Name: _____ Sec: _____ Roll No.: _____

CODE - A

BURNPUR RIVERSIDE SCHOOL, BURNPUR

SECOND PRE-BOARD EXAMINATION : [2023-2024]
ENGLISH
CLASS – XII

Time: 3 Hours   **Maximum Marks : 80**

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GENERAL INSTRUCTIONS:

1. The Question Paper contains THREE sections-READING, WRITING and LITERATURE.

2. *Attempt questions based on specific instructions for each part. Write the correct question number in your answer sheet to indicate the option/s being attempted.*

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SECTION A : READING SKILLS (22 marks)

Reading Comprehension Through Unseen Passages

1.   **Read the following text.**   12

1. Learning from experience, can be complicated. It can be much more difficult to learn from success than from failure. If we fail, we think carefully about the precise cause. Success can indiscriminately reinforce all our prior actions.

2. A second theme concerns the power of chance events. As I think across a wide variety of settings in my life, I am struck by the incredible role played by the interplay of chance events with intentional choices. While the turning points

themselves are indeed often fortuitous, how we respond to them is anything but so. It is this very quality of how we respond systematically to chance events that is crucial.

3. Of course, the mindset one works with is also quite critical. It matters greatly whether one believes that ability is inherent or that it can be developed. The former view, a fixed mindset, creates a tendency to avoid challenges, to ignore useful negative feedback and leads people to plateau early and not achieve their full potential. The latter view, a growth mindset, leads to a tendency to embrace challenges, to learn from criticism and enables people to reach higher levels of achievement.

4. The fourth theme is cornerstone of the Indian spiritual tradition: *self-knowledge*. Indeed, the highest form of knowledge, it is said, is *self-knowledge*. I believe this greater awareness and knowledge of oneself is what ultimately helps develop a more grounded belief in oneself, courage, determination and, above all, humility – all qualities which enables one to wear one's success with dignity and grace.

5. I would like to end with some words of advice. Do you believe that your future is preordained, and is already set? Or, do you believe that your future is yet to be written and that it will depend upon sometimes fortuitous events? Do you believe that these events can provide turning points to which you will respond with energy and enthusiasm? Do you believe that you will learn from these events and that

you will reflect on your setbacks? Do you believe that you will examine your successes with even greater care? I hope you believe that the future will be shaped by several turning points with great learning opportunities. In fact, this is the path I have walked to much advantage.

6. *A final word:* When, one day, you have made your mark on the world, remember that, in the ultimate analysis, we are all mere temporary custodians of the wealth we generate, whether it be financial, intellectual or emotional. The best use of all your wealth is to share it with those less fortunate.

Answer the following questions, based on the passage above.

(a) **Read the following statements:**   1

(1) Wealth is fleeting.

(2) Life is brief.

    i.   (1) is the cause for (2).

    ii. (1) can be inferred from the text, but not (2).

    iii. (1) is the inference of (2).

    iv. (2) is false and (1) is true

(b) What do the many questions asked in **Paragraph 5**imply?   1

    i.   Questions of advise

    ii. To bring home his conviction on how the future is shaped.

    iii. To tell of the roads he had walked which had proved advantageous to him.

    iv. These provide great learning opportunities.

(c) **Choose the option that rightly reflects the tone of the** 1
speaker in the given passage.

    i.   Intimidating

    ii.   Moralizing

    iii.   Preaching

    iv.   Warning

(d) *"The best use of all your wealth is to share it ..."* The "*wealth*" 1
here refers to –

    i. pecuniary

    ii. finances and assets

    iii. financial, cognitive and affective

    iv. health

(e) *"Do you believe that your future is preordained, and is already* 1
set?" How does the author respond to the question?

(f) What is author's word of caution when one is finally successful 1
in the world?

(g) **Complete the given statement.** 2

It is easier to learn from failure than from success because

_____.

(h) *Self-knowledge is the greatest knowledge.* How does the writer 2
justify the premise?

(i) How do people with a positive mindset benefit from 2
experience?

2. **Read the following text.** 10

1. Mankind's fascination with gold is as old as civilization itself. The ancient Egyptians esteemed gold, which had religious significance to them, and King Tutankhamen was buried in a solid – gold coffin 3300 years ago. The wandering Israelites worshipped a golden calf, and the legendary King Midas asked that everything he touched be turned into gold.

2. Not only is gold beautiful, but it is virtually indestructible. Gold is extremely easy to work with. One ounce, which is about the size of a cube of sugar, can be beaten into a sheet nearly 100 square feet in size. An ounce of gold can also be stretched into a wire 50 miles long.

3. People have always longed to possess gold. Unfortunately, this longing has also brought out the worst in the human character. The Spanish conquerors robbed palaces, temples and graves and killed thousands of Indians in their ruthless search for gold. Even today, the economic running of South Africa's gold mines depends largely on the employment of black labourers who are paid about 40 pounds a month, plus room and board, and who must work in conditions that can only be described as cruel. About 400 miners are killed in mine accidents in South Africa each year, or one for every two tons of gold produced.

4. Much of gold's value lies in its scarcity. Only about 80,000 tons have been mined in the history of the world. All of it could be stored in a vault 60 feet square, or a super-tanker.

5. Great Britain was the first country to adopt the gold standard,

when the Master of the Mint, Sir Isaac Newton, established a fixed price for gold in 1717. But until the big discoveries of gold in the last half of the nineteenth century – starting in California in 1848 and later in Australia and South Africa – there simply wasn't enough gold around for all the trading nations to link their currencies to the precious metal.

6. One of the big gold-mining areas in the Soviet Union is the Kolyma River region, once infamous for its prison camp. The camp has gone, but in a way nothing has changed. Many ex-prisoners have stayed on to work in the mines and are supervised by ex-guards.

7. Despite the current rush to buy gold, 75 per cent of the metal goes into jewellery. Italy is the biggest user of gold for this purpose, and many Italian jewellers even tear up their wooden floors and burn them to recover the tiny flecks of gold.
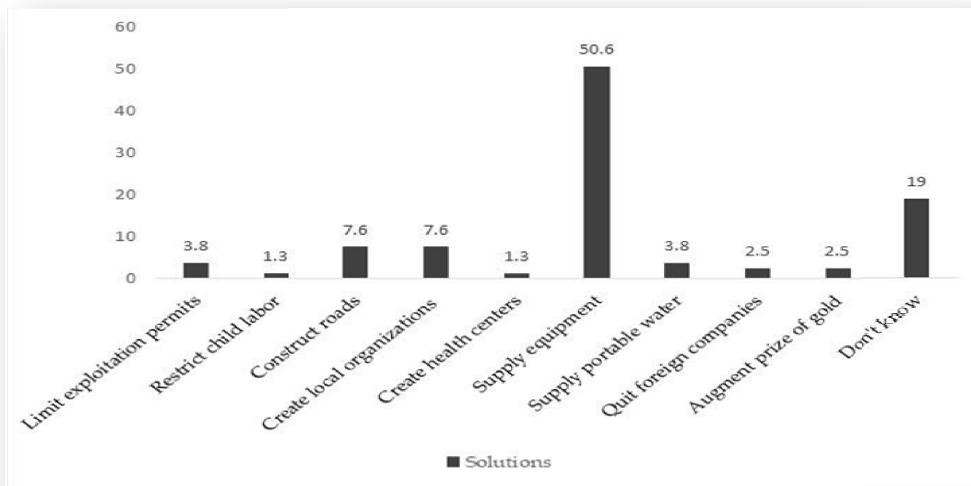
SOLUTIONS TO THE MAJOR CHALLENGES IN ARTISANAL GOLD MINING

(a) As per paragraph **3**, select the option that holds **true**.   1

      i.   The passion to possess gold has been from ancient times.

     ii.   Gold has been the reason for many a war and plunder.

   iii.   Gold controls the economies of many nations, even today.

   iv.   All of the above.

(b) The graph informs of -   1

      i.   Dangers involved in artisanal gold mining

     ii.   Limitations in artisanal gold mining.

   iii.   Alleviating major challenges in artisanal gold mining

   iv.   Health conditions of artisanal gold miners.

(c) **Complete the given statement.**   1

The high price of gold is because of its _____.

(d) *Nations earlier found it difficult to link their currencies to gold.*   1
Give a reason.

(e) How is racism evinced in the given passage?   1

(f) A suitable title to the passage is _____.   1

(g) Attempt any 02 inferences from your observation of the figure.   2

(h) *The gold-mining industry gravely exploited its miners.* Cite   2
instances from the text to justify the statement.

SECTION B : CREATIVE WRITING SKILLS (18 marks)

3.   **Attempt *ANY ONE* of two, in about 50 words.**   4

(a) You are the secretary of the Literary Club of Swami Vivekananda Mission School, Kharagpur. Your school is organizing a declamation contest on the topic *'How to stay healthy*?' Draft a **notice** inviting the students to participate in the competition. Mention relevant details. Sign yourself as Jeet/Jyothi.

OR

(b) You are Anil / Amala, Secretary, Interact Club, Burnpur Riverside School, Chittaranjan. Prepare a **notice** in not more than 50 words to be put up on your school notice board asking all the club members and the other students to join a walk on the occasion of World Diabetes Day to create an awakening among people about diabetes.

4.   **Attempt *ANY ONE* of two, in about 50 words.**   4

(a) **Create an invitation** in about 50 words, on behalf of your aunt, Meghna Menon, which she has to share to invite herfriends and work colleagues to the inaugural event of her own investment consultancy firm, in the City Mall, Kozhikode, Kerala.

OR

(b) Write a **reply to an invitation** in about 50 words to your friend Anisha accepting her request to spend the winter break with her in Murshidabad. You are Puja / Puneet of 25, N.S.B Road, Bardhaman.

5.   **Attempt *ANY ONE* of two , in about 120-150 words**   5

You are Ashish / NimmiDhar B-94 Fort William Road, Kolkata. You saw the given advertisement in the newspaper and wish to apply for the position advertised. Write an application in 120 – 150 words along with a bio-data expressing your interest in the situation vacant.

> INDIA CHEMICAL INDUSTRIES, DELHI
> Requires: Accounts Officers
> Qualification: B. Com.
> Experience : Minimum 4 years
> Job requirement: Maintaining books of accounts, preparation of Balance Sheet, etc.
> Salary : Best in the industry
> Apply to : Managing Director, ICI, B – 12 Barakhamba Road, New Delhi

OR

Auto rickshaws and vans overcrowded with precariously seated children, is not an uncommon sight in cities today. Write a letter to the **editor of a newspaper** highlighting this dangerous practice and requesting him to publicise the issue and urging the authorities to take steps to curb it, else it may cost the lives of innocent children. Write the letter as Sushant/Sunanda.

6. **Attempt *ANY ONE* of two, in about 120-150 words** 5

Since birth, the girl child who constitutes almost 50 percent of the child population is discriminated against in India. Compose an **article** for publication in the school Annual Magazine on the topic, "*Emancipation of Women begins with a fair treatment and respect for the Girl Child*". You are Sumit / Sumana.

OR

Your school, Carmel High School, Durgapur has organized an exhibition-cum-sale of the items made by students in their work experience classes. You had an excellent and overwhelming response from the parents and the visitors. The proceeds of the sale have been donated by your school in a function to Helpline India, an organization supporting the cause of orphans. Write a **report** of the same in about 120 - 150 words to be published in your school bulletin/magazine.

SECTION C : LITERATURE TEXTBOOK AND SUPPLEMENTARY READING TEXT (40 marks)

7. **Read the given extracts and answer the questions for *ANY ONE* of the two, given.** 6

Sometimes I feel myself I can hardly bear

The thought of so much childish longing in vain,

The sadness that lurks near the open window there,

That waits all day in almost open prayer…

(a) The 'I' in the extract is -

    i.   The poet

    ii.   The author

    iii.   An individual villager

    iv.   The polished traffic

(b) "*That waits all day…*" The wait is for -

    i.   cars to apply brakes and so stop

    ii.   some city-goer to stop and ask for the farmer's prices

    iii.   for prayers in the open

    iv.   All of the above

(c) *Select a suitable word from the extract to complete the following analogy:*

Scarcely : hardly:: futile: _____.

(d) Cite a reason why 'I' can 'hardly bear'?

(e) What is the 'childish' longing for?

(f) **State whether the given statement is TRUE or FALSE.**

The cars stopped and so were the wishes of the farmers fulfilled.

OR

What I want should not be
confused
with total inactivity.
Life is what it is about;
I want no truck with death.
If we were not so single-minded
about keeping our lives moving,.

(a) The 'I' in the extract is -

    i.   The author

    ii.   The reader

    iii.   An itinerant preacher

    iv.   The representative of humanity

(b) What does 'I' want?

    i.   Minimizing confusion

    ii.   Lessening inactivity

    iii.   Life activities

    iv.   No truck with death

(c) **Select a suitable word from the extract to complete the following analogy.**

death: inactivity :: association: _____.

(d) What is 'life' according to the extract?

(e) "*What I want…*"Why does the poet so 'want'?

(f) **State whether the given statement is TRUE or FALSE, with reference to the extract.**

Single-mindedness helps being single and so fosters introspection.

8.   **Read the given extracts and answer the questions for ANY ONE of the two, given.**   4

MOTHER: You think I don't know about him, you think. I haven't heard things?

DERRY: You shouldn't believe all you hear.

MOTHER: Been told. Warned. We've not lived here three

months, but I know what there is to know and you're not to go back there.

DERRY: What are you afraid of? What do you think he is? An old man with a tin leg and he lives in a huge house without curtains and has a garden. And I want to be there, and sit and....listen to things. Listen and look.

MOTHER: Listen to what?

DERRY: Bees singing. Him talking.

MOTHER: And what's he got to say to you?

(a) What is the mother 'afraid' of?

    i. They have not lived there 03 months.

    ii. He had been earlier warned of.

    iii. She had heard 'things' about Mr. Lamb.

    iv. All of the above.

(b) How does *'bees singing'* come as striking to Derry?

(c) **"…***you're not to go back there...***"** speaks of the mother's

    _____.

(d) How does Derry leave the house?

<p align="center">***OR***</p>

Days go on and on and on in surreal 24-hour austral summer light, and a ubiquitous silence, interrupted only by the occasional avalanche or calving ice sheet, consecrates the place. It's an immersion that will force you to place yourself in the context of the earth's geological history. And

for humans, the prognosis isn't good.

Human civilisations have been around for a paltry 12,000 years — barely a few seconds on the geological clock. In that short amount of time, we've managed to create quite a ruckus…

(a) *"...the prognosis isn't good."* highlights the author's _____ .

    i. Knowledge of astrology

    ii. concern.

    iii. quest for knowledge.

    iv. reminiscing history

(b) **Select a suitable word from the extract to complete the following analogy.**

ubiquitous: occasional :: continuous : _____ .

(c) *"...the prognosis isn't good."* What does the author want to tell his readers?

(d) How have humans managed to create quite a ruckus?

9. **Read the given extracts and answer the questions for ANY ONE of the two, given.** 6

Suddenly the book assumed tremendous significance. Stephen Spender, the poet who had visited Gemini Studios! In a moment I felt a dark chamber of my mind lit up by a hazy illumination. The reaction to Stephen Spender at Gemini Studios was no longer a mystery. The Boss of the Gemini Studios may not have much to do with Spender's poetry. But not with his god that failed.

(a) The book assumed significance for the reason

    i. Stephen Spender was the poet who had visited Gemini Studios.

    ii. The book cost 50 paise.

    iii. Stephen Spender's essay on communism and his disillusioned return was part of the anthology and he had visited Gemini Studios.

    iv. All of the above.

(b) What is actually the 'god' that failed?

    i. Stephen Spender.

    ii. Communism.

    iii. Gemini Studios

    iv. All of the above

(c) *"Suddenly the book assumed tremendous significance."* Identify the book.

(d) Why does the author say, "…*I felt a dark chamber of my mind lit up by a hazy illumination*"?

(e) What was the purpose of Spender's visit to Gemini Studios?

(f) **State whether the given statement is TRUE or FALSE, with reference to the extract.**

The Boss of the Gemini Studios may not have much to do with Spender's poetry because he has an aversion to poetry in general.

OR

H. G. Wells in an interview in 1894 referred to 'the interviewing ordeal', but was a fairly frequent interviewee and forty years later found himself interviewing Joseph Stalin. Saul Bellow, who has consented to be interviewed on several occasions, nevertheless once described interviews as being like thumbprints on his windpipe. Yet despite the drawbacks of the interview, it is a supremely serviceable medium of communication....

(a) Saul Bellow's impression of interviews is / are

    1. thumbprints

    2. stifling

    3. condemning

    4. biased

(b) H. G. Wells' '*the interviewing ordeal*' can be referred to as -

    i. long hours of interview

    ii. troubles one undertakes to get the consent for an interview

    iii. the tantrums of the celebrity interviewee

    iv. trials and tribulations of the interviewee during the interview

(c) Explain: *thumbprints on his windpipe*

(d) *"Yet despite the drawbacks of the interview…"* List a drawback of interview.

(e) **Select a suitable word from the extract to complete the following analogy.**

Less : several :: advantage : _____.

(f) Interview is a supremely serviceable medium of communication in the sense _____.

10. **Answer *ANY FIVE* of the following six questions, in about 40-50 words.** 5x2

(a) Bring out the significance of the question: "*Will they make them sing in German, even the pigeons?*" (*The Last Lesson*)

(b) Why has the poet brought in the image of *the young trees sprinting?* (*My Mother at Sixty-six*)

(c) *Few airplanes fly over Firozabad.* How is the lament expressed here? (*Lost Spring*)

(d) How does Christmas serve as a meaningful backdrop in the story, *The Rattrap*?

(e) How would death not even bring respite to Aunt Jennifer from her ordeals?

(f) What prompted Gandhi ji to say, "*The battle of Champaran is won*"? (*Indigo*)

11. **Answer *ANY TWO* of the following three questions, in about 40-50 words.** 2x2

(a) Do you think that the third level was a medium of escape for Charley? Why?

(b) *For some people sycophancy is a means of livelihood.* How does the Dewan prove the truth of the statement?

(c) "*We too are human beings…*" What prompts Bama to say so?

12. **Answer *ANY ONE* of the following two questions, in about 120-150 words.**   5

Sophie wakefully dreams of meeting Danny Casey in Royce's window. Imagining this to be true, she writes a letter to her friend expressing her excitement and happiness at the meeting.

As Sophie, write the letter to your friend.

OR

You had read Keats' *A Thing of Beauty* and the poem left a deep impression on you.

You decide to explain the poem to your friends. Provide the explanation.

13. **Answer *ANY ONE* of the following two questions, in about 120-150 words.**   5

Zitkala-Sa and Bama, established in their individual lives, meet with each other. They recount incidents from their childhood, wherein they were subjected to indignity and oppression from the dominant society.

Construct a dialogue between Zitkala-Sa and Bama where the two authors recount the stories of their lives.

OR

"He stood for a moment on the veranda, gazing out to the sea from whence the young man had come that other night. And into his mind, although without reason, there came other white faces he had known — the professor at whose house he had met Hana, a dull man, and his wife… Now he remembered the youthful,haggard face of his prisoner — white and repulsive."Strange," he thought. "I wonder why I could not killhim?"

Dr.Sadao remembers the accounts of the recent past wherein he sheltered a white prisoner-of-war and even saved his life. He had even to go against his own folk. He decides to pen down his thoughts and emotions in his diary. As Dr.Sadao compose the entry, describing his situation and the conflicting emotions in his heart and finally how he did resolve the conflict.

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NAME_____SEC_____ROLL NO._____

BURNPUR RIVERSIDE SCHOOL, BURNPUR
PRE BOARD-II EXAMINATION: [2023-2024]
ENGLISH CORE
CLASS-XII

Time: 3 Hrs.   **Maximum Marks: 80**

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General Instructions:

1. The question paper contains three sections – READING, WRITING and LITERATURE.

2. Attempt questions based on specific instructions for each part. Write the correct question number in your answer sheet to indicate the option/s being attempted.

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SECTION A: READING SKILLS (22 Marks)

1.   **Read the passage given below:**   12

1. Have you ever caught yourself scratching your head, twitching your ear, tapping your foot or playing your keys or pen? If you have, you are a sure fidgeter. And it is very likely that the habit has carried over from childhood, when your wriggling probably exasperated – and sometimes amused your parents and teachers. It is not a pleasant sight to see a grown-up person fidgeting; in fact, it is a distraction.

2. Recently, some doctors in Britain have discovered that not only is fidgeting quite normal, it even does you good.

3. Almost everybody fidgets when hot, cold, hungry, thirsty or tired. Being kept waiting also brings us to fidgets. Most of this is normal but then with some this translates into exaggerated mannerisms, that is where we have a problem. When the British doctors wired up volunteers to an electric 'fidgetmeter,' followed by a gruelling interview, some stayed almost completely still. Others made up to 57

movements in half a minute. Since the rate went up when disturbing topics were raised, it seemed that those who fidgeted more were the anxious types, needing to release nervous energy

4. This is what led to the conclusion that fidgeting has its uses too – since it helps get rid of stress that could sometimes lead to headaches, muscle pain or even ulcers. Fidgeting is also believed to fight the flab. Add up all those little movements made by fidgeters during their waking hours and they burn up as much energy as a jog, the report said.

5. While British doctors may feel that fidgeting is an expression of anxious behaviour, doctors here do not necessarily agree.

6. Meanwhile, a former assistant professor in Los Angeles opines that fidgeting is a sign of "some underlying tension which is causing anxiety." While one cannot make generalized statements, some experts feel that pencil-suckers yearn for babyhood, teeth-grinders and fist clenchers seem to be holding back their aggression, foot tappers wish to be on the move and people who scratch may wish to injure themselves.

7. A leading psychiatrist gives a positive side to the anxiety angle. According to him, "a bit of anxiety is not harmful since it induces one to do better. It often brings out the best in people while meeting deadlines, submitting reports or at interviews and examinations." He gives the example of tennis players who play with "manageable anxiety," but warns that when the fidgets turn to restlessness, it might affect performance. Often, he says, a person suffering from a neurological illness ends up fidgeting deliberately, "mainly to distract his companion from his actual problem. It could be something as harmless as the shaking of the hand or twitching of the eye."

8. Refuting this, another psychiatrist insists that fidgeting in no way should be considered good. "It may be innocuous unless it is harming the fidgeter or annoying others, but what fidgeting really reveals is a lack of confidence and even social phobia, besides, of course, anxiety. It, in fact, sends non-verbal messages to people who then treat the person accordingly as nervous or anxious individuals," he adds.

9. Unfortunately, fidgeters often find it hard to kick the habit, even when it's socially unacceptable.

10. While those fidgeting are themselves perturbed by the habit, efforts in controlling it could cause other problems, because, "the person could get hypertense or worried about being unable to tackle it and get more fidgety in the process." Experts, in the meantime, keep suggesting remedies or tricks to get out of fidgeting habits, like playing with a coin in your pocket or glove or wearing a ring which you can rub without others noticing. In Greece, many taxi-drivers carry worry-beads which they click while waiting to combat fidgeting, while some stores in London's West End once sold pieces of polished stone designed for gently stroking with the thumb.

11. Dr James Buyers, a neurologist of London, hopes for a more lasting and practical solution. "Anything that will stop the speed of modern life for even half a minute will definitely be beneficial," he says.

On the basis of your understanding of the above passage, answer the following questions.

i   Choose the most appropriate option.   1
   The habit of fidgeting in a grown-up person is…………………………

   a. a childish habit in a grown-up
   b. a sign of exasperation and amusement
   c. not a pleasant sight and a distraction
   d. normal and does good

ii   Given below are some ways by which people who fidget can rid   1
    themselves of the habit with a lasting solution. Select the practical
    solution given by Dr Buyers.

   a. Playing with a coin in one's pocket
   b. Stopping the speed of life for even half a minute
   c. Clicking on worry beads like Greek taxi drivers
   d. Stroking polished stones with one's thumb

iii What are the positive speculations that the author makes about anxiety'?   2

iv Complete the sentence appropriately.   1
    According to British doctors, fidgeting is an expression of…………….

v   Select the antonym for the word 'gruelling.'   1

    a. facile

    b. facial

    c. faceted

    d. factice

vi What are some commonalities noticed among various kinds of   2
    fidgeters?

vii According to the author, what were the findings of British doctors using   2
    a fidgetmeter?

viii State two ways by which people were assessed through the fidgetmeter.   1

ix Read the five titles (1-5) given below.   1
        1. The Curative Remedies for Fidgeting
        2. The Jury is Still Out on Fidgeting
        3. Tennis Players and Their Manageable Anxiety
        4. Many Aspects of Fidgeting
        5. Fidgeting – a necessity
    Identify the option that displays the titles that DOES / DO correspond
    with the passage.
        a. 1 and 2
        b. 2 and 3
        c. only 4
        d. 3 and 5

2. **Read the passage given below.**   10

    1. An analysis of the seven IITs that stand in the top 10 of the National
       Institute Ranking framework shows that the disproportion in number
       of dropouts is starker at some institutions. IIT Guwahati holds the
       worst record, with 88% of its 25 dropouts hailing from the reserved
       categories. IIT Kharagpur has had the highest number of dropouts,
       with a whopping 79 students leaving the institution over the last five
       years. More than 60% are from the reserved categories.

2. The MHRD said high attrition rate in the undergraduate programmes could be attributed to "withdrawal due to wrong choices filled, poor academic performance, personal and medical reasons." The MHRD added that the institutes were taking correctional measures to de-stress students; fee reductions, institute scholarships, priority access to national level scholarships to aid students with poor financial backgrounds to pursue their education are a few steps taken to prevent dropouts.

3. Somesh Kumar, Dean of Students Affairs at the IT Kharagpur, said the numbers are not alarming as 15% seats were reserved for the SC category, 7.5% for the STs and 27% for the OBC category, which makes it 49.5%. A counselling centre and a student welfare group that help students to manage stress have been set up.

PERCENTAGE OF DROPOUT IN SOME INSTITUTES

YEAR	IIT	IIM	OTHER INSTITUTIONS
2015 – 16	2.25	1.04	7.49
2016 – 17	1.60	1.06	8.56
2017 – 18	1.71	1.03	6.76
2018 – 19	1.46	0.50	5.36
2019 – 20	0.68	0.78	2.82

(Courtesy: MHRD)

4. Some social researchers disagree with Prof. Kumar. The usually high dropouts from the two IITs reflect that there could be some institutional factors. They should undertake a social climate assessment survey.

5. A coaching class for qualifying JEE provides students with enough superficial knowledge to clear the entrance, but the emphasis on fundamental knowledge is minimal. Consequently, studying the actual courses in IITs is a shocker. Reserved quota students who got admission on the basis of low cut-offs fail to gross qualifying marks during the semester assessments. The privilege for them ends with the entrance and only merit is what sustains an IITian.

6. Lack of English communication skills especially of those who studied in regional language medium pulls their overall academic performance down. Though the institute offers verbal proficiency classes, but either they are too late or too less. There are innumerable co-curricular opportunities in the IITs that can be overwhelmingly engaging. They can be a distraction when students over-invest themselves in them.

7. Then there're those who take up a branch that they do not completely understand or which matches their ranks or looks glamorous to them until the time the academic session actually commences and reality hits them. Then the interest level falters.

8. Preparing for engineering is a part of the herd mentality. Peer pressure or family ambitions can pressure them into joining IIT with very little interest in the subject that they are going to study for the next four years; they obviously give up midway after suffering from poor grades.

9. To fail is human but not factoring in one's aptitude and passion will guarantee failure.

On the basis of your understanding of the above passage, answer the following questions.

i   What is the main reason for the worst performance of the students who studied in regional languages? Why?   2

ii   Ironically, students who get into IITs due to a special privilege of low cut-offs for them, realize that …………………………………….   1

    I.   their fundamental concepts are always shaky
    II. the actual course content is tough
    III. only merit is going to sustain them
    IV. getting even minimum qualifying marks is a tough job

    a. only III
    b. only IV
    c. I and II
    d. all except I

iii   How do you think that only merit sustains an IITian?   1


iv   Which of the following graphical representations show the correct data   1
     (to nearest approximation) for seat reservations in the IITs on the basis
   of socio-economic backwardness?

SC: 15%
ST: 9%
GEN: 51%
OBC: 27%

1

GEN: 30%   SC: 30%
OBC: 20%   ST: 15%

2

GEN: 27%   SC: 20%
ST: 23%
OBC: 30%

3

SC: 28%
GEN: 50%
ST: 12%
OBC: 10%
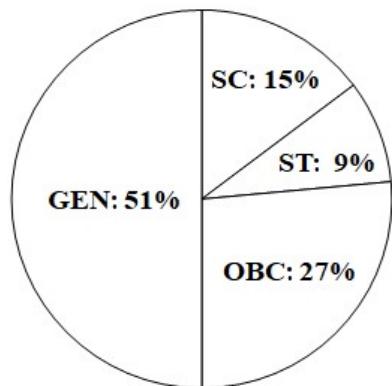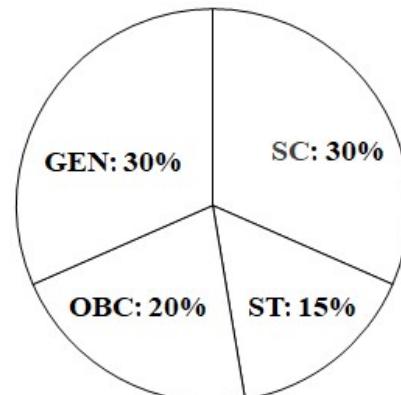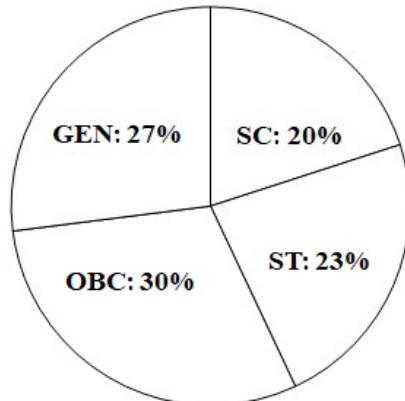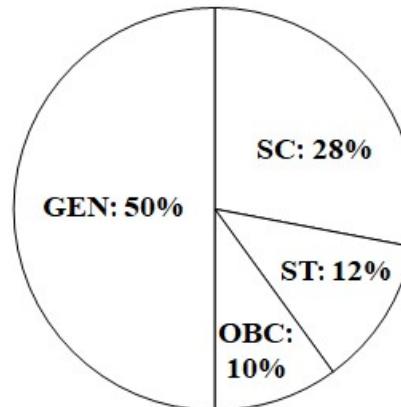
4

   a. 1
   b. 2
   c. 3
   d. 4

v   One is guaranteed a successful stint in any of the IITs, provided one has   1

_____.

    a.   good command over English and completing high school in English medium
    b.   qualifying JEE and knowing about different branches
    c.   the aptitude and passion for engineering
    d.   having a national level or an institutional scholarship

vi   What did MHRD say about correctional measures?   2

vii   Complete the sentence appropriately.   1
Preparation for engineering is a part of the ……………………

viii   State TRUE or FALSE.   1
There are innumerable co-curricular opportunities in the IITs.

SECTION B: CREATIVE WRITING SKILLS (18 Marks)

3.   **Attempt <u>ANY ONE</u> of two, in about 50 words.**

A   The local branch of the British Council has agreed to hold a workshop   4
in your school on 'Writing Skills in English Language.' Draft a notice inviting students to give their names for participation. Mention relevant details of day, date, time and venue. You are Sneha / Snehasish, President of the Literary Society of Doon Public School.

OR

B   The Traffic Police of your district has agreed to hold a one-day   4
programme on 'Road Safety' in your school. Draft a notice to be put up on the school notice board, informing students of classes 8 – 12 to assemble at the appointed place. You are Prachi / Pranav, Sports Incharge. Mention day, date, time and venue.

4.   **Attempt <u>ANY ONE</u> of two, in about 50 words.**

A   You are Deepika / Deepak, a student of Julien Day School. Your school   4
is holding its Annual Sports Day on 22 December, 2023. Design an
invitation card to be sent to the parents and other invitees.

<div align="center">

OR

</div>

B   Your friend, Manish Tripathi has invited you to attend his wedding   4
anniversary. You cannot attend it as you have a family get-together on
the same day. Write an informal reply expressing your inability to
attend the function and wish him all the happiness on this joyous
occasion. You are Mita / Mahendra Juneja of 5 Vasundhara Colony,
Patna.

5.   **Attempt <u>ANY ONE</u> of two, in about 120-150 words.**

A   Write a letter to the editor of 'The Indian Express' expressing your   5
views on the increasing loneliness of the elderly and suggesting ways to
support them. You are Anshika / Ankush.

You may use the cues given below:

<table>
<tr><td>

<u>**Causes**</u>

- Smaller families

- Children abroad

- Modern, hectic lifestyles

<u>**Suggestions**</u>

- Helplines

- Support groups, RWA activities (Residents Welfare Association)

- Sensitization of younger generation

</td></tr>
</table>

OR

B You are Sujoy / Sujata Sharma. You saw the given advertisement and wish to apply for the position advertised. Write a letter of application along with your biodata. 5

Fair Fax Pvt. Ltd.

Required: Assistant Manager, Digital Marketing

Job Responsibilities:

- Maintain Digital Dashboard

- Monitor Online Marketing

Preferred Skills & Qualifications:

- Bachelor's Degree in Marketing or Business

- Minimum 2 years' experience in Digital Marketing

- Knowledge of Picture/Video Editing Software

Send your biodata within 10 days to the Director HR, Fair Fax Pvt. Ltd.

---

6. **Attempt ANY ONE of two, in about 120-150 words.**

A 5

LEAD A PRODUCTIVE LIFE – VOLUNTEER

- Spend time with senior citizens

- Keep surroundings clean

- Support 'Each One Teach One' programme

- Build books/clothes banks for the needy

- Share celebratory moments

YOU CAN MAKE A DIFFERENCE

The Resident Welfare Society in your colony has put up the above poster. Write an article to be published in the neighbourhood weekly on the need to inculcate a spirit of volunteerism among people. Mention simple ways in which the ordinary citizens can contribute and benefit from it. Your are Kritika / Kunal.

OR

B   **STREET THEATRE**   5

FREE VIEWERSHIP FOR THE PUBLIC	➡	SOCIAL MOVEMENTS, ENVIRONMENTAL ISSUES	➡	TRADITIONAL FORM OF THEATRE VEHICLE FOR SOCIAL COMMUNICATION AND SOCIAL TRANSFORMATION
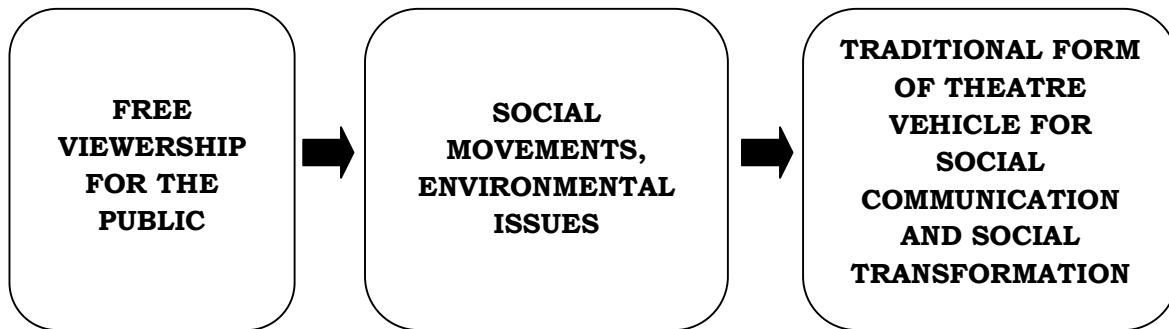
CHILD RIGHTS ..... DRUG ABUSE ..... SAVE THE ENVIRONMENT ..... ILLITERACY

As a reporter of a national daily, you attended a Street Theatre Festival at Central Lawns. Skits on child rights, drug abuse and junk food were put up by student members from five NGOs. The performances were followed by an open-house session in which experiences were shared. Write a report on the festival to be published in the local daily. You are Arunima / Arun. Mention day, date, time and venue. You may use the above given cues.

SECTION C: LITERATURE TEXTBOOK AND SUPPLEMENTARY READING TEXT (40 Marks)

7.   **Read the extracts given below and attempt <u>ANY ONE</u> of the two, by answering the questions that follow.**

A   Offered for sale wild berries in wooden quarts,   6
       Or crook-necked golden squash with silver warts,
       Or beauty rest in beautiful mountain scene,
       You have the money, but if you want to be mean

                                                      (*A Roadside Stand*)

i   What did the stand offer its customers?   1

        a. Wild berries
        b. Golden squash and wild berries
        c. A moment of respite
        d. Berries and dates

ii   What does 'beauty rest in a mountain scene' indicate?   1

iii   Complete the sentence with one word from the extract.   1

The men who are not willing to give or share thing is _____.

iv   State whether the following statement is TRUE or FALSE.   1

The peasant's shed sells locally grown products.

v   Whom does this line refer to, "You have the money, but if you want to   1
be mean"?

vi   What is the rhyme scheme of the extract?   1

OR

B   What I want should not be   6
confused
with total inactivity.
Life is what it is all about;
I want no truck with death.
If we were not so single-minded
about keeping our lives moving
and for once could do nothing,
Perhaps a huge silence
Might interrupt this sadness
of never understanding ourselves with
death.

(*Keeping Quiet*)

i   The poet's intention in the first line is to   1

        a. give warning to the readers
        b. give right direction to the readers
        c. give choice to the readers
        d. give a clarification to the readers

ii   Who is to blame for the condition of threatening ourselves with death,   1
    according to the poet?

iii Select the word from the following options to complete the sentence.   1

    The tone of the poet in the expression, "If we were not so single-
    minded…" is _____ .

        a. regretful
        b. critical
        c. encouraging
        d. friendly

iv   State whether the given statement is TRUE or FALSE.   1

    In the expression, "I want no truck with death," the poet assures that he
    does not advocate death.

v   What is the tone of the poet in the expression, "perhaps a huge silence,   1
    might interrupt this sadness"?

vi   Complete the sentence appropriately.   1

    The poet does not advocate death because he has a firm belief in
    _____ .

8. **Read the extracts given below and attempt <u>ANY ONE</u> of the two, by answering the questions that follow.**

A DERRY: You think…. 'Here's a boy.' You look at me …. and then you   4
see my face and you think. 'That's bad. That's a terrible thing. That's the ugliest thing I ever saw.' You think, 'Poor boy.' But I'm not. Not poor. Underneath, you are afraid. Anybody would be. I am. When I look in the mirror, and see it, I'm afraid of me.

MR. LAMB: No. Not the whole of you. Not of you.

DERRY: Yes!

(*On the Face of It*)

i   Who is Derry afraid of? Why?   1

ii   What is a terrible thing, according to Derry?   1

    a. People calling him names
    b. Boys running away from him
    c. Boys fighting with him
    d. People looking at him with pity

iii Mr. Lamb is optimistic while Derry is _____.   1

iv   How do people react to Derry's face?   1

OR

B Students on Ice, the programme I was working with on the Shokalskiy,   4
aims to do exactly this by taking high school students to the ends of the world and providing them with inspiring educational opportunities which will help them foster a new understanding and respect for our planet.

(*Journey to the End of the Earth*)

i   Complete the sentence appropriately.   1

Through the programme *Students on Ice* the students get an enlightening _____.

ii　How does a visit to Antarctica help the students?　　　　1

     a. It provides them educational opportunities.
     b. It fosters a new understanding and respect for our planet.
     c. A pleasure trip to the ocean.
     d. Both (a) and (b)

iii　Who headed the programme 'Students on Ice'?　　　　1

iv　Why were students selected for the programme?　　　　1

9.　　**Read the extracts given below and attempt <u>ANY ONE</u> of the two, by answering the questions that follow.**

A　In all instances of frustration, you will always find the anger directed towards a single person openly or covertly and this man of the make-up department was convinced that all his woes, ignominy and neglect were due to Kothamangalam Subbu. Subbu was the No. 2 at Gemini Studios. He couldn't have had a more encouraging opening in films than our grown-up boy had. On the contrary he must have had to face more uncertain and difficult times, for when he began his career, there were no firmly established film producing companies or studios. Even in the matter of education, specially formal education, Subbu couldn't have had an appreciable lead over our boy.　　6

　　　　　　　　　　　　　　　　　　　　　　　(*Poets and Pancakes*)

i　Who is the writer pointing at when he says, "this man of the make-up department"?　　　1

ii The line, "On the contrary he must have had to face more uncertain and   1
    difficult times," can be best classified as:

     a. an objective fact
     b. an opinion
     c. an assumption
     d. a theory

iii Explain any one possible inference that can be derived from the fact that   1
    the office boy was convinced that all his woes, ignominy and neglect
    were due to Kothamangalam Subbu.

iv Identify the line from the text that bears evidence to the fact that both   1
    Subbu and the office boy had a positive beginning in their respective
    careers when they started.

v   Based on the context provided in the extract, select the biggest   1
    disadvantage Subbu faced at the start of his career in films.

     a. An opening in films
     b. A formal education
     c. Lack of established film producing companies or studios
     d. His caste

vi Complete the sentence with ONE word.   1

    The most outstanding quality of Kothamangalam Subbu which comes
    across the extract is his _____.

OR

B Umberto Eco a professor at the University of Bologna in Italy has   6
    already acquired a formidable reputation as a scholar for his ideas on
    semiotics (a study of signs), literary interpretation and medieval
    aesthetics before he turned to writing fiction. Literary fiction, academic
    tests, essays, children's books, newspaper articles – his written output is
    staggeringly large and wide-ranging. In 1980, he acquired the
    equivalent of intellectual superstardom with his publication of The
    Name of the Rose, which sold more than 10 million copies.

i   Who interviewed Umberto Eco?   1

ii   'His written output is staggeringly large and wide-ranging.' This   1
     statement can be classified as:

    a. an objective fact
    b. a subjective opinion
    c. a premise
    d. a hypothesis

iii Complete the sentence appropriately.   1

Eco had already acquired a formidable reputation as a scholar because

_____.

iv   Pick evidence from the extract that helps one infer that Eco became a   1
     superstar in the field of literature.

v   Umberto Eco is a specialist in writing a range of genres. This can be   1
     proven by the fact that he has written a staggering volume of
     _____.

vi   What does the concept of 'intellectual superstardom' mean?   1

    a. Eco could write on a wide range of topics.

    b. Eco became a superstar in the field of semiotics.

    c. Eco won many international awards for this novel.

    d. 'The Name of the Rose' became a bestseller.

10. **Answer <u>ANY FIVE</u> out of the six questions, in about 40-50 words** 10
     each.

i   What tempted Franz to stay away from school?   2

(*The Last Lesson*)

ii   Why does the poet draw the image of sprinting trees and merry   2
     children?

iii How do you know that everyone in Mukesh's family had resigned to their fate? 2

(*Lost Spring*)

iv What did the peddler say in his defence on sensing the ironmaster's fury? 2

(*The Rattrap*)

v How do 'denizens' and 'chivalric' add to our understanding of the tiger's attitudes? (*Aunt Jennifer's Tigers*) 2

vi Why did Gandhi tell the court that he was involved in a 'conflict of duties'? 2

(*Indigo*)

11. **Answer <u>ANY TWO</u> out of the three questions, in about 40-50 words each.** 4

i How does Charley describe Galesburg as it used to be in 1894? 2

(*The Third Level*)

ii What incentive did the Maharaja give to the village with the hundredth tiger? What was his reaction when the tiger was not found? 2

(*The Tiger King*)

iii "I felt like sinking to the floor," says Zitkala-Sa. When did she feel so and why? 2

(*Memories of Childhood*)

12. **Answer <u>ANY ONE</u> out of the two questions, in about 120-150 words.** 5

i Imagine Sophie's father finds out about Sophie's going to the canal to meet Danny Casey which leads him to think that she has lied to everyone about the whole affair. He is infuriated and prohibits Sophie from going anywhere except to school. 5

As Geoff, write a diary entry disapproving of your father's punishment by citing your reasons for being sympathetic to Sophie.

You may begin this way:

Monday, 2 September 1940

I cannot get myself to stand with father in his tirade against Sophie. Sure, she is not the most …..

(*Going Places*)

OR

ii Proximity to beautiful things can lead man to everlasting happiness. 5 Discuss with reference to the poem 'A Thing of Beauty.'

13. **Answer <u>ANY ONE</u> out of the two questions, in about 120-150** 5 **words.**

i Imagine your school has organized a panel discussion on 'Oppression 5 and its Evils.' You are one of the speakers. As part of your address, you are required to reflect on the lessons and ideas from the story 'Memories of Childhood.'

Draft the address.

You may begin like this:

Good Morning, ladies and gentlemen. It is a pleasure to be given an opportunity to speak today. I would like to begin by quoting James Baldwin, 'Not everything that is faced can be changed, but nothing can be changed until it is faced.' Tolerating oppression in any form is ………………..

OR

ii   The escaped soldier in 'The Enemy' reaches his country, where he is   5
reunited with his family. He can't thank God enough, as he recalls the
harrowing experience and his subsequent rescue and recovery by Sadao
and his wife Hana who were a God send for him. He expresses his
thoughts in a diary entry.

As the American soldier, write the diary entry expressing your
gratitude.

You may begin this way:

I have served in the army for a decade now but have never been caught
by the enemies. But in the …….

==

Name: _____ **Sec:** _____ **Roll No.:** _____

BURNPUR RIVERSIDE SCHOOL, BURNPUR
SECOND PRE-BOARD EXAMINATION : [2023-2024]
MATHEMATICS
CLASS - XII

Time: 3 Hrs.   **Maximum Marks: 80**

==

General Instructions:

*1. This question paper contains – **five sections A, B, C, D** and **E**. Each section is compulsory. However, there are internal choices in some questions.*

*2. **Section A** has 18 **MCQ's and 02** Assertion – Reason based questions of 1 mark each.*

*3. **Section B** has 05 **Very Short Answer (VSA) – type** questions of 2 marks each with sub parts*

*4. **Section C** has 06 **Short Answer (SA) – type** questions of 3 marks each.*

*5. **Section D** has 04 **Long Answer (LA-I) – type** questions of 5 marks each.*

*6. **Section E** has 03 **Source Based / Case Based (CBQ) – type** question of 4 marks.*

==

SECTION - A
(Multiple Choice Questions)
Each question carries 1 mark.

1. If n(A) = n(B) = 3, then how many bijections from A to B can be formed?   1
    A) 5
    B) 3
    C) 6
    D) 2

2. Principal value of $\sec^{-1}(-2)$ is: 1
    A) $\dfrac{\pi}{3}$
    B) $\dfrac{2\pi}{3}$
    C) π
    D) $\dfrac{2\pi}{5}$

3. The number of all possible matrices of order 3×3 with each entry 2 or 0 is: 1
A) 9
B) 27
C) 81
D) 512

4. The area of the triangle with vertices (-3,0), (3,0) and (0,k) is 9 sq. units. The value of k will be: 1
A) 9
B) -9
C) ±3
D) ±6

5. The function $f(x) = \begin{cases} 3x - 8, & \text{if } x \leq 5 \\ 2k, & \text{if } x > 5 \end{cases}$ is continuous at x = 5, then the value of k is: 1
A) 2/7
B) 7/2
C) 3/7
D) 4/7

6. If $f(x) = \dfrac{x}{1- \sqrt{1-x}}$ becomes continuous at x = 0, then f(0) =   1
A) 2
B) -2
C) 4
D) -4

7. If $y = f(x^2 + 2)$ and $f'(3) = 5$ then $\dfrac{dy}{dx}$ at x = 1 is: 1
A) 25
B) 10
C) 5
D) 15

8. The interval on which the function $f(x) = 2x^3 + 9x^2 + 12x - 1$ is decreasing is: 1
A) $[-1, \infty)$
B) $[-2, -1]$
C) $(-\infty, -2]$
D) $[-1, 1]$

9. $\int \frac{1}{x(\log x)^m} dx$, x > 0, m ≠ 1 is equal to: 1

A) $\frac{(\log x)^{1-m}}{1+m} + C$

B) $\frac{(\log x)^{1+m}}{1-m} + C$

C) $\frac{(\log x)^{1-m}}{1-m} + C$

D) $\frac{(\log x)^{1+m}}{1+m} + C$

10. $\int \frac{(x+1)(x+\log x)^2}{x} dx$ is equal to: 1

A) $\frac{1}{3}(x - \log x)^3$

B) $\frac{1}{3}(1 + \log x)^3$

C) $\frac{1}{3}(1 - \log x)^3$

D) $\frac{1}{3}(x + \log x)^3 + C$

11. $\int \frac{x^3 \sin(\tan^{-1} x^4)}{1+x^8} dx$ is equal to: 1

A) $\frac{1}{4}\cos(\tan^{-1} x^4) + C$

B) $-\frac{1}{4}\cos(\tan^{-1} x^4) + C$

C) $-\frac{1}{4}\cos(\cot^{-1} x^4) + C$

D) $-\frac{1}{4}\cos(\sin^{-1} x^4) + C$

12. If $\int_0^a \sqrt{x}dx = 2a\int_0^{\frac{\pi}{2}} \sin^3x\, dx$, then the value of $\int_a^{a+1} x\, dx$ is: 1

A) 7/2

B) 11/2

C) 9/2

D) 13/2

13. If $\int_{-5}^5 |x + 2|\, dx$ is equal to: 1

A) 28

B) 29

C) 27

D) 30

14. The integrating factor of the differential equation $x\dfrac{dy}{dx} + 2y = x^2$ is :

    1

A) x

B) x^2

C) y^2

D) y

15. The sum of the order and degree of the differential equation

    1

$$1 + \left(\dfrac{dy}{dx}\right)^4 = 7\left(\dfrac{d^2y}{dx^2}\right)^3 \text{ is:}$$

A) 4

B) 5

C) 6

D) 7

16. If $|\vec{a}| = 10$ and $|\vec{b}| = 2$ and $\vec{a} \cdot \vec{b} = 12$, then the value of $|\vec{a} \times \vec{b}|$ is:

    1

A) 5

B) 10

C) 14

D) 16

17. $|\vec{a} \times \vec{b}|^2 + |\vec{a} \cdot \vec{b}|^2 = 144$ and $|\vec{a}| = 4$, then $|\vec{b}|$ is equal to:

    1

A) 1

B) 2

C) 3

D) 4

18. If $|\vec{a}| = 2$ and $|\vec{b}| = 7$ and $\vec{a} \times \vec{b} = 3\hat{\imath} + 2\hat{\jmath} + 6\hat{k}$ then the angle between $\vec{a}$ and $\vec{b}$ is:

    1

A) $\pi/6$

B) π

C) $\pi/2$

D) $\pi/3$

19. Assertion (A): The point A (1, 0, 7) is the mirror image of the point B (1, 6, 3) in the line $\dfrac{x}{1} = \dfrac{y-1}{2} = \dfrac{z-2}{3}$

    1

Reason (R): The line: $\dfrac{x}{1} = \dfrac{y-1}{2} = \dfrac{z-2}{3}$ bisects the line segment joining A (1, 0, 7) and B(1, 6, 3).

(a) Both A and R are true and R is the correct explanation of A.

(b) Both A and R are true but R is not the correct explanation of A.

(c) A is true but R is false.

(d) A is false but R is true.

20. Assertion (A): For two events A & B such that $P(A) = P(A \mid B) = \frac{1}{4}$ and $P(B \mid A) = \frac{1}{2}$, then $P(\bar{A} \mid B) = \frac{3}{4}$ & $P(\bar{B} \mid A) = \frac{1}{2}$

Reason (R): Two events A and B are independent, then $P(B \mid A) = P(B)$

(a) Both A and R are true and R is the correct explanation of A.
(b) Both A and R are true but R is not the correct explanation of A.
(c) A is true but R is false.
(d) A is false but R is true.

1

SECTION - B

This section comprise of Short Answer type – questions (SA) of 2 marks each.

21. If f:R →R be the function defined by $f(x) = 4x^3 + 7$, show that f is a bijection (one – one and onto).

2

OR

Given a function defined by $f(x) = \sqrt{4 - x^2}$, $0 \le x \le 2$, $0 \le f(x) \le 2$. Show that f is a bijective function (one – one and onto).

22. The volume of a cube is increasing at the rate of 8 cm^3/sec. Find the rate at which the surface area is increasing when the length of an edge is 12 cm.

2

23. Write the value of b for which

$$f(x) = \begin{cases} 5x - 4, & 0 < x \le 1 \\ 4x^2 + 3bx, & 1 < x < 2 \end{cases}$$ is continuous at x = 1.

2

24. Evaluate: $\int e^{\tan^{-1}x} \left(\frac{1+x+ x^2}{1+ x^2} \right) dx$

2

OR

Evaluate: $\int \frac{\sin x - \cos x}{\sqrt{\sin 2x}} dx$

25. If $\vec{a}, \vec{b}, \vec{c}$ are unit vectors such that $\vec{a} + \vec{b} + \vec{c} = \vec{0}$, then find the value of $\vec{a} \cdot \vec{b} + \vec{b} \cdot \vec{c} + \vec{c} \cdot \vec{a}$

2

This section comprise of Short Answer type – questions (LA) of 3 marks each.

26. Find x, y, z, if $A = \begin{bmatrix} 0 & 2y & z \\ x & y & -z \\ x & -y & z \end{bmatrix}$ satisfies $A^T = A^{-1}$.   3

OR

If $A = \begin{bmatrix} 3 & -5 \\ -4 & 2 \end{bmatrix}$, then find $A^2 - 5A - 14I$. Hence find A^3.

27. If $y = (\tan^{-1}x)^2$, show that $(x^2 + 1)^2 y_2 + 2x(x^2 + 1) y_1 = 2$ 3

28. Evaluate: $\int_{-2}^{2} \dfrac{x^2}{1 + 5^x} dx$ 3

OR

Evaluate: $\int_{0}^{3/2} |x \sin \pi x| dx$

29. Find the particular solution of the given differential equation   3

$x\dfrac{dy}{dx} - y = (x + 1)e^{-x}$, given that $y = 0$, when $x = 1$

30. Find the image of the point (1, -2, 1) in the line $\dfrac{x-2}{3} = \dfrac{y+1}{-1} = \dfrac{z+3}{2}$.   3

31. From a lot of 30 bulbs which includes 6 defective, a sample of 4 bulbs is drawn at random with replacement. Find the probability distribution of the number of defective bulbs drawn.   3

SECTION - D

This section comprise of Long Answer type – questions (LA) of 5 marks each.

32. Use the product $\begin{bmatrix} 1 & -1 & 2 \\ 0 & 2 & -3 \\ 3 & -2 & 4 \end{bmatrix}\begin{bmatrix} -2 & 0 & 1 \\ 9 & 2 & -3 \\ 6 & 1 & -2 \end{bmatrix}$ to solve the system of   5

equations

$x + 3z = 9; \ -x + 2y - 2z = 4; \ 2x - 3y + 4z = -3$

33. Find the area enclosed between the parabola $4y = 3x^2$ and the straight line $3x - 2y + 12 = 0$.   5

OR

Find the area bounded by the curve $y = 2x - x^2$ and the line $y = -x$

34. Show that the lines $\dfrac{x+1}{3} = \dfrac{y+3}{5} = \dfrac{z+5}{7}$ and $\dfrac{x-2}{1} = \dfrac{y-4}{3} = \dfrac{z-6}{5}$ intersect each other. Also find their point of intersection.   5

OR

Find the equation of a line through the point (-1, 2, 3) which is perpendicular to the lines $\dfrac{x}{2} = \dfrac{y-1}{-3} = \dfrac{z+2}{-2}$ and $\dfrac{x+3}{-1} = \dfrac{y+2}{2} = \dfrac{z-1}{3}$.

35. Minimize $Z = 13x - 15y$ 5
Subject to: $x + y \le 7$, $2x - 3y + 6 \ge 0$, $x \ge 0$, $y \ge 0$.

SECTION – E
This section comprise of Case Based type – questions (CBQ) of 4 marks each

36. Sherlin and Danju are playing Ludo at home during COVID – 19. While rolling the dice, Sherlin's sister Raji observed and noted the possible outcomes of the throw every time to set {1, 2, 3, 4, 5, 6}. Let A be the set of players while B be the set of all possible outcomes.
A = {S, D} and B = {1, 2, 3, 4, 5, 6}
Based on the above information, answer the following questions:
   (a) Raji wants to know the number of functions from A to B. How many number of functions are possible?   2
   (b) Raji wants to know the number of relations from A to B. How many number of f relations are possible?   2

37. An open box with square base is to be made of a given quantity of card board of area c^2.
Based on the above information, answer the following questions:
   (a) What is the length of the side of the square base for which the volume of the box is maximum?   2
   (b) What is the maximum volume of the box?   2

38. Bag A contains 4 red, 3 white and 2 black balls. Bag B contains 3 red, 2 white and 3 black balls. One ball is transferred from bag A to bag B and then a ball is drawn from bag B. The ball so drawn is found to be red.
Based on the above information, answer the following questions:
   (a) Find the probability that the transferred ball is black.   2
   (b) Find the probability that the transferred ball is red.   2

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BURNPUR RIVERSIDE SCHOOL, BURNPUR
SECOND PRE-BOARD EXAMINATION:[2023-2024]
MATHEMATICS
CLASS: XII

Time: 3 Hrs. **Maximum Marks:80**

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General Instructions :

1.This Question paper contains - five sections A, B, C, D and E. Each section is compulsory. However, there are internal choices in some questions.

2. Section A has 18 MCQ's and 02 Assertion-Reason based questions of 1 mark each.

3. Section B has 5 Very Short Answer (VSA)-type questions of 2 marks each.

4. Section C has 6 Short Answer (SA)-type questions of 3 marks each.

5. Section D has 4 Long Answer (LA)-type questions of 5 marks each.

6. Section E has 3 source based/case based/passage based/integrated units of assessment of 4 marks each withsub-parts.

_____

SECTION A
(Multiple Choice Questions)

1. If f:R➔R, $f(x) = 3x$. Then f is [1]
   (a)one one onto   (b)many one and onto (c)one one but not onto
   (d) neither one-one nor onto

2. The principal value of $cos^{-1}(cos\frac{13\pi}{6})$ is (a)$\frac{13\pi}{6}$ (b)$\frac{\pi}{6}$ (c)$\frac{\pi}{4}$ [1]
   (d) $\frac{\pi}{5}$

3. The minor of the element of second row and third column (a_{23}) in [1]
   the determinant $\begin{vmatrix} 2 & -3 & 5 \\ 6 & 0 & 4 \\ 1 & 5 & 7 \end{vmatrix}$ is (a)−22 (b)−13 (c) 13 (d) 22

4. If the area of the triangle with vertices $(-3,0), (3,0)$ and $(0,k)$ is [1] 9 sq units, then the value/s of k will be

(a) 9 (b) ± 3 (c) -9 (d) 6

5. The value of k for which the function f(x)=$\begin{cases} kx^2, if\ x \geq 1 \\ 4, if\ x < 1 \end{cases}$ is [1]

continuous at x=1 is (a)4 (b)3 (c)2 (d)1

6. A function is said to be continuous for $x \in R$, if [1]

(a) it is continuous at x=0

(b)differentiable at x=0

(c)continuous at two points

(d)differentiable for $x \in R$

7. If $y = \log x, then\ \dfrac{d^2 y}{dx^2} =$ [1]

(a) $-\dfrac{1}{x^2}$ (b)$\dfrac{1}{x}$ c) 1 (d) x

8. The rate of change of area of a circle with respect to its radius at r [1] = 6 cm is

(a)10π (b)12π (c) 11π (d) 8π

9. $\int secx(secx + tanx)dx$ [1]

(a)$\sec x + \tan x + C$ (b)$\sec x \tan x + C$ (c)$- \sec x + C$

(d)$\tan x + C$

10. $\int \dfrac{e^{\tan^{-1} x}}{1+x^2}$ dx= ? [1]

(a)$e^{\tan^{-1} x} + C$ (b) $\tan^{-1}x+$ C (c)$\dfrac{1}{\tan x} + C$ (d) $1 + x^2$

11. $\int \dfrac{1}{1-\sin x} dx = ?$ [1]

(a) $\tan x - \sec x + C$ (b)$\tan x + \sec x + C$

(c) $\sec x - \tan x + C$ (d) $1 + \sin x + C$

12. $\int_{-\frac{\pi}{2}}^{\frac{\pi}{2}} sin^3 x \cos x\ dx =$? (a)$\dfrac{\pi}{2}$ (b)0 (c)1 (d) $-\dfrac{\pi}{2}$ [1]

13. If $\int_0^{2\pi} \sin \left(\dfrac{\pi}{4} + \dfrac{x}{2}\right) dx =$? [1]

(a) $-2\sqrt{2}$ (b)-2 (c)$\sqrt{2}$ (d)$2\sqrt{2}$

14. The degree of the differential equation $\left(\dfrac{d^2 y}{dx^2}\right)^2 + 3\dfrac{dy}{dx} + \dfrac{d^3 y}{dx^3} = 4$ is [1]

(a) 2 (b)3 (c) 1 (d) Not defined

15. The order of the differential equation $\left(\dfrac{dy}{dx}\right)^4 + 3\dfrac{d^2 y}{dx^2} = 0$ [1]

(a)2 (b)1 (c)3 (d)4

16. The angle between the vectors $\vec{a} = \hat{\imath} - \hat{\jmath} + \hat{k}$ and $\vec{b} = \hat{\imath} + \hat{\jmath} - \hat{k}$ [1]
(a) $\frac{1}{3}$ (b) $\frac{2}{3}$ (c) $-\frac{1}{3}$ (d) $\cos^{-1}\left(\frac{1}{3}\right)$

17. The value of λ for which two vectors $2\hat{\imath} + \hat{\jmath} + 3\hat{k}$ and $\hat{\imath} - \lambda\hat{\jmath} + 4\hat{k}$ are perpendicular to each other is [1]
(a)12 (b)−12 (c)14 (d)−14

18. If $\vec{a}$ and $\vec{b}$ are two vectors such that $|\vec{a}| = \sqrt{3}, \ |\vec{b}| = 2$ and [1]
angle between them is $60°$ then is $\vec{a}.\vec{b}$ is
(a)$\sqrt{3}$ (b)$\frac{1}{2}$ (c)$\frac{1}{\sqrt{3}}$ (d) 2

ASSERTION-REASON BASED QUESTIONS

19. Assertion (A): If A and B are two independent events then $\bar{A}$ and $\bar{B}$ are also independent [1]
Reason (R): For two mutually exclusive events A and B, P(A∩B) = 0
(a)Both A and R are true and R is the correct explanation of A.
(b) Both A and R are true but R is not the correct explanation of A.
(c) A is true but R is false.
(d) A is false but R is true.

20. Assertion (A): direction cosine of y axis are 0,1,0 [1]
Reason (R): any order triplet represents direction cosines of a line.
(a)Both A and R are true and R is the correct explanation of A.
(b) Both A and R are true but R is not the correct explanation of A.
(c) A is true but R is false.
(d) A is false but R is true.

SECTION-B

21. Prove that f:R→ R given by f(x)=x^3+1 is one one function [2]
OR
Given $f(x) = \sin x$. Check if the function f is one one for $(0, \pi)$

22. Show that the function $f(x) = 4x^3 - 18x^2 + 27x - 7$ is always increasing on R. [2]

23. Find the value of k for which $f(x) = \begin{cases} kx^2, & x \geq 1 \\ 4, if \ x < 1 \end{cases}$ at x=1 is continous [2]

24. Evaluate $\int x (\log x)^2 \, dx$

OR

$\int \dfrac{1}{4 + 9x^2} \, dx =?$ [2]

25. If θ is the angle between two vectors $\hat{\imath} - 2\hat{\jmath} + 3\hat{k}$ and $3\hat{\imath} - 2\hat{\jmath} + \hat{k}$, find $\sin\theta$ [2]

SECTION-C

26. If $A = \begin{bmatrix} 1 & -1 \\ -1 & 1 \end{bmatrix}$ and $A^2 = kA,$ then write the value of k   [3]

OR

If A= $\begin{bmatrix} 4 & 3 \\ 2 & 5 \end{bmatrix}$, find the values of x and y such that $A^2 - xA + yI = O$ where I is a 2×2 unit matrix and O is a 2×2 zero matrix

27. If $y = \tan^{-1} x$ then prove that   [3]

$(1 + x^2)\dfrac{d^2y}{dx^2} + 2x\dfrac{dy}{dx} = 0$

28. $\displaystyle\int_{\frac{\pi}{6}}^{\frac{\pi}{3}} \dfrac{dx}{1 + \sqrt{\cot x}} =?$ [3]

OR

$\displaystyle\int_{0}^{1} \sin^{-1} \dfrac{2x}{1 + x^2} \, dx =?$

29. Find the solution of the differential equation   [3]
$x\dfrac{dy}{dx} = y(\log y - \log x + 1)$

30. Find the point on the line $\dfrac{x+2}{3} = \dfrac{y+1}{2} = \dfrac{z-3}{2}$ at a distance of $3\sqrt{2}$ units from the point (1,2,3)   [3]

31. A and B appear in an interview for two vacancies for the same post. The probability of A's selection is $\dfrac{1}{7}$ and that of B's selection is $\dfrac{1}{5}$. What is the probability that   [3]
(i) both will be selected?
(ii) only one of them will be selected ?
(iii)none of them will be selected?

SECTION-D

32. Solve the following system of linear equations by matrix method [5]
$$\frac{2}{x}+\frac{3}{y}+\frac{10}{z}=4,$$
$$\frac{4}{x}-\frac{6}{y}+\frac{5}{z}=1,$$
$$\frac{6}{x}+\frac{9}{y}-\frac{20}{z}=2$$

33. Using integration find the area of the ΔABC whose vertices are [5]
A(1,2),B(2,0), and C(4,3)

OR

using integration find the area bounded by the parabola $y^2=16x$ and its latus rectum

34. Find the shortest distance between the lines [5]
$$\frac{x-1}{2}=\frac{y+1}{3}=z \text{ and } \frac{x+1}{1}=\frac{y+4}{1}=\frac{z+1}{1}$$

OR

Find the shortest distance between the lines whose vector equations are $\vec{r_1}=(6\hat{i}+2\hat{j}+2\hat{k})+\lambda(\hat{i}-2\hat{j}+2\hat{k})$ and $\vec{r_2}=(-4\hat{i}-\hat{k})+\mu(3\hat{i}-2\hat{j}-2\hat{k})$,where λ , μ are scaler

35. Solve the following linear programming problem graphically [5]
Minimize $z=5x+10y$
Subject to $x+2y\le 120,$
$x+y\ge 60$ and $x-2y\ge 0,$ $x\ge 0, y\ge 0$

SECTION-E

(This section comprises of 3 case-study/passage-based questions of 4 marks each with two sub-parts. First two case study questions have three sub parts (i), (ii), (iii) of marks 1, 1, 2 respectively. The third case study question has two sub-parts of 2 marks each.)

36. *Casestudy1:*
Rajan and Manish are playing ludo at home. While rolling the dice Rajan's sister Raji observed and noted that possible outcomes of the throw every time belongs to set {1,2,3,4,5,6}. Let A be the set of players and B be the set of all outcomes.
A={R,M}, B={1,2,3,4,5,6}

1

(i) Let the relation R:B→B defined by R={(x,y):y is divisible by x}. show that relation is reflexive and transitive but not symmetric

(ii) let R be a relation on B defined by   1
R={(1,2),(2,2),(1,3),(3,4),(3,1),(4,3),(5,5)}. Check whether R is an equivalence relation.

                                                                                              2
(iii) how many number of functions are possible from A to B?
                                    OR
 (iii)how many number of relations are possible from A to B?

37.   ***Casestudy2:*** $P(x) = -5x^2 + 125x + 37500$ is the total profit function of a company where x is the production of the company
       (i)what will be the production when profit is maximum?   1
       (ii) what will be the maximum profit?   1
       (iii) when the production is 2 units what will be the profit of the   2
       company?
                                    OR
          (iii)What will be the production of the company when the profit is Rs 38250?

38.   ***Casestudy3***: A coach is training 3 players. He observes that the player A can hit a target 4 times in 5 shots , player B can hit 3 times in 4 shots and the player C can hit 2 times in 3 shots .
       consider the following events
       A= A hits the target
        B= B hits the target
        C= C hits the target

       (i)What is the probability that all will hit the target?   2
       (ii) what is the probability that none of them hit the target?   2

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NAME_____SEC_____ROLLNO._____

BURNPUR RIVERSIDE SCHOOL, BURNPUR
PRE BOARD-II EXAMINATION: [2023-2024]
PHYSICS
CLASS-XII

Time: 3 Hrs.   **Maximum Marks: 70**
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General Instructions:
(1) There are 33 questions in all. All questions are compulsory.
(2) This question paper has five sections: Section A, Section B, Section C, Section D and Section E.
(3) All the sections are compulsory.
(4) Section A contains sixteen questions, twelve MCQ and four Assertion Reasoning based of 1 mark each, Section B contains five questions of two marks each, Section C contains seven questions of three marks each, Section D contains two case study based questions of four marks each and Section E contains three long answer questions of five marks each.
(5) There is no overall choice. However, an internal choice has been provided in one question in Section B, one question in Section C, and all three questions in Section E. You have to attempt only one of the choices in such questions.
(6) Use of calculators is not allowed.
(7) You may use the following values of physical constants where ever necessary
i. $c = 3 \times 10^8$ m/s
ii. $m_e = 9.1 \times 10^{-31}$ kg
iii. $e = 1.6 \times 10^{-19}$ C
iv. $\mu_0 = 4\pi \times 10^{-7}$ TmA^{-1}
v. $h = 6.63 \times 10^{-34}$Js
vi. $\varepsilon_0 = 8.854 \times 10^{-12} C^2 N^{-1} m^{-2}$
vii. Avogadro's number = 6.023×10^{23} per gram mole
==

SECTION : A

1.   A capacitor C is fully charged with voltage V_0. After   1
        disconnecting the voltage source, it is connected in parallel
        with another uncharged capacitor of capacitance C/2. The
        energy loss in the process after the charge is distributed
        between two capacitors is

(a) $CV_0^2/4$
(b) $CV_0^2/3$
(c) $CV_0^2/6$
(d) $CV_0^2/2$

2.   Three infinitely long charge sheets are placed as shown in fig.   1
The electric field at point P is:
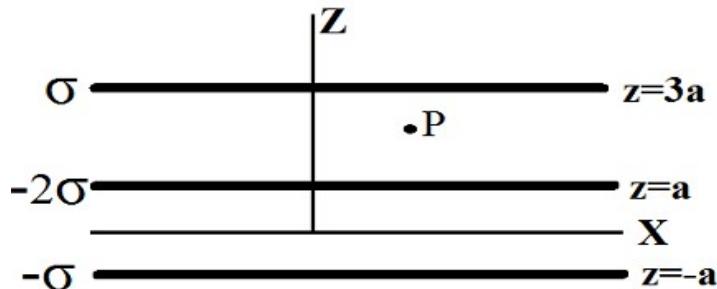
(a) $2\sigma/\varepsilon_0\hat{k}$
(b) $-2\sigma/\varepsilon_0\hat{k}$
(c) $4\sigma/\varepsilon_0\hat{k}$
(d) $-4\sigma/\varepsilon_0\hat{k}$

3.   A proton, a neutron, an electron and an α particle have same   1
energy. Then their de Broglie wavelengths compared as:
(a) $\lambda_p = \lambda_n > \lambda_e > \lambda_\alpha$
(b) $\lambda_\alpha < \lambda_p = \lambda_n < \lambda_e$
(c) $\lambda_e < \lambda_p = \lambda_n > \lambda_\alpha$
(d) $\lambda_p = \lambda_n = \lambda_e = \lambda_\alpha$

4.   The speed of particle that can take discrete values is   1
proportional to
(a) $n^{2/3}$
(b) n^{-1}
(c) $n^{1/2}$
(d) n

5.   A current of 10 A is flowing from east to west in a long straight   1
wire kept on a horizontal table. The magnetic field developed
at a distance of 10cm due to north on the table is:
(a) 2×10^{-5} T acting downwards
(b) 2×10^{-5} T acting upwards
(c) 4×10^{-5} T acting downwards
(d) 4×10^{-5} T acting upwards

6.   Above Curie temperature   1
   (a)   Ferromagnetic material becomes diamagnetic
   (b)   Ferromagnetic material becomes paramagnetic
   (c)   Paramagnetic material becomes ferromagnetic
   (d)   Paramagnetic material becomes diamagnetic

7.   A straight current carrying conductor is placed inside a uniform   1
         magnetic field. The force acting per unit length of the
         conductor is
   (a)   Maximum when the conductor is perpendicular to the direction
         of magnetic field
   (b)   Maximum when the conductor is along the direction of
         magnetic field
   (c)   Minimum when the conductor is perpendicular to the direction
         of magnetic field
   (d)   Minimum when the conductor is making 45^0 with the direction
         of magnetic field

8.   When two nuclei (A≤10) fuse together to form a heavier   1
         nucleus the
   (a)   B.E. per nucleon increases
   (b)   B.E. per nucleon decreases
   (c)   B.E. per nucleon does not change.
   (d)   B.E. is not involve in fission reaction.

9.   The phase difference between the current and voltage in series   1
         LCR circuit at resonance is:
   (a) π
   (b) $\pi/2$
   (c) $\pi/3$
   (d)   zero

10   The oscillating magnetic field in a plane em wave is given as   1
         $B_y = 8 \times 10^{-6} \sin [2 \times 10^{11}t + 300\pi x]$ T, wavelength of the em
         wave is:
   (a)   0.08 cm
   (b) 1×10^3 m
   (c) 2×10^{-2} cm
   (d)   0.67 cm

11.   A coil having 500 square loops of side 10cm is placed normal   1
        to the magnetic flux which increases at the rate of 1 T/s. The
        induced emf is
    (a)   0.1V
    (b)   0.5V
    (c)   1V
    (d)   5V

12.   If 13.6eV energy is required to ionize the hydrogen atom, then   1
        the energy required to remove an electron (in eV) from n=2 is
    (a)   10.2
    (b)   Zero
    (c)   3.4
    (d)   6.8

**For Questions 13 to 16, two statements are given –one
labelled Assertion (A) and other labelled Reason (R). Select
the correct answer to these questions from the options as
given below.
a) If both Assertion and Reason are true and Reason is
correct explanation of Assertion.
b) If both Assertion and Reason are true but Reason is not
the correct explanation of Assertion.
c) If Assertion is true but Reason is false.
d) If both Assertion and Reason are false.**

13.   **Assertion (A):** In his study of photoelectric emission   1
        Hallwachs connected a negatively charged zinc plate to an
        electroscope. He found that the negatively charged particles
        were emitted from the zinc plate under the action of visible
        light.
        Reason (R): An uncharged zinc plate becomes positively
        charged when radiated by visible light.

14.   **Assertion (A):** The depletion layer in p-n junction under   1
        forward bias decreases.
        Reason (R): The electric field due to external voltage supports
        the electric field due to potential barrier.

15. **Assertion (A):** A metallic shield in the form of a hollow shell may be built to block an electric field. 1
Reason (R): In hollow spherical shield the electric field inside it is zero at every point.

16. **Assertion (A):** The angle of minimum deviation of a prism is lesser for red light than for blue light. 1
Reason (R): The refractive index of the material of the material of a prism for blue light is greater than that for red light.

SECTION : B

17. Draw V-I characteristic of a p-n junction diode. Explain why the current under reverse bias is almost independent of the applied voltage upto the critical voltage. 2

18. Using Rutherford model of the atom derive the expression for the total energy of the electron in hydrogen atom. Write the significance of total negative energy possessed by the electron. 2

19. An object is placed 15cm in front of convex lens of focal length 10cm. Where a concave mirror of radius of curvature 20cm should be placed so that the final image is formed at the position of the object itself. 2

20. A cell of emf E and internal resistance r is connected across a variable resistor R. Plot a graph showing the variation of terminal voltage V of the cell verses the current I. Using the plot show how the emf of the cell and its internal resistance can be determined? 2

21.   Prove Lens Makers formula for a double convex lens.   2
                              OR
           A beam of light converges at a point P. Now a lens is placed in
           the path of the convergent beam 12cm from P. At what point
           does the beam converge if the lens is
           (a) a convex lens of focal length 20 cm
           (b) a concave lens of focal length 16 cm

SECTION : C

22.   Draw the plot of binding energy per nucleon as a function of   3
           mass number. Use this graph to explain the release of energy in
           both the processes of nuclear fission and fusion.

23.   Calculate potential on the axis of a ring due to charge Q   3
           uniformly distributed along the ring of radius R.

24.   The ground state energy of hydrogen atom is -13.6eV.   3
    (a)   What is the potential energy of electron in 3rd excited state?
    (b)   If the electron jumps to the ground state from the 3rd excited
           state, calculate the wavelength of the photon emitted.

25.   Using Kirchhoff's rules calculate the current through 40Ω and   3
           20Ω resistors in the following circuits:
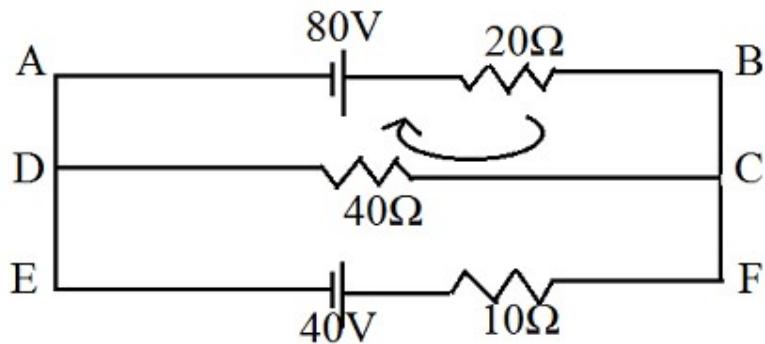
26.   A rectangular loop of wire of size 4cm x 10cm carries a steady   3 current 2A. A straight long wire carrying 5A current is kept near the loop as shown. If the loop and the wire are coplanar find
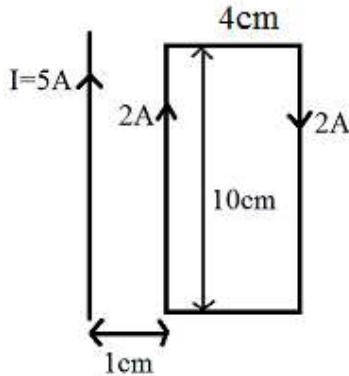
(i)   The torque acting on the loop
(ii)   The magnitude and direction of the force on the loop due to the current carrying wire.

27.   Answer the following: 3
(a)   Long distance radio broadcasts use short wave bands. Why?
(b)   Why is the amount of momentum transferred by the em waves incident on the surface so small?

28.   The magnetic flux linked with a closed circular loop of radius   3 20cm and resistance 2Ω at any instant of time is $\phi = 4t + 3$. Where ϕ is in milliweber and t is in sec.
Find
(a)   Flux linked with the loop at t = 3s
(b)   Induced emf at t = 2s
(c)   Plot a graph between
(i) ϕ and t
(ii) ε and t

<center>OR</center>

The magnetic field through a circular loop of wire 12cm in radius and 8.5Ω resistance, changes with time as shown in figure. The magnetic field is perpendicular to the plane of the loop. Calculate the induced current in the loop and plot it as a function of time.
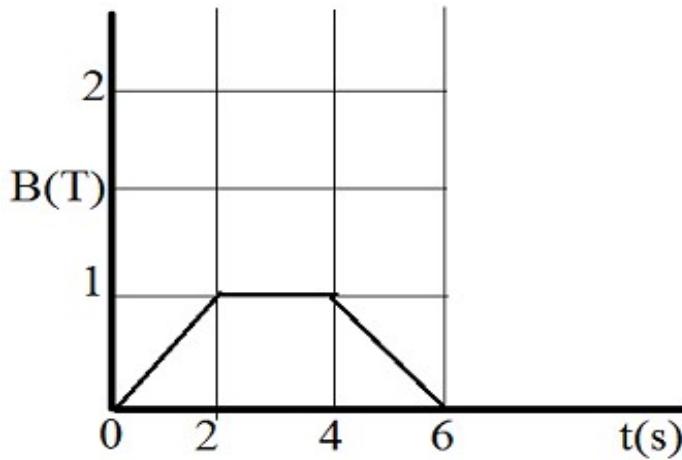
SECTION-D
Case Study Based Questions

Read the following paragraph and answer the questions that follow.

29. There are different tecniques of fabricating p-n junction. In one 4 such tecnique called fused junction tecnique, an aluminium film is kept on the wafer of n- type semiconductorand the combination is then heated to a high temperature(about 600^0C). As a result Aluminium fused into and produces p type semiconductor and in this way p-n junction is formed.

(i) When p-n junction is reversed baised, then how does height of potential barrier change?
(a) No current flows
(b) The depletion region is reduced
(c) Height of the potential barrier is decreased
(d) Height of the potential barrier is increased

(ii) The cause of potential barrier in p-n junction is
(a) depletion of positive charge near the junction
(b) concentration of negative charge near the junction
(c) concentration of positive and negative charges near the junction
(d) depletion of negative charge near the junction

(iii) The circuit has two oppositely connected ideal diodes in parallel. What is the current flowing in the circuit?
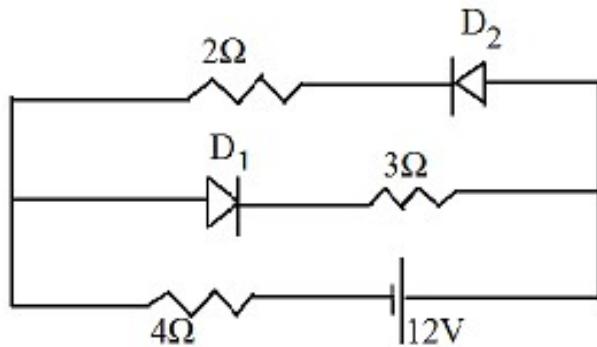
(a) 1.17A
(b) 2A
(c) 2.31A
(d) 1.33A

(iv) When p-n junction is forward biased then
(a) only diffusion current flows
(b) both diffusion current and drift current flow but diffusion current is more than drift current
(c) only drift current flows
(d) both diffusion current and drift current flow but drift current is more than diffusion current

30.   Mirage in Deserts: 4
To a distint observer, the light appears to be coming from somewhere below the ground. The observer naturally assumes that light is being reflected from the ground, say, by pool of water near the tall object.
Such inverted images of distinct tall objects cause an optical illusion to the observer. This phenomenon is called mirage. This type of mirage is generally common in hot deserts.

(i)   Which of the following phenomenon is involved in the formation of mirage?
(a) refraction, total internal reflection
(b)dispersion and refraction
(c) dispersion and scattering of light
(d) total internal reflection and diffraction.

(ii) A driver at a depth 12m inside water of refractive index 4/3 sees sky in a cone of semi vertical angle
(a) $\sin^{-1} 4/3$
(b) $\tan^{-1} 4/3$
(c) $\sin^{-1} 3/4$
(d) 90^0

(iii) Light fall from glass to air. Find the angle of incidence for which the angle of deviation is 90^0, if refractive index of glass is $(2)^{1/2}$
(a) 90^0
(b) 45^0
(c) 30^0
(d) 60^0

(iv) Calculate the speed of light in a medium whose critical angle is 30^0.
(a) 3×10^8 m/s
(b) 1.5×10^8 m/s
(c) 2×10^8 m/s
(d) 1 m/s

SECTION : E

31. (a) Draw a labeled ray diagram of compound microscope.   5

(b) Derive an expression for its magnification power.
(c) Why is objective of a microscope of short aperture and short focal length?

OR

A beam of light consisting of two wavelengths 650nm and 520nm is used to obtain interferance fringes in Young's double slit experiment on a screen 1.2m away. The separation between the slits is 2mm.

(a) Find the distance of the third bright fringe on the screen from the central maximum for wavelength 650nm.

(b) What is the least distance from the central maximum when the bright fringes due to both the wavelength coincide?

32. (a) A parallel plate capacitor is charged by a battery to a potential. 5
The battery is disconnected and a dielectric slab is inserted to completely fill the space between the plates.
How will
(i)its capacitance
(ii) electric field between the plates and
(iii) energy stored in the capacitor be affected?
Justify your answer giving necessary mathematical expressions for each case.

(b) Sketch the pattern of electric field lines due to
(i) a conducting sphere having negative charge in it
(ii) an electric dipole.

OR

Two charges –q and +q are located at points (0,0,-a) and (0,0,a) respectively. What is the electrostatic potential at point (x,y,0) and (0,0,±z)

33. (a) Find the condition for resonance in series LCR circuit 5
connected to a source $V=V_m sin\omega t$ where ω can be varied.

(b) Give the factors on which the resonant frequency of a series LCR circuit depends.

(c) Plot a graph showing the variation of electric current with frequency in series LCR circuit.
OR
(i) Describe briefly with the help of labelled diagram, the working of a step up transformer.
(ii) Write any two sources of energy loss in a transformer.
(iii) A step up transformer converts a low voltage into a high voltage. Does it not violate the principle of conservation of energy? Explain

CODE:B

BURNPUR RIVERSIDE SCHOOL, BURNPUR
PRE BOARD-II EXAMINATION: [2023-2024]
PHYSICS
CLASS-XII

Time: 3 Hrs.   **Maximum Marks: 70**
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General Instructions:

All questions are compulsory. However internal choice is there. Question paper has five sections A, B, C, D and E
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SECTION:A

Choose the correct option only:

Q1.   If charge on $3\mu F$ capacitor is $3\ \mu C$. Then what is the charge on   1
the capacitor of capacitance C in μC.
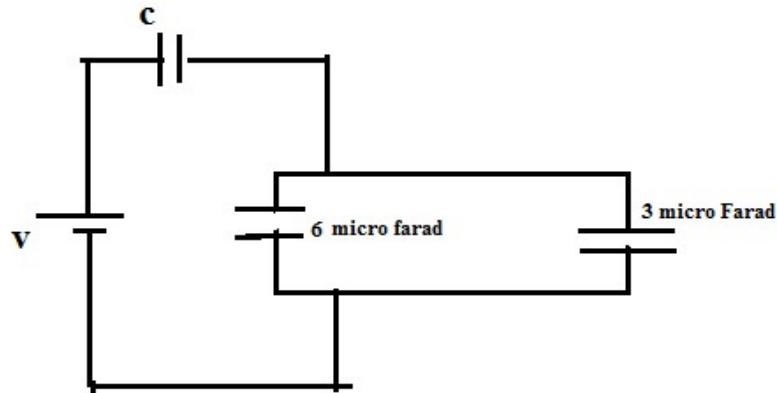
a.$9\mu C$ b.$6\ \mu C$ c.$3\ \mu C$ d.$12\ \mu C$

Q2.   Two point charges +9e and +e are placed 16 cm apart from   1
each other. Where should a third charge be placed from the +9e
charge such that the whole system remains in equilibrium.

a.6 cm   b. 9cm   c.3 cm   d.12 cm

Q3. When wavelength of radiation falling on a metal changes from 500 nm to 200nm, the maximum kinetic energy of photoelectrons becomes three times larger. The work function metal is close to : 1
a.0.52ev b.1.02ev   c.0.61ev   d.0.81ev

Q4. A He$^+$ ion is its first excited state. Its ionization energy is: 1
a.13.6ev b.6.04ev   c.48.36ev   d.54.40ev

Q5. The magnetic field due to current carrying circular loop of radius 3cm at a point on the axis at a distance of 4cm from the center is $54\mu T$. What is the value of magnetic field at the center of the loop is: 1
a.$250\mu T$ b. $150\mu T$ c.125μT   d.75μT

Q6. A proton , duetron and an alpha particle having same kinetic energy are allowed to pass through uniform electric field perpendicular to their direction of motion , then ratio of their radius r_p:r_d:r_{alpha}= 1

a. 1:2:1   b.$\sqrt{2}$:1:2   c.1:$\sqrt{2}$:1   d.2:2:1

Q7. If a galvanometer is connected in series with a high resistance so that potential difference across the galvanometer is 1/n th of the total applied voltage, then combined resistance of the galvanometer and the series resistor is : 1
a.2nR_g b.nR_g c.R_g d.n^2R_g

Q8. In a hydrogen like atom , when an electron jumps from M shell to L shell , the wave length of the emitted radiation is λ. If the electron jumps from N shell to L shell , the wave length of emitted radiation will be : 1
a.$\frac{27}{20}\lambda$ b.$\frac{16}{25}\lambda$ c.$\frac{20}{27}\lambda$ d.$\frac{25}{16}\lambda$

Q9. A 2 μF capacitor, 100ohm resistor and 8H inductor are connected in series with an AC source. What should be the frequency such that current drawn in the circuit is maximum: 1
a.25π Hz   b.50/π Hz c.250/π Hz   d. 125/π Hz

Q10. Electromagnetic waves are transverse in nature is established   1
by :
a. Polarization b.Interferencec.Reflectiond.Diffraction

Q11.   1
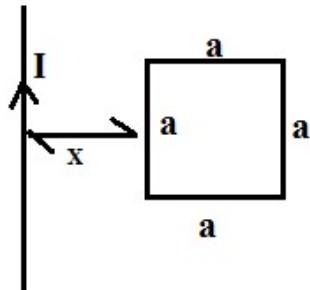
Flux passing through the square coil which is at x distance from
the infinite long wire is :

a.$\frac{\mu_\circ}{4\pi}\ln(a+a/x)$ b.$\frac{\mu_\circ}{\pi}\ln(a+a/x)$

c.$\frac{\mu_\circ}{2\pi}\ln(a+a/x)$ d.$\frac{\mu_\circ}{4\pi}\ln(a-a/x)$

Q12. The energy that must be added to an electron so as to reduce its   1
de-Broglie wave length from 1nm to 0.5nm is :

a.four times initial kinetic energy .

b. twice times initial kinetic energy.

c. thrice times initial kinetic energy.

d. equal to initial kinetic energy.

Reasoning Assertion type.   1

Instruction for question no 13 to 16.

Question contains two statements, Assertion and Reason.
Question also has four alternative choices, only one of which is
the correct answer. You have to select one of the codes (a), (b),
(c) and (d) from given below.
(a) Assertion is correct, reason is correct; reason is a correct
explanation for assertion.
(b) Assertion is correct, reason is correct; reason is not a correct
explanation for assertion
(c) Assertion is correct; reason is incorrect
(d) If both Assertion and reason is false.

Q13. **ASSERTION**: Mass of a moving photon varies inversely as the wave length.   1

REASON: Energy of the particle = mass x (speed of light)^2

Q14. **ASSERTION**: Energy gap between valance band and conduction band is greater in silicon than in germanium   1

REASON: Thermal energy produces fewer minority carriers in silicon than in germanium

Q15. **ASSERTION**: Sky is maximum red in the morning   1

REASON: Smallest wave length is scattered maximum

Q16. **ASSERTION**: A hollow metallic shield in form of a hollow shell may be built to block an electric field.   1

REASON: In a hollow spherical, electric field inside every point is zero.

SECTION :B

Each carry two marks

Q17. Draw circuit diagram of a full wave rectifier and explain its working.   2

Q18. Define mass defect and express it mathematically.   2

Q19. Derive thin lens formula for convex lens producing real image.   2

Q20. A convex lens of focal length 30cm is placed between screen and square plate of area 4cm^2. Image of the plate produced on the screen is 16cm^2. Calculate the distance between the plate and the screen.   2

OR

A screen is placed 80cm from an object. The image of the object on the screen is formed by a convex lens at two different positions, separated by 20cm. Calculate the focal length of the lens used.

Q21. Establish the relation I=neaV_d, where terms have their usual meaning.   2

SECTION :C

Each question carries 3 marks.

Q22. Draw the graph of P.E for a pair of nucleon vs separating   3
distance r between them, explain the graph. Give salient
features of nuclear forces.

Q23. Derive expression of electric field due to dipole at an **axial**   3
pointoutside the dipole. Electric field is increasing along
positive x axis, draw equipotential surfaces.

Q24.   a. Draw graph of anode potential vs photocurrent for two   3
rays falling on a metal surface. The rays are having same
wave length but their intensities are different ($I_1>I_2$)

b. Draw graph of anode potential vs photocurrent for two
rays falling on a metal surface. The rays are having
different wave length ($\lambda_1 > \lambda_2$ but their intensities are
same ($I_1=I_2$)

c. Draw the graph of stopping potential vs frequency of
incident radiation.

Q25.   a. Draw the variation of resistivity of copper with   3
temperature.

b. Draw the variation of resistivity of nichrome with
temperature

c. Draw the variation of resistivity of semiconductor with
temperature

Q26. A circular loop of radius R is carrying a current of I. Derive the 3
expression of magnetic field at a distance of X from its center
of the current carrying loop.

Q27.   A glass sphere of radius 15cm has a small bubble at 6cm from
        the center. The bubble is viewed along the diameter of sphere
        from the side on which it lies. How far from the surface will it
        appear to be if refractive index of glass is 3/2. Also ray
        diagram.   3

Q28.   Derive the expression of energy stored in an inductor coil of   3
        self –inductance**L**. Write the dimension of inductive reactance
        of a coil.

                                    OR

        Derive the expression of energy stored per unit volume in a
        magnetic field. Write dimension magnetic flux.

                            SECTION:D
        Question no 29 and 30 are Case Based questions:
Q29.   **Any device whose action is based on the controlled flow of   4
        electrons through it is called as electronic device. In 1930 it
        was first realized that solid-state semiconductors and their
        junction have a possibility of controlling the number and
        direction of current flow.**

        Answer any four question , Choose correct option only:

        a.The major carrier of current in a **N type** semiconductor is :

        i)neutrons ii)protons iii)electrons iv)holes

        b.An**acceptor** impurity results in :

        i)Production of n type semiconductor

        ii)Production of P-type semiconductor

        iii)Increase in resistance of semiconductor

        iv)Decreases the resistance of the semiconductor

        c.Semiconductors obey Ohm's law for only:

        i.High field   ii. Low field

        iii. Both high and low fieldiv. None of the above

d.In a N-type semiconductor , germanium is doped with:

i)Phosphorus b) arsenic   iii)Antimony   iv)all of these

e.In**reverse biased** condition thickness of depletion zone

i)increases ii) decreases iii)fluctuates iv)no change

Q30.   **Huygen's principle is the basis of wave theory of light. It**   4
tells us how a wave front propagates through a medium.
Each point on a wavefront is source of secondary wave.
Huygens principle can be used to prove both law of
reflection and refraction.

Answer any four question ,Choose correct option only:

a.Two plane monochromatic waves are propagating in same
direction having amplitude A and 2A differing in phase by $\pi/3$.
Then amplitude of resulting wave is :

i.$\sqrt{7}$A   ii.$\sqrt{6}$A   iii.$\sqrt{8}$A   iv. $\sqrt{9}$A

b. In Young's double slit experiment, what is the intensity at a
point on the screen where two waves arrive having a phase
difference of 60^0.

i)I_0 ii) $2I_0$ iii)$3I_0$ iv)$4I_0$

c. In a YDSE , two parallel slits are made 1 mm apart and
screen is placed 1m away, fringe separation formed when light
of 500nm is used:

i.5mm   ii.5cm   iii.0.005mm   iv. 0.5mm

d. In YDSE the path difference at a point on the screen,
between two interfering waves is 1/8 th of the wave length. The
ratio of intensity at this point to that at the center of a bright
fringe is close to:

i.0.74   ii.0.94   iii.0.80 iv.0.85

e)To demonstrate phenomenon of interference , we require two sources which emit radiation of :

i.Nearly same frequency

ii.The same frequency

iii.Different wave length

iv.Same frequency having different phase relationship

SECTION –E

Long answer type question.

Q31.   **Answer either (a and b) OR (c and d)**   5

a) With the help of a ray diagram, explain the construction and working of a **compound microscope** for **normal** adjustment. Find the expression for magnifying power for**normal** adjustment.

b)Deduce the expression of fringe width in Young's double slit experiment.

OR

c) With the help of a ray diagram, explain the construction and working of a **telescope** for **normal**adjustment. Find the expression for magnifying power for **normal** adjustment.

d)The transparent solid cylinder has refractive index of $2/\sqrt{3}$. It is surrounded by air. A light ray is incident at the middle point as shown in the figure. Find the angle θ for which ray grazes with the wall of the rod.
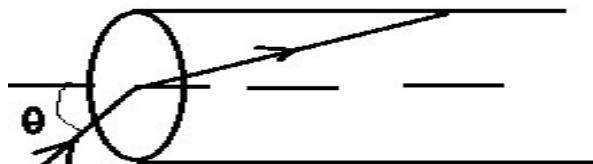
Q32.   **Answer either (a and b) OR (c and d)**   5

a) Derive the expression for force of attraction between plates of a parallel air capacitor.
b) State Gauss law of electrostatics. Use Gauss law to derive Coulomb's law from it.

<div align="center">OR</div>

c) An earlymodel of atom considered having positively charged point nucleus of charge Ze , surrounded by by negative charge of up to radius R. The atom as a whole is neutral. Find expression of field at distance r (r<R).
d) Derive the expression of torque acting on an electrical dipole placed in an uniform electrical field**.**

Q33.   **Answer either (a and b) OR (c and d)**   5

a) A sinusoidal emfof $V=V_0 sinwt$ is applied to a circuit containing an inductor only. Show that the expression of current across the inductor is: $I=I_0 sin(wt-\pi/2)$.

b) An inductor and a resistor **are** added in series to an ac source. The voltage across inductor and capacitor are120 volt and 90 volt respectively and rms value of current is 3Amp, Then calculate impedance of circuit and phase difference between current and voltage.

<div align="center">**OR**</div>

c) A sinusoidal emf of $V=V_0 sinwt$ is applied to a circuit containing an capacitor only. Show that the expression of current across the capacitor is: $I=I_0 sin(wt+\pi/2)$.

d) Derive the expression resonance frequency in a series L,C and R ac circuit. Draw the phasor diagram also.

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NAME_____SEC_____ROLLNO._____

BURNPUR RIVERSIDE SCHOOL, BURNPUR
PRE BOARD-II EXAMINATION: [2023-2024]
CHEMISTRY
CLASS-XII

Time: 3 Hrs.   **Maximum Marks: 70**
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General instructions:-
- There are 33 questions in this question paper with internal choice.
- SECTION-A consists of 12 multiple choice questions and 4 Assertion/Reason questions carrying 1 marks each.
- SECTION-B consists of 5 very short answer questions carrying 2 marks each.
- SECTION-C consists of 7 short answer questions carrying 3 marks each.
- SECTION-D consists of 2 case-based questions carrying 4 marks each.
- SECTION -E consists of 3 long answer questions carrying 5 marks each.
- **All questions are compulsory.**
- **Use of calculators is not allowed.**

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SECTION-A

1   What would be the change in pH of the solution, when electrolysis   1
     of aqueous solution of $CuSO_4$ is carried out in presence of inert
     electrodes?
     a) pH increases   b) pH decreases c) no change in pH d) can't be
     predicted

2   Which of the following will show disproportionation when treated   1
     with 50% aqueous NaOH?
     a) m-Nitrobenzaldehyde
     b) Formaldehyde
     c) Benzaldehyde
     d) All of these

3   The functional unit that is repeated in a protein molecule is :   1
     a) An ester linkage
     b) A glycosidic linkage
     c) A peptide linkage
     d) An ether linkage

4   Which of the following will not reduce the Fehling's reagent?   1
     a) Formic acid b) Ethanal c) 2-Methylpropanal d) Benzaldehyde

5   Chlorobenzene when treated with sodium in dry ether gives   1
     Diphenyl. It is called:
     a) Wurtz reaction
     b) Fittig reaction
     c) Wurtz-Fittig reaction
     d) Friedal-Craft reaction

6   Which of the following is the radioactive element among all   1
     lanthanoids?
     a) Promethium b) Lutetium c) Yetterbium d) Samarium

7   The plot of logK vs 1/T helps to calculate: 1
     a) Activation energy
     b) Rate constant
     c) Reaction order
     d) Activation energy and frequency factor

8   Gabriel phthalimide synthesis is used in the preparation of :   1
     a) 1° Amines b) 2° Amines c) 3° Amines d) Mixture of three types
     of amines.

9   An aldehyde can be reduced to alkane by :   1
     a) $NaBH_4$ b) Ni/H_2 c) Zn-Hg/HCl d) $LiAlH_4$

10   For an endothermic reaction, $\Delta_r H$ represents the enthalpy of   1
     reaction. The minimum value for the energy of activation will be:
     a) equal to $\Delta_r H$
     b) zero
     c) less than $\Delta_r H$
     d) cannot be predicted

12   What is the shape of MnO_4^- ion?   1
     a) Square planar
     b) See-saw
     c) Tetrahedral
     d) Square pyramidal

For questions given below, two statements are given- one lebelled Assertion (A) and the other lebelled Reason(R). Select the correct answer from the following codes (A),(B),(C) and (D) as given below.
A) Both assertion and reason are correct statements and reason is the correct explanation of assertion.
B) Both assertion and reason are correct statements, but reason is not the correct explanation of assertion.
C) Assertion is correct, but reason is wrong statement.
D) Assertion is wrong, but reason is correct statement.

13   Assertion: Alcohols react both as nucleophiles and electrophiles.   1
        Reason: The bond between O-H is broken when alcohols react as
        nucleophiles.

14   Assertion: The boiling points of ketones are higher than those of   1
        aldehydes of comparable molecular masses.
        Reason: Ketones are more polar than aldehydes.

15   Assertion: D-(+)-glucose is dextrorotatory in nature.   1
        Reason: 'D' represents its dextrorotatory nature.

16   Assertion: The potential difference between two electrodes of a   1
        galvanic cell is called the cell potential.
        Reason: Cell potential is measured in volts.

SECTION-B

17   What is the unit of rate of reaction when expressed in terms of: 2
        a) concentration ?
        b) pressure for gaseous reactants and products?

18   What is semi-permeable membrane? Give an example.   2
19   Cyanide ion acts as an ambient nucleophile. From which end it acts   2
        as a stronger nucleophile in aqueous medium? Give reason for your
        answer.

20   Give a plausible explanation for the following statement: There are   2
     two $-NH_2$ groups in semicarbazide. However, only one is involved
     in the formation of semicarbazones.
     OR
     Would you expect Benzaldehyde to be more reactive or less reactive
     in nucleophilic addition reactions than propanal? Explain your
     answer.

21   How are vitamins classified? Name the vitamin responsible for   2
     coagulation of blood.

SECTION-C

22   a) Why is $[NiCl_4]^{2-}$ paramagnetic while $[Ni(CN)_4]^{2-}$ is diamagnetic?   3
     (Atomic number of Ni = 28)
     b) Why are low spin tetrahedral complexes rarely observed?

23   State Faraday's laws of electrolysis. How much charge in terms of   3
     Faraday is required for reduction of 1 mol of $Cr_2O_7^{2-}$ to Cr^{3+}?

24   a) Name the starting material used in the industrial preparation of   3
     phenol.
     b) Write complete reaction for the bromination of phenol in aqueous
     and non-aqueous medium.

25   Which of the following compounds would undergo aldol   3
     condensation, which the Cannizzaro reaction and which neither?
     Write the structures of the expected products of aldol condensation
     and Cannizzaro reaction.
     i) Methanal
     ii) Cyclohexanone
     iii) 2,2-Dimethylbutanal

26   The rate constant for the first order decomposition of N_2O_5 is given   3
     by the following equation :
     $K = (2.5 \times 10^{14} \, s^{-1})e^{(-25000K)/T}$
     Calculate E_a for the reaction and rate constant if its half life period
     be 300 minutes.

27   Give the IUPAC name of the product formed when: 3
     i) 2-Methyl-1-bromopropane is treated with sodium in the presence
     of dry ether.
     ii) 1-Methylcyclohexene is treated with HI.
     iii) Chloroethane is treated with silver nitrite.

28 a) What is the difference between instantaneous rate of a reaction   3
    and average rate of a reaction.
    b) The decomposition of NH_3 on platinum surface is zero order
    reaction. What are the rates of production of N_2 and H_2 if $k = 2.5 \times$
    10^{-4} mol $L^{-1}s^{-1}$?

SECTION-D

29 Read the passage given below and answer the following questions: 4
    Metal carbonyls are coordination compounds that contain carbonyl
    ligand only. These compounds are better termed as homoleptic
    carbonyls. Metal carbonyls have well defined structures like
    tetrahedral, Octahedral etc. The bond between the carbonyl
    molecule and the metal is further strengthened by synergic effect.

    a) Give one example of a homoleptic metal carbonyl complex.
    b) Carboxy haemoglobin is a complex compound of which metal
    atom?
    c) Discuss the nature of bonding in metal carbonyls?
    OR
    c) Can we call metal carbonyl as organometallics? Name the
    bonding present in metal carbonyls.

30 Read the passage given below and answer the following questions: 4
    Many of the things we deal with in life are related either directly or
    indirectly to electrochemical reactions. The Daniell cell is an
    electrochemical cell named after John Frederic Daniell in 1836. In
    this arrangement the oxidation and reduction reactions are separated
    by a salt bridge.

    a) What is electrode potential?
    b) A galvanic cell has electrical potential of 1.1 V . If an opposing
    potential of 1.1 V is applied to this cell, what will happen to the cell
    reaction and current flowing through the cell?
    c) Give two functions of salt bridge.
    OR
    c) Write the Nernst equation for the cell reaction in the Daniell cell.
    How will the E_{cell} be affected when concentration of Zn^{2+} is
    increased?

SECTION-E

31   a) Answer the following questions: 5

i) Which element of the first transition series has highest second ionisation enthalpy?
ii) Which element of the first transition series has highest third ionisation enthalpy?
iii) Which element of the first transition series has lowest enthalpy of atomisation?
b) Identify the metal in the following :
i) $M(CO)_5$
ii) MO_3F

32   i) Show graphically that the freezing point of a liquid will be depressed   5
when a non volatile solute is dissolved in it.

ii) Visha took two aqueous solutions-one containing 7.5 g of urea (Molar mass = 60g/mol) and the other containing 42.75g of substance Z in 100 g of water, respectively. It was observed that both the solutions froze at the same temperature. Calculate the molar mass of Z.

OR

i) What is van't Hoff factor.

ii) Which of the following solutions has higher freezing point?
0.05 M $Al_2(SO_4)_3$, 0.1 M $K_3[Fe(CN)_6]$. Justify.

iii) An aqueous solution of 2% non-volatile solute exerts a pressure of 1.004 bar at the normal boiling point of the solvent. What is the molar mass of the solute?

33   a) What is the role of pyridine in the acylation reaction of amines?   5
b) Arrange the following in the increasing order of their boiling point-
$C_2H_5NH_2$, C_2H_5OH , $(CH_3)_3N$
c) Give one chemical test to distinguish between the compounds of the
following pairs :
i) CH_3NH_2 and $(CH_3)_2NH$
ii) Aniline and Ethanamine
d) Why aniline does not undergo Friedel-Crafts reaction?

OR

a) Write short notes on the following:
i) Carbylamine reaction
ii) Acetylation
b) Accomplish the following conversions:
i) Benzyl chloride to 2-Phenylethanamine
ii) Aniline to p-Bromoaniline
iii) Benzoic acid to aniline.

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NAME_____SEC_____ROLLNO._____

CODE : B

BURNPUR RIVERSIDE SCHOOL, BURNPUR
PRE BOARD-II EXAMINATION: [2023-2024]
CHEMISTRY
CLASS-XII

Time: 3 Hrs.   **Maximum Marks: 70**

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General Instructions:
(a) There are 33 questions in this question paper with internal choice.
(b) SECTION A consists of 16 multiple -choice questions carrying 1 mark each.
(c) SECTION B consists of 5 short answer questions carrying 2 marks each
(d) SECTION C consists of 7 short answer questions carrying 3 marks each.
(e) SECTION D consists of 2 Case - based questions carrying 4 marks each.
(f) SECTION E consists of 3 long answer questions carrying 5 marks each.
(g) All questions are compulsory.
(h) Internal choices is there in some questions.

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SECTION-A

1.   On electrolysis of dilute sulphuric acid using platinum electrodes, the   1
        product obtained at the anode will be

        a. hydrogen

        b. oxygen

        c. hydrogen sulphide

        d. sulphur dioxide

2.   Which of the following contains the most acidic hydrogen?   1
        a. Hexan-2,4-dione
        b. Hexan-2,3-dione
        c. Hexan-2,5-dione
        d. Hexan-3-one.

3   A disaccharide is formed when two monosaccharides are joined   1
together by a/an linkage.

a. glycosidic
b. peptide
c. ionic
d. phosphodiester

4.   Conversion of propyne to acetone requires three important reagents.   1
Identify which of the following is not one of the three?
a. Water
b. Zinc dust
c. H_2SO_4
d. $HgSO_4$

5.   Which of the following compounds contains an allylic carbon?   1

a. A
b. B
c. C
d. D
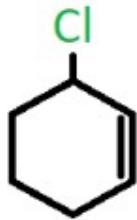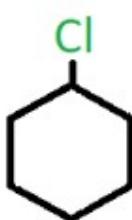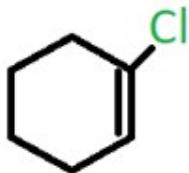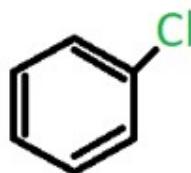
6.   Transistion elements form alloys easily because they have   1
a. Same atomic number
b. Same electronic configuration
c. Nearly same atomic size
d. None of the above.

7. The rate constant of a reaction is k = 3.28 × 10^{-4} s^{-1}. Find the order of   1
    the reaction.

    a. Zero order

    b.Third order

    c.Second order

    d.First order

8. Which of these substances has a lower melting point than amine?   1

    a Alcohol

    b. Ether

    c. Carboxylic acid

    d. Phosphine

9. What is the IUPAC name of Salicylic acid?   1

    a. 1-Hydroxybenzoic acid
    b. 2,4,6-Trimethylbenzoic acid
    c. 2-Hydroxybenzoic acid
    d. 2,4,6–Trinitrophenol

10. What will be the fraction of molecules having energy equal to or   1
    greater than activation energy, E_a?
    a. K
    b. A
    c. $Ae^{-Ea/RT}$
    d. $e^{-Ea/RT}$

11. Which of the following processes does not result in the production of alcohol? — 1

a. Acid catalysed hydration of alkenes

b. Free radical halogenation of alkanes

c. Reduction of aldehydes

d. Hydroboration-oxidation of alkenes

12. Why Fe^{3+} ion is more stable than Fe^{2+} ion? — 1

a. more the charge on the atom, more is its stability

b. configuration of Fe^{2+} is $3d^6$ while Fe^{3+} is $3d^5$

c. Fe^{2+} has a larger size than Fe^{3+}

d. Fe^{3+} ions are coloured hence more stable

Q.no from13 to 16 are assertion (A) and a reason (R) type questions. Mark your answer as-

a. Both A and R are true and R is the correct explanation of A.

b. Both A and R are true but R is not the correct explanation of A.

c. A is true but R is false.

d. A is false but R is true.

13. **Assertion :** tert–Butyl methyl ether is not prepared by the reaction of — 1
tert-butyl bromide with sodium methoxide.
Reason: Sodium methoxide is a strong nucleophile.

14. **Assertion:** The boiling points of aldehydes and ketones are higherthan hydrocarbons and ethers of comparable molecular masses.

   Reason: There is a weak molecular association in aldehydes and ketones arising out of the dipole-dipole interactions.

   1

15. **Assertion:** Sucrose is called an invert sugar.

   Reason: On hydrolysis, sucrose bring the change in the sign of rotation from dextro (+) to laevo(−).

   1

16. **Assertion:** The resistivity for a substance is its resistance when it is one meter long and its area of cross-section is one square meter.

   Reason: The SI units of resistivity is ohm meter .

   1

SECTION - B

17. For a first-order reaction, show that the time required for 99% completion is twice the time required for the completion of 90% of the reaction.

   2

18. To lower the melting point of 75 g of acetic acid by $1.5^{0}C$, how much mass of ascorbic acid($C_6H_8O_6$) is needed to be dissolved in the solution where K_f= 3.9 K kg mol^{-1}?

   2

19. Give the IUPAC name of the following compounds :

   2

   a.

   $CH_3-C = C-CH_2OH$
   | |
   CH_3 Br

   b.

   CH₃ ... OH ... OCH₃ (ring structure)
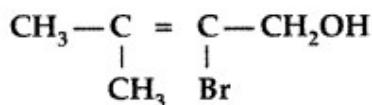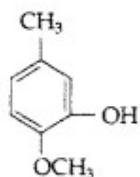
20.   Predict the products formed when cyclohexanecarbaldehyde reacts   2
        with
        following reagents.
        (i) PhMgBr and then H_3O^+

        (ii) Tollens' reagent

OR

        How will you convert ethanal into the following compounds?
        (i) Butane-1, 3-diol

        (ii) But-2-enal

21.   What is the difference between a nucleoside and a nucleotide?   2

SECTION - C

22.   Using IUPAC norms, write the formulas for the following: 3
        (i) Tetrahydroxidozincate(II)
        (ii) Potassium tetrachloridopalladate(II)
        (iii) Diamminedichloridoplatinum(II)

23.   Three electrolytic cells, A, B, and C, containing solutions of $ZnSO_4$,   3
        $AgNO_3$ and $CuSO_4$, respectively, are connected in series. A steady
        current of 1.5 amperes was passed through them until 1.45 g of silver
        was deposited at the cathode of cell B. How long did the current
        flow? What mass of copper and zinc were deposited?
        [At mass of Zn = 65.38g , Ag = 108g and Cu = 63.5 g]

24.   Give reason for your answer:-   3
        a. The –OH group attached to a carbon of benzene ring activates it
            towards electrophilic substitution.
        b. Alcohols are comparatively more soluble in water than
            hydrocarbons of comparable molecular masses.
        c. ortho nitrophenol is more acidic than ortho methoxyphenol.

25. Draw structures of the following derivatives.   3

(i) The 2,4-dinitrophenylhydrazone of benzaldehyde

(ii) The semicarbazone of cyclobutanone

(iii) The methyl hemiacetal of formaldehyde

26. The decomposition of 'A' into the product has a value of k as $4.5 \times 10^3 \, s^{-1}$ at $10\,^{\circ}C$ and energy of activation 60 kJ mol^{-1}. At what temperature would k be $1.5 \times 10^4 s^{-1}$? [log 3.333 = 0.5224]   3

27. Draw the structures of major monohalo products in each of the following reactions :   3
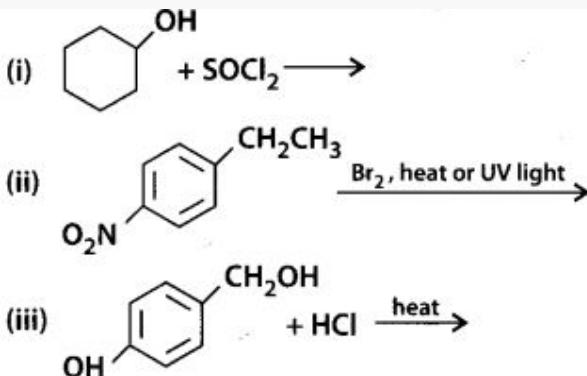
28. Mention the affect of the following on rate of a chemical reaction:-   3

a. Concentration of reactants.

b. Surface area.

c. Presence of catalyst.

SECTION – D

Q.NO. 29 & 30 are case-based questions. There are three part (i, ii, iii).An internal choice is there in part-iii. Read the passage carefully and answer the following questions after each passage.

29. Coordination compounds are chemical compounds that consist of an array of anions or neutral molecules that are bounded to the central metal atom via coordinate bonds. Their properties are completely different from the constituents. In coordination compounds and the ions or neutral molecules, called ligands. For example, DMG is a bidendate ligand chelating large amounts of metals. To explain bonding in coordination compounds various theories were proposed. One of the important theory was valence bond theory. According to that, the central metal ion in the complex makes available a number of empty orbitals for the formation ofcoordination bonds with suitable ligands. The appropriate atomic orbitals of the metal, hybridise to give a set of equivalent orbitals of definite geometry. The d-orbitals involved in the hybridisation may be either inner d-orbitals i.e., $(n - 1)$ d or outer d-orbitals i.e., nd.   4

    i.   What is the oxidation state of metal in $[Mn_2(CO)_{10}]$?
    ii. One mole of $CrCl_3.6H_2O$ reacts with excess of AgO_3 to yield 2 mole of AgCI. Write formula of complex.
    iii. What type of isomerism is shown by $[Cr(H_2O)_6] CI_3$ and $[Cr(H_2O)_5Cl]Cl_2.H_2O$? Name the hexadentate ligand used for treatment of lead poisoning.

    OR

    iii . What is hybridisation of $[CoF_6]^{3-}$ [Co = 27] Give its shape and magnetic property.

30. The study of the conductivity of electrolyte solutions is important for the development of electrochemical devices, for the characterization of the dissociation equilibrium of weak electrolytes, and for the fundamental understanding of charge transport by ions. The conductivity of the electrolyte is measured for electrolyte solution with concentrations in the range of 10^{-3} to 10^{-1} mol L^{-1}, as a solution in this range of concentrations can be   4

easily prepared. The molar conductivity (Λ_m) of strong electrolyte solutions can be nicely fit by the Kohlrausch equation.

$$\Lambda_m = \Lambda^{\circ}_m - K \sqrt{C} .$$

i. What do you mean by infinite dilution.

ii. HNO_2 , HCN , NH_3 and HCl Which of the following is a strong electrolyte in aqueous solution?

iii. Write two application of Kohlraush law?

OR

iii. If the molar conductivities at infinite dilution for NaI, CH_3COONa and $(CH_3COO)_2Mg$ are 12.69, 9.10 and 18.78 S cm^2 mol^{-1} respectively at $25^{\circ}C$, then what is the molar conductivity of MgI_2 at infinite dilution?

SECTION - E

31.   A. Account for the following:-   5

i.   The enthalpies of atomisation of the transition metals are high.

ii. Transition metals and their many compounds act as good catalysts.

B. Describe the preparation of potassium dichromate from iron chromite ore.

32.   A. The partial pressure of ethane over a solution containing 6.56 ×   5
10^{-3} g of ethane is 1bar. If the solution contains 5.00×10^{-2} g of ethane, then what shall be the partial pressure of the gas?

B. The depression in freezing point of water observed for the same amount of acetic acid, trichloroacetic acid and trifluoroacetic acid increases in the order given above. Explain briefly.

OR

A. 19.5 g of CH_2FCOOH is dissolved in 500 g of water. The depression in the freezing point of water observed is 1.00 C. Calculate the van't Hoff factor and dissociation constant of fluoroacetic acid.

B. Define Henry's law. What is the significance of Henry's Law constant K_H ?

33.   A. Arrange the following.   5
(i) In decreasing order of the pK_b values,
$C_2H_5NH_2$, $C_6H_5NHCH_3$, $(C_2H_5)_2NH$ and $C_6H_5NH_2$

(ii) In increasing order of boiling point,
C_2H_5OH, $(CH_3)_2NH$, $C_2H_5NH_2$

(iii) In increasing order of basic strength,
$C_6H_5NH_2$, $C_6H_5N(CH_3)_2$, $(C_2H_5)_2NH$ and CH_3NH_2

B. How will you convert:-
i. Ethanoic acid into methanamine
ii. Ethanamine into methanamine

OR

A. Predict the reagent or the product in the following reaction sequence.

NAME_____SEC_____ROLL NO._____
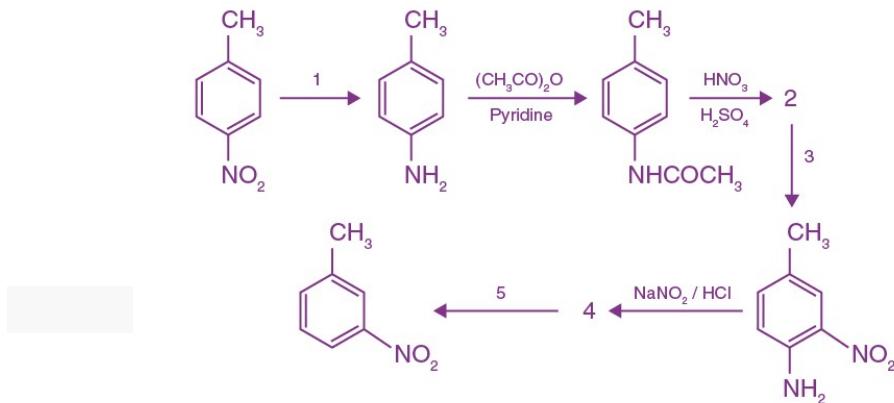
BURNPUR RIVERSIDE SCHOOL, BURNPUR
PRE BOARD-II EXAMINATION: [2023-2024]
BIOLOGY
CLASS-XII

Time: 3 Hrs.   **Maximum Marks: 70**
==

General instructions:
(i) All questions are compulsory.
(ii) The question paper has five sections and 33 questions. All questions are compulsory.
(iii) Section–A has 16 questions of 1 mark each; Section–B has 5 questions of 2 marks each; Section– C has 7 questions of 3 marks each; Section– D has 2 case-based questions of 4 marks each; and Section–E has 3 questions of 5 marks each.
(iv) There is no overall choice. However, internal choices have been provided in some questions. A student has to attempt only one of the alternatives in such questions.
(v) Wherever necessary, neat and properly labeled diagrams should be drawn.

==

Section – A

1.   Which of the following is an anemophilous flower ?   1
        (a)   *Hydrilla*
        (b)   *Grass*
        (c)   *Zostera*
        (d)   *Amorphophallus*

2.   Generative nucleus divides to form -   1
        (a)   2 male nuclei
        (b)   3 male nuclei
        (c)   2 female nuclei
        (d)   3 female nuclei

3. In humans, chromosome 1 has how many genes ?   1

    (a) 2698
    (b) 2968
    (c) 2986
    (d) 2896

4. Valine is coded by -   1

    (a) GUG
    (b) GCG
    (c) AUG
    (d) GAC

5. _____ evolved in to the first amphibians.   1

    (a) Frogs
    (b) Salamanders
    (c) Lobefins
    (d) Shrews

6. The process of evolution of different species in a given geographical area starting from a point and literally radiating to other areas of geography is called _____.   1

    (a) Founder effect
    (b) Adaptive convergence
    (c) Natural selection
    (d) Adaptive radiation

7. In grasshopper, the female has 24 chromosomes and the male has _____ chromosomes.   1

    (a) 23
    (b) 24
    (c) 25
    (d) 26

8. Who proposed the chromosomal theory of inheritance ? 1
    (a) Von Tschermak
    (b) Walter Sutton
    (c) Mendel
    (d) T.H. Morgan

9. Which of the following is a blood cholesterol lowering agent ? 1

    (a) Cyclosporine - A
    (b) Streptokinase
    (c) Statins
    (d) Brandy

10. Downstream processing includes which of the following process ? 1
    (a) PCR
    (b) DNA isolation
    (c) Cloning
    (d) Purification

11. Transgenic animals are not used for - 1

    (a) Study of diseases
    (b) Production of human Alpha lactalbumin
    (c) Production of lipase
    (d) Chemical safety testing

12. Which of the following is a detritus ? 1
    (a) Cow dung
    (b) Leech
    (c) Earthworm
    (d) Pond

Question No. 13 to 16 consist of two statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below: a) Both A and R are true and R is the correct explanation of A. b) Both A and R are true and R is not the correct explanation of A. c) A is true but R is false. d) A is false but R is true.

13. A: Parthenocarpic fruits are seedless. 1

R: Banana is a parthenocarpic fruit.

14. A: Haemopohilia is an autosomal recessive disease.   1

R: Sickle cell anaemia is an autosomal recessive disease.

15. A: *Plasmodium* has a digenetic life cycle.   1

R: It completes its life cycle in humans and mosquitoes.

16. A: Eco RIis a restriction endonuclease.   1

R: It produces blunt ends.

Section – B

17. Name the paired accessory reproductive glands in human males.   2

18. Mendel used pea plants to study inheritance. In a tabular form, write four pair of characters denoting dominant and recessive traits.   2

19. Differentiate between active and passive immunity. Provide one example each.   2

20. With the help of an example, explain insertional inactivation.   2

21. What is primary productivity ? Which factors affect primary productivity ?   2

OR

What are the components of ecosystem ?

Section – C

22. Schematically explain the process of oogenesis.   3

23. Where are leydig cells located ? What do they secrete ?   3

24. Explain the three natural methods of contraception.   3

25. (a) State the Hardy-Weinberg Principle.   3

    (b) Which factors affect the principle ?

26. 'Biofertilisers enrich the nutrient quality of the soil'. Justify the   3
    statement, with the help of examples.

27. Why does the toxin produced from *Bacillus thuringiensis* kill the   3
    lepidopterans but does not effect the microbe ?

    OR

    How can you treat adenosine deaminase deficiency using gene therapy ?

28. What are the causes of biodiversity losses ?   3

Section – D

Q. No. 29 and 30 are case-based questions. Each question has 3 subparts
with internal choice in one subpart.

29.   4
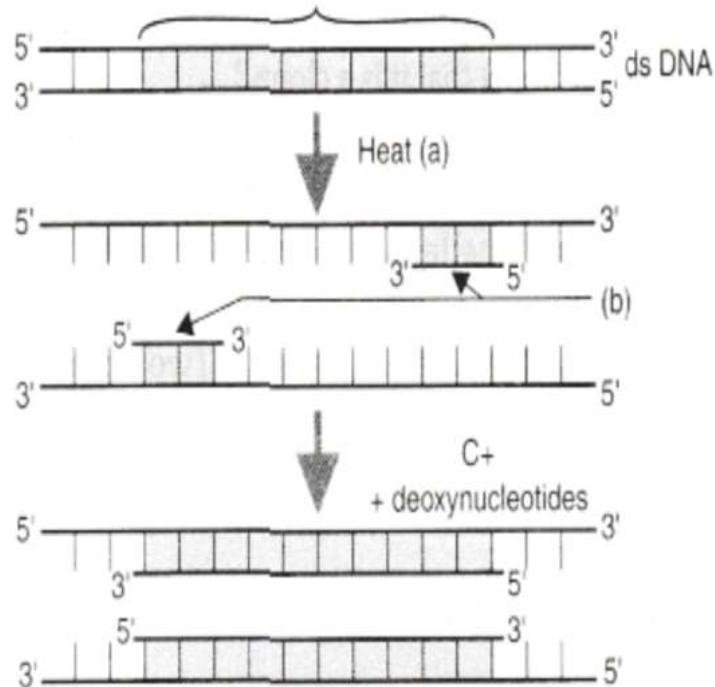
(a) Name the steps – (a) and (b)

(b) Name the DNA polymerase c.

(c) In denaturation which bonds of DNA are getting broken ? Name the bond responsible for formation of the DNA backbone.

OR

(d) What is the full form of PCR ? What is it's application in recombinant DNA technology ?

30.   4

Study the three different age pyramids for human population given below and answer the questions that follow:
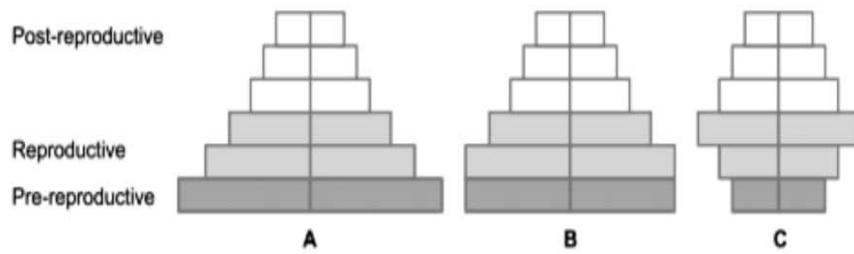
(a) What is the growth status of pyramids A and C.

(b) What can you infer from pyramid B.

(c) Mention two attributes of population.

OR

(d) Point two process that contribute to an increase in population density and two process that contribute to a decrease in population density.

Section – E

31. Explain the role of pituitary gonadotropins during the follicular & ovulatory phases of the menstrual cycle. Describe the shifts in steroidal secretions. 5

OR

Explain the various developmental stages of the zygote until implantation with suitable diagrams.

32. A homozygous violet axial flowered pea plant was crossed with a white terminal flowered pea plant. The F_1 progeny was self crossed to produce F_2 progeny. 5

Find out the approximate number of pea plants with white axial flowers, if the total number of F_2 progeny are 64.

OR

(a) Explain incomplete dominance using a suitable example.

(b) Why did T.H. Morgan choose fruit fly for experimental verification of chromosomal theory of inheritance.

33. Write down the pathogen and symptoms of the following – 5

    (a)   Ascariasis

    (b)   Ringworm infection

    (c)   Typhoid

    (d)   Elephantiasis

    (e)   Pneumonia

OR

Sports persons misuse drugs to enhance their performance.

    (a)   Mention two of such drugs.

    (b)   What are the effects of such misuse in males and females.

Name: _____ Sec: ____ Roll No.: ____

CODE - B

BURNPUR RIVERSIDE SCHOOL, BURNPUR
SECOND PRE-BOARD EXAMINATION : [2023-2024]
BIOLOGY (044)
CLASS : XII
Time : 3 Hours   Maximum Marks : 70

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General Instructions:

i   *All questions are compulsory.*

ii *The question paper contains five sections-A, B, C, D and E. There are 33 questions in the question paper.*

iii ***Section A** has 16 questions of 1 mark each. **Section B** has 05 questions of 2 marks each. **Section C** has 07 questions of 3 marks each. **Section D** has 02 case based question carries 4 marks each. It has three sub-questions (a), (b and (c).Parts (a) and (b) are compulsory .An internal choice has been provided in part (c), one has to attempt any one of the choices and **Section E** has 03 questions of 5 marks each.*

iv *There is no overall choice. However, internal choices have been provided in some questions. A student has to attempt only one of the alternatives in such questions.*

v   *Wherever necessary, neat and properly labeled diagrams should be drawn.*

===

SECTION-A

1.   During microsporogenesis,meiosis occurs in   1
     a) Endothecium
     b) Microprore mother cells
     c) Microspore tetrads
     d) Pollen grain

2.   A particular species of plant produces light ,nonsticky   1
     and large number of pollen grains.The pollination will
     most likely to occur by

a) Insects
b) Bats
c) Wind
d) Animals

3. Antiparallel strands in a DNA molecule means   1
    a) One strand turns clock wise
    b) One strand runs anti-clock wise
    c) Phosphate groups of both the strands share the same ends
    d) Phosphate groups of both the strands are at opposite ends.

4. In birds sex determination type is   1
a)ZZ/ZW
b)ZO/ZZ
c) XX/XY
d) XX/ZZ

5. Thorns of Bougainvillea and tendril of Cucurbita are   1
examples of
    a) Vestigial organ
    b) Retrogressive evolution
    c) Analogous organs
    d) Homologous organs

6. Analogous organs arise due to   1
    a) Divergent evolution
    b) Genetic drift
    c) Artificial selection
    d) Convergent evolution

7. If a genetic disease is transferred from a   1
phenotypically normal but carrier female to only some
of the male progeny, the disease is
    a) Autosoimal dominant
    b) Autosomal recessive
    c) Sex-linked dominant
    d) Sex- linked recessive

8. CsCl$_2$ density gradient centrifugation by Meselson and 1
Sthal separated
   a)DNA from RNA
   b) DNA from Protein
   c)Normal DNA from ^{15}N DNA
   d)Protein from Protein

9. Secondary sewage treatment is mainly a 1
   a) Physical process
   b) Mechanical process
   c) Biological process
   d) Chemical process

10. Restriction endonuclease 1
   a)synthesizes DNA
   b)cuts DNA molecule randomly
   c)cuts DNA at specific sites.
   d) Joins DNA

11. Cry I endotoxin obtained from *Bacillus thuringiensis* 1
    are effective against
    a) Nematodes
    b) Bollworm
    c) Mosquitoes
    d) Flies

12. Which of the following has the largest number of 1
    population in a food chain?
    a) Producer
    b) Primary consumer
    c) Secondary consumer
    d) Decomposers

Question 13 to 16 consists of two statements-Assertion (A) and Reason (R) .Answer these questions selecting the appropriate options given below:

   a. **Both A and R are true and R is the correct explanation of A.**
   b. **Both A and R are true but R is not the correct explanation of A.**
   c. **A is true but R is false.**
   d . **A is false but R is true**.

13. Assertion:-The endosperm of an angiosperms generally triploid.
Reason:- It developed from primary endosperm nucleus formed by the fusion of haploid male gamete and diploid secondary nucleus.   1

14   Assertion:-mRNA attaches to ribosomes through its5'end
Reason:-The mRNA has bases of lagging sequences.   1

15   Assertion:- Dope test is done on athletes to ascertain whether drugs has been consumed.
Reason:-A drunken person usually feels tense and less talkitive.   1

16   Assertion:-Plasmids are extra-chromosomal DNA.
Reason:- Plasmids are found in simian monkeys.   1

SECTION-B

17. Why are human testes located outside the abdominal cavity? Name the pouch in which they are present.   2

18. What is point mutation? Give an example.   2

19. What is meant by metastasis?   2

20. Name the process used in the amplification of DNA.Mention its steps.   2

21. Differentiate between primary and secondary productivity.   2
               OR
What are the shortcomings of ecological pyramids in the study of ecosystem?

SECTION-C

22. Construct a flow chart exhibiting sequential events of spermatogenesis.   3

23. Explain the process of parturition.   3

24. Do you think that reproductive health has improved in the past 50 years? If yes, mention such areas of improvement.   3

25. Explain adaptive radiation. When can adaptive radiation be referred as convergent evolution.   3

26. Describe how do **flocs** and **activated sludge** help in sewage treatment.   3

27. Why do **lepidopterans** die when they feed on Bt-cotton plant? Explain how does it happen.   3

        OR

What is **RNAi**? How it has been used to control nematode infection?

28. What are the main causes of species losses in a geographical area?Explain.   3

SECTION-D (Case Based)

29. **Agarose Gel Electrophoresis**   4

Introduction:;-Agarose gel electrophoresis is a widely used technique in molecular biology to separate and analyze DNA fragments based on their size. Here are the basic steps and applications:

Steps: Prepare Gel:Mix agarose powder with a buffer, heat to dissolve, and pour into a gel mold.

Insert a comb to create wells for sample loading.

Prepare Sample Mix DNA samples with a loading buffer.

Heat samples briefly to denature DNA and ensure even loading.

Load Samples:

Carefully load DNA samples into the wells using a micropipette.

Run Electrophoresis:

Connect the gel to a power supply.

Apply an electric current to move DNA through the gel.

DNA fragments separate based on size, with smaller fragments migrating faster.

Stain and Visualize:

After electrophoresis, stain the gel with a DNA-specific dye.

Visualize DNA bands under UV light or using a gel documentation system.

Analyze Results:

Compare band patterns to a DNA ladder or standard to determine fragment sizes.

Analyze the distribution and sizes of DNA fragments in each sample.

a) What stain is used in the above process? (1)

b) Why is an electric field applied in the above experiment?(1)

c) Mention the factors that help in DNA separation

(2)

OR

(c)What can be the applications of this process

(2)

30.   The term **"Great Migration"** in Africa typically 4
refers to the movement of wildbeast and other
herbivores in East Africa. This phenomenon
involves millions of animals and is one of the
most spectacular wildlife events on the continent.
Here's a brief overview:

Location:East Africa: The Great Migration
primarily occurs in the Serengeti National Park
in Tanzania and the Maasai Mara National
Reserve in Kenya.

Species Involved:Wildbeast: The migration is
dominated by wild beast, but other herbivores
like zebras and gazelles also participate.

Key Phases: Calving Season (January to March):

Wildbeast give birth to their young in the
southern Serengeti.

The abundance of young calves attracts
predators.

Grasslands Depletion (April to June):The
migration starts as the animals move in search of
fresh grazing.

River Crossings (July to October):One of the most dramatic phases involves river crossings, most notably the Mara River.

Wildbeast brave crocodile-infested waters during their migration northward.

Return South (November to December):As the dry season begins, the herds start their journey back to the southern Serengeti.

Significance: Ecological Impact: The migration plays a crucial role in the ecosystem, influencing vegetation, predator-prey dynamics, and nutrient cycling.

Tourism Attraction: The Great Migration is a major tourist attraction, drawing visitors from around the world to witness this natural spectacle.

Research Interest: Scientists study the migration for insights into animal behavior, ecology, and conservation.The Great Migration showcases the intricate balance of nature and is a testament to the remarkable adaptations of wildlife in response to changing environmental conditions.

a)Which countries are mentioned in the Migration?(1)

b)Mention two animals in this migration process.(1)

c) What is meant by the term migration? How is it different from immigration? (2)

OR

c) Why is the study of this Great migration important? (2)

SECTION-E

31. Draw a sectional view of a human ovary and label primary follicle ,tertiary follicle, graffian follicle and corpus luteum in it.
Mention the functions of hCG,LH,FSH,Relaxin.   5

OR

Explain the menstrual cycle in human females.

32. Explain Mendel's law of Independent Assortment by taking a suitable example.   5

OR

During a cross involving true breeding red -flower and true breeding white flowered snapdragon plants, the F1 progeny did not show any of the parental traits, while they reappeared in F2 progenies. Explain the mechanism using Punnet square.

33. Discuss the structure of an Antibody with a diagram.   5
OR
Explain the life cycle of a retrovirus/HIV with diagram.
.

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Name: _____ Sec: _____ Roll No.: _____

CODE: A

BURNPUR RIVERSIDE SCHOOL, BURNPUR
SECOND PRE-BOARD EXAMINATION : [2023-2024]
COMPUTER SCIENCE
CLASS-XII

Time: 3 Hrs. **Maximum Marks: 70**
==

General Instructions:

☐ *Please check this question paper contains 35 questions.*

☐ *The paper is divided into 4 Sections- A, B, C, D and E.*

☐ *Section A, consists of 18 questions (1 to 18). Each question carries 1 Mark.*

☐ *Section B, consists of 7 questions (19 to 25). Each question carries 2 Marks.*

☐ *Section C, consists of 5 questions (26 to 30). Each question carries 3 Marks.*

☐ *Section D, consists of 2 questions (31 to 32). Each question carries 4 Marks.*

☐ *Section E, consists of 3 questions (33 to 35). Each question carries 5 Marks.*

☐ *All programming questions are to be answered using Python Language only.*

==

SECTION-A

1.   State whether the following statement is **True** or **False**:   [1]
         The value of the expressions 4/(3*(2-1)) and 4/3*(2-1) is the
         same.

2. From the table climate, display all the cities' details whose humidity is in the range 65 . . 80. [1]
    a) SELECT * FROM climate WHERE humidity IN (65 to 80);
    b) SELECT * FROM climate WHERE humidity NOT IN (65 to 80);
    c) SELECT * FROM climate WHERE humidity BETWEEN 65 AND 80;
    d) SELECT * FROM climate WHERE humidity NOT BETWEEN 65 AND 80;

3. What will be the output of the following Python code? [1]
    ```
    tp = ( )
    tp1 = tp * 2
    print(len(tp1))
    ```
    a. 0   b. 1   c. 2   d. error

4. Which of the following function headers is correct? [1]
    a. def f (a = 1, b):   b. def f (a = 1, b, c = 2):
    c. def f (a = 1, b = 1, c = 2):   d. def f (a = 1, b = 1, c = 2, d):

5. Which of the following is not a legal sub-language of SQL? [1]
    a. TCL   b. DDL   c. QAL   d. none

6. What law makes it illegal to knowingly spread a computer virus? [1]
    a. IT Act   b. Computer Misuse Act
    c. Cyber Act   d. Cyber Misuse Act

7. Which is the correct form of declaration of tuple(s)? [1]
    a.   x = ("Hina", "Mina", "Tina", "Nina")
    b.   x = "Hina", "Mina", "Tina", "Nina")
    c.   x = ["Hina", "Mina", "Tina", "Nina"]
    d.   x = (["Hina", "Mina", "Tina", "Nina"])

8. You have the following code segment: [1]
    ```
    String1 = "my"
    String2 = "work"
    print(String1 + String2.upper( ))
    ```
    What is the output of this code?
    a. mywork   b. MY Work   c. myWORK   d. My Work

9. Which of the following will create a single element tuple? [1]
    a. (1,)   b. (1)   c. ([1])   d. none

10. The uniform ( ) function is the part of _____ module. [1]
    a. string   b. int   c. random d. none

11. _____ protocol is responsible for transferring data over the [1] Internet.
a. FTP   b. SMTP   c. TCP/IP   d. POP

12. Carefully observe the code and give the answer. [1]

```
def function1(a):
   a = a + '1'
     a = a * 2
   print(a)
function1("hello")
```
   a. indentation error
   b. cannot perform mathematical operation on strings
   c. hello2
   d. hello2hello2

13. State whether the following statement is **True** or **False**: [1]
'When you open a file for appending, if the file exists, the existing file is overwritten with the new file.'

14. _____ means data about data. [1]
a. metadata   b. prodata   c. maindata   d. none

15. _____ is a protocol which allows users to download E-Mail [1]
messages from mail server to a local computer.

16. Which of the following command is used to open a file [1]
"c:\pat.txt" for writing as well reading in binary format only?
   a. fout = open ("c:\pat.txt", "w")
   b. fout = open ("c:\pat.txt", "wb")
   c. fout = open ("c:\pat.txt", "w+")
   d. fout = open ("c:\pat.txt", "wb+")

Q17 and 18 are ASSERTION AND REASONING based questions. Mark the correct choice as
 (a) Both A and R are true and R is the correct explanation for A.
 (b) Both A and R are true and R is not the correct explanation for A.
 (c) A is true but R is False (or partly true).
 (d) A is false (or partly true) but R is True.
 (e) Both A and R are false or not fully true.

17. **ASSERTION**: Modifying a string creates another string internally but modifying a list does not create a new list.   [1]

    REASON: Strings store characters while lists can store any type of data.

18. **ASSERTION**: A function is a subprogram.   [1]

    REASON: A function exists within a program and works within it when called.

SECTION-B

19.   (i)   Expand the following terms: [2]
            NIU , **TAP**
      (ii) Define **Baud**.
                        OR
      (iii) Differentiate between **Hub** and **Switch**.
      (iv) What do you understand by '**Bandwidth**'?

20.   Find and write the output of the following python code: [2]
```
def fun(s):
     k=len(s)
     m=" "
     for i in range(0,k):
          if(s[i].isupper()):
               m=m+s[i].lower()
          elif s[i].isalpha():
               m=m+s[i].upper()
          else:
               m=m+'@'
     print(m)
fun('LOVE2#god')
```

21.   Write a function that receives an octal number and prints the   [2]
      equivalent number in other number bases i.e., in decimal,
      binary and hexadecimal equivalents.
                        OR
      Write a function LShift(Arr,n) in Python, which accepts a list
      Arr of numbers and n is a numeric value by which all elements
      of the list are shifted to left.
      Sample Input Data of the list Arr = [10,20,30,40,12,11], n=2
      Output : Arr = [30,40,12,11,10,20]

22.　　Write the Python method for **each** of the following tasks:　　[2]
　　　(i)　　adds an item to the end of a list.
　　　(ii)　　Adds multiple elements (given in the form of a
　　　　　list) to a list.

23.　　a. What will be the output of the following code if a = "abcde"?　[2]
　　　>>> a[1:1] = = a[1:2]
　　　>>> type (a[1:1]) = = (a[1:2])
　　　　　　　　OR
　　b. Predict the output of the following code:
　　　tuple1 = (11, 22, 33, 44, 55, 66)
　　　list1 = list(tuple1)
　　　new_list = [ ]
　　　for i in list1:
　　　　　if i % 2 != 0:
　　　　　　　new_list.append(i)
　　　new_tuple = tuple(new_list)
　　　print(new_tuple)

24.　　Write SQL queries for the following:　　[2]
　　　(a)　Add a column GRADE in the table 'STUDENT' with
　　　　　datatype as char with 5 characters.

　　　(b)　Delete the record of students securing less than 33%
　　　　　from the 'STUDENT' table.
　　　　　　　　OR
　　　(c)　Increase the Half Yearly marks of the students by 10%
　　　　　whose name begins with 'S' in the table 'STUDENT'.
　　　(d)　Insert the following record into the 'STUDENT' table:
　　　　Adm_No – B/007, Name – 'Virat', PT1 – 383,
　　　　Half_Yearly – 390, PT3 – 490, Percentage – 75,
　　　　Grade – B.

25.　　Predict the output of the following code fragment:　　[2]

　　def func (message, num = 1):
　　　print (message * num)

　　func('Python')
　　func('Easy', 3)

26.   Consider the following code: [3]
          Inp = input ("Please enter a string :")
          While len (Inp) <= 4 :
                  if Inp [-1] == 'z' :
                          Inp = Inp [0 : 3] + 'c'
                  elif 'a' in Inp:
                          Inp = Inp [0] + 'bb'
                  elif not int (Inp [0]) :
                          Inp = '1' + Inp[1 :] + 'z'
                  else:
                          Inp = Inp + '*'
          print (Inp)
          What will be the output produced if the input is:
          (i)   'abc'
          (ii)   '0xy'
          (iii)   '1bzz'

27.   Consider the following tables **GAMES** and **PLAYER** and answer the   [3]
      following parts of this question:

Table : GAMES

GCode	GameName	Type	Number	Prize Money	ScheduleDate
101	Carom Board	Indoor	2	5000	23-Jan-2004
102	Badminton	Outdoor	2	12000	12-Dec-2003
103	Table Tennis	Indoor	4	8000	14-Feb-2004
105	Chess	Indoor	2	9000	01-Jan-2004
108	Lawn Tennis	Outdoor	4	25000	19-Mar-2004

Table : PLAYER

PCode	Name	GCode
1	Nabi Ahmad	101
2	Ravi Sahai	108
3	Jatin	101
4	Nazneen	103

Give the output of the following SQL queries:
- (i)   SELECT COUNT (DISTINCT Number) FROM GAMES;
- (ii)   SELECT MAX(ScheduleDate), MIN(ScheduleDate) FROM GAMES;
- (iii)   SELECT Name, GameName FROM GAMES G, PLAYER P WHERE G.GCode = P.GCode AND G. PrizeMoney > 10000;

28.   A text file contains alphanumeric text (say an.txt). Write a function that reads this text file and prints only the numbers or digits from the file.   [3]

OR

Write a method in python to read lines from a text file MYNOTES.TXT, and display those lines, which are starting with an alphabet 'K'.

29.   Consider the following **TEACHER** table and write the SQL queries based on it: [3]

T_ID	T_Name	Age	Department	Date_of_join	Salary	Gender
1	P. SEN	34	Comp. Sci.	10/01/2017	12000	M
2	C. DAS	31	Maths	24/03/2008	20000	F
3	G. SINGH	32	Science	12/12/2016	30000	M
4	S. GILL	35	So. Sci.	01/07/2015	40000	F
5	T. PAL	42	Comp. Sci.	05/09/2007	25000	M
6	H. ROY	50	Maths	27/06/2008	30000	M
7	A. KHAN	44	Science	25/02/2017	21000	M
8	T. GILL	33	So. Sci.	31/07/2018	20000	F

- (a)   To show all information about the teachers of Comp. Sci. department.
- (b)   To list the names of female teachers who are in Maths department.
- (c)   To list the names of all teachers with their date of joining in ascending order.

30.   A list contains following record of a student: [3]
       [S_name, S_Stream, Address]

       Write the following user defined functions to perform given
       operationson the stack named '**stustk**':

       (i)   Push_element() - To Push an object containing
              name and stream of students who live in Asansol
              to the stack

       (ii)   Pop_element() - To Pop the objects from the stack
              and display them. Also, display "Stack Empty" when
              there are no elements in the stack.

    For example:
    If the lists of customer details are:

    ["Ram", "Science", "Asansol"]
    ["John", "Arts", "Durgapur"]
    ["Gurdev","Arts", "Durgapur"]
    ["Rahim", "Commerce", " Asansol"]

    The stack should contain:
    ["Rahim", "Commerce"]
    ["Ram", "Science"]

    The output should be:
    ["Rahim", "Commerce"]
    ["Ram", "Science"]
    Stack Empty

SECTION-D

31. Consider the following tables **CABHUB** and **CUSTOMER**.   [4]
Write SQL commands for the following statements:

Table : CABHUB

VCode	VehicleName	Make	Color	Capacity	Charges
101	Innova	Toyata	White	7	15
102	SX4	Sizuki	Blue	5	14
104	Grand i10	Hyundai	Orange	5	35
105	Alto	Sizuki	White	4	14
108	Indigo	Tata	Silver	4	12

Table : CUSTOMER

CCode	CName	VCode
1	Hemant Sahu	101
2	Raj Lal	108
3	Feroza Shah	105
4	Ketan Agarwal	104

i) To display the names of all the white colored vehicles.
ii) To display the names of vehicle, make and capacity of vehicles in ascending order of their seating capacity.
iii) To display the highest charges at which a vehicle can be hired from CABHUB.
iv) To display the customer name and the corresponding name of the vehicle hired by them.

32.   Write a program to get item details (code, description and   [4]
price) for multiple items from the user and create a csv file by
writing all the item details in one go.

SECTION-E

33. "Vidya for All" is an educational NGO. It is setting up its new campus at Jaipur for its web-based activities. The campus has four buildings as shown in diagram below: [5]
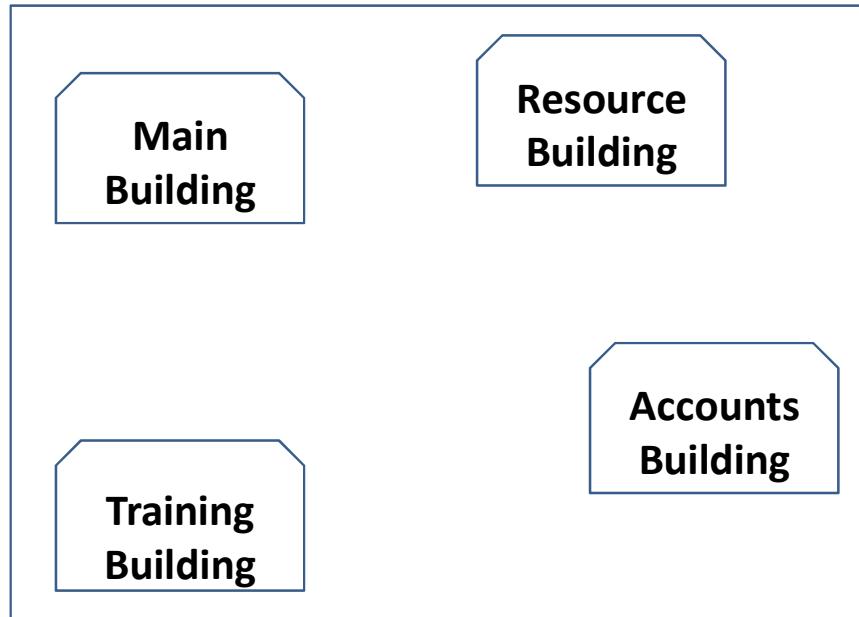
Center to center distances between various buildings as per architectural drawings (in meters) is as follows:

Main Building to Resource Building	120 m
Main Building to Training Building	40 m
Main Building to Accounts Building	135 m
Resource Building to Training Building	125 m
Resource Building to Accounts Building	45 m
Training Building to Accounts Building	110 m

Expected number of Computers in each building is as follows:

Main Building	15
Resource Building	25
Training Building	250
Accounts Building	10

a) Suggest a cable layout of connections between the buildings.

b) Suggest the most suitable place (i.e., building) to house the server of this NGO. Also, provide a suitable reason for your suggestion.

c) Suggest the placement of the following devices with justification:

   i) Repeater   ii) Hub/Switch

d) The NGO is planning to connect its international office situated in Delhi. Which out of the following wired communication links, will you suggest for a very high speed connectivity?

      (i)   Telephone Analog line
      (ii)   Optical Fibre
      (iii)   Ethernet Cable

e) Give one advantage of networking.

34.   (i)   Write the file mode that will be used for opening the [2+3] following files. Also, write the Python statements to open the following files:

      (a)   A binary file "abc.dat" in write only mode.
      (b)   A text file "xyz.txt" in write and read mode.

      (ii)   A Binary file, VEHICLE.DAThas the following structure:

      {VID:[VNAME, VTYPE]}
      Where
      VID – Vehicle ID
      VNAME – Vehicle Name
      VTYPE is Vehicle Type
      Write a user defined function, infotype(vtype), that accepts vtype as parameter and displays all the records from the binary file VEHICLE.DAT, that have the value of Vehicle Type as vtype.

                OR

      (iii) Write the file mode that will be used for opening the following files. Also, write the Python statements to open the following files:

      (a)   A binary file "mno.dat" in read mode.
      (b)   A text file "pqr.txt" in append mode.

(iv) A binary file "ITEM.DAT" has structure (item_number, item_name, profit_percent). Write a function countrec( ) in Python that would read contents of the file "ITEM.DAT" and display the details of those items whose profit percent is less than 25. Also display number of items having profit percent less than 25.

35. (i) Which function of mysql.connector library lets you check if the connection to the database is established or not? [1+4]

(ii) Hitesh has created a table named 'Teacher' in MYSQL database, **Teacher2023**:

- TID (Teacher ID)- integer
- TName(Name) - string
- TdoJ (Date of Join) – Date
- TSalary – float

Note the following to establish connectivity between

Python andMySQL:

- Username - abc
- Password – abc123
- Host – localhost

Hitesh, now wants to display the records of teachers whose salary is more than 50000. Help Hitesh to write the program in Python.

OR

(iii) Which method is used to close the open database connection?

(iv) Mitesh wants to write a program in Python to insert the following recordin the table named **Product** in MYSQL database, **Product2023**:
- PID (Product ID)- integer
- Pname (Product Name) - string
- Pdom (Date of manufacture) – Date
- Pcost – (Cost price)-float

Note the following to establish connectivity between Python and MySQL:

- Username - xyz
- Password – xyz789
- Host - localhost

The values of fields PID, Pname, Pdom and Pcost has to be accepted from the user. Help Mitesh to write the program in Python.

=======================================

Name _____**Sec** ___   **Roll No.**___

CODE: B

BURNPUR RIVERSIDE SCHOOL, BURNPUR
PRE BOARD-II EXAMINATION: [2023-2024]
COMPUTER SCIENCE
CLASS-XII

Time: 3 Hrs.   **Maximum Marks: 70**

==

General Instructions:
☐ **Please check this question paper contains 35 questions.**

☐ **The paper is divided into 4 Sections- A, B, C, D and E.**

☐ **Section A, consists of 18 questions (1 to 18). Each question carries 1 Mark.**

☐ **Section B, consists of 7 questions (19 to 25). Each question carries 2 Marks.**

☐ **Section C, consists of 5 questions (26 to 30). Each question carries 3 Marks.**

☐ **Section D, consists of 2 questions (31 to 32). Each question carries 4 Marks.**

☐ **Section E, consists of 3 questions (33 to 35). Each question carries 5 Marks.**

☐ **All programming questions are to be answered using Python Language only.**

==

SECTION A

1. Which of the following is a keyword in Python?   [1]
   a) true   b) For   c) pre-board   d) False

2. In MYSQL database, if a table, BOOK has degree 8 and cardinality 7, and another table, SALE has degree 4 and cardinality 7, what will be the degree and cardinality of the Cartesian product of BOOK and SALE ?   [1]
   a) 32 , 49   b) 12, 49   c) 12 ,14   d) 32,14

3. What is " C " stands in TCP/IP ?   [1]
   a) Common   b) Centre   c)Control   d) Coordinate

4. Consider the following statements and choose the correct output [1]
    from the given
    options :
    EXAM="COMPUTER SCIENCE"
    print(EXAM[:12:-2])
    a) EN   b) CI   c)SCIENCE   d) ENCE

5. Which of the following methods will give the current [1]
    position of the file pointer?
    (a)seek()   (b)tell()   (c)getloc()   (d) None of the above

6. What possible outcome will be produced when the following code is [1]
    executed?
    import random
    value=random.randint(0,3)
    fruit=["APPLE","ORANGE","MANGO","GRAPE"]
    for i in range(value):
    print(fruit[i],end='##')
    print()

    a) APPLE##
    b) APPLE#
    ORANGE##
    c) APPLE## ORANGE##
    d) ORANGE##
    MANGO##
    APPLE##

7. The default mode of opening a file in pyhton [1]

    (a) append
    (b) read
    (c) write
    (d) both b and c

8.   Fill in the blanks: [1]
      The SQL keyword ---------------- is used in SQL expression to select
      records based on patterns

9.   Select the network device from the following, which connects,   [1]
      networks with
      different protocols
      a) Bridge   b)Gateway   c)Hub   d) Router

10.   State whether the following statement is TRUE or FALSE :   [1]
      The value of the expression 4/3*(2-1) and 4/(3*(2-1)) is the same

11.   What will the following expression be evaluated to in Python?   [1]
      print(2**3**2//8)
      (a)64.0   (b)64   (c)8   (d)None Of These

12.   In the relational models , cardinality actually refers to --------------   [1]
      a) Number of tuples   b) Number of attributes
      c) Number of tables   d) Number of constraints

13.   Which function is used to establish connection between python and   [1]
      SQL database?

      (a) connection
      (b) connect
      (c) getconnection
      (d) getconnect

14.   Which function is used to write a list of strings in a file?   [1]
      a) writeline( )   b) writelines( )   c) write()   d) writeall( )

15.   Which clause is used to apply conditions with GROUP BY   [1]
      (a) WHERE
      (b) HAVING
      (c) LIKE
      (d) None Of These

16. Which of the following function header is correct?
    a) def fun(a=1,b):
    b) def fun(a=1,b,c=2):
    c) def fun(a=1,b=1,c=2):
    d) def fun(a=1,b=1,c=2,d):

    [1]

    Q17 and 18 are ASSERTION AND REASONING based questions.
    Mark the
    correct choice as
    (a) Both A and R are true and R is the correct explanation for A
    (b) Both A and R are true and R is not the correct explanation for A .
    (c) A is True but R is False
    (d) A is false but R is True

17. Assertion (A): In SQL, the aggregate function avg() calculates the   [1]
    average value on a set of values and produces a single result.
    Reason (R): The aggregate functions are used to perform some
    fundamental arithmetic tasks such as min(), max(), sum() etc

18. Assertion (A):-Functions in a program increases the modularity and   [1]
    readability of the program
    Reasoning (R):-Usage of Functions increases the execution speed of
    the program

SECTION B
19. i) Expand the following :   [1+
    a) SMTP   b) VoIP   1=

                                                                         2]
    ii) Give one disadvantage of Star topology

                         OR

    i)What is a web browser?

    ii) Define the term MAC Address

20. Rewrite the following code in Python after removing all syntax **[2]**
    error(s) and underline each correction done in the code .

    30 = num
    for k in range(0,num)
    IF k%4==0 :
    print(k*4)
    Else:
    print(k+3)

21. (a) Given is a Python string declaration: **[2]**

    Mystr="I will win"
    Write the output of: print(Mystr[2:6])
    (b) Write the output of the code given below:

    dictcount={"age1":26,"age2":32,"age3":40}
    sum=0
    for key in dictcount:
        sum=sum+dictcount[key]
    print(sum)

22. Explain the use of 'Primary Key' in a Relational Database **[2]**
    Management System. Give example to support your answer.

23. (a) Write the full forms of **[2]**
    the following:
    (i) FTP (ii)TCP

    (b) What is the use of POP3?

24. Satheesh has created a database "school" and table "student". Now **[2]**
    he wants to view all the databases present in his laptop. Help him to
    write SQL command for that , also to view the structure of the table
    he created.

Meera got confused with DDL and DML commands. Help her to select only DML command from the given list of command.
UPDATE , DROP TABLE, SELECT , CREATE TABLE , INSERT INTO, DELETE , USE

25. Predict the output for the following Python snippet   [2]

```
def calc(p,q=3):
    ans=1
    for x in range(q):
        ans=ans*p
    return ans
power=calc(3)
print(power,'9')
power=calc(3,2)
print(power,'27')
```

SECTION C

26. Predict the output of the code given below: [3]

```
s="welcome2cOMPUTERsWORLD"
n = len(s)
m=""
for i in range(0, n):
    if (s[i] >= 'a' and s[i] <= 'm'):
        m = m +s[i].upper()
    elif (s[i] >= 'n' and s[i] <= 'z'):
        m = m +s[i-1]
    elif (s[i].isupper()):
        m = m + s[i].lower()
    else:
        m = m +'&'
print(m)
```

27. Consider the following table **DOCTOR** given below and write the output of the SQL Queries that follows : [3]

D_ID	D_NAME	D_DEPT	GENDER	EXPERIENCE
101	JOSEPH	ENT	MALE	10
104	GUPTA	MEDICINE	MALE	12
106	SUMAN	ORTHO	FEMALE	7
111	HANEEF	ENT	MALE	12
123	DEEPTI	CARDIOLOGY	FEMALE	6
132	VEENA	SKIN	FEMALE	12

i) SELECT D_NAME FROM DOCTOR WHERE GENDER=MALE AND EXPERIENCE=12 ;
ii) SELECT DISTINCT(D_DEPT) FROM DOCTOR ;
iii) SELECT D_NAME , EXPERIENCE FROM DOCTOR ORDER BY EXPERIENCE ;

28. Write a function in Python to count the number of lines in a text fie 'EXAM.txt' which start with an alphabet 'T' . [3]

                    OR

Write a function in Python that count the number of "can" words present in a text file "DETAILS.txt" .

29. Consider the following Table "TEACHER" [3]

T_ID	NAME	SEX	DEPT	SALARY
101	SANDEEP	M	MATH	56000
102	JOEL	M	COMPUTER	65000
103	NEENA	F	HINDI	20000
104	MUHSIN	M	SCIENCE	35000
105	DEEPTI	F	MATH	50000

Based on the above table, Write SQL command for the following :
i) To show all information about the teacher of maths department
ii) To list name and department whose name starts with letter 'M'
iii) To display all details of female teacher whose salary in between 35000 and 50000

30. Thushar received a message(string) that has upper case and lower-case alphabet. [3]
He want to extract all the upper case letters separately .Help him to do his task by performing the following user defined function in Python:
a) Push the upper case alphabets in the string into a STACK
b) Pop and display the content of the stack.
For example:
If the message is "All the Best for your Pre-board Examination"
The output should be : E P B A

SECTION D

31. Consider the table **PRODUCT** and **CLIENT** given below: [4]

Table: PRODUCT

PR_ID	PR_NAME	MANUFACTURER	PRICE	QTY
BS101	BATH SOAP	PEARSE	45.00	25
SP210	SHAMPOO	SUN SILK	320.00	10
SP235	SHAMPOO	DOVE	455.00	15
BS120	BATH SOAP	SANTOOR	36.00	10
TB310	TOOTH BRUSH	COLGATE	48.00	15
FW422	FACE WASH	DETOL	66.00	10
BS145	BATH SOAP	DOVE	38.00	20

Table : CLIENT

C_ID	C_NAME	CITY	PR_ID
01	DREAM MART	COCHIN	BS101
02	SHOPRIX	DELHI	TB310
03	BIG BAZAR	DELHI	SP235
04	LIVE LIFE	CHENNAI	FW422

Write **SQL queries** for the following:
i) Display the details of those clients whose city is DELHI
ii) Increase the Price of all Bath soap by 10
iii) Display the details of Products having the highest price
iv) Display the product name, price, client name and city with their corresponding matching product Id.

What is a csv file?

32. Write a Program in Python that defines and calls the following user defined functions: [1+ 3]

(i) INSERT() – To accept and add data of a student to a CSV file 'student.csv'. Each record consists of a list with field elements as sid, name and marks to store student id, name and marks respectively.

(ii) COUNTSTUDENTS() – To count the number of records present in theCSV file named'student.csv'.

SECTION E

33. PQR University is setting up its academic blocks at Naya Raipur and is planning to set up a network. The University has 3 academic blocks and one Human Resource Center as shown in the diagram below: [5]
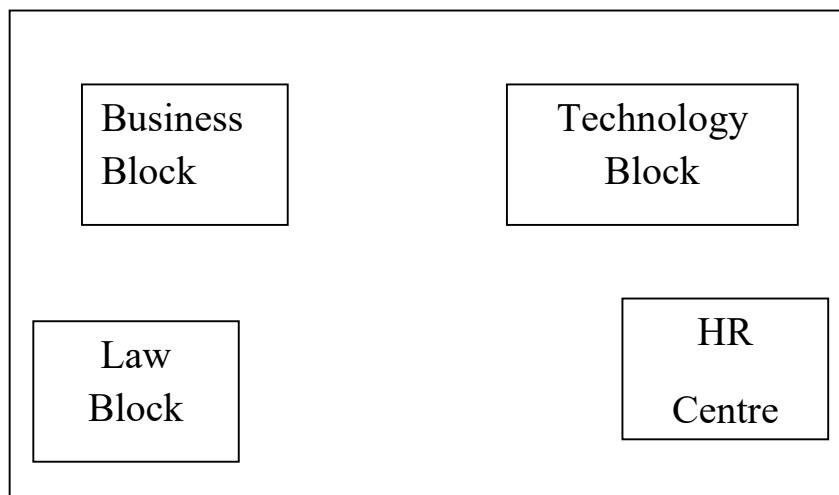
Center to Center distances between various blocks/center is as follows:

Law Block to Business Block	40 m
Law Block to Technology Block	80 m
Law Block to HR Centre	105 m
Business Block to Technology Block	30 m
Business Block to HR Centre	35 m
Technology Block to HR Centre	15 m

Number of computers in each of the blocks/Center is as follows:

Law Block	15
Technology Block	40
HR Centre	115
Business Block	25

a) Suggest the most suitable place (i.e., Block/Center) to install the server of this University with a suitable reason.

b) Suggest an ideal layout for connecting these blocks/centers for a wired connectivity.

c) Which device will you suggest to be placed/installed in each of these blocks/centers to efficiently connect all the computers within these blocks/centers.

d) Suggest the placement of a Repeater in the network with justification.

e) The university is planning to connect its admission office in Delhi, which is more than 1250km from university. Which type of network out of LAN, MAN, or WAN will be formed? Justify your answer.

34. i) What is Pickling or Serialization? [2+
    ii) A binary file "salary.DAT" has structure [employee id, employee 3]
    name, salary]. Write a function countrec() in Python that would read
    contents of the file "salary.DAT" and display the details of those
    employee whose salary is above 20000.

                            OR

    i) What is the difference between 'r' and 'rb' mode in Python file ?
    ii) A binary file "STUDENT.DAT" has structure
    [admission_number, Name, Percentage].

    Write a function countrec() in Python that would read contents of
    the file "STUDENT.DAT" and display the details of
    those students whose percentage is above 90. Also display number
    of students scoring above 90%

35 i) What do you mean by a Primary key in RDBMS ? [1+
    ii) Complete the following database connectivity program by writing 4]
    the missing statements and performing the given query

    ```
    import ------------------- as mysql                    # statement 1
    con=mysql. ---------(host='localhost',user='root',passwd='123' ,
    database='student')                                    # statement 2
    cursor=con.cursor( )
    cursor.execute(------------------------------)         # statement 3
    data=cursor. ----------------------------------        # statement 4
    for rec in data:
        print(rec)
    con.close( )
    ```

    a) Complete the statement 1 by writing the name of package need to
    be imported for database connectivity.
    b) Complete the statement 2 by writing the name of method require
    to create connection between Python and mysql.
    c) Complete the statement 3 by writing the query to display those
    students record whose mark is between 50 and 90 from table
    "student"
    d) Complete the statement 4 to retrieve all records from the result
    set.

i) What is the difference between UNIQUE and PRIMARY KEY constraints ?

ii) Maya has created a table named BOOK in MYSQL database, LIBRARY

BNO(Book number)- integer

B_name(Name of the book) - string

Price (Price of one book) –integer

Note the following to establish connectivity between Python and MySQL:

Username – root, Password – writer, Host – localhost.

Maya, now wants to display the records of books whose price is more than 250. Help Maya to write the program in Python

==

BURNPUR RIVERSIDE SCHOOL, BURNPUR
SECOND PRE-BOARD EXAMINATION : [2023-2024]
ACCOUNTANCY
CLASS – XII

Time : 3 Hours   **Maximum Marks : 80**
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General Instructions :
1. This question paper contains 34 questions. All questions are compulsory.
2. This question paper is divided into two parts, Part A and B.
3. Questions 1 to 16 and 27 to 30 carries 1 mark each.
4. Questions 17 to 20, 31 and 32 carries 3 marks each.
5. Questions from 21,22 and 33 carries 4 marks each.
6. Questions from 23 to 26 and 34 carries 6 marks each.
7. There is no overall choice. However, an internal choice has been provided in 7 questions of one mark, 2 questions of three marks, 1 question of four marks and 2 questions of six marks.
8. All parts of a question should be attempted at one place.
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1   A and B are partners sharing profits in the ratio 5:4. They admit C for   1
     1/10th share of profit which he acquires in equal proportion from both.
     What is the new profit sharing ratio of A, B and C?
     (a) 5:4:9 (b) 50:40:18 (c) 91:71:18 (d) None of these

2   Assertion(A): A, a partner, in the firm gave loan of ₹ 5,00,000 to the firm   1
     without any agreement as to the rate of interest. Interest on
              loan by A is to be allowed @ 6% p.a.
     .
     Reason (R): In the absence of partnership deed provisions of the
     Partnership
              Act, 1932 apply. Thus, interest on loan to partner should be
              charged at the rate 6% p.a.

     In the context of above statements, which of the following is correct?

(a) Both A and R are correct and R is the correct explanation of A
(b) Both A and R are correct but R is not the correct explanation of A
(c) A is correct but R is incorrect
(d) A is incorrect but R is correct

3   A company forfeited 3000 shares of ₹ 10 each, on which only ₹ 5 per   1
     share (including premium ₹ 1) has been paid. Out of these, few shares
     were re-issued at a discount of ₹ 1 per share and ₹ 6000 were transferred
     to capital reserve. How many shares were re-issued?
     (a) 3000 shares (b) 2000 shares(c) 1500 shares   (d) 1000 shares

                              OR

     If 10,000 shares of ₹ 10 each forfeited for non-payment of final call money
     of ₹ 3 per share and only 7000 of these shares were re-issued@₹ 11 per
     share as fully paid up, then what is the minimum amount that company
     must collect at the time of re-issue of the remaining 3000 shares?
     (a) ₹ 9,000   (b)₹ 16,000   (c) ₹21,000   (d) ₹ 30,000

4   P, R and S are partners.Before changing their profit sharing ratio to 5:3:2, 1
     they were sharing profits equally. Workmen compensation Reserve existed
     at ₹1, 00,000against which a claim existed at ₹ 20,000. Amount that will
     be created to their capital account in their old profit sharing ratio will be
     (a) ₹ 1,00,000   (b) ₹ 80,000   (c) ₹ 1,00,000 credited and ₹ 20,000 debited
     (d) ₹20,000 credited and ₹ 100,000 debited

                              OR

     M, R and A were partners sharing profits in the ratio of 2:2:1. They
     decided to share future profits equally with effect from 1st April 2022 .
     Their balance sheet as on that date showed a balance of ₹ 50,000 in
     Investment Fluctuation Reserve Account while book value of investments
     was ₹ 1,00,000 and market value of these investments was ₹ 90,000 . The
     amount that will be adjusted in the capital accounts of the partners will be
     (a) ₹ 1,00,000 (b) ₹ 10,000 (c) ₹ 90,000 (d) none of these.

5   If a partner individually carries on any business of the same nature as   1
     competing with that of firm, he shall account for
     (a) retire from partnership (b) all profits made by him
     (c) dissolve the farm (d) none of the above

6   A company has taken a loan of ₹ 20,00,000 . The lender took 8%   1
     Debenture as collateral security. The director of the company wants to
     journalise this collateral security. Accountant doesn't know the exact entry
     Advise him as to which entry is correct?

     (a) LenderA/c   Dr.   20,00,000
          To 8% Debenture A/c20,00,000
     (b) Bank Loan A/cDr.   20,00,000
          To 8% Debenture   A/c   20,00,000
     (c) Debenture Suspense A/c Dr. 20,00,000
          To 8% Debenture A/c20,00,000
     (d) none of these

                              OR

     A Ltd.issued 5,000, 10% Debenture of ₹ 100 at a discount of ₹ 10 .
     Amount was payable as follows:
     On Application   ₹ 50
     On Allotment   Balance
     All amount due was received on time except a holder of 1000 debentures
     who didn't pay allotment money. Journalise the entry on receipt of
     allotment money.

     (a) Bank A/c   Dr.   2,50,000
          To Debenture Allotment A/c   2,50,000

     (b) Bank A/cDr.   1,60,000
          To Debenture Allotment A/c1,60,000

     (c) Bank A/c   Dr.   2,00,000
          To Debenture Allotment A/c   1,60,000
           To Discount on Issue of Debenture A/c   40,000
     (d) none of these

7   Assertion(A): Reserve Capital is a part of subscribed capital which the   1
            company decides to call at the time of winding up of the
            company.
     Reason (R): Share Capital, which the companies resolve to call up on its
      winding up, is termed as Reserve Capital.
     (a) Both A and R are correct and R is not the correct explanation of A
     (b) Both A and R are correct but R is the correct explanation of A
     (c) A is correct but R is incorrect
     (d) A is incorrect but R is correct

8   A and S are partners in a firm with capitals of ₹ 300,000 and ₹ 2,00,000   1
     respectively. The normal rate of return was 20% and the capitalized value
     of average profit was ₹ 8,50,000. The goodwill of the firm by
     capitalization of average profit method will be
     (a) ₹ 10,00,000   (b)₹ 150,000 (c) ₹ 350,000 (d)₹ 500,000

OR

     A, B and C are partners with ratio of 2:2:1. C was guaranteed for
     minimum profit of ₹ 10,000. A and B bears the deficiency as ₹ 500 and ₹
     500 respectively. How much profit was earned by the firm?
     (a) ₹ 30,000 (b) ₹ 45,000 (c) ₹ 50,000 (d) none of these

     Read the following hypothetical situation, answer question no. 9 and 10.
     A and B were partners in a stationary business. They supplied stationary in
     many schools across the city and over the counter too. The partnership
     deed entitled:
     (a) Interest on capital @ 8% per annum
     (b) Profit sharing ratio is 5:2
     On 1st April 2020, their capitals were ₹ 6,00,000 and ₹ 4,00,000
     respectively.B took the responsibility of dealing in schools and A took the
     charge of counter sale. During the year, A used firm's cash₹ 1,00,000
     without B's knowledge to invest privately. He incurred a loss of ₹ 12,000
     in it.
     After 6 months due to positive response of partnership business, they
     decided to expand their sales outside the city also. For this purpose they
     also decided to make their capital ₹8,00,000 each by introducing
     additional cash.They purchased 5 delivery van and employed eight staff

members.

At the end of the year the farm earned net profit of ₹ 2,44,000.

9   Interest on A's capital will be   1
(a) ₹ 56,000   (b) ₹ 48,000 (c) ₹ 64,000 (d) none of these

10   B's share of divisible profit will be   1
(a) ₹ 30,000   (b) ₹ 35,000 (c) ₹ 40,000 (d) none of these

11   Which of the following is not recorded on the credit side of current 1
accounts of partners?
(a) Interest on capital (b) Partner's Salary
(c) Interest on Partner's loan (d) Share of profits to partner.

12   A Ltd. forfeited 300 shares of ₹ 10 each, fully called up, held by B for 1
non-payment of allotment money of ₹ 3 per share and final call money ₹ 4
per share. Out of these 250 shares were reissued to C for a total payment
of ₹ 1800. Calculate the amount to be transferred to capital reserve
account.
(a) ₹ 50   (b) ₹ 100   (c) ₹ 500   (d) ₹ 150.

13   V Ltd. forfeited 200 shares held by R for non-payment of allotment money 1
of ₹ 40 per share (including premium of ₹ 10 per share). The first and final
call of ₹ 20 per share was not yet called. In the forfeiture entry share
capital account will be
(a) Debited by ₹20,000   (b) Debited by ₹ 18,000 (c) Debited by₹ 16,000
(d) Credited by ₹ 16,000

14   A and B are partners sharing profits and losses in the ratio3:2. A's capital 1
is ₹ 1,60,000 and B's capital is ₹1,30,000. They admit C for 1/5th share of
profits. How much C should bring in as his capital?
(a) ₹38,000   (b) ₹ 24,000   (c) ₹72,500   (d) ₹ 22,000

15   A and B are partners sharing profits in the ratio of 3:2. Calculate interest 1
on A's capital if profits for the year are ₹ 15,000 and interest on capital to
all partners is ₹ 20,000 each
(a) ₹ 20,000   (b) ₹ 12,500   (c) ₹ (7500) loss (d) ₹ 7,500

X and Y are partners sharing profits in the ratio of 3:2. As per their agreement X will receive 5% p.a. interest on his loan of ₹ 100,000 and Y will receive 2% commission on sales affected by him, which were ₹ 100,000. Calculate X's share of profit when net profit as per Profit and Loss A/c is ₹ 100,000

(a) ₹ 58,800 (b)₹ 58,000 (c) ₹ 60,000(d) ₹ 48,200

16 The amount of sundry assets transferred to realisation account was ₹ 80,000. 60% of them were sold at a profit of ₹2,000. 20% of the remaining were sold at a discount of 30% and remaining were taken over by Z at book value. The amount realised from assets is   1

 (a)₹ 54,480 (b) ₹ 25,600   (c) ₹ 8,000   (d) ₹ 80,080

17 X, Y and Z were partners in a firm sharing profits in the ratio 5:3:2. X died and the new profit sharing ratio of Y and Z was equal. On X's death the goodwill of the firm was valued at ₹ 50,000. Calculate the gaining ratio and pass necessary journal entry on X's death for the treatment of goodwill without opening goodwill account.   3

18 R and S are partners sharing profits and losses in the ratio of 3:5. Their fixed capitals were R ₹500,000 and S ₹ 900,000. After the accounts of the year are closed, it was found that interest on capital @ 10% p.a. as provided in partnership deed, has not been credited to the capital accounts of the partners. Rectify the above by passing an adjustment entry. Show workings clearly.   3

OR

A, B and C were partners in a firm. On 1st April 022, their capitals were ₹ 5,00,000, ₹ 2,50,000 and ₹ 2,50,000 respectively. The partnership deed provided for the following:

(a) Partners were entitled to interest on capital @ 6% p.a.
(b) C was entitled for a salary ₹ 5,000 per month.
(c) A was entitled for a commission of ₹ 80,000 p.a.
(d) Partners will share profits in he ratio of their capitals.

The net profit for the year ended 31.03.2023 was ₹ 3,00,000 which was distributed equally, without providing for the above. Rectify the above by passing an adjustment entry. Show workings clearly.

19 M Ltd. issued 7,000, 11% debentures of ₹ 100 each at par, redeemable 3
    after 5 years. The company also raised a short term loan of ₹ 200,000 from
    SBI, collaterally secured by issue of 2,500, 11% Debentures f ₹ 100 each.
    How will be the Debentures presented in the Balance Sheet of the
    company assuming that the company has passed necessary journal entries
    for the issue of debenture as collateral security in the books of the
    company.

    OR

    P Ltd. purchased assets of ₹ 180,000 and took over liabilities (creditors) of
    ₹ 80,000 of M Ltd. for a purchase consideration of ₹ 176,000. P Ltd. paid
    half the amount by cheque and balance was settled by issuing 12%
    Debenture of ₹ 100 each at a premium of 10%.
    Pass necessary journal entries to record the above transactions in the books
    of P Ltd

20 The average profit earned by a firm is ₹ 75,000 which includes 3
    undervaluation of stock of ₹ 5,000 on an average basis. The capital
    invested in the business is ₹ 700,000 and the normal rate of return is 7%.
    Calculate the value of goodwill of the firm on the basis of 5 times the
    Super profit.

21 S.Ltd. is registered with authorised capital of ₹ 10,00,00,000 divided into 4
    10,00,000 equity shares of ₹ 100 each. Out of these, company issued
    1,00,000 equity shares of ₹ 100 each. The amount was payable as follows.
    ₹ 50 on application, ₹ 30 per share on allotment, the balance on first and
    final call. A shareholder holding 100 shares failed to pay the first and final
    call money. His shares were forfeited. The forfeited shares were re-issued
    at ₹ 90 per share as fully paid up.
    Prepare an extract of Balance Sheet of S Ltd. as per Revised Schedule III,
    Part I of the Companies Act,2013 disclosing the above information. Also
    prepare 'Notes to Accounts' for the same.

22 The firm of M, S and J was dissolved on 31st March 2023. It was agreed 4
    that S will take care of dissolution related activities and will get 10% of
    the value of assets realised, S agreed to bear the realisation expenses.
    Assets realised ₹10,00,750 and realisation expenses were ₹ 90,000 which

were paid by the farm's cash. ₹ 4,50,000 were paid to creditors in full settlement of their claim.

Pass necessary journal entries for the above transactions in the books of the firm.

23   AB Ltd. issued 635, 9% Debentures of ₹ 500 each. Pass necessary journal   6
entries for the issue of debentures in the following situations.
(a) When debentures were issued at 5% discount, redeemable at 10% premium.
(b)When debentures were issued at 12% premium, redeemable at 6% premium.

24   M, N and P were partners in the firm sharing profits in the ratio of 1:2:1.   6
The firm closes its books on 31st March every year. On 30th September 2022 N died. On that date his capital account should a debitbalance of ₹ 5000.There was a debit balance of ₹ 30,000 in profit and loss account. The goodwill of the farm was valued at ₹ 3,80,000. N's share of profit in the year of his death was to be calculated on the basis of average profit of last 5 years, which was ₹ 90,000.

Pass necessary journal entries in the books of the firm on N's death.

25   EF Ltd. invited applications for issuing 80,000 equity shares of ₹ 50 each   6
at a premium of 20%. The amount was payable as follows.
On Application - ₹ 20 per share (including premium ₹ 5)
On Allotment   - ₹ 15 per share (including premium ₹ 5)
On First call   - ₹ 15 per share
On Second and Final Call - Balance amount
Applications for 1,20,000 shares were received. Applications for 20,000 shares were rejected and pro-rata allotment was made to the remaining applicants.

S, holding 4,000 shares failed to pay the allotment money. Afterwards the first call was made. S paid allotment money along with the first call. X, who had applied for 2500 shares failed to pay the first call money. X's sharewere forfeited and subsequently reissued to G for ₹ 60 per share, ₹ 50 per share paid up. Final call was not made.

Pass necessary journal entries for the above transactions in the books of EF Ltd. by opening calls in arrears account.

R Ltd. invited applications for issuing 1,00,000 shares of ₹ 10 each at a premium of ₹ 2 per share. The amount per share was payable as follows.

On Application   -   ₹ 4 per share (including premium ₹ 1)

On Allotment   -   ₹ 4 per share (including premium ₹ 1)

On First and Final call   -   Balance amount

Applications for 1,50,000 shares were received and allotment was made to the applicants as follows.

(a) Applicants of 80,000 shares were allotted 60,000 shares

(b) Applicants of 50,000 shares were allotted 40,000 shares

(c) No share was allotted to the remaining applicants and their application money was returned.

Y, who belonged to category (b) and who had applied for 5,000 shares failed to pay the allotment and call money. His shares were forfeited. Later half of Y's forfeited shares were reissued @ ₹ 18 per share as fully paid-up.

Pass the necessary journal entries to record the above transactions in the books of R Ltd.

26   A and M were partners in firm sharing profits in the ratio time is 5:3 . On 31st March 2022 they admitted X add a new partner for 1/5th share in the profit. The new profit sharing ratio was 5:3:2. On X's admission the balance sheet of the farm was as follows.   6

Balance Sheet as at 31.03.2022

Liabilities		₹	Assets		₹
Capital A/cs			Land and Building		1,50,000
			Machinery		40,000
A	1,50,000		Patents		5,000
M	90,000	2,40,000	Stock		27,000
			Debtors	47,000	
Workmen's			Less Provision		
Compensation Fund		32,000	for Bad Debt	1,200	45,800
			Cash		4,200
Creditors		20,000	Profit and Loss A/c		20,000
		2,92,000			2,92,000

On X's admission it was agreed that,

(a)X will bring ₹ 40,000 as his capital and ₹16,000 for his share of goodwill premium, half of which was withdrawn by A and M

(b) A provision of 2.5% on bad and doubtful debt was to be created

(c) Included in sundry creditors was an item of ₹ 2500 which was not to be paid.

(d) A provision was to be made for an outstanding bill for electricity ₹ 3,000

(e) A claim of ₹ 325 for damage against the firm was likely to be admitted. Provision for the same was to be made.

After the above adjustments, the capitals of A and M were to be adjusted on the basis of X's capital. Actual cashwas to be brought in or to be paid off to A and M, as the case may be.

Prepare Revaluation Account and Partners' capital account of the new farm.

OR

L, M and N were partners in a firm sharing profits as 50%, 30% and 20% respectively. On 31st March 2022, their balance sheet was as follows.

Balance Sheet as at 31.03.2022

Liabilities		₹	Assets		₹
Capital A/cs			Goodwill		40,000
L1,	40,000		Investment		80,000
M	80,000		Stock		38,000
N	50,000	2,70,000	Debtors	94,000	
Investment Fluctuation			Less Provision		
Fund		20,000	for Bad Debt	6,000	88,000
Provident Fund		10,000	Cash		68,000
Creditors		34,000	Profit & Loss A/c		20,000
		3,34,000			3,34,000

On the above date, M retired and L and N agreed to continue on the following terms

(a) Firm's goodwill was valued at ₹ 1,02,000 and it was decided to adjust M's share of goodwill into the capital accounts of continuing partners.

(b) There was aclaim for Workmen's compensation to the extent of ₹12,000 and investments were brought down to ₹ 30,000.

(c) Provision for bad debts was to be reduced by ₹ 2,000

(d) M was to be paid ₹ 20,600 in cash and the balance will be transferred to his loan account which was paid in two equal instalments together with interest @ 10% per annum.

(e) L and N's Capital were to be adjusted in their new profit sharing ratio by bringing in or paying off cash as the case may be.

Prepare Revaluation A/C and Partners' Capital A/c of the reconstituted firm.

PART B
Analysis of Financial Statements

27 Which of the following is not a limitation of financial statement analysis   1
(a) Window dressing   (b) Price level changes ignored (c) Subjectivity (d) Inter-firm comparison possible

OR

Main limitation of financial statement analysis is
(a) To know earning capacity   (b) To know financial strength   (c) Do not reflect changes in price level (d) Comparative study with other firms

28 Cash balance ₹ 5,000; Trade Payable ₹ 40,000; Inventory ₹ 50,000; Trade   1
Receivable ₹ 65,000 and Prepaid Expenses ₹ 10,000, Liquid ratio will be
(a) 1.75 : 1   (b) 2:1 (c) 3.25:1 (d) 3:1

29 Dividend paid by a financial enterprise will come under which kind of 1
activity while preparing cash flow statement
(a) Operating activity (b) Investing activity   (c) Financing activity (d) both (b) and (c)

OR

Interest received on investment will come under which type of activity while preparing cash flow statement of a non-financial enterprise
(a) Investing activity   (b) Financing activity (c) Operating activity (d) Both (b) & (c)

30   Which of the following transactions are shown under financing activities   1
     while preparing cash flow statement? (I) Issue of equity share (II) Cash
     received from debtors (III) Redemption of debentures (IV) Cash paid
     against trade payable
     (a) (I)(b) (I) and (II)   (c) (I) and (III)   (d) (I), (II) and (IV)

31   Classify the following items under Major heads and Sub heads(if any) in   3
     the Balance Sheet of a company as per Schedule III of the Companies
     Act,2013 (a) Capital Reserve (b) Bank Overdraft (c) Income Received in
     Advance (d) Land and Building (e) Unpaid Dividend (f) Patents

32   From the following information calculate the following ratios (a)   3
     Operating ratio and (b) Inventory Turnover ratio

     Cash revenue from operation ₹10,00,000; Credit revenue from operation
     120% of cash revenue from operation , Operating expenses 10% of
     revenue from operations, Rate of gross profit 40%; Opening inventory ₹
     1,50,000; Closing inventory ₹ 20,000 more than opening inventory;
     Current assets ₹ 3,00,000; Current liabilities ₹ 2,00,000; Share capital ₹
     6,00,000; fixed assets ₹ 5,00,000.

33   From the following Balance Sheet of S.Ltd as at 31st March 2021 and 31st   4
      March 2022, prepare Common-size Balance Sheet.

	Note No.	31.03.2022 (₹)	31.03.2021 (₹)
I. EQUITY AND LIABILITIES			
1. Shareholders' Funds			
(a) Share Capital		80,00,000	60,00,000
(b) Reserves and Surplus		12,00,000	8,00,000
2. Non-Current Liabilities			
Long-term Borrowings		24,00,000	20,00,000
3. Current Liabilities			
(a) Short-Term Borrowings		4,00,000	12,00,000
Total		120,00,000	100,00,000
II. ASSETS			
1. Non-Current Assets			
Property, Plant and Equitment and Intangible Assets			
(a) Property,Plant &Equipment		80,00,000	60,00,000
(b) Intangible Assets		4,00,000	12,00,000
2. Current Assets			
(a) Inventories		24,00,000	20,00,000
(b) Cash and Cash Equivalents		12,00,000	8,00,000
Total		120,00,000	100,00,000

OR

From the following Balance Sheet of E.Ltd as at 31st March 2021 and 31st March 2022, prepare Comparative Balance Sheet.

	Note No.	31.03.2022 (₹)	31.03.2021 (₹)
I. EQUITY AND LIABILITIES			
1. Shareholders' Funds			
(a) Share Capital		18,00,000	12,00,000
2. Non-Current Liabilities			
Long-term Borrowings		6,00,000	6,00,000
3. Current Liabilities			
Trade Payables		6,00,000	3,00,000
Total		30,00,000	21,00,000
II. ASSETS			
1. Non-Current Assets			
Property, Plant and Equipment and Intangible Assets			
Property,Plant &Equipment		18,00,000	15,00,000
2. Current Assets			
(a) Trade Receivables		10,00,000	5,00,000
(b) Cash and Cash Equivalents		2,00,000	1,00,000
Total		30,00,000	21,00,000

34   From the following Balance Sheet of D Ltd. and additional information as   6
at 31st March,2022, prepare a Cash Flow Statement:

Balance Sheet of D Ltd. as at 31st March,2022

Particulars	Note No.	31.3.2022(₹)	31.3.2021(₹)
I. EQUITY AND LIABILITIES			
1. Shareholders' Funds			
(a) Share Capital		24,00,000	22,00,000
(b) Reserves and Surplus	1	6,00,000	4,00,000
2. Non-Current Liabilities			
Long-term Borrowings		4,80,000	3,40,000
3. Current Liabilities			
(a) Trade Payables		3,58,000	4,08,000
(b) Short-Term Provisions		1,00,000	1,54,000
Total		39,38,000	35,02,000
II. ASSETS			
1. Non-Current Assets			
Property, Plant and Equipment and Intangible Assets			
(i) Property,Plant &Equipment	2	21,40,000	17,00,000
(ii) Intangible Assets	3	80,000	2,24,000
2. Current Assets			
(a) Current Investments		4,80,000	3,00,000
(b) Inventories		2,58,000	2,42,000
(c) Trade Receivables		3,40,000	2,86,000
(c) Cash and Cash Equivalents		6,40,000	7,50,000
Total		39,38,000	35,02,000

Notes to Accounts

Particulars	31.3.2022(₹)	31.3.2021(₹)
1. Reserve and Surplus		
Surplus, i.e., Balance in Statement of Profit or Loss	6,00,000	4,00,000
2. Property, Plant and Equipment		
Machinery	25,40,000	20,00,000
Less Accumulated Depreciation	(4,00,000)	(3,00,000)
	21,40,000	17,00,000
3. Intangible Assets		
Goodwill	80,000	2,24,000

Additional Information:

During the year a piece of machinery costing ₹ 48,000 on which accumulated depreciation was ₹ 32,000 was sold for ₹ 12,000.

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Name: _____ Sec: _____ Roll No.: _____

BURNPUR RIVERSIDE SCHOOL, BURNPUR
SECOND PRE-BOARD EXAMINATION : [2023-2024]
ACCOUNTANCY
CLASS – XII

Time : 3 Hours   **Maximum Marks : 80**

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3. Questions 1 to 16 and 27 to 30 carries 1 mark each.
4. Questions 17 to 20, 31 and 32 carries 3 marks each.
5. Questions from 21,22 and 33 carries 4 marks each.
6. Questions from 23 to 26 and 34 carries 6 marks each.
7. There is no overall choice. However, an internal choice has been provided in 7 questions of one mark, 2 questions of three marks, 1 question of four marks and 2 questions of six marks.
8. All parts of a question should be attempted at one place.

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1   Assertion(A): Reserve Capital is a part of subscribed capital which the   1
        company decides to call at the time of winding up of the
        company.
   Reason (R): Share Capital, which the companies resolve to call up on its
        winding up, is termed as Reserve Capital.
   (a) Both A and R are correct and R is not the correct explanation of A
   (b) Both A and R are correct but R is the correct explanation of A
   (c) A is correct but R is incorrect
   (d) A is incorrect but R is correct

2   A company forfeited 3000 shares of ₹ 10 each, on which only ₹ 5 per   1
   share (including premium ₹ 1) has been paid . Out of these, few shares
   were re-issued at a discount of ₹ 1 per share and ₹ 6000 were transferred
   to capital reserve. How many shares were re-issued?
   (a) 3000 shares (b) 2000 shares   (c) 1500 shares   (d) 1000 shares

If 10,000 shares of ₹ 10 each forfeited for non-payment of final call money of ₹ 3 per share and only 7000 of these shares were re-issued @ ₹ 11 per share as fully paid up, then what is the minimum amount that company must collect at the time of re-issue of the remaining 3000 shares?
(a) ₹ 9,000   (b) ₹ 16,000   (c) ₹ 21,000   (d) ₹ 30,000

3   If a partner individually carries on any business of the same nature as   1
     competing with that of firm, he shall account for
     (a) retire from partnership   (b) all profits made by him
     (c) dissolve the farm   (d) none of the above

4   A company has taken a loan of ₹ 20,00,000 . The lender took 8%   1
     Debenture as collateral security. The director of the company wants to
     journalise this collateral security. Accountant doesn't know the exact entry
     Advise him as to which entry is correct?

     (a) Lender A/c   Dr.   20,00,000
             To 8% Debenture A/c   20,00,000
     (b) Bank Loan A/c   Dr.   20,00,000
             To 8% Debenture   A/c   20,00,000
     (c) Debenture Suspense A/c   Dr.   20,00,000
             To 8% Debenture A/c   20,00,000
     (d) none of these

                              OR

     A Ltd. issued 5,000, 10% Debenture of ₹ 100 at a discount of ₹ 10 .
     Amount was payable as follows:
     On Application   ₹ 50
     On Allotment   Balance
     All amount due was received on time except a holder of 1000 debentures
     who didn't pay allotment money. Journalise the entry on receipt of
     allotment money.

(a) Bank A/c   Dr.   2,50,000
        To Debenture Allotment A/c   2,50,000

(b) Bank A/c   Dr.   1,60,000
        To Debenture Allotment A/c   1,60,000

(c) Bank A/c   Dr.   2,00,000
        To Debenture Allotment A/c   1,60,000
        To Discount on Issue of Debenture A/c   40,000
(d) none of these

5   A and S are partners in a firm with capitals of ₹ 300,000 and ₹ 2,00,000   1
     respectively. The normal rate of return was 20% and the capitalized value
     of average profit was ₹ 8,50,000. The goodwill of the firm by
     capitalization of average profit method will be
     (a) ₹ 10,00,000   (b) ₹ 150,000 (c) ₹ 350,000 (d) ₹ 500,000
                                   OR
     A, B and C are partners with ratio of 2:2:1. C was guaranteed for
     minimum profit of ₹ 10,000. A and B bears the deficiency as ₹ 500 and ₹
     500 respectively. How much profit was earned by the firm?
     (a) ₹ 30,000 (b) ₹ 45,000 (c) ₹ 50,000 (d) none of these

6   A and B are partners sharing profits in the ratio 5:4. They admit C for   1
     1/10th share of profit which he acquires in equal proportion from both .
     What is the new profit sharing ratio of A, B and C?
     (a) 5:4:9 (b) 50:40:18 (c) 91:71:18 (d) None of these

7   Which of the following is not recorded on the credit side of current   1
     accounts of partners?
     (a) Interest on capital   (b) Partner's Salary
     (c) Interest on Partner's loan   (d) Share of profits to partner.

8   P, R and S are partners. Before changing their profit sharing ratio to 5:3:2,   1
     they were sharing profits equally. Workmen compensation Reserve existed
     at ₹ 1,00,000 against which a claim existed at ₹ 20,000. Amount that will
     be created to their capital account in their old profit sharing ratio will be
     (a) ₹ 1,00,000   (b) ₹ 80,000   (c) ₹ 1,00,000 credited and ₹ 20,000 debited
     (d) ₹ 20,000 credited and ₹ 100,000 debited

M, R and A were partners sharing profits in the ratio of 2:2:1. They decided to share future profits equally with effect from 1st April 2022 . Their balance sheet as on that date showed a balance of ₹ 50,000 in Investment Fluctuation Reserve Account while book value of investments was ₹ 1,00,000 and market value of these investments was ₹ 90,000 . The amount that will be adjusted in the capital accounts of the partners will be
(a) ₹ 100,000 (b) ₹ 10,000 (c) ₹ 90,000 (d) none of these.

Read the following hypothetical situation, answer question no. 9 and 10.
A and B were partners in a stationary business. They supplied stationary in many schools across the city and over the counter too. The partnership deed entitled:
(a) Interest on capital @ 8% per annum
(b) Profit sharing ratio is 5:2
On 1st April 2020, their capitals were ₹ 6,00,000 and ₹ 4,00,000 respectively. B took the responsibility of dealing in schools and A took the charge of counter sale. During the year, A used firm's cash ₹ 1,00,000 without B's knowledge to invest privately. He incurred a loss of ₹ 12,000 in it.
After 6 months due to positive response of partnership business, they decided to expand their sales outside the city also. For this purpose they also decided to make their capital ₹8,00,000 each by introducing additional cash. They purchased 5 delivery van and employed eight staff members.
At the end of the year the farm earned net profit of ₹ 2,44,000.

9   Interest on A's capital will be   1
     (a) ₹ 56,000 (b) ₹ 48,000 (c) ₹ 64,000 (d) none of these

10   B's share of divisible profit will be   1
     (a) ₹ 30,000 (b) ₹ 35,000 (c) ₹ 40,000 (d) none of these

11   Assertion(A): A, a partner, in the firm gave loan of ₹ 5,00,000 to the firm   1
without any agreement as to the rate of interest. Interest on
loan by A is to be allowed @ 6% p.a.

.

Reason (R): In the absence of partnership deed provisions of the
Partnership
Act, 1932 apply. Thus, interest on loan to partner should be
charged at the rate 6% p.a.

In the context of above statements, which of the following is correct?

(a) Both A and R are correct and R is the correct explanation of A
(b) Both A and R are correct but R is not the correct explanation of A
(c) A is correct but R is incorrect
(d) A is incorrect but R is correct

12   V Ltd. forfeited 200 shares held by R for non-payment of allotment money   1
of ₹ 40 per share (including premium of ₹ 10 per share). The first and final
call of ₹ 20 per share was not yet called. In the forfeiture entry share
capital account will be
(a) Debited by ₹ 20,000 (b) Debited by ₹ 18,000 (c) Debited by ₹ 16,000
(d) Credited by ₹ 16,000

13   A and B are partners sharing profits and losses in the ratio3:2. A's capital   1
is ₹ 1,60,000 and B's capital is ₹1,30,000. They admit C for 1/5th share of
profits. How much C should bring in as his capital?
(a) ₹ 38,000 (b) ₹ 24,000   (c) ₹ 72,500   (d) ₹ 22,000

14   The amount of sundry assets transferred to realisation account was ₹   1
80,000. 60% of them were sold at a profit of ₹2,000. 20% of the remaining
were sold at a discount of 30% and remaining were taken over by Z at
book value. The amount realised from assets is
(a) 54,480 (b) ₹ 25,600   (c) ₹ 8,000   (d) ₹ 80,080

15   A Ltd. forfeited 300 shares of ₹ 10 each, fully called up, held by B for   1
      non-payment of allotment money of ₹ 3 per share and final call money ₹ 4
      per share. Out of these 250 shares were reissued to C for a total payment
      of ₹ 1800. Calculate the amount to be transferred to capital reserve
      account.
      (a) ₹ 50   (b) ₹ 100   (c) ₹ 500   (d) ₹ 150.

16   A and B are partners sharing profits in the ratio of 3:2. Calculate interest   1
      on A's capital if profits for the year are ₹ 15,000 and interest on capital to
      all partners is ₹ 20,000 each
      (a) ₹ 20,000   (b) ₹ 12,500   (c) ₹ (7500) loss (d) ₹ 7,500

                                    OR
      X and Y are partners sharing profits in the ratio of 3:2. As per their
      agreement X will receive 5% p.a. interest on his loan of ₹ 100,000 and Y
      will receive 2% commission on sales affected by him, which were ₹
      100,000. Calculate X's share of profit when net profit as per Profit and
      Loss A/c is ₹ 100,000
      (a) ₹ 58,800   (b)₹ 58,000   (c) ₹ 60,000   (d) ₹ 48,200

17   R and S are partners sharing profits and losses in the ratio of 3:5. Their   3
      fixed capitals were R ₹500,000 and S ₹ 900,000. After the accounts of the
      year are closed, it was found that interest on capital @ 10% p.a. as
      provided in partnership deed, has not been credited to the capital accounts
      of the partners. Rectify the above by passing an adjustment entry. Show
      workings clearly.
                                    OR
      A, B and C were partners in a firm. On 1st April 022, their capitals were ₹
      5,00,000, ₹ 2,50,000 and ₹ 2,50,000 respectively. The partnership deed
      provided for the following:
      (a) Partners were entitled to interest on capital @ 6% p.a.
      (b) C was entitled for a salary ₹ 5,000 per month.
      (c) A was entitled for a commission of ₹ 80,000 p.a.
      (d) Partners will share profits in the ratio of their capitals.
      The net profit for the year ended 31.03.2023 was ₹ 3,00,000 which was
      distributed equally, without providing for the above. Rectify the above by
      passing an adjustment entry. Show workings clearly.

18   The average profit earned by a firm is ₹ 75,000 which includes   3
      undervaluation of stock of ₹ 5,000 on an average basis. The capital
      invested in the business is ₹ 700,000 and the normal rate of return is 7%.
      Calculate the value of goodwill of the firm on the basis of 5 times the
      Super profit.

19   X, Y and Z were partners in a firm sharing profits in the ratio 5:3:2. X died   3
      and the new profit sharing ratio of Y and Z was equal. On X's death the
      goodwill of the firm was valued at ₹ 50,000. Calculate the gaining ratio
      and pass necessary journal entry on X's death for the treatment of
      goodwill without opening goodwill account.

20   M Ltd. issued 7,000, 11% debentures of ₹ 100 each at par, redeemable   3
      after 5 years. The company also raised a short term loan of ₹ 200,000 from
      SBI, collaterally secured by issue of 2,500, 11% Debentures f ₹ 100 each.
      How will be the Debentures presented in the Balance Sheet of the
      company assuming that the company has passed necessary journal entries
      for the issue of debenture as collateral security in the books of the
      company.

OR

      P Ltd. purchased assets of ₹ 180,000 and took over liabilities (creditors) of
      ₹ 80,000 of M Ltd. for a purchase consideration of ₹ 176,000. P Ltd. paid
      half the amount by cheque and balance was settled by issuing 12%
      Debenture of ₹ 100 each at a premium of 10%.
      Pass necessary journal entries to record the above transactions in the books
      of P Ltd

21   The firm of M, S and J was dissolved on 31ˢᵗ March 2023. It was agreed   4
      that S will take care of dissolution related activities and will get 10% of
      the value of assets realised, S agreed to bear the realisation expenses.
      Assets realised ₹10,00,750 and realisation expenses were ₹ 90,000 which
      were paid by the farm's cash. ₹ 4,50,000 were paid to creditors in full
      settlement of their claim.
      Pass necessary journal entries for the above transactions in the books of
      the firm.

22   S.Ltd. is registered with authorised capital of ₹ 10,00,00,000 divided into 4
      10,00,000 equity shares of ₹ 100 each. Out of these, company issued
      1,00,000 equity shares of ₹ 100 each. The amount was payable as follows.
      ₹ 50 on application, ₹ 30 per share on allotment, the balance on first and
      final call. A shareholder holding 100 shares failed to pay the first and final
      call money. His shares were forfeited. The forfeited shares were re-issued
      at ₹ 90 per share as fully paid up.
      Prepare an extract of Balance Sheet of S Ltd. as per Revised Schedule III,
      Part I of the Companies Act,2013 disclosing the above information. Also
      prepare 'Notes to Accounts' for the same.

23   M, N and P were partners in the firm sharing profits in the ratio of 1:2:1. 6
      The firm closes its books on 31st March every year. On 30th September
      2022 N died. On that date his capital account should a debit balance of ₹
      5000. There was a debit balance of ₹ 30,000 in profit and loss account.
      The goodwill of the farm was valued at ₹ 3,80,000. N's share of profit in
      the year of his death was to be calculated on the basis of average profit of
      last 5 years, which was ₹ 90,000.
      Pass necessary journal entries in the books of the firm on N's death.

24   A and M were partners in firm sharing profits in the ratio time is 5:3 . On 6
      31st March 2022 they admitted X add a new partner for 1/5th share in the
      profit. The new profit sharing ratio was 5:3:2. On X's admission the
      balance sheet of the farm was as follows.

                          Balance Sheet as at 31.03.2022

Liabilities		₹	Assets		₹
Capital A/cs			Land and Building		1,50,000
			Machinery		40,000
A	1,50,000		Patents		5,000
M	90,000	2,40,000	Stock		27,000
			Debtors	47,000	
Workmen's			Less Provision		
Compensation Fund		32,000	for Bad Debt	1,200	45,800
			Cash		4,200
Creditors		20,000	Profit and Loss A/c		20,000
		2,92,000			2,92,000

On X's admission it was agreed that,

(a) X will bring ₹ 40,000 as his capital and ₹16,000 for his share of goodwill premium, half of which was withdrawn by A and M

(b) A provision of 2.5% on bad and doubtful debt was to be created

(c) Included in sundry creditors was an item of ₹ 2500 which was not to be paid.

(d) A provision was to be made for an outstanding bill for electricity ₹ 3,000

(e) A claim of ₹ 325 for damage against the firm was likely to be admitted. Provision for the same was to be made.

After the above adjustments, the capitals of A and M were to be adjusted on the basis of X's capital. Actual cash was to be brought in or to be paid off to A and M, as the case may be.

Prepare Revaluation Account and Partners' capital account of the new farm.

OR

L, M and N were partners in a firm sharing profits as 50%, 30% and 20% respectively. On 31st March 2022, their balance sheet was as follows.

Balance Sheet as at 31.03.2022

Liabilities		₹	Assets		₹
Capital A/cs			Goodwill		40,000
L	1,40,000		Investment		80,000
M	80,000		Stock		38,000
N	50,000	2,70,000	Debtors	94,000	
Investment Fluctuation			Less Provision		
Fund		20,000	for Bad Debt	6,000	88,000
Provident Fund		10,000	Cash		68,000
Creditors		34,000	Profit & Loss A/c		20,000
		3,34,000			3,34,000

On the above date, M retired and L and N agreed to continue on the following terms

(a) Firm's goodwill was valued at ₹ 1,02,000 and it was decided to adjust M's share of goodwill into the capital accounts of continuing partners.

(b) There was a claim for Workmen's compensation to the extent of ₹12,000 and investments were brought down to ₹ 30,000.

(c) Provision for bad debts was to be reduced by ₹ 2,000

(d) M was to be paid ₹ 20,600 in cash and the balance will be transferred to his loan account which was paid in two equal instalments together with interest @ 10% per annum.

(e) L and N's Capital were to be adjusted in their new profit sharing ratio by bringing in or paying off cash as the case may be.

Prepare Revaluation A/C and Partners' Capital A/c of the reconstituted firm.

25   AB Ltd. issued 635, 9% Debentures of ₹ 500 each. Pass necessary journal   6
entries for the issue of debentures in the following situations.

(a) When debentures were issued at 5% discount, redeemable at 10% premium.

(b)When debentures were issued at 12% premium, redeemable at 6% premium.

26   EF Ltd. invited applications for issuing 80,000 equity shares of ₹ 50 each   6
at a premium of 20%. The amount was payable as follows.

On Application   -   ₹ 20 per share (including premium ₹ 5)
On Allotment   -   ₹ 15 per share (including premium ₹ 5)
On First call   -   ₹ 15 per share
On Second and Final Call -   Balance amount

Applications for 1,20,000 shares were received. Applications for 20,000 shares were rejected and pro-rata allotment was made to the remaining applicants.

S, holding 4,000 shares failed to pay the allotment money. Afterwards the first call was made. S paid allotment money along with the first call. X, who had applied for 2500 shares failed to pay the first call money. X's share were forfeited and subsequently reissued to G for ₹ 60 per share, ₹ 50 per share paid up. Final call was not made.

Pass necessary journal entries for the above transactions in the books of EF Ltd. by opening calls in arrears account.

OR

R Ltd. invited applications for issuing 1,00,000 shares of ₹ 10 each at a premium of ₹ 2 per share. The amount per share was payable as follows.

On Application   -   ₹ 4 per share (including premium ₹ 1)
On Allotment   -   ₹ 4 per share (including premium ₹ 1)
On First and Final call -   Balance amount

Applications for 1,50,000 shares were received and allotment was made to the applicants as follows.
(a) Applicants of 80,000 shares were allotted 60,000 shares
(b) Applicants of 50,000 shares were allotted 40,000 shares
(c) No share was allotted to the remaining applicants and their application money was returned.
Y, who belonged to category (b) and who had applied for 5,000 shares failed to pay the allotment and call money. His shares were forfeited. Later half of Y's forfeited shares were reissued @ ₹ 18 per share as fully paid-up.
Pass the necessary journal entries to record the above transactions in the books of R Ltd.

PART B
Analysis of Financial Statements

27   Dividend paid by a financial enterprise will come under which kind of   1
activity while preparing cash flow statement
(a) Operating activity (b) Investing activity   (c) Financing activity (d) both (b) and (c)

OR

Interest received on investment will come under which type of activity while preparing cash flow statement of a non-financial enterprise
(a) Investing activity   (b) Financing activity (c) Operating activity (d) Both (b) & (c)

28   Which of the following is not a limitation of financial statement analysis   1
(a) Window dressing (b) Price level changes ignored (c) Subjectivity (d) Inter-firm comparison possible
OR
Main limitation of financial statement analysis is
(a) To know earning capacity (b) To know financial strength (c) Do not reflect changes in price level (d) Comparative study with other firms

29   Which of the following transactions are shown under financing activities   1
      while preparing cash flow statement? (I) Issue of equity share (II) Cash
      received from debtors (III) Redemption of debentures (IV) Cash paid
      against trade payable

      (a) (I)   (b) (I) and (II)   (c) (I) and (III)   (d) (I), (II) and (IV)

30   Cash balance ₹ 5,000; Trade Payable ₹ 40,000; Inventory ₹ 50,000; Trade   1
      Receivable ₹ 65,000 and Prepaid Expenses ₹ 10,000, Liquid ratio will be
      (a) 1.75 : 1   (b) 2:1 (c) 3.25:1 (d) 3:1

31   From the following information calculate the following ratios (a)   3
      Operating ratio and (b) Inventory Turnover ratio

      Cash revenue from operation ₹10,00,000; Credit revenue from operation
      120% of cash revenue from operation , Operating expenses 10% of
      revenue from operations, Rate of gross profit 40%; Opening inventory ₹
      1,50,000; Closing inventory ₹ 20,000 more than opening inventory;
      Current assets ₹ 3,00,000; Current liabilities ₹ 2,00,000; Share capital ₹
      6,00,000; fixed assets ₹ 5,00,000.

32   Classify the following items under Major heads and Sub heads(if any) in   3
      the Balance Sheet of a company as per Schedule III of the Companies
      Act,2013 (a) Capital Reserve (b) Bank Overdraft (c) Income Received in
      Advance (d) Land and Building (e) Unpaid Dividend (f) Patents

33   From the following Balance Sheet of S.Ltd as at 31st March 2021 and 31st 4
      March 2022, prepare Common-size Balance Sheet.

	Note No.	31.03.2022 (₹)	31.03.2021 (₹)
I. EQUITY AND LIABILITIES			
1. Shareholders' Funds			
(a) Share Capital		80,00,000	60,00,000
(b) Reserves and Surplus		12,00,000	8,00,000
2. Non-Current Liabilities			
Long-term Borrowings		24,00,000	20,00,000
3. Current Liabilities			
(a) Short-Term Borrowings		4,00,000	12,00,000
Total		120,00,000	100,00,000
II. ASSETS			
1. Non-Current Assets			
Property, Plant and Equitment and Intangible Assets			
(a) Property,Plant &Equipment		80,00,000	60,00,000
(b) Intangible Assets		4,00,000	12,00,000
2. Current Assets			
(a) Inventories		24,00,000	20,00,000
(b) Cash and Cash Equivalents		12,00,000	8,00,000
Total		120,00,000	100,00,000

OR

From the following Balance Sheet of E.Ltd as at 31st March 2021 and 31st March 2022, prepare Comparative Balance Sheet.

	Note No.	31.03.2022 (₹)	31.03.2021 (₹)
I. EQUITY AND LIABILITIES			
1. Shareholders' Funds			
(a) Share Capital		18,00,000	12,00,000
2. Non-Current Liabilities			
Long-term Borrowings		6,00,000	6,00,000
3. Current Liabilities			
Trade Payables		6,00,000	3,00,000
Total		30,00,000	21,00,000
II. ASSETS			
1. Non-Current Assets			
Property, Plant and Equipment and Intangible Assets			
Property, Plant &Equipment		18,00,000	15,00,000
2. Current Assets			
(a) Trade Receivables		10,00,000	5,00,000
(b) Cash and Cash Equivalents		2,00,000	1,00,000
Total		30,00,000	21,00,000

From the following Balance Sheet of D Ltd. and additional information as at 31ˢᵗ March,2022, prepare a Cash Flow Statement:

34

6

Balance Sheet of D Ltd. as at 31ˢᵗ March,2022

Particulars	Note No.	31.3.2022(₹)	31.3.2021(₹)
I. EQUITY AND LIABILITIES			
1. Shareholders' Funds			
(a) Share Capital		24,00,000	22,00,000
(b) Reserves and Surplus	1	6,00,000	4,00,000
2. Non-Current Liabilities			
Long-term Borrowings		4,80,000	3,40,000
3. Current Liabilities			
(a) Trade Payables		3,58,000	4,08,000
(b) Short-Term Provisions		1,00,000	1,54,000
Total		39,38,000	35,02,000
II. ASSETS			
1. Non-Current Assets			
Property, Plant and Equipment and Intangible Assets			
(i) Property, Plant &Equipment	2	21,40,000	17,00,000
(ii) Intangible Assets	3	80,000	2,24,000
2. Current Assets			
(a) Current Investments		4,80,000	3,00,000
(b) Inventories		2,58,000	2,42,000
(c) Trade Receivables		3,40,000	2,86,000
(c) Cash and Cash Equivalents		6,40,000	7,50,000
Total		39,38,000	35,02,000

Notes to Accounts

Particulars	31.3.2022(₹)	31.3.2021(₹)
1. Reserve and Surplus		
Surplus, i.e., Balance in Statement of Profit or Loss	6,00,000	4,00,000
2. Property, Plant and Equipment		
Machinery	25,40,000	20,00,000
Less Accumulated Depreciation	(4,00,000)	(3,00,000)
	21,40,000	17,00,000
3. Intangible Assets		
Goodwill	80,000	2,24,000

Additional Information:

During the year a piece of machinery costing ₹ 48,000 on which accumulated depreciation was ₹ 32,000 was sold for ₹ 12,000.

==

CODE:A

BURNPUR RIVERSIDE SCHOOL, BURNPUR
PRE BOARD-II EXAMINATION: [2023-2024]
BUSINESS STUDIES
CLASS-XII

Time: 3 Hrs.   **Maximum Marks: 80**
===

General Instructions :
1. This question paper contains 34 questions. All questions are compulsory.
2. Marks are indicated against each question
3. Answers should be brief and to the point.
4. Answers to questions 1 mark may be in one word or one sentence.
5. Answers to questions 3 marks may be from 50 to 75 words.
6. Answers to questions 4 marks may be about 150 words.
7. Answers to questions 6 marks may be about 200 words.
8. Attempt all parts of the questions together.

1   A decision for replacing machines with modern machinery of higher 1
        production capacity is a
        (a) Financing decision   (b) Working capital decision
        (c) Investment decision   (d) none of these

2   Mr.P has decided to start a business of manufacturing crockery and cutlery 1
        items. In order to give a unique identification to his products, he has
        decided to assign the brand name 'Surprise' as it will enable the firm to
        secure and control the market for its products. Identify the relative
        advantage of branding to the marketers being described in the above case.
        (a) Facilitates differential pricing
        (b) Easy in the launching of new products
        (c) Facilitates product differentiation
        (d) Assists in advertising and display programmes.

3   An enterprise that monitors its environment continuously, is in a position   1
     to improve its future performance. Identify the importance of business
     environment.
     (a) It helps in coping with rapid changes
     (b) It helps in tapping useful resources
     (c) It helps in improving performance
     (d) none of the above

4   B. Verma has set up a factory to manufacture herbal and sanitizers in   1
     Kolkata . The size and shape of the bottles in which the product are packed
     are specially designed so that it should be convenient to handle and use by
     the consumers. The bottles in which sanitizers are packed is part of
     (a) primary packaging
     (b) secondary packaging
     (c) tertiary packaging
     (d) both secondary and tertiary packaging

5   Primary and secondary markets   1
     (a) compete each other
     (b) complement each other
     (c) function independently
     (d) control each other

6   At which level of management managers are responsible for maintaining   1
     the quality output and safety standard
     (a) Top level management
     (b) Middle level management
     (c) Lower level management
     (d) Both (b) & (c)

7   Identify the concept which increases the return on equity shares with a   1
     change in the capital structure of a company
     (a) Trading on equity   (b) Capital structure
     (c) Debt financing   (d) Equity financing

8   The process of controlling necessarily involves analysing divisions and   1
     taking corrective actions, which aims at improving future performance and
     achievement of predetermined goals. This statement describes controlling
     as
     (a) backward looking function
     (b) forward-looking function
     (c) pervasive function
     (d) none of these

9   Which type of distribution channel is used by Flipkart?   1
     (a) Direct distribution
     (b) One level Distribution
     (c) Two level distribution
     (d) Three level Distribution

10   Identify the social objectives from the following.   1
     (a) Providing good quality products at reasonable prices
     (b) Conducting business in fair and lawful manner
     (c) Expansion of the organization
     (d) Both (a) and (b)

11   The process that initiates implementation of plan by clarifying jobs,   1
     working relationships and effectively deploying resources for attainment
     of identified and desired results is called
     (a) Coordination   (b) Management   (c) Organizing (d) Delegation

12   Which of the following statement(s) is/are not correct?   1
     (a) planning originates controlling
     (b) planning and controlling are interdependent
     (c) planning is practical whereas controlling is theoretical
     (d) learning and controlling both are forward-looking

13   For the following two statements choose the correct option.   1
     Statement I: If the demand of a product is inelastic, the firm is in a
     position to fix higher prices.
     Statement II: In case the degree of competition is high, the firm is in a
     position to set higher prices.

(a) Statement I is correct and II is wrong
(b) Statement II is correct and I is wrong
(c) Both the statements are correct
(d) Both the statements are incorrect

14   'Equal pay for equal work' is an example of which dimension of business   1
     environment?

     (a) Economic environment   (b) Legal environment
     (c) Social environment   (d) None of the above

15   Which of the following statements is correct with reference to organizing   1
     function of management?

     (a) Leads to systematic allocation of jobs and facilitates specialization
     (b) Reduces the risk of uncertainty
     (c) Helps in obtaining competent personnel
     (d) Judges accuracy of standards.

16   Mr. X bought certain shares of R Ltd. from Mr.Y and lodged them with   1
     the depository in form of a book entry. However, as per the register of
     members of R.Ltd. Mr. Y is still the owner of those shares. In such a
     situation Mr.X would be known as

     (a) registered owner   (b) holder of shares
     (c) beneficial owner   (d) none of these

17   Several initiatives have been undertaken by the Government of India to 1
     encourage domestic manufacturing and export of defence equipments.
     'Make In India in defence was one such scheme launched by the
     Government to encourage companies across the world to manufacture
     defence products in India. To which dimension of business environment
     does the above case relates to?

     (a) Economic environment   (b) Legal environment
     (c) Political environment   (d) Social environment

18   Match the concept of marketing in Column I with their respective   1
      definition in Column II.

Column I	Column II
Product Concept	(i) relates to maintaining high quality of the product.
Selling Concept	(ii) relates to satisfying customer needs
Marketing Concept	(iii) relates to aggressively persuading buyer to purchase the product.

      (a) i, ii, iii   (b) ii, i, iii   (c) iii, ii, i   (d) i, iii, ii

19   The management gives a common direction to the individual effort in   1
      achieving the overall goal of the organization. Which point of importance
      of management is highlighted in the above statement?
      (a) Helps in achieving personal objectives
      (b) Helps in achieving group goals
      (c) helps to increase efficiency
      (d) helps to create a dynamic organization

20   Which of the following is not Steve in driving and settlement procedure in   1
      a stock exchange
      (a) Approaching a broker   (b) Placing an order
      (c) Finding a deal (d) None of the above

21   What is meant by coordination? Explain its importance (any two)   3

22   AB Company is a large manufacturing unit. Recently the company had   3
      conducted time and motion studies and concluded that on an average, a
      worker could produce 300 units per day. However it has been noticed that
      the average daily production of a worker is in the range of 200 to 225
      units.
      (a) Name the function of management and identify the step in the process
      of this function which helped in finding out that the actual production of a
      worker is less than the set target.
      (b) To complete the process of the function identified in and to ensure the
      performance as per time add motion studies, explain what further steps the
      manager has to take.

OR

Planning and controlling are inseparable twins of management. Explain any three points to establish the relationship between planning and controlling.

23 External sources of recruitment are consider better than internal sources. 3
Give any three reasons in support of this statement.

24 Differentiate between capital market and money market on the basis of (a) 3
Instruments (b) Safety and (c) Type of capital

OR

Explain any three functions of secondary market.

25 Explain any four organisational barriers to communication. 4

OR

Explain any four non-financial incentives what can be implemented by top level management to motivate subordinates in an organisation.

26 Explain any two on-the-job methods of training. 4

OR

Explain first four steps in the process of selection of its employees in an organisation.

27 Explain any four responsibilities of a consumer according to Consumer 4
Protection Act,2019.

28 Explain any four factors that may be considered for estimating working 4
capital requirement of a company.

29 Explain the followings under the marketing management philosophies. 4
(a) Product concept and (b) Marketing Concept

30   D Ltd. requires an investment of ₹ 60,00,000 to earnEarning Before   4
      Interest and Tax(EBIT) of ₹ 8,00,000 . In order to raise ₹ 60,00,000 there
      are two proposals.
      Proposal A
      6,00,000 Equity shares of ₹ 10 each
      Tax rate = 20%
      Proposal B
      4,00,000Equity shares of ₹ 10 each
      ₹ 20,00,000, 10% Debentures
      Tax rate = 20%

      Which proposal, if accepted, would ensure better earnings for the
      shareholders? Decide on the basis of Earning Per Share (EPS). Show
      workings clearly.

31   Explain the followings.   6
      (a) Differential piece Wage system   (b) Harmony, not discord   (c)
      Method Study
                                    OR
      Explain the followings with example, if possible.
      (a) Order (b) Initiative (c). Stability of personnel

32   Two years ago Mr. M completed his degree input technology. He worked   6
      for sometime in a company manufacturing pickles and murabbas. He was
      not happy in the company and decided to have his own organic food
      processing unit for the same. He set the objectives and the targets and
      formulated action plan to achieve the same.
      One of his objective was to earn 10% profit on the amount invested in the
      first year. It was decided that raw materials like fruits, vegetables etc. will
      be purchased on three months credit from farmers cultivating organic
      crops only.He also decided to follow the steps required for marketing of
      the products through his own outlets. He appointed Mr. Y as a Production
      Manager who decides the exact manner in which the production activities
      are to be carried out. Mr. Y also prepared a statement showing the number
      of workers that will be required in the factory throughout the year. Mr. M
      informed Mr. Y about his salestarget his different products, areawise
      forforthcoming quarter.
      While working on the production table, a penalty of ₹ 100 per day for not
      wearing the caps, gloves and aprons was announced.

Quoting lines from the above para identify and explain any six types of plan discussed above.

33   Explain any six functions of marketing.   6
                                         OR
        Explain any six functions of packaging.

34   Define the term 'Organising' and explain the steps in the process of 6
        organizing.

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BURNPUR RIVERSIDE SCHOOL, BURNPUR
PRE BOARD-II EXAMINATION: [2023-2024]
BUSINESS STUDIES
CLASS-XII

Time: 3 Hrs.   **Maximum Marks: 80**

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General Instructions :
1. This question paper contains 34 questions. All questions are compulsory.
2. Marks are indicated against each question
3. Answers should be brief and to the point.
4. Answers to questions 1 mark may be in one word or one sentence.
5. Answers to questions 3 marks may be from 50 to 75 words.
6. Answers to questions 4 marks may be about 150 words.
7. Answers to questions 6 marks may be about 200 words.
8. Attempt all parts of the questions together.

==

1   B. Verma has set up a factory to manufacture herbal and sanitizers in   1
     Kolkata . The size and shape of the bottles in which the product are packed
     are specially designed so that it should be convenient to handle and use by
     the consumers. The bottles in which sanitizers are packed is part of
     (a) primary packaging   (b) secondary packaging
     (c) tertiary packaging   (d) both secondary and tertiary packaging

2   The process that initiates implementation of plan by clarifying jobs,   1
     working relationships and effectively deploying resources for attainment
     of identified and desired results is called
     (a) Coordination   (b) Management   (c) Organizing (d) Delegation

3   'Equal pay for equal work' is an example of which dimension of business   1
     environment?
     (a) Economic environment   (b) Legal environment
     (c) Social environment   (d) None of the above

4   A decision for replacing machines with modern machinery of higher   1
     production capacity is a
     (a) Financing decision   (b) Working capital decision
     (c) Investment decision (d) none of these

5   Which of the following statements is correct with reference to organizing   1
     function of management?
     (a) Leads to systematic allocation of jobs and facilitates specialization
     (b) Reduces the risk of uncertainty
     (c) Helps in obtaining competent personnel
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6   Which of the following statement(s) is/are not correct?   1
     (a) planning originates controlling
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     (c) planning is practical whereas controlling is theoretical
     (d) learning and controlling both are forward-looking

7   An enterprise that monitors its environment continuously, is in a position   1
     to improve its future performance. Identify the importance of business
     environment.
     (a) It helps in coping with rapid changes
     (b) It helps in tapping useful resources
     (c) It helps in improving performance
     (d) none of the above

8   Mr. X bought certain shares of R Ltd. from Mr.Y and lodged them with   1
     the depository in form of a book entry. However, as per the register of
     members of R.Ltd. Mr. Y is still the owner of those shares. In such a
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9   Which of the following is not Steve in driving and settlement procedure in   1
     a stock exchange
     (a) Approaching a broker   (b) Placing an order
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10   Mr.P has decided to start a business of manufacturing crockery and cutlery   1
      items. In order to give a unique identification to his products, he has
      decided to assign the brand name 'Surprise' as it will enable the firm to
      secure and control the market for its products. Identify the relative
      advantage of branding to the marketers being described in the above case.
      (a) Facilitates differential pricing
      (b) Easy in the launching of new products
      (c) Facilitates product differentiation
      (d) Assists in advertising and display programmes.

11   Identify the social objectives from the following.   1
      (a) Providing good quality products at reasonable prices
      (b) Conducting business in fair and lawful manner
      (c) Expansion of the organization
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      position to fix higher prices.
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      position to set higher prices.

      (a) Statement I is correct and II is wrong
      (b) Statement II is correct and I is wrong
      (c) Both the statements are correct
      (d) Both the statements are incorrect

13   Primary and secondary markets   1
      (a) compete each other   (b) complement each other
      (c) function independently   (d) control each other

14   Identify the concept which increases the return on equity shares with a   1
      change in the capital structure of a company
      (a) Trading on equity   (b) Capital structure
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15   Which type of distribution channel is used by Flipkart?   1
      (a) Direct distribution   (b) One level Distribution
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(a) Name the function of management and identify the step in the process of this function which helped in finding out that the actual production of a worker is less than the set target.

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OR

Planning and controlling are inseparable twins of management. Explain any three points to establish the relationship between planning and controlling.

22 Differentiate between capital market and money market on the basis of   3
(a) Instruments   (b) Safety   and (c) Type of capital
OR
Explain any three functions of secondary market.

23 What is meant by coordination? Explain its importance (any two)   3

24 External sources of recruitment are consider better than internal sources. Give any three reasons in support of this statement.   3

25 Explain any four responsibilities of a consumer according to Consumer Protection Act,2019.   4

26   D Ltd. requires an investment of ₹ 60,00,000 to earn Earning Before   4
     Interest and Tax(EBIT) of ₹ 8,00,000 . In order to raise ₹ 60,00,000 there
     are two proposals.

     Proposal A
     6,00,000 Equity shares of ₹ 10 each
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     Proposal B
     4,00,000 Equity shares of ₹ 10 each
     ₹ 20,00,000, 10% Debentures
     Tax rate = 20%

     Which proposal, if accepted, would ensure better earnings for the
     shareholders? Decide on the basis of Earning Per Share (EPS). Show
     workings clearly.

27   Explain any two on the job methods of training.   4
                                   OR
     Explain first four steps in the process of selection of its employees in an
     organisation.

28   Explain the followings under the marketing management philosophies.   4
     (a) Product concept and (b) Marketing Concept

29   Explain any four organisational barriers to communication.   4
                                   OR
     Explain any four non-financial incentives what can be implemented by top
     level management to motivate subordinates in an organisation.

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     capital requirement of a company.

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     for sometime in a company manufacturing pickles and murabbas. He was
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     first year. It was decided that raw materials like fruits, vegetables etc. will

be purchased on three months credit from farmers cultivating organic crops only. He also decided to follow the steps required for marketing of the products through his own outlets. He appointed Mr. Y as a Production Manager who decides the exact manner in which the production activities are to be carried out. Mr. Y also prepared a statement showing the number of workers that will be required in the factory throughout the year. Mr. M informed Mr. Y about his sales target his different products, area wise for forthcoming quarter.

While working on the production table, a penalty of ₹ 100 per day for not wearing the caps, gloves and aprons was announced.

Quoting lines from the above para, identify and explain any six types of plan discussed above.

32   Define the term 'Organising' and explain the steps in the process of   6
      organizing.

33   Explain the followings.   6
      (a) Differential piece Wage system   (b) Harmony, not discord   (c)
      Method Study
                                    OR
      Explain the followings with example, if possible.
      (a) Order   (b) Initiative (c).Stability of personnel

34   Explain any six functions of marketing.   6
                                    OR
      Explain any six functions of packaging.

Name: _____ Sec: ____ Roll No.: ____

CODE-A

BURNPUR RIVERSIDE SCHOOL, BURNPUR
SECOND PRE-BOARD EXAMINATION : (2023-2024)
ECONOMICS(030)
CLASS XII

Time:3Hrs   Maximum Marks-80

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General Instructions :

   1)This question paper contains two sections:
       Section A- Macro Economics
       Section B- Indian Economic Development
  2) This paper contains 20 Multiple Choice Questions type questions of 1mark each.
  3) This paper contains 4 Short Answer Questions type questions of 3 marks each to be answered in 60 to 80 words.
  4) This paper contains 6 Short Answer Questions type questions of 4 marks is to be answered in 80 to 100 words.
  5) This paper contains 4 Long Answer Questions type questions of 6 marks each to be answered in 100 to 150 words.

===

SECTION A- MACRO ECONOMICS

1. Read the following statements carefully.   **1**
Statement 1:Consumption function assumes that, consumption changes at a constant rate as income changes.
Statement 2:Autonomous consumption is the ratio of total consumption (C) to total income(Y).
In light of the given statements, choose the correct alternative from the following:
a.Statement 1 is true and Statement 2 is false
b. Statement 1 is false and Statement 2 is true
c.Both statements are true
d.Both statements are false

2. When prices in the base year are less than prices in the current year,   **1**
then which of the following is correct?
a.Real GDP is less than nominal GDP.
b. Real GDP is more than nominal GDP.
c. Market price is greater than factor cost.
d.Market price is less than factor cost.

3. _____refers to that level of aggregate demand which can be met by the corresponding supply in the economy.(fill up the blank with correct alternative)   **1**
a. Autonomous consumption
b. Effective demand
c. Excess demand
d. Deficient demand

4. As per the Reserve Bank of India(RBI) press report, dated 22nd June, 2022.   **1**
"Net Foreign Portfolio Investment(FPI) recorded an outflow of US dollar 15.2 billion mainly from the equality market".
The above transaction will be recorded in the_____ account on _____ side of BOP Account of India. (Choose the correct alternative).
a. Current, Credit
b.Current, Debit
c. Capital, Credit
d. Capital, Debit

5. " Mr. Sarvesh was not able to find a buyer for his surplus production of milk which can be exchanged with cloth". Which function of money can resolve this problem?   **1**
(choose the correct alternative)
a.Medium of exchange
b. Store of value
c. Unit of account
d. Means of standard of deferred payments.

6. Complete the table:-   **1**
If the initial deposit in an economy is rupees 4000 crore.

LRR	Money Multiplier
10%	--
20%	--
25%	--

a.4,5,10
b. 10,5,4
c. 10,20,25
d.25,20,10

7. If in an economy, the value of investment multiplier is 4 and autonomous consumption is rupees 30 crore, the relevant consumption function would be:
(choose the correct alternative to fill up the blanks).
   a. C= 30+ 0.75Y
   b. C= -30 + 0.25Y
   c. C= 30 - 0.75Y
   d. C= 30 -0.25Y

1

8. Identify the missing column.
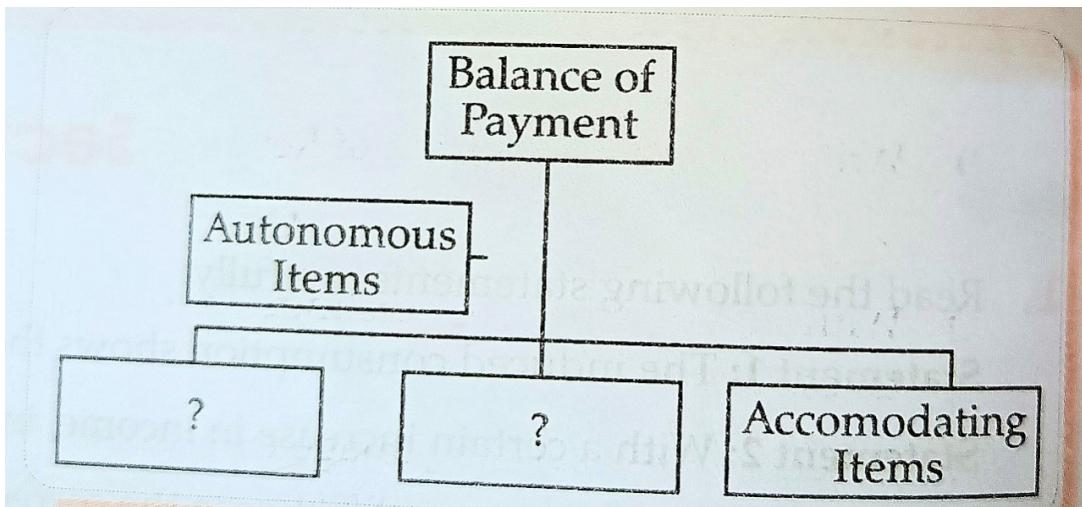
a. Balance of trade and Balance of invisible items
b. Balance of trade and Balance on current account
c. Balance on current account and Balance on capital account
d. BOP Deficit and BOP surplus

1

9. Suppose for a given economy,
S= -40+0.25Y
I= Rs. 8000 crore
(Where S= Saving Function, Y= National Income, I= Investment Expenditure)
Equilibrium level of income would be Rs. _____ crore.
a.Rs. 32000
b. Rs. 32160
c. Rs. 40200
d. Rs. 40000

1

10.   **1**
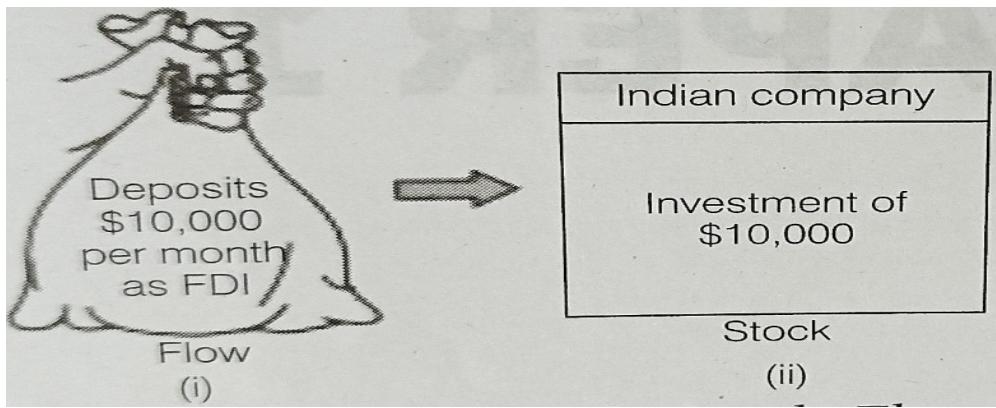
Observe the given figure carefully and choose the correct pair from the alternatives given below.

a.Flow, Stock

b. Stock, Flow

c.Flow, Flow

d.Stock, Stock

11.   *" It records capital transactions between the resident of the country*   **3**
and the rest of the world."

Identify the account being highlighted in the given statement and state any two components of the same.

12.

Serial no.	Items	Amt.(in Rupees)
1	Private final consumption expenditure	1000
2	Net domestic capital formation	200
3	Profits	400
4	Compensation of employees	800
5	Rent	250
6	Government final consumption expenditure	500
7	Consumption of fixed capital	60
8	Interest	150

3

9	Net current transfer from rest of the world	-80
10	Net factor income from abroad	-10
11	Net exports	-20
12	Net indirect taxes	80

Calculate Gross National Product at factor cost from the following data by expenditure method.

OR

Explain why subsidies are added to and indirect taxes are deducted from domestic product at market price to arrive at domestic product at factor cost?

13. An economy is in equilibrium. Calculate the investment expenditure from the following.   **4**
National Income=₹ 800
Marginal Propensity to Save=0.3
Autonomous Consumption= 100

14. A. *" The government has raised the exemption limit for the payment of income tax from Rs 2 lakh to Rs. 2.5 lakh"*   **4**
If the situation of deficient demand is prevailing in the economy, what will be the impact of this action taken by government?

OR

B. '*Lack of store of value*'was a major problem under barter system, but goods like diamond, gold can be easily stored for future use. Then why this was not a popular mean under barter system?

15. *" Managing the government's banking transactions is a key RBI role. Like individuals, businesses and banks, governments need a banker to carry out their financial transactions in an efficient and effective manner, including the raising of resources from the public."*   **4**
In the light of the above statement, explain the function performed by the central bank.

16. A. On the basis of the given information, calculate the value of   **5**

      i)   Fiscal deficit
      ii)   Primary deficit

Particulars		Rs. In crores
1.Revenue deficit		19000
2. Capital receipts (a) Recovery of loans (b) Borrowing	1200 7000	 8200
3. Total receipts		27000
4. Total expenditure (a) Revenue(including interest payment of Rs. 6000 crore) (b) Capital	27000 33000	 57000
5. Interest payments		7000

B.   State two sources through which budget deficit can be financed.   **1**

<div align="center">OR</div>

A.   State any three objectives of a government budget.   **3**

B.   *" Taxation is an effective tool to reduce the inequalities of income".*
Justify the given statement with valid reasons.   **3**

17(A) Social welfare may not increase even when real GDP increases.   **3**
Explain.

(B)   How will you treat the following while estimating National Income?
      i.   Capital gain on sale of a house.
      ii.   Interest on public Debt.

      3

<div align="center"><u>SECTION B- INDIAN ECONOMIC DEVELOPMENT</u></div>

18.   The other name of village and small scale industries committee set up   **1**
in 1955 is _____
a. Lakdawala committee
b. Karve committee
c. Narasimham committee
d. Hussain committee

19. The main aim of ' Great Leap Forward(GLF)' in China was to ensure rapid increase of _____   **1**
a. Agriculture
b. Industries
c. Services
d.Exports

20. Select the correct combination between the following columns: **1**

Column 1	Column 2
A.Licensing on production capacities	1. MRTP Act, 1969
B. Correcting the BOP situation and bringing inflation under control	2. Stabilization measures
C. Increasing efficiency and international competitiveness	3. Globalization
D. Integrating national economy with the world economy	4. Structural measures

a.A-1
b. B-2
c.C-3
d.D-4

21. 1

Handicraft

Poultry
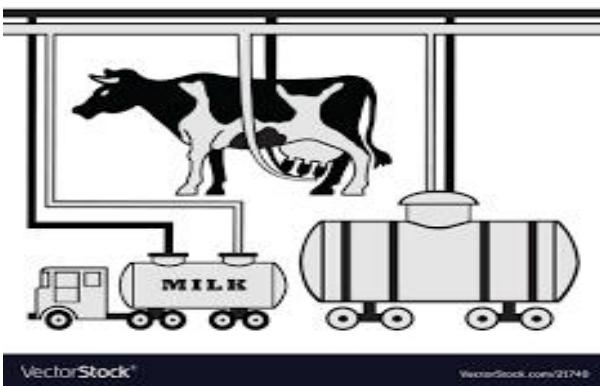
Dairy

Above image indicates which of the following to help generation of sustainable livelihood?

a. Diversification in production technique

b. Diversification in the production activities

c. Agricultural marketing

d. None of the above

22. Read the following statements-Assertion(A) and Reason(R). Choose one of the correct alternatives given below:-

Assertion(A)- India developed a sound industrial base during the colonial rule.

Reason(R)- The industrial sector was trying for modernisation, diversification, capacity building and increased public investment.

Alternatives:

a. Both Assertion (A) and Reason(R) are true and Reason(R) is the correct explanation of Assertion (A).

b. Both Assertion (A) and Reason(R)are true but Reason(R) is not the correct explanation of Assertion (A).

c. Assertion (A) is true but Reason (R) is false.

d. Assertion (A) is false but Reason(R) is true.

1

23. Which of the following gives the correct sequence explaining the commencement of five year plans in chronological order?

a.India, China, and Pakistan

b. Pakistan, China and Pakistan

c.China, India and Pakistan

d. India, Pakistan and China

1

24.

1
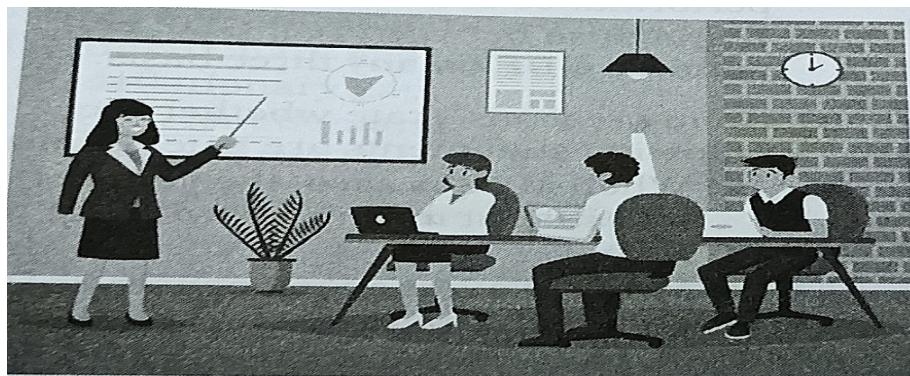
Above image indicates which of the following source of human capital formation?

Alternative:

a. Investment in health

b. Migration

c. Investment in education

d. On the job training

25. _____ is a form of market intervention by the Government of India   **1**
to ensure agricultural produces against any sharp fall in farm prices.
a.Minimum Support Prices(MSP)
b. Adequate prices
c. Quality Assured Prices(QAP)
d.Structural Adjustment Prices(SAP)

26. Unemployment is a situation in which people who are_____ and _____   **1**
to work but are not getting work.
Alternatives
a. Incapable and willing
b. Capable and not willing
c. Incapable and not willing
d. Capable and willing

27. From the set of the events given in the column I and corresponding   **1**
facts given in the column II , choose the correct pair of statements:-

Column I	Column II
A. Economic development in China	1. Mao
B. India's New Development Policy	2. China
C. The Great Leap Forward	3. 1978
D. Commune	4. 1991

Codes

	A.	B.	C.	D.
a.	3.	4.	1.	2.
b.	4.	2.	1.	3.
c.	1.	2.	3.	4.
d.	2.	1.	4.	3.

28. State and elaborate whether the following statements are true or false   **3**
with valid arguments
   i.   During independence, 90% of working population was
        engaged in manufacturing unit.
   ii.   Green revolution is related to food grains.

OR

"Liberalization and Globalisation have had a significant impact on the Indian economy".
Discuss the key features of liberalisation, globalisation and their effects on the Indian economy.

29. *"Acquiring information on health and education expenditure is crucial for the effective utilisation of human resources"*. 　　3
Justify the above statement with valid explanation.

30. *"Special Economic Zone increases foreign investment"*. Explain. 　　4

31.A. *"Kudumbashree is a woman oriented community based poverty reduction program being implemented in Kerala"*.
It is an example of which form of institutional credit? Also explain briefly this form of rural credit. 　　2

B. *"So many children drop out from different levels of education in India"*.Comment and explain two reasons for student drop out. 　　2

<center>OR</center>

A. The education commission in 1966, had recommended that at least 6% of GDP should be spent on education in India. However, even after 50 years of such a recommendation, the government continues to spend 3-4% of GDP on education. 　　2
How has this affected the education sector in India? What value stands violated by the central government?

B. *"Unemployment is related to poverty"*. Comment. 　　2
32. What does picture indicate about the movement of labour? 　　4

33.

A. *" Modernisation as a planning objective create contradiction in the light of employment generation".* Defend or refute this statement with valid explanation.   **4**

B. State whether the following statement is true or false with valid explanation.   **2**

" Navratna policy of the government has helped in improving the performance of public sector undertakings in India".

OR

A. ' Commercialisation of agriculture' has been cited as a reason for the dismal state of farmers at the time of independence. In contrast of the present time, do you think that such a concern over commercialization of agriculture is justified?   **4**

B. State whether the following statement as true or false with valid explanation.   **2**

" It is quintessential to be a member of WTO and enjoy enormous trade advantages".

34. Read the following hypothetical text and answer the given questions:

Title: " Achieving Sustainable Development: A key Challenge for Global Economies".

In recent years, sustainable development has emerged as a crucial focus for governments, organisations and individuals around the world. As economies continue to grow, concerns about the long term viability of development practices have come to the forefront. Sustainable development AIIMS to meet the needs of the present without compromising the ability of future generations to meet their own needs.

One of the main challenges in achieving sustainable development lies in striking a balance between economic growth and environmental conservation. Traditional development models have often prioritised economic growth at the expense of environmental degradation. However, this approach is increasingly been recognised as unsustainable in the long run. Governments and businesses are now realising the importance of integrating environmental considerations into their development strategies.

Further more, achieving sustainable development requires addressing social issues such as poverty, inequality and access to basic services. Economic growth alone is not sufficient to ensure sustainable future.

It is essential to ensure that development benefits are distributed equitably among all members of society and that marginalised groups are not left behind.

In addition, sustainable development necessitates a shift towards renewable energy sources and efficient resource management. This involves reducing Reliance on fossil fuels, promoting clean technologies, and implementing sustainable practices in industries such as agriculture and manufacturing. Transitioning to a low carbon economy is not only beneficial for the environment but also presence economic opportunities in terms of job creation and innovation.

Overall, sustainable development requires a holistic approach that encompasses economic, environmental and social dimensions. It calls for the fundamental rethinking of development strategies and the adoption of sustainable practices at all levels. Only by embracing this Paradise in shift can be ensure prosperous and resilient future for generations to come.

On the basis of the given text and common understanding, answer the following questions:

- **(A)** Explain the concept of sustainable development and why it is considered crucial in the current global scenario.
- **(B)** What are the main challenges faced in achieving sustainable development? Discuss the need to balance economy growth with environmental conservation. **3**

3

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CODE-B

BURNPUR RIVERSIDE SCHOOL, BURNPUR
SECOND PRE-BOARD ; EXAMINATION : (2023-2024)
ECONOMICS(030)
CLASS : XII

**Time: 3 Hrs.**   **Maximum Marks : 80**
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General Instructions :

1) This question paper contains two sections:
    Section A- Macro Economics
    Section B- Indian Economic Development
2) This paper contains 20 Multiple Choice Questions type questions of 1mark each.
3) This paper contains 4 Short Answer Questions type questions of 3 marks each to be answered in 60 to 80 words.
4) This paper contains 6 Short Answer Questions type questions of 4 marks is to be answered in 80 to 100 words.
5) This paper contains 4 Long Answer Questions type questions of 6 marks each to be answered in 100 to 150 words.

===

SECTION A- MACRO ECONOMICS

1. Read the following statements carefully.   1
   Statement 1: If MPC is 0.8, then APC will also be 0.8.
   Statement 2: APC is the ratio of change in consumption and change in income.
   In light of the given statements, choose the correct alternative from the following:
   a. Statement 1 is true and Statement 2 is false
   b. Statement 1 is false and Statement 2 is true
   c. Both statements are true
   d. Both statements are false

2.
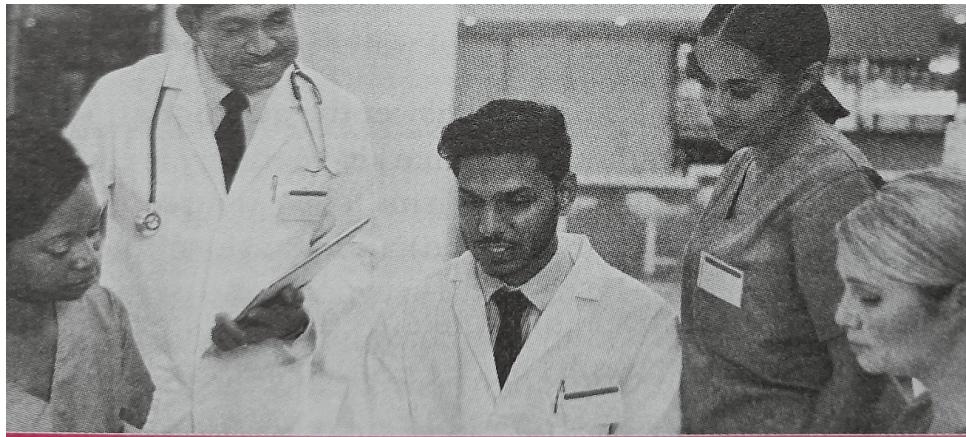
The above image (relating to the services of a doctor) indicates to which of the following?

a. Stock variable

b. Flow variable

c. Either stock variable or flow variable

d. Neither stock variable nor flow variable

1

3. If the entire additional income of an economy is consumed, the value of investment multiplier will be_____

(Choose the correct alternative to fill up the blank)

a. Zero

b. Not defined

c. One

d. Ten

1

4. Which of the following is a debit item of the capital account of India's balance of payment account?

(Choose the correct alternative)

a. An Indian buying a European company

b. An Indian sending remittances home from USA

c. A Chinese company buying shares of an Indian company

d. A US company selling mobile phones in Indian market

1

5. Identify the correct sequence of alternatives given in column II by matching them with respective items in column I:

1

Column I	Column II
A.Money	1. Money value = commodity value
B. Money as a measure of value	2. Fiduciary money

C. Full bodied money	3. Separated the acts of sale and purchase
D. Cheques	4. Value of goods and services is expressed in terms of money

Alternatives:
a. A-2, B-3, C-4, D-1
b. A-3, B-1, C-4, D-2
c. A-4, B-1, C-2, D-3
d. A-3, B-4, C-1, D-2

6.

Rounds	Primary Deposits (₹ lakh)	Loans (₹ lakh)	Demand Deposits (₹ lakh)
1st round	1,500	1,200	300
2nd round	1,200	—	240
3rd round	—	768	192
(and so on till all excess reserves are exhausted)			
Total	7,500	6,000	1,500

1

Read the following hypothetical information carefully and answer the question on the basis of the same:
Identify the formula to calculate demand deposits. (Choose the correct alternative)
a. 1÷Cash Reserves × CRR
b. 1÷Time Deposits × CRR
c. 1÷CRR × Cash Reserves
d. 1÷ CRR × Time Deposits

7. If the value of investment multiplier= 4 and Dissavings = - 60, identify the correct saving function from the following. (choose the correct alternative).   1
   a. S= -60+ 0.25Y
   b. S = -60 + 0.75Y
   c. S= -60 + 0.20Y
   d. S= -60 + 0.60Y

8. Suppose that, Balance of Trade of a nation exhibits are deficit of Rupees 50000 crore. The import of visible items are five times of the exports of visible items. The value of exports of   1

visible items would be Rupees_____ crore.(Choose the correct alternative to fill up the blank)

a. 20,000

b. 10,000

c. 12,500

d. 20,300

9. For the given consumption function, C= 205+ 0.9Y , the value of investment multiplier would be_____ .(Choose the correct alternative to fill up the blank). **1**

a. 0.09

b. 10.0

c. 0.9

d. 9.0

10. Read the following chart carefully and choose the correct alternative. **1**
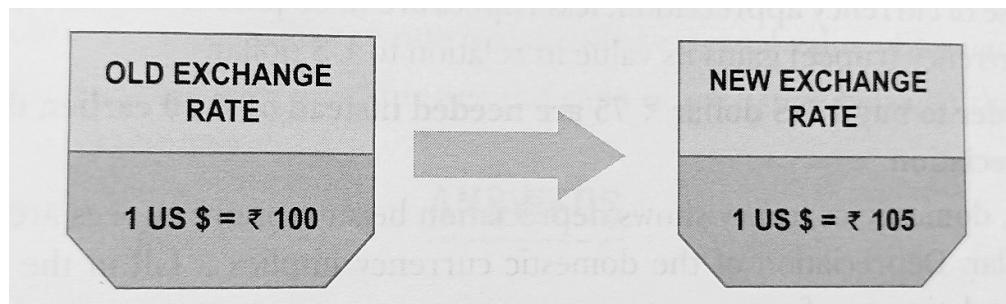
The appreciating currency in the above case is_____

a. Dollar

b. Rupee

c. Both (a) and (b)

d. None of these

11. *"There exist a positive relation between foreign exchange rate and supply of foreign exchange".* **3**
Do you agree with the given statement? Justify your answer with valid arguments.

12. On the basis of the data given below for an imaginary economy, estimate the value of Net Domestic Product at Factor Cost.   **3**

Particulars	Amount
1.Household consumption expenditure	2000
2. Government final consumption expenditure	1500
3. Gross domestic fixed capital formation	1000
4. Net addition to stock	300
5. Exports	700
6. Net indirect taxes	350
7. Imports	200
8. Consumption of fixed capital	250

OR

Justify the following statement:
" Depreciation is a fall in the value of an asset due to expected obsolescence".

13. Suppose the following information is given about a hypothetical economy: **4**
C = 100 + 0.75Y (where C= Consumption and Y= Income)
I= 200 (Autonomous investment)
Calculate the following on the basis of the given information:
   a. Equilibrium level of income
   b. Aggregate demand at equilibrium level of income
   c. Marginal propensity to save

14. A. **Read the following information carefully:**   **4**
"The monitory policy committee of the Reserve Bank of India, recently increase the repo rate by 50 basis points. The rate stands today at 5.40% whereas Reverse Repo Rate was left unchanged at 3.35%."

Answer the following questions:
  i. Identify the nature of the two monetary policy measures mentioned in the above text.
  ii. Elaborate the likely economic rationale behind the increasing repo rate by the Monitory Policy Committee.

OR

B. Suppose an imaginary economies physical situation of deficient demand in the short run time period.
Discuss briefly, the probable impacts of the same on the economy.

15 *" The process of creation by commercial banks comes to end when the total of required reserves become equal to the initial deposits."* 4
With the help of a numerical example, prove that the given statement is true.

16. A. **" The Government Budget of a country cannot have fiscal deficit without the existence of revenue deficit".** Defend or refute the given statement. **3**

B. From the following data of a government budget, find **3**
  a. Revenue deficit
  b. Fiscal deficit
  c. Primary deficit

Items.	(₹ in crore)
i.Plan capital expenditure.	13000
ii. Revenue expenditure.	11000
iii.Non-plan capital expenditure.	9000
iv.Revenue receipts.	8000
v. Capital receipts net of borrowing	15000
vi. Interest payment.	4000

OR

A.

WHERE INDIA GETS ITS MONEY FROM?
For every ₹ 1 that the Govt. earns

Corporation tax — 21 paise
Recovery of loan — 3 paise
Non-tax revenue — 3 paise
Borrowings and other liabilities — 20 paise
GST and other taxes — 19 paise
Customs — 4 paise
Income tax — 16 paise
Excise duties : 8 paise

3
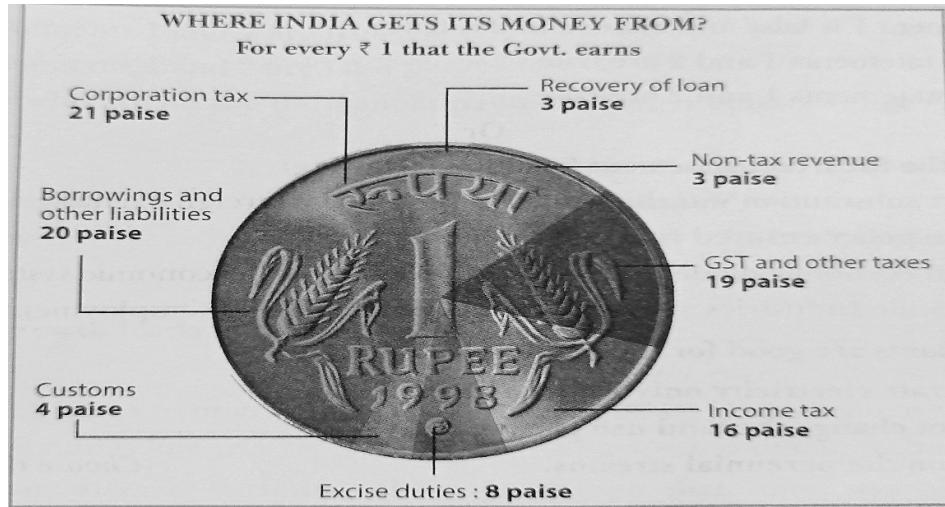
From the information given in the diagram, categorise items into revenue receipts and capital receipts, stating valid reasons.

B. Distinguish between Revenue deficit and Fiscal deficit **3**

17(A) *"Many goods and service which may contribute to welfare, but it is not included in estimating Gross Domestic Product(GDP).* **4**

Do you agree with the given statement? Give valid reason in support of your answer.

(B) State the meaning of 'Normal Resident' of a country. **2**

SECTION B- INDIAN ECONOMIC DEVELOPMENT

18. In a _____ economy, resources are owned and operated by both public and private sectors. **1**
(Fill up the blank with correct alternative)
a. Socialist
b. Capitalist
c. Democratic
d. Mixed

19. Read the following statements carefully. **1**
Statement 1: In the agricultural sector, communes were established, where land holdings were allocated to individual households for ownership.
Statement 2: Special Economic Zones (SEZs) were established to attract foreign investments and technology.

a. Statement 1 is true and statement 2 is false
b. Statement 1 is false and statement 2 is true
c. Both statements 1 and 2 are true
d. Both statements 1 and 2 are false

20. Which of the following policies was adopted to increase the competitive position of Indian goods in the international markets?   **1**
Alternatives:
a. Export duties were removed
b. Import licensing was abolished
c. The rate of corporation tax was reduced
d. Foreign institutional investors were allowed to invest in India

21. Which of the following is a function of NABARD?   **1**
(Choose the correct alternative to fill up the blank)
a. Guidance to all concerned on matters relating to rural credit
b. Development of cooperative credit institutions
c. To take appropriate measures to improve the credit delivered system
d. Training and professionalization of cooperatives

22. Read the following statements-Assertion(A) and Reason(R).   **1**
Choose one of the correct alternatives given below:-
Assertion(A)- There was systematic de industrialisation of Indian industries during British rule.
Reason(R)- Indian economy was used as a source of raw material and a market for sale of final goods in order to exploit Indian economy.
Alternatives:
a. Both Assertion (A) and Reason(R) are true and Reason(R) is the correct explanation of Assertion (A).
b. Both Assertion (A) and Reason(R)are true but Reason(R) is not the correct explanation of Assertion (A).
c. Assertion (A) is true but Reason (R) is false.
d. Assertion (A) is false but Reason(R) is true.

23. *"Multiple reasons for economies slow down and re emergence of poverty in Pakistan may be enumerated."*   1
    Identify which of the following might not be one of them.
    i.   Rising depends on foreign loans
    ii.   Stable macroeconomic indicators
    iii. Unstable agriculture growth
    (Choose the correct alternative).
    a. i, ii, iii
    b. ii and iii
    c. i and iii
    d. Only ii

24. Identify which of the following is an incorrect function of   1
    environment?
    Alternatives:
    a. Supplies resources
    b. Assimilates waste
    c. Land degradation
    d. Provides aesthetic services

25. Read the following statements carefully:-   1
    Statement 1: Economic growth means the increase in rural
    national income of a country.
    Statement 2: Human Capital Formation and Human
    Development are one and the same concepts.
    In light of the given statements, choose the correct alternative
    from the following.
    Alternatives
    a. Statement 1 is true and statement 2 is false
    b. Statement 1 is false and statement 2 is true
    c. Both statements are true
    d. Both statements are false

26. Read the following statements carefully:-   1
    Statement 1: Self employment is higher in rural areas
    compared to urban areas.
    Statement 2: Family farms are the most attractive means of
    employment in rural areas.
    In light of the given statements, choose the correct alternative
    from the following.

Alternatives
a. Statement 1 is true and statement 2 is false
b. Statement 1 is false and statement 2 is true
c. Both statements are true
d. Both statements are false

27. From the set of the events given in the column I and corresponding facts given in the column II , choose the correct pair of statements:-   **1**

Column I	Column II
A. Reforms introduced in China	1. 1976
B. First five year plan in Pakistan	2. 1955
C. India	3. Has the most skewed sex ratio
D. Introduction of commune system in China	4. 1976

Alternatives:
a. A-1
b. B-2
c. C-3
d. D-4

28. Discuss any two liberalisation measures pertaining to the financial sector, introduced by the Government of India during the economic reform process of 1991.   **3**

<center>**Or**</center>

Explain the reasons why the industrial sector has performed poorly in the reform period.

29. *"Dr Khurana, a dentist, ran his clinic in an economically backward area. He was earning a comparatively low income. So he decided to move to a city and spent a huge amount for the same."*   **3**

Identify and explain the type of expenditure incurred by doctor Khurana, which directly contributed to the process of human capital formation.

30. Read the following schedule carefully:
Analyse the output growth trend in the three sectors over the given years between India and China.

Trends in output growth in different sectors, 1980-2015

Country	1980-90			2011-2015		
	Agriculture	Industry	Service	Agriculture	Industry	Service
India	3.1	7.4	6.9	2.3	5	8.4
China	5.9	10.8	13.5	4.1	8.1	8.4
Pakistan	4	7.7	6.8	2.7	3.4	8.

4

31. Discuss briefly, why agriculture diversification is essential for sustainable livelihoods.   **4**

OR

" It is necessary to create employment in the formal sector rather than in the informal sector."
Defend or refute the given statement with valid arguments.

32. State and elaborate whether the following statement is true or false, with valid arguments: **4**

" Indian economy has showed satisfactory progress towards formalisation of workforce in the recent past."

33.   **3**

A. State 6 point suggesting positive impact of the British rule in India.

B. **'Atmanirbhar Bharat'** had been at the roots of the Indian planning process in the form of ' self-reliance' as an objective of the planning process. Do you agree with the given statement? Justify the rationale of the given statement.   **3**

A. Write three observation suggesting good and bad effects each of the growth strategy during the period 1950-1990. **3**

B. Discuss briefly any two major steps taken by the Govt. of India on *'Financial Sector'* font under the economic reforms of 1991. **3**

34. Read the following hypothetical text and answer the given questions:

The ideology of Sustainable Development refers to the process of development in a sustainable way. Sustainable Development in the words of Baylis and Smith is " economic and social development that meets the needs of the present without compromising the ability of future generations to meet their own needs; programs which maintain and appropriate balance between economic development, and environmental protection. In practice, this is a contested concept, in that groups which differing political, economic, social, an environmental perspectives disagree about its exact meaning. Though there were few discussions about the importance of the environment in the area of Aristotle and Montesquieu but as the development activities of those days were not identical to these days, the environment had not degraded as it is today and hence importance of sustainable development was not realised. It is only after the two world wars, people have started realising the environmental degradation and started working towards its protection both nationality and internationally. The concept and importance of sustainable development was even realised much later in the 1980s.

    ____Pankaj Bora, MM Sarma, sustainable development and Indian Manifestos:
A study of haves and have nots, 2011.

    (A) Whether the statement is true or false. Justify your answer with valid reason. **4**
"Sustainable Development is that process of growth which focuses on the face of growth but always accounts for the environmental degradation". **2**

(B) 'If the rate of resource extraction exceeds the rate of regeneration, it leads to reduction in carrying capacity of the environment.'
Discuss the rationale of the given statement with valid reason.

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Name: _____ Sec: _____ Roll No.: _____

CODE : A

BURNPUR RIVERSIDE SCHOOL, BURNPUR
SECOND PRE – BOARD EXAMINATION [2023 – 2024]
GEOGRAPHY
CLASS - XII

Time: 3 Hrs.   Maximum Marks: 70

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General Instructions:

1. This question paper contains 30 questions. All questions are compulsory.
2. This question paper is divided into **five sections.** Sections - **A, B, C, D** and **E**.
3. **Section A** - Question number **1 to 17** are multiple choice type questions carrying 1 mark each.
4. **Section B -** Question number **18 and 19** are source based questions carrying 3 marks each**.**
5. **Section C -** Question number **20 to 23** are short answer type questions carrying 3 marks each. Answers to these questions shall be written in 80 to 100 words.
6. **Section D -** Question number **24 to 28** are Long answer type questions carrying 5 marks each. Answers to these questions shall be written in 120 to 150 words.
7. **Section E -** Question number **29 and 30** are map based questions**.**

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SECTION - A
MULTIPLE CHOICE QUESTIONS

1. Assertion (A): The growth is qualitative and value neutral.   1
   Reason (R): This means that the changes may be either positive (showing a change) or negative (indicating a decrease).
   (a) Both Assertion and Reason are true and Reason is the correct explanation of the Assertion.
   (b) Both Assertion and Reason are true but reason is not the correct explanation of the Assertion.
   (c) Assertion is true but reason is false.
   (d) Assertion is false but reason is true.

2. Which one of the following is not an area of sparse population?   1
   (a) The Atacama.
   (b) South -East Asia.
   (c) The Equatorial region.
   (d) Polar region.

3. Identify the incorrect pair: 1
        (A)China   (i)Wool
        (B)Iran   (ii)Carpets
        (C)North Africa   (iii)Leather Works
        (D)Indonesia   (iv)Batik Cloth

        OPTIONS:
    (a) A-i
    (b) B-ii
    (c) C-iii
    (d) D-iv

4. Consider the following statements: 1
    (i)   Kharif crops are grown after the onset of monsoon.(June-
          September)
    (ii) Kharif crops are harvested in the month of April-May.

    Select the correct statement:

    (a)   Only statement (i) is correct.
    (b)   Only statement (ii) is correct.
    (c)   Both statements (i) and (ii) are correct.
    (d)   Both statements (i) and (ii) are incorrect.

5. Select a geographical factor responsible for the location of an industry: 1
    (a)   Government policies.
    (b)   Banking and insurance.
    (c)   Availability of raw material.
    (d)   Industrial belts.

6. The World Development Report has projected that by 2025,India's   1
    population will touch:
    (a)   500 million mark.
    (b)   1000 million mark.
    (c)   1500 million mark.
    (d)   1,350 million mark.

7. The volume of goods and services traded by countries is recorded by ----   1
    -------------.
    (a)   Volume of trade.
    (b)   Composition of trade.
    (c)   Direction of trade.
    (d)   Balance of trade.

8. Which of the following is not a plantation crop?   1
   (a)tea
   (b)jute
   (c)sugarcane
   (d)bananas

9. Which one of the following is the feature of Plantation Agriculture?   1
   (a) It has single crop specialization..
   (b) It has multi crop specialization.
   (c) It is an example of subsistence agriculture.
   (d) Cultivation is done with the help of very primitive tools.

10. Consider the following statements: 1
    Statement I: The Suez Canal and the Panama Canal are two vital man
    made navigation canals.

    Statement II: They serve as gateways of commerce for both the eastern
    and western countries.
    Option
    (a) Both statement I & II are true and statement II is the correct
         explanation of statement I.
    (b) Both statement I & II are true and statement II is not the correct
         explanation of statement I.
    (c) Statement I is true but statement II is false.
    (d)Statement I is false and statement II is true.

11. Arrange the following in correct sequence: 1
    Following is the sequence for generating geo thermal energy.
       (i) It is so hot that when it rises to the earth's surface, it turns into
           steam.
    (ii)Ground water in such areas, where the geo thermal gradient is high
    absorbs heat from the rocks and becomes hot.
       (iii) This steam is used to drive turbines and generate electricity.
       (iv)   Geo thermal energy exists, because the earth grows
              progressively hotter with increasing depth.

    (a) (iv)-(ii)-(i)-(iii).
    (b) (ii)-(i)-(iv)-(iii).
    (c) (i)-(iv)-(iii)-(ii).
    (d) (iii)-(ii)-(iv)-(i).

12. In ---------------, rainwater harvesting structures are locally known as   1
    kunds or tankas.

    (a) Madhya Pradesh.
    (b)   Tripura.
    (c)   Himachal Pradesh.
    (d)   Rajasthan.

13. Which of the following groups has the Northern most and Eastern most   1
    nodes of the Golden Quadrilateral?
    (a)Delhi and Mumbai.
    (b) Varanasi and Chennai.
    (c) Amritsar and Allahabad.
    (d) Delhi and Kolkata.

14. --------------- accounts for most of the surface and ground water.   1
    (a)   mining
    (b)service sector
    (c)   industrial sector
    (d)agriculture

15. Study the following table carefully and answer the following questions: 1
    TABLE

Region	Land (2018)	Land Area (km^2)	Density (P/km^2)	World Share In percentage)
Asia	4545133904	31033131	146	59. 50%
Africa	1287920518	29648481	43	16.90%
Europe	742648010	22134900	34	9.70%
Latin America and the Carribbean	652012001	20139378	32	8.50%
Northern America	363844490	18651660	20	4.80%
Oceania	41261212	8486460	5	0.50%

Name the continent with highest density of population?
(a)Africa
(b) Asia
(c)Europe
(d)North America.

16. Choose any two factors which are responsible for high population in this continent.   1
    (a) Industrialization and mining.
    (b)   Fertile soil and availability of water.
    (c) Urbanization and mining.
    (d) Good educational facilities and availability of water.
17. What is the density of population of the Oceanic countries?   1
    (a)   10 persons per sq km.
    (b)   8 persons per sq km.
    (c)   3 persons per sq km.
    (d)   5 persons per sq km.

SECTION – B (SOURCE BASED QUESTIONS)

18. Read the passage given below and answer the questions that follow: 3
    The rural settlements derive their life support or basic economic needs from land based primary economic activities,whereas,urban settlements ,depend on processing of raw materials and manufacturing of finished goods on the one hand and a variety of services on the other.
    Cities act as nodes of economic growth,provide goods and services not only to urban dwellers but also to the people of the rural settlements in their hinterlands in return for food and raw materials.This functional relationship between the urban and rural settlements takes place through transport and communication network.
    (a) What do you mean by rural settlements?
    (b) Write down how rural settlement is different from urban settlements?
    (c) How do cities act as nodes of economic growth?
19. Read the passage given below and answer the questions that follow: 3
    Cyber space is the world of electronic computerised space.It is encompassed by the internet such as World Wide Web (www).In simple words, It is the electronic digital world for communicating or accessing information over computer networks without physical movement of the sender and the receiver.It is also referred to as the Internet.Cyberspace exists everywhere.It may be in an office,sailing boat,lying plane and virtually anywhere.The speed at which this electronic network has spread is unprecedented in human history. There were less than 50 million Internet users in 1995,about 400 million in 2000A.D. and over two billion in 2010.In the last few years there has been a shift among global users from U.S.A. to the developing countries.The percentage share of U.S.A. has dropped from 66 in 1995 to only 25 in 2005.Now

the majority of the worlds users are in U.S.A.,U.K.
Germany.Japan,China and India.
(a) The accessing information over cyber space does not include:
(i) physical movement of sender.
(ii)communication
(iii)social and economic net working.
(iv) e-goverance
(b)The number of internet users in 2010 is :
(i)400 million (ii)500 million (iii)1000 million (iv)2000 million
(c) 25 percentage of the worlds internet users belong to ------------.
(i)Germany (ii) China (iii) India (iv)U.S.A.

SECTION – C (SHORT ANSWER TYPE QUESTIONS)

20. Why is agricultural productivity still low in India? Write three main   3
        reasons.
                                    OR
      Write down the main features of rainfed crops.
21. Which is the working age group? Describe the characteristics of this age   3
      group.
22. Explain how technology indicates the level of cultural development of   3
        society.
23. Explain retail trading. Name the fast emerging countries of medical   3
      tourism in the world. What is digital divide?

SECTION – D (LONG ANSWER TYPE QUESTIONS)

24. What is meant by transhumance? State four characteristics of pastoral   5
      farming?
25. Describe the five main features of Indira Gandhi Canal Command Area?   5

26. What are the causes and consequences of air pollution?   5

27. Describe the organisational characteristics of modern manufacturing.   5
28. What are the main characteristics of International trade after   5
        Independence?

SECTION – E (MAP BASED QUESTIONS)

29. On the given political map of the world, the following seven   5
    geographical features are seen, identify any five of those features and
    write the correct names on the line marked near each feature.
    (a)   A major area of commercial livestock rearing.
    (b)   A major seaport.
    (c)   An international airport.
    (d)   A major airport.
    (e)   Largest country of Europe by area.
    (f)   An inland waterway.
    (g)   Terminal station of Trans-Canadian Railway line.

30. On the given political map of India locate and label any five of the   5
    following with appropriate symbols:
    (a)   The state with the highest rural population.
    (b)   The state leading in production of coffee.
    (c)   An oil refinery in Gujarat.
    (d)   Copper mine located in Rajasthan.
    (e)   An international airport in Punjab.
    (f)   The seaport stated as the queen of Arabian Sea.
    (g)   Southernmost city with more than 10 million population.

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BURNPUR RIVERSIDE SCHOOL, BURNPUR
SECOND PRE-BOARD EXAMINATION : (2023-2024)
GEOGRAPHY
CLASS: XII

Time : 3 Hours   **Maximum Marks : 70**
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General Instructions:

1. This question paper contains 30 questions. All questions are compulsory.
2. This question paper is divided into five sections. Sections-A, B, C, D and E.
3. Section A - Question number 1 to 17 are Multiple Choice type questions carrying 1 mark each.
4. Section B- Question number 18 and 19 are Source based questions carrying 3 marks each.
5. Section C- Question number 20 to 23 are Short Answer type questions carrying 3 marks each. Answer to these questions shall be written in 80 to 100 words.
6. Section D-Question number 24 to 28 are Long Answer type questions carrying 5 marks each. Answer to these questions shall be written in 120 to 150 words.
7. Section E Question number 29 and 30 are Map based questions.
===

SECTION-A
Question numbers 1 to 17are Multiple Choice Questions

1   **There are two statements marked as Assertion(A) and Reason(R).   1
     Mark your answer as per the codes provided below**.

     ASSERTION(A): India's Human Development Index (HDI) rank in the world is 134
     REASON(R): HDI measures achievement in terms of health, life expectancy at birth, adult literacy rate and purchasing power.
     OPTIONS
     a) Both (A) and (R) are true but (R) is not the correct explanation of (A)

b) Both (A) and (R) are true and (R) is the correct explanation of (A)

c) (A) is incorrect but (R) is correct

d) (A) is correct but (R) is incorrect

2   Which of the following statement is **incorrect**?   1
   a. Migrants who move into a new place are called Immigrants.
   b. The pull factors make the place of origin seem less attractive.
   c. Migration may be permanent, temporary or seasonal.
   d. Migrants who move out of a place are called Emigrants.

3   In which of the following trade blocks, is India an associate member?   1
   a. SAFTA
   b. OECD
   c. ASEAN
   d. OPEC

4   **Consider the following statements and choose the correct answer**   1
   with the help of given options.
   Statement I: Indian agricultural economy was largely subsistence
   before Independence.
   Statement II: Agriculture is purely land based activity unlike
   secondary and tertiary activities.
   OPTIONS:
   a. Only statement I is correct.
   b. Only statement II is correct.
   c. Both the statements are correct and statement II correctly
      explains statement I.
   d. Both the statements are true but not related with each other

5   **Choose the correct option by matching column I and column II.**   1

COLUMN I(Approaches)	COLUMN II(Features)
I. Capability Approach	i) It was initially proposed by ILO
II. Basic Needs Approach	ii) This approach is associated with Prof. Amartya Sen
III. Income Approach	iii) Government is responsible for increasing levels of human development
IV. Welfare Approach	iv) Higher the level of income ,the higher is the level of human development

OPTION
   a. I-iv, III-ii, II-iii, IV-i
   b. IV-iii, I-ii, III-iv, II-i
   c. III-iii, II-ii, IV-iv, I-i
   d. II-iv, III-ii, IV-i, I-iii

6   Which one of the following is the largest linguistic group of India?   1
   a. Sino-Tibetan
   b. Indo-Aryan
   c. Austric
   d. Dravidian

7   **Which of the following is incorrectly matched?**   1
   COLUMN I (Type of Ports)   **COLUMN II(Example)**
   a. Oil Ports   Tripoli
   b. Packet Station   Dover
   c. Naval Port   Kolkata
   d. Entrepot Port   Rotterdam

8   Which one of the following activities comes under 'Primary activity'?   1
   a. Pastoralism
   b. Weaving Basket
   c. Milk Vending
   d. Tailoring

9   Which of the following is the feature of 'plantation agriculture'?   1

   a. It is a single crop specialization
   b. It is a multicrop specialization
   c. It is an example of subsistence agriculture
   d. Cultivation is done with the help of very primitive tools

10   **Consider the following statements and choose the correct answer**   1
   with the help of given options.
   Statement I: Among all the Personal Communication System
   Internet is the most effective and advanced one.
   Statement II: It is widely used in rural areas.
   OPTIONS:
   a. Only statement I is correct.
   b. Both the statements are incorrect
   c. Both the statements are correct and statement II correctly
      explains statement I.
   d. Both the statements are true but not related with each other

11   Arrange the following in correct sequence.   1
      i.   It is so hot when it rises to the earth's surface , it turns into
            steam.
      ii.   The hot water gushes out through the gyser wells.
      iii. This steam is used to drive turbine and generate electricity
      iv.   Geothermal energy exist because the earth grows
            progressively hotter with increasing depth.
      OPTIONS
      a. iv-ii-i-iii
      b. ii-i-iv-iii
      c. i-iv-iii-ii
      d. iii-ii-iv-i

12   Which one of the following south Indian states has the highest   1
      groundwater utilisation (in per cent) of its total ground water
      potential?
      a. Kerala
      b. Karnataka
      c. Andhra Pradesh
      d. Tamil Nadu

13   Given below a list of the important National waterways of India and   1
      the places they connect. Which one of the following pairs is Not
      correctly matched?
      a. **National Waterway 1**- Allahabad- Haldia stretch (1,620 km)
      b. **National Waterway 2**- Sadiya-Dhubri stretch (891 km)
      c. **National Waterway 3**- Specified stretches of river Brahmani
         along with Matai river, delta channels of Mahanadi and
         Brahmani rivers and East Coast canals(588km)
      d. **National Waterway 4**-Specified stretches of Godavari and
         krishna rivers along with Kakinada Puducherry stretch of canal
         (1078 km)

14   '**ArvaryPani Sansad'** have taken up construction of various water-   1
      harvesting structures in which state.
      a. Andhra Pradesh
      b. Rajasthan
      c. Arunachal Pradesh
      d. Madhya Pradesh

Read the following graph and answer question no 15 to 17.
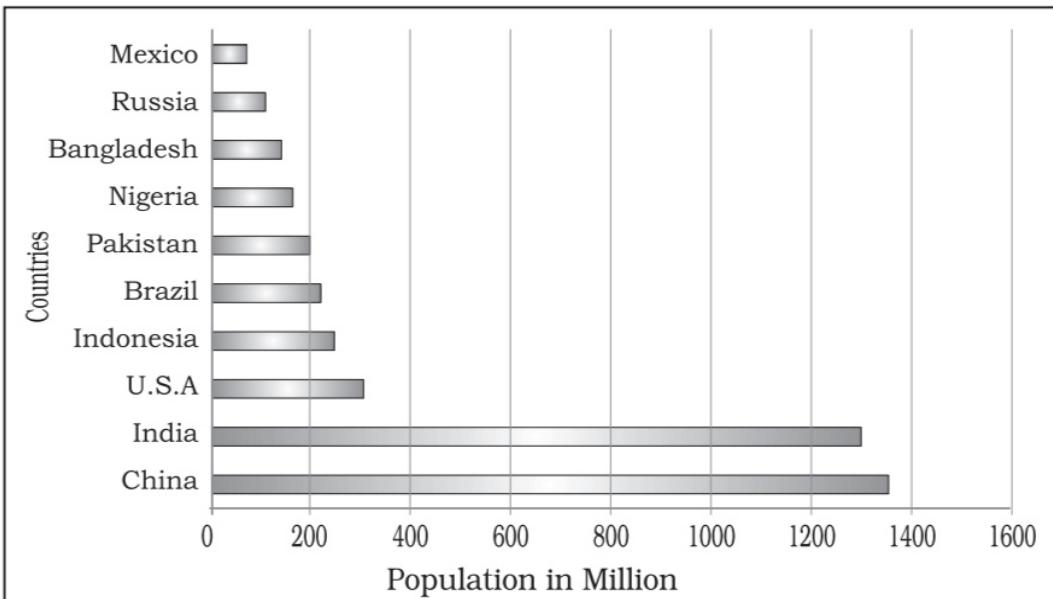
15   Which continent have the most populous countries?   1
      a. Europe
      b. Asia
      c. Australia
      d. North America
16   Among the ten populous countries how many countries are located in   1
   Asia?
      a. 6
      b. 9
      c. 4
      d. 2
17   The way people are spaced over the earth's surface is known as   1
      a. Population Growth
      b. Population Composition
      c. Population Density
      d. Population Distribution

SECTION-B
Question 18 & 19 are Source based questions.

18   **Read the given Passage carefully and answer the questions that
   follow:**

   The level of urbanisation is measured in terms of percentage of urban
   population to total population. The level of urbanisation in India in
   2011 was 31.16 per cent, which is quite low in comparison to
   developed countries. Total urban population has increased eleven-fold

during the twentieth century. Enlargement of urban centres and emergence of new towns have played a significant role in the growth of urban population and urbanisation in the country. But the growth rate of urbanisation has slowed down during last two decades. Apart from their role as central or nodal places, many towns and cities perform specialised services. Some towns and cities specialise in certain functions and they are known for some specific activities, products or services. However, each town performs a number of functions.

i.	**How is the level of urbanisation measured in India?**	1
ii.	**What was the level of urbanisation in India in 2011?**	1
iii.	**What are the major factors that influenced in the growth of urban population in India?**	1

19 **Read the given Passage carefully and answer the questions that follow:**

Communication through satellites emerged as a new area in communication technology since the 1970s after U.S.A. and former U.S.S.R. pioneered space research. Artificial satellites, now, are successfully deployed in the earth's orbit to connect even the remote corners of the globe with limited onsite verification. These have rendered the unit cost and time of communication invariant in terms of distance. This means it costs the same to communicate over 500 km as it does over 5,000 km via satellite. India has also made great strides in satellite development. Aryabhatt was launched on 19 April 1979, Bhaskar-I in 1979 and Rohini in 1980. On 18 June 1981, APPLE (Arian Passenger Payload Experiment) was launched through Arian rocket. Bhaskar, Challenger and INSAT I-B have made longdistance communication, television and radio very effective. Today weather forecasting through television is a boon

i.	**Name a satellite that help in telecommunication.**	1
ii.	**How satellites are useful to communicate distant places?**	1
iii.	**How the farmers get prosperous cultivation through satellite communication?**	1

SECTION-C
Question numbers 20 to 23 are Short Answer type questions.

20   Analyse any five problems faced by Indian farmers in agriculture.   3

OR

On the basis of the main sources of moisture for crops, analyse the types of farming in the Indian scenario.

21	Explain with examples how the availability of water and landform influence the distribution of population in India.	3
22	How possibilism is different from environmental determinism?	3
23	How do quaternary services differ from tertiary services? Give reasons why the services sector in developing and developed countries is growing faster than the manufacturing.	3

SECTION-D
Question numbers 24 to 28 are Long Answer Type questions.

24	Describe any five characteristics of 'Pastoral Nomadism' in the world.	5
25	Attaining sustainable development in the command area requires major thrust upon the measures to achieve ecological sustainability. Highlight the measures proposed to promote sustainable development in the command areas of Indira Gandhi Rajasthan Canal.	5
26	What are the different problems of slums in India?	5
27	By which features we can identify the small- scale industries in the world?	5
28	Write a note on the changing nature of the international trade of India.	5

SECTION-E

Question numbers 29 & 30 are Map based questions having 5 sub-parts each.

29	**On the given political map of the World, seven geographical features have been marked as A, B, C, D, E, F, G. Identify <u>any five</u> with the help of the following information and write their correct names on the lines drawn near each feature.**	**5**

    A. An area of nomadic herding

    B. An area of commercial livestock rearing

    C. An area of commercial grain farming

    D. A major seaport

    E. A major airport

    F. A major seaport

    G. A major airport

30 **Locate and label <u>any five</u> of the following geographical features on** 5
the political outline map of India with appropriate symbols.

    i.   The state with highest population density (2011)
    ii.   Hazaribagh- Copper mine
    iii.   Bilaspur -Bauxite mine
    iv.   An oil refinery in Uttar Pradesh
    v.   Mayurbhanj- Iron ore mine
    vi.   An international seaport in Odisha
    vii.   An international airport in Assam

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Name: _____ Sec: ____ Roll No.: ____

BURNPUR RIVERSIDE SCHOOL, BURNPUR
SECOND PRE-BOARD EXAMINATION: [2023-2024]
INFORMATION TECHNOLOGY (802)
CLASS – XII

Time: 3 Hrs.   **Maximum Marks: 60**

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General Instructions:

1. *Please read the instructions carefully.*
2. *This Question Paper consists of **24 questions** in two sections – Section A & Section B.*
3. *Section A has Objective type questions whereas Section B contains Subjective type questions.*
4. ***Out of the given (6 + 18 =) 24 questions, a candidate has to answer (6 + 11 =) 17 questions in the allotted (maximum) time of 3 hours.***
5. *All questions of a particular section must be attempted in the correct order.*
6. ***SECTION A - OBJECTIVE TYPE QUESTIONS (30 MARKS):***
    i. *This section has 06 questions.*
    ii. *There is no negative marking.*
    iii. *Do as per the instructions given.*
    iv. *Marks allotted are mentioned against each question/part.*
7. ***SECTION B – SUBJECTIVE TYPE QUESTIONS (30 MARKS):***
    i. *This section contains 18 questions.*
    ii. *A candidate has to do 11 questions.*
    iii. *Do as per the instructions given.*
    iv. *Marks allotted are mentioned against each question/part.*

===

1.   **Answer any 4 out of the given 6 questions on Employability Skills (1 x 4 = 4 marks)**

    i.   Give an example of Intrinsic Motivation.   1

    ii.   What is a Cell in Calc?   1

    iii.   What do you understand by Women entrepreneurs?   1

    iv.   Identify the preposition from the sentence given below: 1
'She often goes for a walk ____ night.'
a. in   b. on   c. at   d. none

    v.   OCPD stands for Obsessive compulsive personality ____.   1
a. direction   b. design   c. disorder   d. none

    vi.   State whether the following statement is TRUE or FALSE.   1
'Green jobs help in minimizing waste and pollution'.

2.   **Answer any 5 out of the given 7 questions (1 x 5 = 5 marks)**

    i.   Most web applications are written in ____.   1
a. CSS   b. C++   c. Both (a) & (b)   d. none

    ii.   NIC stands for: 1
a. National Intelligence Centre   b. National Informatics Centre
c. National Information Centre   d. none of the above

    iii.   In Java, to take user input we use the already input ____ class.   1
a. Wrapper   b. Scanner   c. Both (a) & (b)   d. none

    iv.   ____ command is used to create a new table or relation.   1
a. NEW TABLE   b. CREATE TABLE
c. ADD TABLE   d. none

    v.   Name the domain where database applications may be used for storing details of electoral roll, all types of taxes, criminal records.   1
a. E-Commerce   b. Government Sector
c. Private Sector   d. none

    vi.   Name an entry controlled loop in Java.   1

    vii.   What is the use of the Modulo operator?   1

3.

    i.   What is the use of WHERE clause in SELECT statement?   1

    ii.   Which command is used to see a list of tables present in the   1
              current database?

    iii.   Name the domain where database applications may be used for   1
              maintaining information regarding patients such as their personal
              details, health records, hospitalization date.

    iv.   MOOCs stands for _____.   1
              a. Massive Open Offline Courses
              b. Massive Open Online Courses
              c. Massive Online Open Courses
              d. none

    v.   Which of the following is a client-side script?   1
              a. JavaScript   b. HTML   c. Both (a) & (b)   d. none

    vi.   A _____ is defined as a sequence of tasks that must be completed   1
              to attain a certain outcome.

    vii.   Identify the type of operator used: 1
              if (A && B)

4.

    i.   Never share _____ with anyone while doing any online   1
              transaction.
              a. OTP   b. PIN   c. Both (a) & (b)   d. none

    ii.   Name the domain where database applications may be used for   1
              storing information regarding communication networks,
              customers, call records, and their bills.

    iii.   Which functions are also called multiple row / group functions in   1
              MySQL?

    iv.   Which command is used to modify the structure of the table after   1
              making the table?

    v.   NeGP was formulated in _____.   1
              a. 2004   b. 2005   c. 2006   d. none

    vi.   Which method of a String Class appends a string to the end of   1
              another string?

5.

    i.   What is the function of the site *udacity.org*?   1

    ii.   Name the domain where database applications may be used for   1
storing details of PAN cards, AADHAR cards, vehicle
registration, birth/death certificate registration.

    iii.   Which constraint specifies that primary key of a relation cannot   1
have null value?

    iv.   If a user has not entered a value for an attribute, then which value 1
that is specified while creating the table is used?

    v.   In 'https://', what does 's' stands for?   1

    vi.   Predict the output   1
double[ ]Qty = {112, 56.3, 19, 89, 15};
System.out.println(Qty[4]);

6.

    i.   Expand NeGP.   1

    ii.   Name the domain where database applications may be used for   1
storing information about customers' information regarding daily
transactions.

    iii.   select distinct address from student;   1

         What does the above query do?
           a) It gives all the tuples having address
           b) It gives the address attribute values of all tuples without
              repetition
           c) It gives all the address attribute of all the tuples
           d) It gives all the address attribute of all the tuples

    iv.   What do you understand by the Cardinality of a relation?   1

    v.   Name the ICT network established by NIC.   1

    vi.   What will be the value of n after the execution of the following   1
selection statement :
int n = 0;
if (6 > 7 | | 5 < 4)
{ n = 89 ; }
else n = 107;

SECTION-B: SUBJECTIVE TYPE QUESTIONS
Answer any 3 out of the given 5 questions on Employability Skills (2 x 3 = 6 marks)
Answer each question in 20 – 30 words.

----

7. Write two benefits of Positive Attitude.   2

8. What are arguments in Calc? Also, write down the syntax of a function.   2

9. Convert the following sentences written in active voice into passive voice: 2
    a. He will repair her cycle.
    b. She shall start the meeting.

10. Write two differences between Wage Employment and Entrepreneurship.   2

11. What is the role of Energy Auditors?   2

Answer any 3 out of the given 5 questions (2 x 3 = 6 marks)

12. Name the two types of DCL commands.   2
    Also, mention their functions.

13. The following commands are giving errors. Write the correct MYSQL commands.   2
    (a) SELECT MAXIMUM(MARKS) FROM STUDENT;
    (b) SELECT * FROM ITEM
    WHERE COSTPRICE > 5000
    ORDER BY ITEMNAME DESCENDING;

14. Explain Work integrated learning with respect to Medical / Hospital sector. (*Write two valid points*)   2

15. What will be the value of rem after the execution of the following code snippet? why?   2
    code =1; switch(code)
    {case 1: rem= 51;
    case 2: rem= 61;
    case 3: rem= 71; break;
    case 4: rem= 81; break;}

16. The following code has some error(s). Rewrite the correct code underlining all the corrections.   2

```
int x = 1
while (x<=10);
{ if ( x % 2 = 0)
        System.out.print(x , "is even\n");
else
        System.out.print(x + "is odd\n");
        x++;
}
```

Answer any 2 out of the given 3 questions (3 x 2 = 6 marks)

17.
   a. Which command in MySql is used to modify the structure of a table after making the table?   3
   b. Write down the syntax to add a column in an existing table.
   c. Write down the syntax to delete an existing column of a table.

18. *Before entering the payment details on any website, ensure that the site is secure.*   3
Mentions three points that are to be checked before entering the payment details on any website to ensure that the site is secure.

Write the output of the following code:

19.
```
class abc                                          3
{
public static void main(String args[])
{
int m=2, n=15;
for(int i=1; i<=3; i++)
{
m++;--n;
System.out.println("m="+m);
System.out.println("n="+n);
}
}
}
```

Answer any 3 out of the given 5 questions (4 x 3 = 12 marks)

20.   a.   Predict the output of the following program code: 4

```
import java.util.Scanner;
public class Question
{
public static void main (string args[ ])
{
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter upper limit");
        int r = Integer .parseInt(sc.next());
        for (int i = 1; i<=r; i++)
              System.out.print(i * i +",";
}}
```

NOTE: Assume the upper limit is 7.

        b.   Name the two types of branching statements in Java.

21.   Write a single line Java code using String methods to   4
perform the following tasks:
String abc = '' BRS '';

    i.   Convert the characters to small letters.
    ii.   Add a word ''Achievements" at the end of original string.
    iii.   Checks whether the given string is empty or not.
    iv.   Removes white spaces from both ends of the string.

22.   *During Covid-19 pandemic phase, all teaching and learning*   4
process is done by online learning.
Mention any four advantages of online learning.

23.   Write the commands that are a part of DML.   4
Also, mention their functions.

24. Consider the following tables **ITEM** and **CUSTOMER**.   4
    Write SQL commands for the following statements:

TABLE: ITEM

I_ID	I_NAME	MANUFACTURER	PRICE
101	Personal Computer	ABC	35000
102	Laptop	ABC	55000
103	Personal Computer	XYZ	32000
104	Personal Computer	COMP	37000
105	Laptop	PQR	57000

TABLE : CUSTOMER

C_ID	CustomerName	City	I_ID
1	N.Roy	Delhi	101
6	H Singh	Mumbai	101
12	R Pandey	Delhi	105
15	C Sharma	Delhi	105
16	K Agarwal	Bangalore	103

i) To display the details of those Customer whose city in Delhi.

ii) To display the details of Item whose Price is in range of 35000 to 55000 (Both values included)

iii) To display the CustomerName, City from table Customer and ItemName and Price from table Item, with their corresponding matching I_ID.

iv) To increase the Price of all Items by 1000 in the table Item.

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Name: _____ Sec: _____ Roll No.: _____

BURNPUR RIVERSIDE SCHOOL, BURNPUR
SECOND PRE-BOARD EXAMINATION: [2023-2024]
INFORMATION TECHNOLOGY (802)
CLASS – XII

Time: 3 Hrs.   **Maximum Marks: 60**

==

General Instructions:

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5. *All questions of a particular section must be attempted in the correct order.*
6. *SECTION A - OBJECTIVE TYPE QUESTIONS (30 MARKS):*
    i. *This section has 06 questions.*
    ii. *There is no negative marking.*
    iii. *Do as per the instructions given.*
    iv. *Marks allotted are mentioned against each question/part.*
7. *SECTION B – SUBJECTIVE TYPE QUESTIONS (30 MARKS):*
    i. *This section contains 18 questions.*
    ii. *A candidate has to do 11 questions.*
    iii. *Do as per the instructions given.*
    iv. *Marks allotted are mentioned against each question/part.*

==

1.   **Answer any 4 out of the given 6 questions on**
        Employability Skills (1 x 4 = 4 marks)

    i.   Give an example of Extrinsic Motivation.   1

    ii.   What do you understand by 'Filtering Data'?   1

    iii.   What do you understand by Effective Monitoring of   1
            entrepreneurs?

    iv.   Identify the preposition from the sentence given below: 1
            'I have lived in Goa _____ 2005.'
            a. for   b. since   c. on   d. none

    v.   _____ is a personality disorder where people believe that they can 1
            influence other people or events with their thoughts.
            a. Paranoid   b. Schizoid   c. Schizotypal   d. none

    vi.   State whether the following statement is TRUE or FALSE.   1
            'Green jobs help in protecting and restoring ecosystems'.

2.   **Answer any 5 out of the given 7 questions**
        (1 x 5 = 5 marks)

    i.   _____ is the process of building websites and web applications that 1
            work on the internet.
            a. Web management   b. Web development
            c. Both (a) & (b)   d. none

    ii.   NSP stands for: 1
            a. National Scholar Portal   b. National Scholarships Point
            c. National Scholarships Portal   d. none of the above

    iii.   The _____ class in Java provides the mechanism to convert   1
            primitive into object and object into primitive.
            a. Wrapper   b. Scanner   c. Both (a) & (b)   d. none

    iv.   _____ command is used to delete a table from a database.   1
            a. DELETE TABLE   b. REMOVE TABLE
            c. DROP TABLE   d. none

    v.   Name the domain where database applications may be used for   1
            storing information regarding employees such as name, address,
            contact number, salary, position, joining date.

vi.   Name an exit controlled loop in Java.   1
vii.   Which command is used to see a list of tables present in the   1
       current database?

3.   **Answer any 6 out of the given 7 questions**
                               (1 x 6 = 6 marks)

i.   In order to restrict the values of an attribute within a range, which   1
       constraint may be used?
ii.   What is the use of the Modulo operator?   1
iii.   Name the domain where database applications may be used for   1
       storing information such as student details, marks and result.
iv.   Which of the following is a client-side scripts?   1
       a. JavaScript   b. HTML   c. Both (a) & (b)   d. none
v.   Which of the following is an email program?   1
       a. Yahoo   b. AOL   c. Both (a) & (b)   d. none
vi.   ____ refers to booking or cancelling tickets using the internet.   1
vii.   Name special method that every Java application must have.   1

4.   **Answer any 5 out of the given 6 questions**
                               (1 x 5 = 5 marks)

i.   Mozilla Firefox is an example of ____.   1
       a. web server   b. web client   c. web browser   d. none
ii.   Name the domain where database applications may be used for   1
       storing information regarding hotel staff, menu items and
       infrastructure.
iii.   Expand RDBMS.   1
iv.   If a user has not entered a value for an attribute, then which value   1
       that is specified while creating the table is used?
v.   In 'https://', what does 's' stands for?   1
       a. standard   b. standalone   c. secure   d. none
vi.   Identify the type of operator used: 1
       if (A || B)

5. **<u>Answer any 5 out of the given 6 questions</u>**
   <u>(1 x 5 = 5 marks)</u>

   i.   Name the ICT network established by NIC.   1

   ii.   Name the domain where database applications may be used for 1
storing information about customers' information regarding daily
transactions.

   iii.   What do you understand by the Degree of a relation?   1

   iv.   Which command is used to modify the value of attribute of one or 1
more tuple in a table.

   v.   What is the function of the site *udacity.org*?   1

   vi.   Find the error and give correct code.   1
```
for (i=1; i<=5; i++);
{
System.println(i);
}
```

6. **<u>Answer any 5 out of the given 6 questions</u>**
   <u>(1 x 5 = 5 marks)</u>

   i.   Expand NeGD.   1

   ii.   Name the domain where database applications may be used for 1
maintaining information regarding patients such as their personal
details, health records, hospitalization date.

   iii.   _____ command is used to create a new database.   1
a. NEW DATABASE   b. CREATE DATABASE
c. ADD DATABASE   d. none

   iv.   Which command is used to modify the structure of the table after 1
making the table?

   v.   Mention any two payment options that are used while shopping 1
online.

   vi.   What is invoked automatically whenever a new object of a class 1
is created?

SECTION-B: SUBJECTIVE TYPE QUESTIONS
Answer any 3 out of the given 5 questions on
Employability Skills (2 x 3 = 6 marks)
Answer each question in 20 – 30 words.

7.	Write any four sources of Motivation and Inspiration	2
8.	What is the use of Sum( ) function? Give its syntax.	2
9.	What do you understand by Active and Passive voice sentences?	2
10.	Differentiate between Technical entrepreneurs and IT entrepreneurs.	2
11.	What is the role of Solar Panel Engineers & Installers?	2

Answer any 3 out of the given 5 questions (2 x 3 = 6 marks)

12. What are the two types of wild card characters for pattern matching. Also, mention their functions.   2

13. The following commands are giving errors. Write the correct MYSQL commands.   2
    (a) SELECT MINIMUM(MARKS) FROM STUDENT;
    (b) SELECT * FROM ITEM
        WHERE COSTPRICE > 5000
        ORDER BY ITEMNAME ASCENDING;

14. Explain Work integrated learning with respect to education sector. (*Write any two valid points*)   2

15. The following code has some error(s). Rewrite the correct code underlining all the corrections.   2

```
int x = 1
while (x<=10);
{ if ( x % 2 = 0)
      System.out.print(x , "is even\n");
else
      System.out.print(x + "is odd\n");
      x++;
}
```

16. What will be the value of rem after the execution of the following **2**
code snippet? why?
code =2; switch(code)
{case 1: rem= 101;
case 2: rem= 102;
case 3: rem= 103; break;
case 4: rem= 104; break;}

<u>Answer any 2 out of the given 3 questions (3 x 2 = 6 marks)</u>

17.   a. Write down the syntax to modify the datatype, size of an **3**
       existing column in an SQL table.
    b. Write down the syntax to add primary key constraint in an
       SQL table.
    c. Write down the syntax to remove primary key constraint
       from an SQL table.

18. What are the three things needed for making a web application **3**
operational. Also, mention their functions.

19. Write the output of the following code: **3**
```
class zyz
{
public static void main(String args[ ])
{
int i;
for(i = -1;i<10;i++)
{
System.out.println(++i);
}
}
}
```

Answer any 3 out of the given 5 questions (4 x 3 = 12 marks)

20.   a.   Predict the output of the following program code: 4

```
import java.util.Scanner;
public class Question
{
public static void main (string args[ ])
{
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter upper limit");
        int r = Integer .parseInt(sc.next());
        for (int i = 1; i<=r; i++)
                System.out.print(i + i +",";
}}
```
NOTE: Assume the upper limit is 7.

   b.   Name any two basic loop types in Java.

21.   Write a single line Java code using String methods to   4
          perform the following tasks:
          String xyz = '' Good Morning '';
   i.   Display the character at index position 3.
   ii.   Checks whether the string contains "oo".
   iii.   Removes white spaces from both ends of the string.
   iv.   Returns the position of the first occurrence of "M" in the
          given string.

22.   *During Covid-19 pandemic phase, all teaching and learning*   4
          process was done by online learning.
          What are the various ways of online learning?
          Name 2 educational websites.

23.   a) What do you understand by 'Data type'?   4
          b) The various types of values in MySQL that a column / field
             can hold can be categorized in three main types.
             Name them.

24. Consider the following tables **CABHUB** and **CUSTOMER**.   4
Write SQL commands for the following statements:

Table : CABHUB

VCode	VehicleName	Make	Color	Capacity	Charges
100	Innova	Toyata	White	7	15
102	SX4	Sizuki	Blue	5	14
104	Grand i10	Hyundai	Orange	5	35
105	Alto	Sizuki	White	4	14
108	Indigo	Tata	Silver	4	12

Table : CUSTOMER

CCode	CName	VCode
1	Hemant Sahu	101
2	Raj Lal	108
3	Feroza Shah	105
4	Ketan Agarwal	104

i) To display the names of all the white colored vehicles.
ii) To display the names of vehicle, make and capacity of vehicles in ascending order of their seating capacity.
iii) To display the highest charges at which a vehicle can be hired from CABHUB.
iv) To display the customer name and the corresponding name of the vehicle hired by them.

=====================================

CODE-A

BURNPUR RIVERSIDE SCHOOL, BURNPUR
PRE BOARD-II EXAMINATION: [2023-2024]
PHYSICAL EDUCATION
CLASS-XII

**Time: 3 Hrs.**   **Maximum Marks: 70**
==

General instructions:-
 1) The question paper consists of 5 sections and 34
    questions.   .
 2) Section A consists of question 1-18 carrying 1   mark each and is multiple
choice questions. All questions are compulsory.
3) Sections B consist of questions 19-23 carrying 2 marks each and are very
short answer types and should not exceed 60-90 words. There is internal choice
available.
4) Sections C consist of question 24-28 carrying 3 marks each and are short
answer types and should not exceed 100-150 words. There is internal choice
available.
5) Section D consists of question 29-31 carrying 4 marks each and is case
studies. There is internal choice available.
 6) Sections E consist of question 32-34 carrying 5 marks each and are short answer
types and should not exceed 200-300 words. There is internal choice available.
==

SECTION -A

1.   Which of these is not one of the methods used for fixture in   1
        league or Round Robin – tournament.
        a) Cyclic method   b) Spiral method
        c) Staircase method   d) Tabular method

2.   Intramurals are significant for   1
        a) Physical development   b) Mental development
        c) Social development   d) All the above

3.   Adolescence is two periods between ……….   1
        a) Early childhood and middle childhood
        b) Childhood and adulthood
        c) Early childhood and infanthood
        d) Infanthood and middle childhood

4.   Identify the asana in the figure given below.   1

        a) Paschimttanasana   b) Halasana
        c) Urdhva Hastasana   d) Vakrasana

5.   Which one of the following is not the type of Arthritis?   1
        a) Osteoarthritis   b) Juvenile arthritis
        c) Rheumatoid arthritis   d) Cummulative arthritis

6.   Which one of the following is not the age group for team sports   1
        in Special Olympic?
         a)8-11 years
         b) 15 years and under
         c) 16-21 years
         d) 22 and above

7.   Which mineral is required for the developing strong bones and   1
        teeth?
        a) Copper   b) Potassium   c) Sodium d) Phosphorus

8.   Deficiency of which one of the following causes weakening of   1
        the muscles?
   a) Sodium   b) Potassium   c) Iodine   d) Fluorine

9.   Johnson- Metheny Test battery consists of _____ items.   1
        a) 4   b) 5   c) 6   d) 10

10.   In which year Harvard Step Test was developed?   1
        a) In 1923   b) In 1933   c) In 1943   d) In 1953

11.   Identify the given injury.   1

        a) Contusion   b) Abrasion   c) Laceration   d) Incision

12.   The amount of oxygen of which can be absorbed and consumed   1
        by the working muscles from the blood is called.
        a) Oxygen Uptake   b) Oxygen Intake
        c) Oxygen Transport d) Vital Capacity

13.   Identify the image given below.   1

An object at rest will remain at rest, unless a net force acts on it.

An object in motion will remain in motion, unless a net force acts on it.
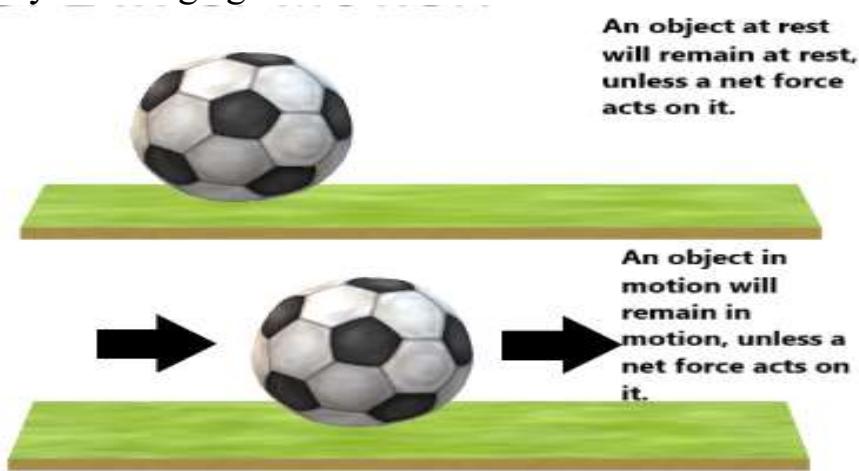
        a) First law of motion   b) Second law of motion
        c) Third law of motion   d) Law of effects

14. Match the following: 1
   A. Vitamin A   1. Weakness in muscles
   B. Vitamin D   2. Anemia
   C. Vitamin E   3. Night blindness
   D. Vitamin K   4. Rickests
   Codes:
   a) A-3, B-4, C-1, D-2   b) A-2, B-1, C-4, D-3
   c) A-4, B-2, C-1, D-3   d) A-1, B-3, C-2, D-4

15. Jung classified most of the people as …….. 1
   a) Ambiverts   b) Extroverts
   c) Introverts   d) Classified equally

16. Which type of motivation occurs when people are compelled to 1
   do something out of pleasure, importance or desire?
   a) Intrinsic motivation   b) External motivation
   c) Environmental motivation   d) None of those

17. Given below are the statements labeled as Assertion (A) and 1
   Reason (R).
   Assertion (A): Explosive strength refers to the ability to apply
   strength along with high speed.
   Reason (R): This is why it is used in swimming and pole vault.
   In context of above statements, which one of the following is
   correct?
   a) Both A and R are true and R is the correct explanation of A.
   b) Both A and R true and R is not the correct explanation of A.
   c) A is true, but R is false
   d) A is false, but R is true

18. Fartlek training is used to develop …….. ? 1
   a) Endurance   b) Strength
   c) Flexibility   d) Speed

SECTION -B

19. What is the seeding method? Why is it done? 2

20. What happens in the case of absence of menstrual cycle? 2

21. List any two uses of proteins in our diet. What are the deficiencies children can develop if they do not have proper protein intake?   2

22. Why are children most prone to greenstick fracture? Which are the most common sites of the fracture?   2

23. Enlist the four methods of reducing friction.   2

OR

What are the factors determining strength.

SECTION -C

24. Is obesity a disease or not? Explain in brief.   3

25. "Participation in physical activities is advantageous for children with special need". Briefly explain any six advantages.   3

26. What is the usefulness of Back Scratch Test for senior citizens? Describe how it is quantitatively measure? Give two more examples of Senior Citizen tests.   1+1+1=3

27. What are psychological attributes in sports?   3

28. What is lever? Write its components and types.   3

OR

Describe in brief the methods of deciding winners in cyclic method.

SECTION - D

29. While organizing sports events for the annual sports day, Arjun and Ravi being the captain and vice captain of sports, formed various committees as shown below.   4
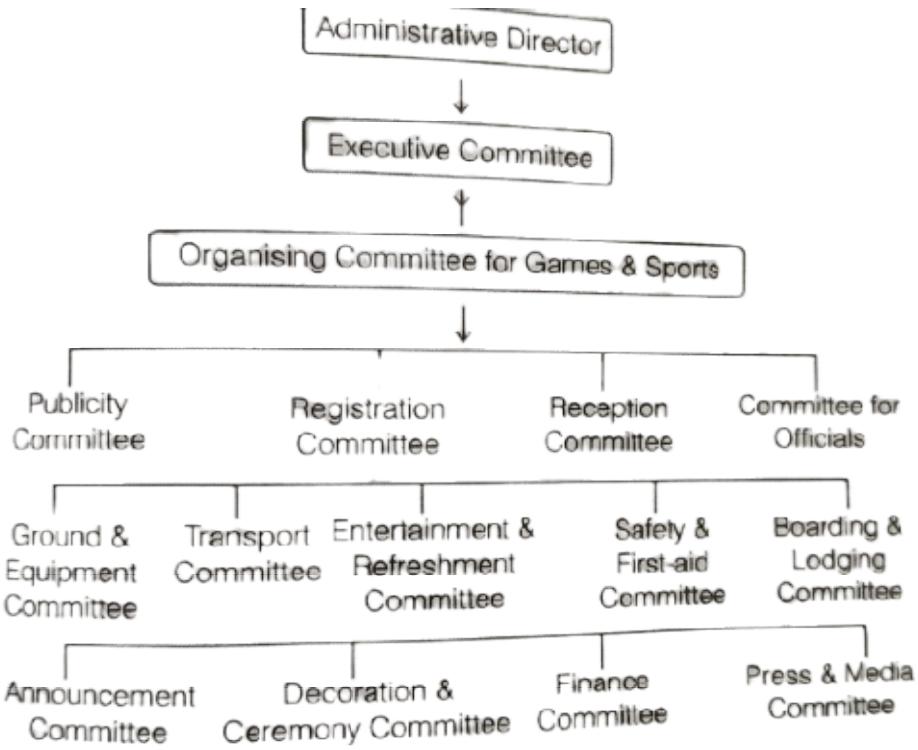
On the basis of above given picture answer the following questions:

a) The members of this committee are responsible for welcoming guests and spectators _____

b) The _____ committee responsible for liaison with print media.

c) Purchase of sports equipment is a work of the _____

d) Publication of rules and regulations should be done _____

OR

To prepare a proper score sheet for record is _____ responsibility.

30. On the basis of the picture given below, answer the following questions: 4

CARBS   PROTEIN   FATS
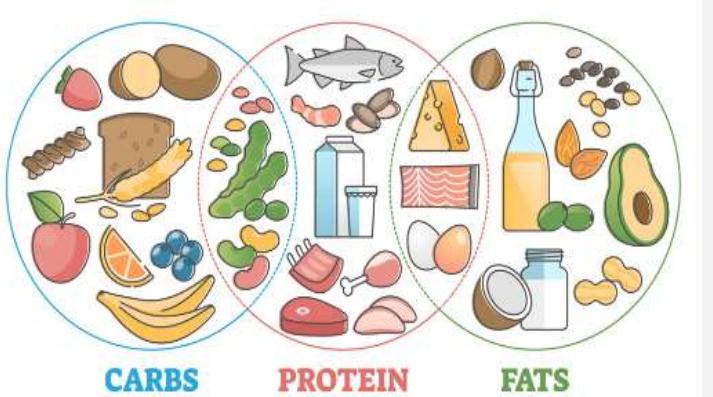
a) Carbohydrate, proteins and fats together make up _____ nutrients.

b) Fats contain 76 percent of _____ , 12 percent of _____,and 12 percent of _____

c) List any two sources of simple and complex carbohydrate each.

d) _____ are the basic constituents of our cells.

31. Study the pictures given below: 4

(A)   (B)
Stationary Ball   Moving Ball
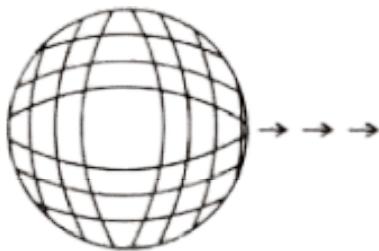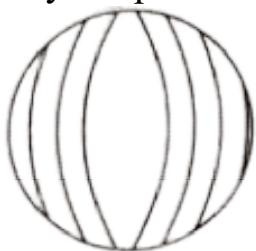
Based on your above study and your knowledge, answer the following questions.

a) Which law of motion will be applied to initiate motion of the ball as depicted in the illustration (A)?

b) In illustration (B), which force is acting upon the ball to slow it down?

c) Which law of motion will determine the quality of bounce?

d) _____ of an object directly upon the mass of the object and net force applied on it.

OR

"When a cricket ball is moving with a certain velocity, the player has to apply retarding force to bring the ball as rest in his hands". Which Newton's law is applied in this illustration?

SECTION - E

32.	List down any four asanas used for prevention of hypertension.	1+4=5
	Explain the procedure and contraindication of one of them with help of a stick diagram.

33.	What do you understand by community sports programme?	5
	Give four example.

34.	A trainer can improve cardio respiratory system with the help of	5
	exercise. Justify.

OR

What is strength? Give its types. Also tell the training methods for improving strength.

==

NAME_____SEC_____ROLLNO._____

<div align="right">**CODE-B**</div>

BURNPUR RIVERSIDE SCHOOL, BURNPUR
PRE BOARD-II EXAMINATION: [2023-2024]
PHYSICAL EDUCATION
CLASS-XII

Time: 3 Hrs.   **Maximum Marks: 70**
==

GENERAL INSTRUCTIONS:
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5) Section-D consists of questions 29-31 carrying 4 marks each and are case studies. There is internal choice available.
6) Section-E consists of questions 32-34 carrying 5 marks each and are long answer types and should not exceed 200-300 words. There is internal choice available.

==
SECTION-A

Q.1.   How many byes will be given for 21 teams on the knock-out basis?   1
      a) 16
      b) 14
      c) 17
      d) 11

Q.2.   **Assertion-Reason Type Questions:-**   1
Given below are the two statements labelled Assertion (A) and Reason (R).
Assertion (A):- In a knock-out tournament there is a possibility that strong teams will meet in the first round and any one of them will be eliminated.
**Reason** (R):- All the things are in organizer's hands they can put the teams at any place in the fixture.

In the context of the two statements given above, which one of the following is correct?
  a) Both Assertion(A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
  b) Both Assertion (A) and Reason (R) are true but Reason (R) is not the correct explanation of Assertion (A)
  c) Assertion (A) is true but Reason (R) is false.
  d) Assertion (A) is false but Reason(R) is true.

Q.3.   At global level, it is estimated that one in four adults _____   1
        percent of adolescents do not do enough physical activity.
          a) 61
          b) 71
          c) 81
          d) 91
          e)

Q.4.   Identify the Asana: 1
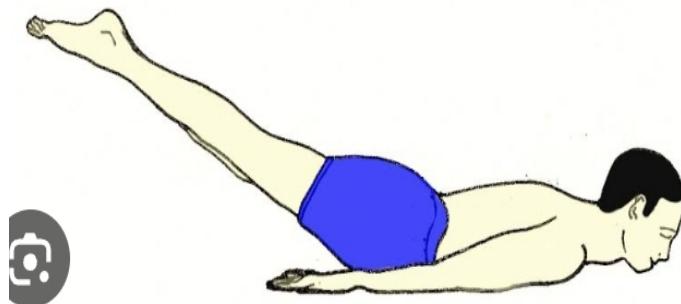
          a) Bhujangasana
          b) Shalabhasana
          c) Pawanmuktasana
          d) Katichakrasana

Q.5.   Back pain is mainly caused by…….   1
          a) Lack of physical activity
          b) Excessive smoking
          c) Lack of flexibility
          d) All the above

Q.6.   Which one of the following is not the age group for team sports   1
        in Special Olympics?
            a) 8-11 years
            b) 15 and under
            c) 16-21 years
            d) 22 and above

Q.7.   _____ build and repair body cells.   1
            a) Whole grain cereals
            b) Proteins
            c) Roughage
            d) Fats

Q.8.   Carbohydrates, Proteins and Fats along with water are   1
        called……
            a) Nutrients
            b) Micronutrients
            c) Macro-nutrient
            d) Proteins

Q.9.   Which of the following is assessed by eight-foot up and go   1
        test?
            a) Walking speed, coordination and agility
            b) Physiology fitness
            c) Upper body strength
            d) Lower body flexibility

Q.10.   In which year Harvard Step Test was developed?   1
            a) In 1923
            b) In 1933
            c) In 1943
            d) In 1953

Q.11.   **Match the following:**   1

	Column-l		**Column-ll**
a)	Abrasion	(i)	Joint injury
b)	Green stick fracture	(ii)	Soft tissue injury
c)	Shoulder dislocation	(iii)	Cause of sports injury
d)	Lack of fitness	(iv)	Bone injury

Select the correct answer:-
A)(a)-(ii) (b)-(iv) (c)-(i) (d)-(iii)
B)(a)-(iii) (b)-(iv) (c)-(ii) (d)-(i)
C)(a)-(iv) (b)-(iii) (c)-(ii) (d)-(i)
D)(a)-(i) (b)-(iv) (c)-(ii) (d)-(iii)

Q.12.   _____ Bone comes out of socket in hip dislocation.   1
        a) Femur
        b) Humerus
        c) Tibia
        d) Fibula

Q.13.   Physical Education Teacher of APJ School explained how   1
        Newton's laws of motion are used in sports. He/she explained
        while dribbling in basketball, how laws can be helpful.
        Which law of motion is shown in picture?

        a) Law of Inertia
        b) Law of acceleration
        c) Law of action and reaction
        d) Both (a) and (b)

Q.14. What are the main components of a lever?   1
  a) Mass, Force and Velocity
  b) Force, Effort and Load
  c) Fulcrum, Load and Effort
  d) Mass, Load and Speed

Q.15. What is the reason to do exercise regularly?   1
  a) To enhance physical appearance
  b) To feel more energetic
  c) To decrease the risk of diseases
  d) All the above

Q.16. Which one of the following is not the benefit of exercise?   1
  a) Improves mood
  b) Improves anxiety
  c) Improves self confidence
  d) Improves flexibility

Q.17. Which of the training referred with "multiple stations "?   1
  a) Interval training
  b) Continuous training
  c) Circuit training
  d) Fartlek training

Q.18. **Given below are the two statements labelled Assertion (A)**   1
  and Reason (R).
  Assertion (A):- Circuit training is convenient for each
  individual.
  Reason (R):- Circuit training can be designed according to the
  needs of the individual.
  In the context of the above two statements which one of the
  following is correct?
  a) Both Assertion (A) and Reason (R) are true and Reason
    (R) is the correct explanation of Assertion (A).
  b) Both Assertion (A) and Reason (R) are true, but Reason
    (R) is not the correct explanation of Assertion (A).
  c) Assertion (A) is true, but Reason (R) is false.
  d) Assertion (A) is false, but Reason (R) is true.

SECTION-B

Q.19. Discuss the meaning of intramural and extramural.   2

Q.20. Design a free hand four (4) exercises programme for curing round shoulder.   2

Q.21. List down various non-nutritive components of diet.   2

Q.22. How does bone density change due to ageing?   2

Q.23 Discuss the 1st class lever with the help of examples from the field of sports.   2

OR

Discuss any two techniques of motivation.

SECTION-C

Q.24. Discuss the benefits of Ardha Chakrasana for preventing back pain.   3

Q.25. Briefly discuss the implementation of inclusive education in India.   3

Q.26. Write a detailed note on Harvard Step Test.   3

Q.27. Explain two types of aggression in sports.   3

Q.28. Which field of study in sports is called 'biomechanics '? Explain any two importance of biomechanics in sports.   3

OR

What do you mean by circuit training? How can load be increased in circuit training?

SECTION-D

Q.29. **Read the given case study carefully and answer the questions that follow:-**   4

ABC International school is going to organize Annual sports Day. Mr. Rohit Kumar Yadav, the sports teacher, has taken the responsibility to organize a sports event so that he has to from all committees who work PRE, During and Post competition.

Based on the case answer the following questions:-

i) Which one of the following Committee works Pre competition…..
   a) Award committee
   b) Registration committee
   c) First Aid committee
   d) Official committee

ii) Which one of the following Committee works Post competition……
   a) Award committee
   b) Officials committee
   c) Registration committee
   d) First Aid committee

iii) Which one of the following Committee works during competition….
   a) Award committee
   b) Officials committee
   c) Registration committee
   d) Welcome and decoration committee

iv) _____ committee is functional before, during and after the tournament.
   a) Reception
   b) Transport committee
   c) Opening ceremony
   d) None of these

Q.30. **Read the given case study carefully and answer the questions that follow:-**   4

Jatin is a weight lifter in the 96 kg category. He has to participate in a weight lifting competition next week so he takes care of his health a lot. For this, he includes all the essential nutrients in his diet.

Based on this case, answer the following questions:

i) What do you think would be the most important competition of Jatin's diet?
   a) Proteins
   b) Carbohydrates
   c) Vitamins
   d) Minerals

ii) What do you think Jatin requires the most?
   a) Flexibility
   b) Strength
   c) Speed
   d) Endurance

iii) Which of these is known as body building food?
   a) Calcium
   b) Proteins
   c) Minerals
   d) Vitamins

iv) A balance diet is complete, when it will be…
   a) Complex carbohydrates
   b) Animal fat rich
   c) 4 to 5 litter water in a day
   d) According to the needs of the person.

Q.31. **Read the given case study carefully and answer the questions that follow:-**   4
During the physical education class, Newton's laws of motion were discussed and their practical application in sports events was explained to students. These laws are most relevant in sports as most of the actions in sports are related to these laws.
Based on this case answer the following questions:-
   i) Biomechanics helps in which of the following?
      a) In improving technique
      b) In improving designs of sports equipment
      c) In improving performance
      d) All of these

ii) Biomechanics deals with….
   a) Muscles involved in movement
   b) Effect of force on different movements done by human body
   c) To understand the physiology of the body
   d) To understand time and distance concept of various Biomechanics

iii) Heading the football into opposition goal post through a corner kick is an example of……………
   a) Newton's 1st law of motion
   b) Newton's 2nd law of motion
   c) Newton's 3rd law of motion
   d) Both (a) and (b)

iv) In the long jump take off, which of the following laws work?
   a) Newton's 1st law of motion
   b) Newton's 2nd law of motion
   c) Newton's 3rd law of motion
   d) Law of conservation of mass.

SECTION-E

Q.32. What is a league tournament? Draw a fixture for nine (9) teams using Cyclic method. Explain British metod to declare winner.   5

Q.33. Draw a stick diagram of Halasana. Explain its procedure, benefits and contraindications.   5

Q.34. Explain in detail role of individual in prevention sports related accidents injury.   5

OR

Circuit training methods was developed in which year? Draw a diagram of Circuit training with 10 stations and explain its improvements.