

Name: _____ Sec: _____ Roll No.: _____

CODE - A

BURNPUR RIVERSIDE SCHOOL, BURNPUR

PRE-BOARD EXAMINATION : (2023-2024)

ENGLISH

CLASS – XII

Time: 3 Hours

Maximum Marks : 80

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.*

SECTION A : READING SKILLS (22 marks)

Reading Comprehension Through Unseen Passages

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

1. What's the one thing that you associate with your college days? For me, it was consuming copious amounts of *chai*. A cup of tea was a panacea to all troubles and the companion to all joys. In this exclusive interview, we caught up with 65-year old Deepak Garg, owner of *Ganga Dhaba*, a spot that every officer from National Academy of Administration has visited multiple times.
2. Deepak begins, “My family has been here for almost 90 years. It was my grandfather who first started working here

as the supplier to the hotel that existed then." In 1964, when Deepak was all of eight, he lost his father and the responsibility of raising four children, fell on his mother.

3. "Our growing up years were a huge struggle. My mother used to teach Home-Science at a local *balwadi* school, and which was also where my siblings and I studied," he says. In 1978, Deepak says that he started a food joint that he named **Om Chinese Restaurant**. "In those days, there was a huge liking for Chinese food and hence, the name and the choice of cuisine," he says.
4. For almost 17 years, things continued and then Deepak got a Public Call Office (PCO) installed for the Officer Trainees. The business did so well that soon he had installed more than ten telephones, with separate cabins, to allow them some privacy while they made and received their calls.
5. The OTs who would talk on the PCO from here would always refer to the place as '*Ganga Dhaba*'. It was because this place is so close to the *Ganga* hostel inside the academy, that slowly the name changed and it became *Ganga Dhaba*. "Since it was the OTs that gave us our identity, we decided to change the name and call it *Ganga Dhaba*," he says.
6. There have been instances when Deepak and his family members have learnt dishes from the OTs. He says, "So many dishes on our menu today are because some officer came in and decided to teach us how to make them."
7. "We have seen two generations of officers, served the

parents, who now as parents come back to drop their children at the academy and tell us to take care of them. What more can we ask for? While the money we make is not great, the respect and the love we have accumulated over the years is what keep us going," says Deepak, proudly.

Answer the following questions, based on the passage above.

(a) Read the following statements:

1

(1) Mr. Deepak named his food joint Om Chinese.

(2) Chinese food was then popular among people.

- i. (2) is the cause for (1).
- ii. (1) is the cause for (2).
- iii. (1) is true and (2) is false.
- iv. (1) is false and (2) is true

(b) The gesture of changing the name of the food joint to 'Ganga Dhaba' speaks of Deepak's:

1

- i. wavering mind.
- ii. tendency to change with times.
- iii. respect and tribute to OTs.
- iv. dogmatic approach.

(c) “..... many dishes on our menu today are because some officer came in and decided to teach us.” 1

Choose the option that rightly reflects the tone of the speaker.

- i. Ignorance
- ii. Humility
- iii. Pride
- iv. Regret

(d) As per paragraph 7, select the option that sums up the personality of Deepak Garg. 1

- i. He is a struggler, lacks business acumen to make his business profitable.
- ii. He is a very social and friendly person and enjoys a good relationship with OTs.
- iii. A responsible son who shared the burden of his family.
- iv. A person who upholds dignity and esteem in life, not materialistic.

(e) What, according to the author, gave him solace during his bad times in his college days? 1

(f) “..... tell us to take care of them.” 1

The statement tells that parents trust and respect Deepak Garg’s hospitality. – TRUE / FALSE

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

The author decided to change the restaurant’s name and call it *Ganga Dhaba* because _____.

(h) How does the text justify that *learning can take place anywhere?* 2

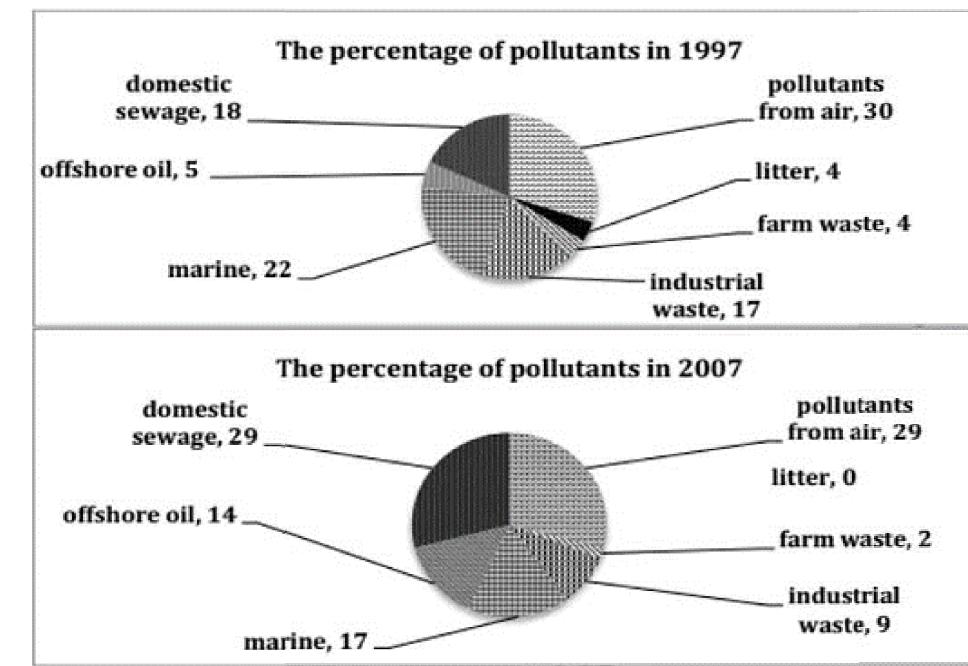
(i) “*...the respect and the love we have accumulated over the years is what keep us going,” says Deepak, proudly.*” Cite an instance from the text that substantiates this claim of his. 2

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

1. Air pollution is a major threat to human health. The United Nations Environment Programme has estimated that, globally, 1.1 billion people breathe in unhealthy air. The World Health Organization (WHO) has estimated that urban air pollution is responsible for approximately 800,000 deaths and 4.6 million people lose their lives every year around the globe.
2. Traffic and transportation problems, inadequate drainage facilities, lack of open spaces, carbon emissions and the accumulation of waste aggravate the problem. Air pollution is associated with increased risk of Acute Respiratory Infections (ARI), the principal cause of infant and child mortality in developing countries.
3. Urban air quality in most mega cities has been found to be critical and Kolkata is no exception to this. An analysis of ambient air quality in Kolkata was done by applying the Exceedance Factor (EF) method, where the presence of listed pollutants’ (RPM, SPM, NO₂ and SO₂) annual average concentration are classified into four different categories;

namely critical, high, moderate and low pollution. Out of a total of 17 ambient air quality monitoring stations operating in Kolkata, five fall under the critical category and the remaining 12 locations fall under the high category of NO₂ concentration, while for RPM, four record critical and 13 come under the high pollution category. The causes of high concentration of pollutants in the form of NO₂ and RPM have been identified in earlier studies as vehicular emission (51.4%), followed by industrial sources (24.5%) and dust particles (21.1%).

4. Later, a health assessment was undertaken with a structured questionnaire at some nearby dispensaries which fall under areas with different ambient air pollution levels. Three dispensaries have been surveyed with 100 participants. It shows that respondents with respiratory diseases (85.1%) have outnumbered water borne diseases (14.9%) and include acute respiratory infections (ARI) (60%), chronic obstructive pulmonary diseases (COPD) (7.8%), upper track respiratory infection (UTRI) (1.2%), influenza (12.7%) and acid-fast bacillus (AFB) (3.4%).
5. To live a healthy life and have better well-being, practising pollution averting activities in one's day-to-day activities is needed. These pollution-averting practices can only be possible when awareness among the masses is generated that the air, they breathe outdoors, is not found to be safe.



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

- Only urban air pollution is responsible for deteriorating human health condition.
- The higher intensity of pollutants in the form of NO_2 and RPM is mainly due to vehicular emissions.
- Dust particles in air are the major contributors of pollution.
- Traffic and transport play a negligible role in increasing pollution

(b) Select the option that lists the author's recommendation to the people. 1

A. He wants people to be aware that air pollution is a major threat.

B. He urges people not to live in mega cities.

C. He advises people to follow pollution averting activities seriously.

D. He wants people to reduce vehicular emissions.

- i. A & B
- ii. B & C
- iii. A & C
- iv. C & D

(c) Complete the given statement.

1

The author's opinion on the condition of mega cities is

_____.

(d) “... accumulation of waste aggravates the problem.” Define the problem?

1

(e) “... that respondents with respiratory diseases (85.1%) have outnumbered water borne diseases (14.9%)” What do the statistics hint at?

1

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

1

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

2

(h) Air pollution is a major threat to human health and even children are not spared of it.

2

How does the passage justify the given statement?

SECTION B : CREATIVE WRITING SKILLS (18 marks)

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

(a) Vineeta is the Head girl of Gandhi Memorial School, Nagpur. She has been asked to **draft a notice** informing students of Class XII about a workshop on Space Science and Astrophysics. Draft Vineeta's **notice**. Mention relevant details.

OR

(b) You're the president of *Gokuldham* Society and you're planning a New Year Eve celebration in your neighbourhood. Prepare a **notice** in not more than 50 words informing your neighbourhood's residents of the function. Include any additional information you believe is necessary for the purpose.

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

(a) You are Faiz/Falak Mazumdar living at 39, Udhampur Colony, Shimla. You decide to hold a dinner party to congratulate your grandparents on their golden wedding anniversary. **Create an informal invitation** in not more than 50 words to all family members to attend a grand dinner at home.

OR

(b) Your friend, P.V. Sathish, has invited you to attend the wedding of his sister, Jaya. You find that you have an important paper of Pre-Board examination on the day of the wedding. Thus, you

cannot attend the event. Write in about 50 words a formal reply to the invitation expressing your regret. You are Puneet / Puneeta Vij, M 114, Fort Road, Chennai.

5.

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

5

You are Ram/Rajani, living at 1, Rana Pratap Marg, New Delhi. You saw the given advertisement in the newspaper and wish to apply for the position advertised. Write a letter to Power Engineering (India) Pvt. Ltd. along with your **bio-data**, expressing your interest in the situation vacant.

WANTED A MAINTENANCE ENGINEER

Power Engineering (India) Pvt. Ltd. requires

Maintenance Engineer.

Qualification: Degree holders in Mechanical Engineering with 3-5 years of experience.

Apply immediately giving complete bio-data, and all the necessary details to

The Personal Manager, Power Engineering (India) Pvt. Ltd. 33 Sector- 21D, Haryana- 121001

OR

Write a **letter to the editor** of The Telegraph, 6, Prafulla Sarkar Street, Kolkata - 700001 highlighting increasing technological addiction among the youth. Stress in your letter the harms that are caused due to the addiction and suggest ways to overcome the dependence.

6.

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

5

Rashmi is President of her school Library Club. She decides to write **an article** on the need to develop the habit of reading as she strongly feels it is fading among the present-day students. Compose her **article** for publication in the school annual magazine.

OR

You are Sneha / Suresh of L.M. Jain School, Ajmer. As Secretary of your school's Intetact Club, you visited a slum area in your city where people suffered a great loss of life and property in a massive fire. The students of your school rendered their services and material help to the victims. Write **a report** covering this tragedy in about 120 - 150 words for a local daily.

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

*A thing of beauty is a joy forever Its loveliness increases,
it will never pass into nothingness;
but will keep*

*A bower quiet for us, and a sleep
Full of sweet dreams, and health, and quiet breathing.*

*Therefore, on every morrow, are we wreathing
A flowery band to bind us to the earth...*

(a) Choose the option that displays the same **poetic device** as used in the first line of the extract.

- I'm as happy as I can be.
- Life is a roller coaster ride.
- Nature is God's gift to us.
- The dazzling divas enchanted all.

(b) Based on the given extract, the benefits of a thing of beauty for humans include -

- healthy body**
- calm mind**
- struggle-free life**
- better relationships**
- hope to carry on**

Choose the most appropriate option.

- Only (E)
- (A), (B) and (E)
- (A) and (D)
- (B) and (D)

(c) **Answer in ONE word.**

When the poet says that '*a thing of beauty*' will never pass into nothingness, he means that it is _____.

(d) Give the suggestion of the line, “*Therefore are we wreathing a flowery band to bind us to earth*”.

(e) How does a thing of beauty provide us with shelter and comfort?

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

One sees beautiful things in dreams.

OR

*Aunt Jennifer's finger fluttering through her wool
Find even the ivory needle hard to pull.
The massive weight of Uncle's wedding band
Sits heavily upon Aunt Jennifer's hand.*

(a) How would you describe Aunt Jennifer based on the above extract?

- oppressed
- malnourished
- aging
- diseased

(b) Which of the following does NOT represent the contrast between Aunt Jennifer and the tigers?

- uncertainty and confidence
- terror and fearlessness
- fiefdom and freedom
- subjugation to authority and autonomy

(c) **Complete the sentence appropriately.**

Aunt Jennifer's finger flutter through her wool because _____.

(d) Bring out the significance of the expression “*massive weight of Uncle's wedding band*” given in the extract.

(e) Which poetic device has been used in the first line of the extract?

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

The wedding band belongs to the husband and so it is heavy.

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

“*Climate change is one of the most hotly contested environmental debates of our time. Will the West Antarctic ice sheet melt entirely? Will the Gulf Stream ocean current be disrupted? Will it be the end of the world as we know it? Maybe. Maybe not. Either way, Antarctica is a crucial element in this debate...*”

(a) The many questions in the extract suggest

- we do not have answers to these.
- we need to be awakened to climate change.
- the spirit of curiosity of the author.
- the author's knowledge on the subject.

(b) What prompts the author to comment, “*May be. May be not.*”?

(c) “*Antarctica is a crucial element in this debate...*” because _____.

(d) “*Climate change is one of the most hotly contested environmental debates of our time.*” Cite an evidence from the text in support of the statement?

OR

The Maharaja and the dewan held deliberations over this issue. As a result, a telegram was dispatched forthwith to a famous British company of jewellers in Calcutta. Send samples of expensive diamond rings of different designs. Some fifty rings arrived. The Maharaja sent the whole lot to the British officer’s good lady. The king and the minister expected the Duraisani to choose one or two rings and send the rest back. Within no time at all the Duraisani sent her reply: “Thank you very much for your gifts.” In two days a bill for three lakh of rupees came from the British jewellers. The Maharaja was happy...

(a) “*Thank you very much for your gifts.*” was soon to come as a _____ to the king.

- shock
- happy surprise.
- token of appreciation.
- goodwill gesture

(b) *The Maharaja was happy.* This was because _____.

(c) What can the conduct of the *Duraisani* be called as?

(d) The given episode proves the king's _____.

9.

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

Poor man! It was in honour of this last lesson that he had put on his fine Sunday clothes, and now I understood why the old men of the village were sitting there in the back of the room. It was because they were sorry, too, that they had not gone to school more. It was their way of thanking our master for his forty years of faithful service and of showing their respect for the country that was theirs no more.

(a) M. Hamel is referred to as 'poor' since

- he had lost his honour.
- he will have to leave the next day.
- the attendees of his class felt sorry for M. Hamel for that was the last French lesson .
- All of the above.

(b) Which of the given idioms describe the act of the village people attending the last lesson attentively?

- Lost in the wilderness.
- Too little, too late.
- Too good to miss
- Miss the boat

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

His fine Sunday clothes made him honourable.

(d) *“It was their way of thanking our master for his forty years of faithful service...”* reflects the villagers’ _____.

(e) Why was *“the country ... theirs no more.”*?

(f) The villagers were repentant because _____.

OR

The Champaran episode was a turning point in Gandhi’s life. “What I did,” he explained, “was a very ordinary thing. I declared that the British could not order me about in my own country.” But Champaran did not begin as an act of defiance. It grew out of an attempt to alleviate the distress of large numbers of poor peasants. This was the typical Gandhi pattern — his politics were intertwined with the practical, day-to-day problems of the millions. His was not a loyalty to abstractions; it was a loyalty to living,

human beings. In everything Gandhi did, moreover, he tried to mould a new free Indian who could stand on his own feet...

(a) Choose the correct option with reference to the two statements given below.

Statement 1: His was not a loyalty to abstractions; it was a loyalty to living, human beings.

Statement 2: Gandhi was a humanitarian at heart.

- i. Statement 1 is the cause of Statement 2.
- ii. Statement 2 is the effect of Statement 1.
- iii. Statement 2 can be inferred from Statement 1.
- iv. Statement 1 and Statement 2 are independent of each other.

(b) In light of the following statement, pick the option that lists the characteristics of Gandhi.

“Gandhi never contented himself with large political or economic solutions. He saw the cultural and social backwardness in the Champaran villages and wanted to do something about it immediately.”

- 1. pragmatic
- 2. obedient
- 3. compassionate
- 4. philanthropic
- 5. patient
- 6. dramatic

- i. 1, 3, 6
- ii. 2, 4, 5
- iii. 1, 3, 4
- iv. 2, 5, 6

(c) “*What I did...*” What did Gandhi ji actually do?

(d) In the extract, the phrase '*not a loyalty to abstractions*' refers to _____.

(e) *Select a suitable word from the extract to complete the following analogy:*
change: transform :: relieve: _____.

(f) The primary motive of Gandhi's actions herein can be said to make Indians _____.

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

(a) Whom does Anees Jung blame for the sorry plight of the bangle makers?

(b) *The rattrap peddler signs his name wrong.* How is the wrong signature significant?

- (c) According to the poet, what is it that human beings can learn from nature? (*Keeping Quiet*)
- (d) How does Eco find the time to write so much? (*The Interview*)
- (e) What does the writer say about the political leanings of the people at Gemini Studios?
- (f) Mention two qualities of Douglas that helped him win over his fear. (*Deep Water*)

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

- (a) How could Bama rise above indignities? (*Memories of Childhood*)
- (b) '*It is not merely age but experience that counts.*' With reference to any one example from the text, comment on how Derry found Mr. Lamb was different from other adults he had encountered.
- (c) How does the writer indicate that Dr. Sadao's father was a very traditional and conventional man? (*The Enemy*)

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

Imagine a car stops and actually buys from the roadside stand.

Keeping in mind the reaction you think the peasants would

have, write a **diary entry as the farmer** describing not only your immediate experience but also your after-thoughts on being able to earn “city money”.

You may begin this way:

Wednesday, 02 March 2020

We had an unexpectedly good day today! ...

OR

*Sophie was a dreamer. The lesson ‘**Going Places**’ reminds us that mere dreams will not help us to accomplish anything.*

As her friend, Jansie, **advise her** to be real and practical in her thoughts. What qualities, do you think, would help Sophie to realise her dreams?

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

“I went down a short flight of stairs and came out on the third level at Grand Central Station.” Charley visits the third level and beholds the world of the 1890s. He decided to pen down his experiences.

As the Charley, write a **diary entry** to this effect. Support your response with references from the story.

OR

“When I heard this, I didn’t want to laugh any more, and I felt terribly sad... How was it that these fellows thought so much of themselves? Because they had scraped four coins together, did that mean they must lose all human feelings?”

The scene she saw in the market place changed Bama’s life forever. She decides to address her school mates from the morning assembly of her school. As Bama, draft the text of her **speech** highlighting the incident and her consequent resistance to her situation.

Name: _____ Sec: _____ Roll No.: _____
CODE : B

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

Class – XII

Time: 3 Hours

Maximum Marks : 80

General Instructions:

1. The question paper contains three sections – READING, WRITING and LITERATURE.
2. Attempt questions based on specific instructions for each part.

SECTION A: READING SKILLS **22**

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

1. My first tryst with Shakespeare several years ago was an enforced one. *The Merchant of Venice* was a prescribed book in class 9 when I was at school. I had read the wonderful *Lamb's Tales from Shakespeare* and considered myself an authority on the stories. I did not think it necessary to read the antiquated language or trudge through several seemingly abstruse paragraphs to get to the main point. To spend a whole year to decipher a play when I had understood the story in a few pages seemed to be a sheer waste of time. Yet, somewhere along the way, I was drawn into the world of *The Merchant of Venice*, their portly argosies, the signors and rich burghers and the news on the Rialto. The language yielded its riches slowly, the characters became well drawn, more rounded and impassioned speeches of Shylock and Portia stirred up a flurry of unexamined questions. Since then, I have read several other plays, have seen a couple of theatrical performances and watched young Leonardo Di Caprio in a modern *Romeo and Juliet* film. Shakespeare

has been around.

2. Shakespeare has shaped the writing and storytelling in the English Language like no other writer has. He liberally borrowed, bent and brought new words into the English language from addiction, bump critic to worthless and zany. The phrases that he coined roll off our tongues as over-used adages – ‘All that glitters is not gold’ (*The Merchant of Venice*), ‘Jealousy is a green-eyed monster’ (*Othello*) and the perennial ‘All is well that ends well.’ He has influenced several writers and been quoted by many of them. One of my favourite authors P. G. Wodehouse had the odd Shakespearean phrase popping up in whacky situations like the ‘milk of human kindness’ sloshing inside someone or references to Banquo and Macbeth explained to Bertie by the estimable Jeeves who knew his Shakespeare. The plays have been translated into most languages, including several regional Indian *bhashas*. They have lent themselves to film adaptations, including Vishal Bhardwaj’s *Maqbool* (*Macbeth*) and *Omkara* (*Othello*).
3. The tragedies and comedies of Shakespeare cover every possible theme and idea – love, greed, jealousy, racism, friendship, mistaken identities, murder, mutiny, politics, feminism and revenge. Like any other celebrity, he has been the subject of speculation and controversy. There have been several conspiracy theories afloat on the ‘real’ authorship of the plays, including a recent claim by a professor in Sicily that Shakespeare was actually Italian. Despite everything, Shakespeare’s appeal is universal, the stories transcend language and nationalities. However, more than 400 years after Shakespeare’s birth, I can’t help wondering if anyone will read his works in the days to come.
4. The average attention span in front of a television channel is about 4 seconds before flicking on the remote to move to another. It is perfectly acceptable to massacre the rules of grammar and syntax b4 u cn say ‘why dis kolaveri di?’ When you can tell a whole story in 140 characters, reading 14 sentences can be a chore. Who will have the desire or patience to dredge up the treasures that lie within?

5. Shakespeare's works have proved to be sturdy, unshakable through the centuries moving with the times lending themselves to newer forms. I hope they don't get relegated to a few diehard literature students or musty libraries. Who knows, we might yet have a different form of Shakespeare that will appeal to the GenNext, a form that will induce them to approach an original play with a sense of anticipation, of beginning a quest to understand and appreciate a good story, well told.

Nothing of him that does fade,
But doth suffer a sea-change
Into something rich and strange.

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

i When did the author consider himself an authority on Shakespeare? 1

- After reading *Lamb's Tales from Shakespeare*
- After reading the prescribed book for class 9
- After finding no use for antiquated languages
- After mastering the abstruse paragraphs to get to the main point

ii Below are given the reasons why Shakespeare's popularity as an author might decline. Select the reason that is not relevant to the context. 1

- The rules of grammar are being mutilated currently in both the spoken and written form of the language.
- Attention spans are curtailed and reading complete sentences is unlikely.
- The televised editions of Shakespeare are far more appealing.
- No one will have the desire and patience to dredge up the treasure of Shakespeare's content in the coming days.

iii Based on your understanding of the text, what accounts for the tremendous popularity of Shakespeare in our times? 2

iv Complete the sentence appropriately. 1

The tragedies and comedies of Shakespeare cover _____.

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

- a. conventional c. contemptible
- b. conversational d. condemnable

vi What are some commonalities that Shakespeare shares with celebrities of today? 2

vii What speculation the author makes about Shakespeare's works? 1

viii According to the author, what drew him into reading Shakespeare's *'The Merchant of Venice'*? 2

ix Read the five titles (1-5) given below. 1

1. Shakespeare – Then and Now
2. Shakespeare of the Future
3. Shakespeare – a Man for All Ages
4. Shakespeare's Literary Appeal is Ageless and Evolutionary
5. Shakespeare – a famous playwright

Identify the option that displays the title that DOES / DO correspond with the passage.

- a. 1 and 2
- b. only 4
- c. 3 and 5
- d. 4 and 5

2. Read the passage given below. 10

1. What's up with WhatsApp, specifically its newish payments business? Contrary to the expectations of many market observers, WhatsApp has processed just 1.6 million of the over 6.7 billion transactions on India's Unified Payments Interface (UPI) since its launch in November 2020.
2. WhatsApp insiders said this was part of its strategy. "We are in it for the long haul; it's a marathon, not a sprint and we are in no

hurry and want to get this piece right,” a person close to the company told *The Economic Times*, requesting anonymity. “To get the simplicity of WhatsApp interface for payments is a complex task. We want to ensure that the experience for customers is smooth.”

TRANSACTION VOLUMES ON UPI IN MILLION

	WhatsApp	PhonePe	Google	Paytm	Amazon	UPI (Total)
January	0.56	968	853	281	46	2,302
December	0.81	902	854	261	41	2,230
November	0.31	868	960	260	37	2,200

3. Market observers said the challenge of India’s sophisticated payments architecture a raging political debate around ownership of digital data coupled with the social messenger’s global experiences such as in Brazil could be the reasons. Within a few days of WhatsApp’s payment service going live, the Central Bank of Brazil had taken it down owing to an uncertain regulatory climate.
4. A WhatsApp spokesperson confirmed the development. “That’s correct,” the spokesperson said responding to ET’s mailed query on whether the slow start was a conscious decision to enhance customer experience before gaining scale.
5. As per the latest data released by the National Payments Corporation of India (NPCI), WhatsApp Pay processed just 0.56 million transactions worth Rs. 36.44 crore in January 2021 against 0.81 million transactions worth Rs. 29.72 crore it recorded in December 2020.
6. At the same time, the NPCI-run UPI yet again clocked record volumes processing 2.3 billion transactions worth Rs. 4.3 lakh crore in the month, cementing its credential as one of the fastest-growing retail payment channels in the world.
7. “We have knowingly gone slow with onboardings and are working on building the right technology and teams to emerge as an important player in enabling India’s digital ecosystem,” the person close to WhatsApp quoted above said, adding: “If we want, we can be a much larger player in the market; we haven’t started

any marketing at all.”

8. Walmart-backed PhonePe, Google Pay, Paytm that is funded by SoftBank and Ant Financial and Amazon Pay cornered a significantly higher share of transactions in this period. PhonePe clocked 968 million transactions in January, whereas Google Pay processed 853 million payments. Paytm came a distant third with 281 million payments on UPI, whereas Amazon Pay did 46 million.
9. “WhatsApp wants to get the payments absolutely right in India because it ties together all its long-term ambitions for growth in the country,” said a chief executive of a domestic payments company, speaking off the record.
10. Experts also pointed that WhatsApp’s bid to capture the digital payments market in India has also not been sufficiently focused on the technology and talent acquisition front.

[Courtesy: The Economic Times]

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

- i What did the market observers say about the challenge of WhatsApp payment? 2
- ii Within a few days of WhatsApp’s payment services going live, the 1
Central Bank of Brazil had taken it down owing to an _____.
 - a. unfavourable climate
 - b. uncertain regulatory climate
 - c. unforeseen contingency
 - d. ecological problem
- iii WhatsApp’s bid to capture the digital payments market in India has not 1
been sufficiently focused. Write on which front could it not focus on?
- iv According to the chart, Walmart-backed PhonePe clocked 968 million 1
transactions whereas Google Pay processed _____.
 - a. 753 million payments
 - b. 853 million payments
 - c. 789 million payments
 - d. 700 million payments

v NPCI-run UPI cemented its credential by processing 2.3 billion 1
transactions worth Rs. 4.3 lakh crore as one of the _____.

vi What did the chief executive say about the domestic payments company 2
of WhatsApp?

vii Complete the sentence appropriately based on the following statement. 1

According to the passage, WhatsApp wants to get the payments
absolutely right in India.

We can say this because _____.

viii State TRUE or FALSE. 1

According to the latest data of NPCI, WhatsApp Pay processed just
0.28 million transactions worth Rs. 36.24 crore in January against 0.81
million transactions.

SECTION B: CREATIVE WRITING SKILLS

18

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

A You are Joseph / Jennifer Mathew, the President of the school Book Club. The Club is organizing a drive for promoting reuse of study materials and books. Draft a notice for the school notice board addressing students of classes X – XII, informing them about this drive and urging them to contribute to the endeavour. Mention how the donated books would benefit a charitable cause. 4

OR

B You are Vijay / Veena, Head Boy / Girl of Mount Litera Public School, Bhopal. Your school is planning to organize a Career Counselling Workshop for the students of classes IX – XII. Draft a notice informing students about the workshop mentioning day, date, time and venue. 4

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

A You have bought a new house in Meerut. Write an informal letter of 4 invitation, inviting your friend to the house warming ceremony. Mention day, date, time and venue. You are Rajesh / Rajni Sharma.

OR

B You have received an invitation to be the judge for literary competition 4 at St. Joseph Public School. Send a formal reply, confirming your acceptance. You are Rohit / Rohini Singh.

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

A You are Vikramjit / Vineeta Singh, a fresh graduate of film-making 5 (BFA), from JTTI, Chandigarh. You saw the given advertisement in the newspaper and wish to apply for the position advertised. Write a letter to Taran Johar Arts, along with your bio-data, expressing your interest in the advertised post.



Taran Johar Arts
ASSISTANT DIRECTORS
wanted
For Feature Film
Opportunity for aspiring Assistant Directors

WHO DO WE NEED?
Freshers, Experienced, both welcome

REQUIRED: Degree / Diploma in Film Making
Skills: Camera handling, functional knowledge of computer, exceptional communication skills and ability to multi-task.

**Please send your resumes to – The Johar House, Offices 05 – 06,
Palli Hill, Mumbai, latest by 10th December, 2023.**

OR

B You are Sujoy / Sujata of Nehru Colony, Indore. You recently visited Shimla with your family. You were perturbed to see the tourists throwing empty water bottles and cans all over the place. Write a letter to the editor of a national daily expressing your concern and offering suggestions to improve the situation. Use the given cues with your own ideas to compose the letter. 5

Eco-Friendly Travel

- create less waste
- dispose garbage properly
- 40% pollution increase during the tourist season
- do sustainable travel
- waste and pollution have far-reaching impact on wildlife, environment, visitors & communities
- create – clean and healthy vacation destination
- Ecological Conservation – A need of the hour

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

A The youth of today are the leaders of tomorrow. As a teenager, you want India to achieve certain goals in the next ten years. Write an article on 'India After Ten Years.' You are Anant / Ananya. Use the following cues. 5

Education

Health

Communication

Infrastructure

Inflation

Employment

OR

B Your school recently conducted an inter-school Heritage Quiz Contest. 5 As a student reporter, write a report of the event to be published in your school magazine. You are Pravin / Prachi. Mention day, date, time and venue.

Know Your Heritage	
An Inter-School Quiz Contest	
History	Mythology
Culture	Monuments
Handicraft	Attractive prizes for audience question
Thursday, 30th November 2023, St. John's Public School	

SECTION C: LITERATURE TEXTBOOK AND 40 SUPPLEMENTARY READING TEXT

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

A And such too is the grandeur of the dooms
We have imagined for the mighty dead;
All lovely tales that we have heard or read:
An endless fountain of immortal drink,
Pouring unto us from the heaven's brink.

6

(A Thing of Beauty)

i Which of the following themes is best represented in the given extract? 1

a. The beauty of nature c. The immortality of art and literature
b. The power of imagination d. The inevitability of death

ii State whether the given statement is TRUE or FALSE, with reference to 1
the extract.
By referring to the dead as "mighty," the poet emphasizes their
importance and the power they exerted on the people.

iii Complete the sentence appropriately.

1

The “endless fountain of immortal drink” is an apt analogy for the tales of the mighty dead because _____.

iv The use of the word “brink” in the extract suggests that the immortality that is being poured onto us is on the verge of overflowing. This creates a powerful image of _____.

v Based on the poem rhyme scheme, evident in lines 2-5, of the given extract, which word would rhyme with line 1?

1
said

think

1
tombs

vi Select the option that is NOT TRUE about the lack of punctuation at the end of the line 1 in the extract.

- Creates a sense of continuity and flow that connects the line with the second line.
- Encourages the reader to continue reading seamlessly without any pause.
- Creates a sense of anticipation and expectation for the reader.
- Encourages a revisit to the ideas in the preceding lines.

OR

B Aunt Jennifer’s fingers fluttering through her wool

6

Find even the ivory needle hard to pull.

The massive weight of Uncle’s wedding band

Sits heavily upon Aunt Jennifer’s hand.

(Aunt Jennifer’s Tigers)

i What do ‘fluttering fingers’ of Aunt Jennifer indicate?

1

- Her nervous state of mind
- Her extremely busy life
- Her uncomfortable and furious nature
- Her cool and peaceful temperament

ii What does the use of words ‘the massive weight’ indicate? 1
iii Select the lines that show Aunt Jennifer’s unhappy married life. 1

- a. lines 1 and 3
- b. lines 1 and 2
- c. line 1
- d. lines 3 and 4

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

Aunt Jennifer creates animals which are similar to her own character.

v What figure of speech has been used in ‘massive weight of Uncle’s 1
wedding band sits heavily upon Aunt Jennifer’s hand’?

vi Complete the sentence appropriately. 1

Aunt Jennifer makes tigers in order to express her desire for _____.

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

A Climate change is one of the most hotly contested environmental 4
debates of our time. Will the West Atlantic ice sheet melt entirely? Will
the Gulf Stream ocean current be disrupted? Will it be the end of the
world as we know it? Maybe. Maybe not. Either way, Antarctica is a
crucial element in this debate – not just because it’s the only place in the
world, which has never sustained a human population and therefore
remains relatively ‘pristine’ in this respect; but more importantly,
because it holds in its ice-cores half-million-year-old carbon records
trapped in its layers of ice.

(Journey to the End of the Earth)

i How does the absence of human population in Antarctica make it 1 significant in the climate change debate?

ii Why is “climate change” described as a “hotly contested” issue in the 1 extract provided? This is so, because there _____.

- is universal agreement on the causes and implications of climate change.
- is a planned path ahead about how to address climate change.
- are differing views on the causes and implications of climate change.
- are minimal reports of fresh threats to climate change.

iii The analogy of a time machine is an appropriate analogy for the role of 1 carbon records in the study of climate change because _____.

iv Give one reason why the writing style of the extract can be called 1 factual and informative.

OR

B In other words, the Tiger King is dead. 4

The manner of his death is a matter of extraordinary interest. It can be revealed only at the end of the tale. The most fantastic aspect of his demise was that as soon as he was born, astrologers had foretold that one day the Tiger King would actually have to die.

“The child will grow up to become the warrior of warriors, hero of heroes, champion of champions. But” they bit their lips and swallowed hard. When compelled to continue the astrologers came out with it. “This is a secret which should not be revealed at all. And yet we are forced to speak out. The child born under this star will one day have to meet its death.”

(The Tiger King)

i Complete the sentence appropriately. 1

The author's purpose in using foreshadowing, is to _____.

ii In the given extract, what emotion were the astrologers feeling when they “bit their lips and swallowed hard”? 1

a. Humiliation c. Grief

b. Disbelief d. Unease

iii Which trait are the astrologers lauding when they say “warrior of 1
warriors, hero of heroes, champion of champions”?

iv How is the line, “the most fantastic aspect of his demise,” an example 1
of contrast?

9. Read the extracts given below and attempt ANY ONE of the two, by answering the questions that follow.

A Usually, when school began, there was a great bustle, which could be heard out in the street, the opening and closing of desks, lessons repeated in unison, very loud, with our hands over our ears to understand better and the teacher's great ruler rapping on the table. But now it was all so still! I had counted on the commotion to get to my desk without being seen; but, of course, that day everything had to be as quiet as Sunday morning. Through the window I saw my classmates, already in their places and M. Hamel walking up and down with his terrible iron ruler under his arm. I had to open the door and go in before everybody. You can imagine how I blushed and how frightened I was.

(The Last Lesson)

i List any two sensory details present in the extract. 1

ii Why does the protagonist feel anxious about entering the classroom on 1 this particular day?

- a. The classmates have started the lesson.
- b. The teacher is in a bad mood.
- c. The classroom is too quiet.
- d. The protagonist is running late.

iii Complete the sentence appropriately. 1

The phrase “as quiet as Sunday morning” suggests that _____.

iv Pick evidence from the extract that helps one infer that this was not the 1 protagonist’s first time being late to school.

v What does the term ‘terrible iron ruler’ indicate about M. Hamel? 1

vi Which of the following headlines best suggests the central idea of the 1 extract?

- a. The Fears of a Latecomer
- b. The Importance of Punctuality
- c. The Rigidity of the School System
- d. The Anxiety of a Young Student

OR

B He wired a full report to the Viceroy. 6

Morning found the town of Motihari black with peasants. They did not know Gandhi’s record in South Africa. They had merely heard that a Mahatma who wanted to help them was in trouble with the authorities. Their spontaneous demonstration, in thousands, around the courthouse was the beginning of their liberation from fear of the British.

The officials felt powerless without Gandhi’s cooperation. He helped them regulate the crowd. He was polite and friendly.

(*Indigo*)

i	What did the authorities do due to the gathering of such a heavy crowd?	1				
ii	The line, “The officials felt powerless without Gandhi’s cooperation” can be classified as	1				
	<table border="0"><tr><td>a. a fact</td><td>c. a theme</td></tr><tr><td>b. an opinion</td><td>d. a plot point</td></tr></table>	a. a fact	c. a theme	b. an opinion	d. a plot point	
a. a fact	c. a theme					
b. an opinion	d. a plot point					
iii	Explain any one possible inference that can be drawn from the line, “They did not know Gandhi’s record in South Africa.”	1				
iv	Identify the line from the extract that bears evidence to the fact that the protest was the beginning of their liberation from fear of the British.	1				
v	What was the large gathering of the peasants a proof of?	1				
	<table border="0"><tr><td>a. Their fear of the British rule began to recede.</td></tr><tr><td>b. They had a large population in the area.</td></tr><tr><td>c. They were angry and violent.</td></tr><tr><td>d. They wanted to solve the issue on their own.</td></tr></table>	a. Their fear of the British rule began to recede.	b. They had a large population in the area.	c. They were angry and violent.	d. They wanted to solve the issue on their own.	
a. Their fear of the British rule began to recede.						
b. They had a large population in the area.						
c. They were angry and violent.						
d. They wanted to solve the issue on their own.						
vi	Complete the sentence.	1				

10. Answer ANY FIVE out of the six questions, in about 40-50 words 10 each.

i How did Saheb get a pair of shoes? Was he happy with them? 2
(*Lost Spring*)

ii Why did Edla still entertain the peddler even after she knew the truth about him? 2
(*The Ratrap*)

iii Do you think the poet advocates total inactivity and death in ‘Keeping Quiet’ 2
(*Keeping Quiet*)

iv What do you understand by the expression ‘thumbprints on his windpipe?’ 2

(*The Interview*)

v What does ‘The God That Failed’ refer to? 2

(*Poets and Pancakes*)

vi How did Douglas develop an aversion to water at the age of three or four? 2

(*Deep Water*)

11. Answer ANY TWO out of the three questions, in about 40-50 words 4 each.

i What comic incident did Bama narrate to her brother? Why was he not amused? 2

(*Memories of Childhood*)

ii ‘Because if I don’t go back there, I’ll never go back anywhere in the world’ says Derry to his mother. How does these words reflect Derry’s state of mind? How does he come to feel this way? 2

(*On The Face of It*)

iii How do the servants react to the presence of an American in the house? 2

(*The Enemy*)

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

i **Read the following complaints.** 5

• ‘The cry of not having money to do anything except carry on the business of making bangles, not even enough to eat, rings in every home.’ (*The Lost Spring*)

• ‘..... far from the city we make our roadside stand and ask for some city money to feel in hand.’ (*A Roadside Stand*)

Create a conversation between a bangle maker (BM) and the owner of a roadside stand (RS) with reference to the above extracts.

OR

ii Compare and contrast Sophie and Jansie highlighting their temperament and aspirations. 5

(*Going Places*)

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

i Do you see an intersection of time and space in the story ‘The Third Level’? 5

(*The Third Level*)

OR

ii Both Bama and Zitkala Sa experienced the harsh reality of discrimination in their childhood. Instead of letting it pull them down, they both found a way to overcome it. You wish to include a cameo* of both in your upcoming blog post. 5

As a part of the research, compare and contrast the experiences faced by the two and their response/s to these experiences.

[Clue: Include the similarities and differences in the discrimination they faced – their feelings – determination to overcome – success]

* a short description that neatly encapsulates someone or something.

(*Memories of Childhood*)

Name: _____ Sec: _____ Roll No.: _____
CODE - A

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

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 $f: N \rightarrow N$: $f(x) = x^2 + x + 1$ is 1
(a) One – one and onto
(b) One – one and into
(c) many – one and onto
(d) many – one and into
2. The value of $\cos^{-1}\left(\frac{1}{2}\right) + 2\sin^{-1}\left(\frac{1}{2}\right)$: 1
(a) $\frac{2\pi}{3}$
(b) $\frac{\pi}{3}$
(c) $\frac{\pi}{2}$
(d) $\frac{3\pi}{2}$

3. If $A = [a_{ij}]$ is a square matrix of order 2 such that $a_{ij} = \begin{cases} 1, & \text{when } i \neq j \\ 0, & \text{when } i = j \end{cases}$, then A^2 is : 1

(a) $\begin{bmatrix} 1 & 0 \\ 1 & 0 \end{bmatrix}$
 (b) $\begin{bmatrix} 1 & 1 \\ 0 & 0 \end{bmatrix}$
 (c) $\begin{bmatrix} 1 & 1 \\ 1 & 0 \end{bmatrix}$
 (d) $\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$

4. If $A = \begin{bmatrix} -2 & 0 & 0 \\ 0 & -2 & 0 \\ 0 & 0 & -2 \end{bmatrix}$, then the value of $|adj A|$ is: 1

(a) 64
 (b) 16
 (c) 0
 (d) -8

5. The value of k ($k < 0$) for which the function f defined as 1

$$f(x) = \begin{cases} \frac{1 - \cos kx}{x \sin x}, & x \neq 0 \\ \frac{1}{2}, & x = 0 \end{cases}$$

is continuous at $x = 0$ is:

(a) ± 1
 (b) -1
 (c) $\pm \frac{1}{2}$
 (d) $\frac{1}{2}$

6. If $f(x) = \begin{cases} mx + 1, & x \leq \frac{\pi}{2} \\ \sin x + n, & x > \frac{\pi}{2} \end{cases}$ is continuous at $x = \frac{\pi}{2}$, then: 1

(a) $m = 1, n = 0$
 (b) $m = \frac{n\pi}{2} + 1$
 (c) $n = m\frac{\pi}{2}$
 (d) $m = n = \frac{\pi}{2}$

7. If $y = 5\cos x - 3\sin x$, then $\frac{d^2y}{dx^2}$ is equal to: 1

(a) $-y$
 (b) y
 (c) $25y$
 (d) $9y$

8. Find the intervals in which the function f given by $f(x) = x^2 - 4x + 6$ is strictly increasing. 1

(a) $(-\infty, 2) \cup (2, \infty)$
 (b) $(2, \infty)$
 (c) $(-\infty, 2)$
 (d) $(-\infty, 2] \cup (2, \infty)$

9. The value of $\int \frac{2-3\sin x}{\cos^2 x} dx$. 1

(a) $2\tan x - \sec x + C$
 (b) $\tan x - 3\sec x + C$
 (c) $3\tan x - \sec x + C$
 (d) $2\tan x - 3\sec x + C$

10. Evaluate: $\int_1^2 \frac{dx}{x(1+\log x)^2}$. 1

(a) $\log 3 / (1 + \log 3)$
 (b) $\log 2 / (1 + \log 2)$
 (c) $\log 3 / (1 + \log 2)$
 (d) $\log 5 / (1 + \log 5)$

11. Evaluate: $\int_0^\pi \frac{x dx}{a^2\cos^2 x + b^2\sin^2 x}$. 1

(a) $\frac{\pi^2}{ab}$
 (b) $\frac{\pi^2}{2ab}$
 (c) $\frac{\pi^2}{3a}$
 (d) $\frac{\pi^2}{3a}$

12. Find: $\int \frac{dx}{9+4x^2}$. 1

(a) $\frac{1}{4} \tan^{-1} \left(\frac{2x}{3} \right) + C$
 (b) $\frac{1}{6} \tan^{-1} \left(\frac{2x}{3} \right) + C$
 (c) $\frac{1}{2} \tan^{-1} \left(\frac{4x}{3} \right) + C$
 (d) $\frac{1}{6} \tan^{-1} \left(\frac{4x}{3} \right) + C$

13. Evaluate: $\int \frac{\cos 2x + 2\sin^2 x}{\cos^2 x} dx$. 1

(a) $\tan x + c$
 (b) $\cot x + c$
 (c) $\tan 2x + c$
 (d) $\cot 2x + c$

14. The order and degree of the following differential equation 1

$$\frac{d^2y}{dx^2} + e^{\frac{dy}{dx}} = 5y.$$

(a) 2, 1
 (b) 2, undefined
 (c) 1, 1
 (d) 1, undefined

15. Solve the differential equation: $\frac{dy}{dx} = \left(\frac{y}{x} \right)^{1/3}$. 1

(a) $y^{1/3} - x^{1/3} = c$
 (b) $y^{2/3} - x^{2/3} = c$
 (c) $y^{-1/3} - x^{-1/3} = c$
 (d) $y^{2/3} - x^{-2/3} = c$

16. If a unit vector \vec{a} makes angles $\frac{\pi}{3}$ with \hat{i} and $\frac{\pi}{4}$ with \hat{j} and an acute angle θ with \hat{k} , then the value of θ is: 1

(a) $\frac{\pi}{2}$
 (b) $\frac{\pi}{4}$
 (c) $\frac{\pi}{3}$
 (d) $\frac{\pi}{6}$

17. If $(\vec{a} \times \vec{b})^2 + (\vec{a} \cdot \vec{b})^2 = 400$ and $|\vec{a}| = 4$, then find $|\vec{b}|$. 1
 (a) 4
 (b) 5
 (c) 16
 (d) 24

18. If $\vec{a} = 2\hat{i} + 3\hat{j} - \hat{k}$ and $\vec{b} = \hat{i} + 2\hat{j} + 3\hat{k}$, then $|\vec{a} \times \vec{b}| =$ 1
 (a) $\sqrt{165}$
 (b) $\sqrt{171}$
 (c) $\sqrt{141}$
 (d) $\sqrt{131}$

ASSERTION – REASON BASED QUESTIONS

19. Assertion (A): The two lines with direction cosines $(\frac{12}{13}, \frac{-3}{13}, \frac{-4}{13})$, $(\frac{4}{13}, \frac{12}{13}, \frac{3}{13})$ are mutually perpendicular. 1
 Reason (R): The two lines with direction cosines (l_1, m_1, n_1) and (l_2, m_2, n_2) are mutually perpendicular iff $l_1 l_2 + m_1 m_2 + n_1 n_2 = 0$.
 (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. Let A and B be two events associated with an experiment such that $P(A \cap B) = P(A) P(B)$. 1
 Assertion (A): $P(A | B) = P(A)$ and $P(B | A) = P(B)$.
 Reason (R): $P(A \cup B) = P(A) + P(B)$.
 (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.

SECTION - B

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

21. Show that the function $f: \mathbb{R} \rightarrow \mathbb{R}$ such that 2

$$f(x) = \begin{cases} 1, & \text{if } x \text{ is rational} \\ -1, & \text{if } x \text{ is irrational} \end{cases}$$
 is many-one and not onto.

OR

Show that the function defined by $f: \mathbb{R} \rightarrow \mathbb{R}$, defined by

$$f(x) = \begin{cases} 1, & \text{if } x > 0 \\ 0, & \text{if } x = 0 \\ -1, & \text{if } x < 0 \end{cases}$$
 is neither one – one nor onto.

22. If the function $f(x) = \frac{a \sin x + 2 \cos x}{\sin x + \cos x}$ is strictly increasing for all values of x , then find the value of a . 2

23. Determine the value of the constant k so that the function 2

$$f(x) = \begin{cases} \frac{\sqrt{1+kx} - \sqrt{1-kx}}{x}, & \text{if } -1 \leq x < 0 \\ \frac{2x+1}{x-1}, & \text{if } 0 \leq x \leq 1 \end{cases} \text{ is continuous at } x = 0.$$

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

OR

$$\text{Integrate: } \int \frac{\sec^2(2\tan^{-1}x)}{1+x^2} dx$$

25. Find a unit vector perpendicular to each of the vectors \vec{a} and \vec{b} where $\vec{a} = 5\hat{i} + 6\hat{j} - 2\hat{k}$ and $\vec{b} = 7\hat{i} + 6\hat{j} + 2\hat{k}.$ 2

SECTION - C

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

Express the following matrix as the sum a symmetric matrix and a

26. skew-symmetric matrix and verify your result: $\begin{pmatrix} 3 & -2 & -4 \\ 3 & -2 & -5 \\ -1 & 1 & 2 \end{pmatrix}.$ 3

OR

If $A = \begin{bmatrix} -1 & -1 \\ 2 & -2 \end{bmatrix}$, then prove that $A^2 + 3A + 4I_2 = O$ and hence find $A^{-1}.$

27. If $y = e^{x \sin^2 x} + (\sin x)^x$, find $\frac{dy}{dx}.$ 3

28. Prove that $\int_0^1 \frac{\log(1+x)}{1+x^2} dx = \frac{\pi}{8} \log 2.$ 3

OR

Prove that: $\int_0^{\pi} \frac{x \sin x}{1 + \sin x} dx = \pi \left(\frac{\pi}{2} - 1 \right)$

29. Find the particular solution of $\ln\left(\frac{dy}{dx}\right) = 3x + 4y$, $y(0) = 0.$ 3

30. Find the shortest distance between the lines l_1 and l_2 are given by 3

$$l_1: \vec{r} = (\hat{i} + 2\hat{j} - 4\hat{k}) + \lambda (2\hat{i} + 3\hat{j} + 6\hat{k})$$

$$l_2: \vec{r} = (3\hat{i} + 3\hat{j} - 5\hat{k}) + \mu (-2\hat{i} + 3\hat{j} + 8\hat{k}).$$

31. A and B throw a pair of dice alternately. A wins the game if he gets a total of 7 and B wins the game if he gets a total of 10. If A starts the game, then find the probability that B wins. 3

SECTION – D

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

32. Find the product BA of matrices $A = \begin{bmatrix} -5 & 1 & 3 \\ 7 & 1 & -5 \\ 1 & -1 & 1 \end{bmatrix}$, $B = \begin{bmatrix} 1 & 1 & 2 \\ 3 & 2 & 1 \\ 2 & 1 & 3 \end{bmatrix}$ 5
and use it in solving the equations :
 $x + y + 2z = 1$; $3x + 2y + z = 7$; $2x + y + 3z = 2$.

33. Using integration, find the area of the region bounded by the curves: $y = |x + 1| + 1$, $x = -3$, $x = 3$ and $y = 0$. 5

OR

Find the area of the region bounded by the curve $x^2 = 4y$ and the line $x = 4y - 2$

34. Find the image of the point $(2, -1, 5)$ in the line $\frac{x-11}{10} = \frac{y+2}{-4} = \frac{z+8}{-11}$. 5

OR

Prove that the lines

$\frac{x-4}{1} = \frac{y+3}{-4} = \frac{z+1}{7}$ and $\frac{x-1}{2} = \frac{y+1}{-3} = \frac{z+10}{8}$ intersect each other and find the point of intersection.

35. Solve the following LPP graphically : Maximize $Z = 600x + 400y$ 5
subject to the constraints :
 $x + 2y \leq 12$, $2x + y \leq 12$
 $x + \frac{5}{4}y \geq 5$ and $x, y \geq 0$.

SECTION – E

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

36. Read the following passage and answer the questions given below: 4

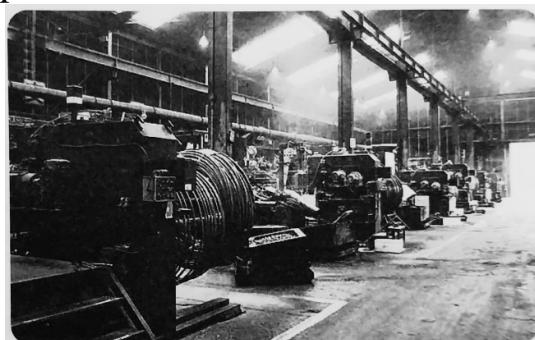
A poster is to be formed for a company advertisement. The top and bottom margins of the poster should be 9 cm and the side margins should be 6 cm. Also, the area for printing the advertisement should be 864cm^2 .



(i) If a cm be the width b cm be the height of the poster, then find the area of the poster, expressed in terms of a and b .
(ii) Find the relation between a and b .
(iii) Find the area of the poster in terms of b .

37. Read the following passage and answer the questions given below: 4

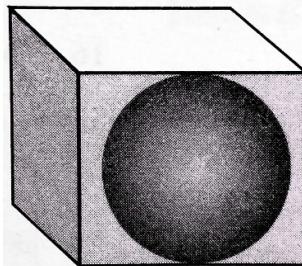
A factory has three machines A, B and C to manufacture bolts. Machine A manufacture 30%, Machine B manufacture 20% and Machine C manufacture 50% of the bolts respectively. Out of their respective outputs 5%, 2% and 4% are defective. A bolt is drawn at random from total production and it is found to be defective.



(i) Find probability that defective bolt drawn is manufactured by machine A.
(ii) Find probability that defective bolt drawn is not manufactured by machine B.
(iii) Find probability that defective bolt drawn is manufactured by machine C.

38. Read the following passage and answer the questions given below: 4

Shreya got a rectangular parallelepiped shaped box and spherical ball inside it as return gift. Sides of the box are x , $2x$ and $x/3$, while radius of the ball is r .



(i) If sum of the surface areas of box and ball are given to be constant k^2 , find the value of x .

(ii) Find the radius of the ball, when sum of the volume of the box and the sphere is minimum.

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Name: _____ Sec: _____ Roll No.: _____
CODE - B

BURNPUR RIVERSIDE SCHOOL, BURNPUR
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 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 with sub-parts.

SECTION-A

(Multiple Choice Questions)

1. If: $R \rightarrow R$, $f(x) = x^2$ is [1]
(a) one-one and onto (b) one-one and into (c) many-one and onto
(d) neither one-one nor onto
2. The principal value of $\sin^{-1}(-\frac{1}{2})$ is (a) $-\frac{\pi}{6}$ (b) $\frac{5\pi}{6}$ (c) $\frac{7\pi}{6}$ (d) 0 [1]
3. If $A = \begin{bmatrix} 1 & k & 3 \\ 3 & k & -2 \\ 2 & 3 & -4 \end{bmatrix}$ is singular then $k =$ [1]
(a) $\frac{16}{3}$ (b) $\frac{34}{5}$ (c) $\frac{33}{2}$ (d) none of these
4. If the area of the triangle with vertices $(-3,0), (3,0)$ and $(0,k)$ is 9 sq units, then the value/s of k will be [1]
(a) 9 (b) ± 3 (c) -9 (d) 6

5. The value of k for which the function $f(x) = \begin{cases} kx^2, & \text{if } x \geq 1 \\ 4, & \text{if } x < 1 \end{cases}$ is continuous at $x=1$ is (a)4 (b)3 (c)2 (d)1 [1]

6. A function is said to be continuous for $x \in R$, if (a) it is continuous at $x=0$ (b)differentiable at $x=0$ (c)continuous at two points (d)differentiable for $x \in R$ [1]

7. If $y = \sin^{-1} x + \cos^{-1} x$, then $\frac{dy}{dx} =$ (a) 0 (b) 1 c) $\frac{1}{2}$ (d) -1 [1]

8. The side of an equilateral triangle is increasing at the rate of 2cm/s. The rate at which area increases when the side is 10cm, is (a) $10 \text{ cm}^2/\text{s}$ (b) $\sqrt{3} \text{ cm}^2/\text{s}$ (c) $10\sqrt{3} \text{ cm}^2/\text{s}$ (d) $\frac{10}{3} \text{ cm}^2/\text{s}$ [1]

9. $\int \frac{\sin \sqrt{x}}{\sqrt{x}} dx = ?$ [1]

(a) $2\cos\sqrt{x} + C$ (b) $-2\cos\sqrt{x} + C$ (c) $-\frac{\cos\sqrt{x}}{2} + C$ (d) $\frac{\cos\sqrt{x}}{2} + C$

10. $\int \left\{ \frac{1}{\log x} - \frac{1}{(\log x)^2} \right\} dx = ?$ [1]

(a) $x \log x + C$ (b) $\frac{x}{\log x} + C$ (c) $x + \frac{x}{\log x} + C$ (d) $1 + x^2$

11. $\int \frac{(1+\log x)^2}{x} dx = ?$ [1]

(a) $\frac{1}{3}(1 + \log x)^3 + C$ (b) $(1 + \log x)^3 + C$
 (c) $\frac{1}{x} + C$ (d) $\log x + C$

12. $\int_{-\frac{\pi}{2}}^{\frac{\pi}{2}} \sin^7 x dx = ?$ (a) $\frac{\pi}{4}$ (b)0 (c)1 (d) $\cos^7 x$ [1]

13. If $\int_0^a 3x^2 dx = 8$ the value of a is (a) 2 (b)1 (c)0 (d)3 [1]

14. The degree of the differential equation $\left\{ 1 + \left(\frac{dy}{dx} \right)^2 \right\}^3 = \left(\frac{d^2y}{dx^2} \right)^2$ is (a) 4 (b) $\frac{3}{2}$ (c) 2 (d) Not defined [1]

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

16. The vector in the direction of the vector $\vec{a} = \hat{i} - 2\hat{j}$ whose magnitude is 7 is [1]
 (a) $7\hat{i} - 14\hat{j}$ (b) $\frac{1}{\sqrt{5}}\hat{i} - \frac{2}{\sqrt{5}}\hat{j}$ (c) $\frac{7}{\sqrt{5}}\hat{i} - \frac{14}{\sqrt{5}}\hat{j}$ (d) none of these

17. The value of λ for which two vectors $2\hat{i} - \hat{j} + 2\hat{k}$ and $3\hat{i} + \lambda\hat{j} + \hat{k}$ are perpendicular to each other is [1]
 (a) 2 (b) 4 (c) 6 (d) 8

18. If \vec{a} and \vec{b} are two vectors such that $|\vec{a}| = \sqrt{3}$, $|\vec{b}| = 2$ and $\vec{a} \cdot \vec{b} = \sqrt{6}$ then the angle between them is [1]
 (a) $\frac{\pi}{6}$ (b) $\frac{\pi}{3}$ (c) $\frac{\pi}{4}$ (d) $\frac{2\pi}{3}$

ASSERTION-REASON BASED QUESTIONS

19. Assertion (A): If A and B are two independent events and $P(A) = \frac{3}{5}$ [1]
 $P(B) = \frac{1}{5}$ then $P(A \cap B) = \frac{3}{25}$
 Reason (R): For two independent events A and B, $P(A \cap B) = P(A) P(B)$
 (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.

20. Assertion (A): If a line makes angles $90^\circ, 135^\circ, 45^\circ$ with the positive x, y and z-axes respectively then the direction cosines are [1]
 $0, -\frac{1}{\sqrt{2}}, \frac{1}{\sqrt{2}}$
 Reason (R): If α, β, γ are the angles that a line makes with the positive direction of x, y, z axis respectively, then the direction cosines of the line are $\cos \alpha, \cos \beta, \cos \gamma$
 (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. Find the domain and range of the function $f: R \rightarrow R$ defined by [2]

$$f(x) = \frac{x^2}{1+x^2} .$$

OR

Let $A=R - \{3\}$ and $B = R - \{1\}$ let $f: A \rightarrow B: f(x) = \frac{x-2}{x-3}$ for all values of $x \in A$. Show that f is one one and onto.

22. Find the interval in which the function $f: R \rightarrow R, f(x) = xe^x$ is increasing [2]

23. Discuss the continuity of $f(x) = \begin{cases} 2x - 1, & \text{if } x < 0 \\ 2x + 1, & \text{if } x \geq 0 \end{cases}$ at $x=0$ [2]

24. Evaluate $\int x \log x \, dx$

OR

$$\int \frac{(x+1)(x+\log x)^2}{x} \, dx = ? \quad [2]$$

25. Find the unit vector in the direction of the sum of the vectors [2]
 $\vec{a} = 2\hat{i} + 2\hat{j} - 5\hat{k}$ and $\vec{b} = 2\hat{i} + \hat{j} - 7\hat{k}$

SECTION-C

26. If $A = \begin{bmatrix} 1 \\ -4 \\ 3 \end{bmatrix}$ and $B = \begin{bmatrix} -1 & 2 & 1 \end{bmatrix}$ verify that $(AB)^T = B^T A^T$ [3]

OR

$$\text{If } A = \begin{bmatrix} 2 & 3 \\ 5 & -2 \end{bmatrix} \text{ show that } A^{-1} = \frac{1}{19}A$$

27. If $y = \log(x + \sqrt{x^2 + a^2})$ then prove that [3]
 $(x^2 + a^2) \frac{d^2y}{dx^2} + x \frac{dy}{dx} = 0$

28. $\int_0^\pi \frac{x \sin x}{1 + \sin x} \, dx = ? \quad [3]$

OR

$$\int_0^{\frac{\pi}{4}} \log(1 + \tan x) \, dx = ?$$

29. Find the solution of the differential equation [3]

$$(x e^{\frac{y}{x}} + y) \, dx = x \, dy$$

30. Show that the lines [3]

$$\frac{x-1}{3} = \frac{y+1}{2} = \frac{z-1}{5} \text{ and } \frac{x+2}{4} = \frac{y-1}{3} = \frac{z+1}{-2}$$

do not intersect

31. The probability that A hits a target is $\frac{1}{3}$ and The probability that B hits a target is $\frac{2}{5}$. Find the probability that the target will be hit if both A and B shoot at it. [3]

SECTION-D

32. Solve the following system of linear equations by matrix method [5]
 $3x + 4y + 2z = 8$,
 $2y - 3z = 3$,
 $x - 2y + 6z = -2$

33. Using integration find the area of the ΔABC whose vertices are [5]
A(2,3),B(4,7), and C(6,2)

OR

using integration find the area bounded by the ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$ [5]

34. Find the length and equation of the line of shortest distance between the lines

$$\frac{x+1}{7} = \frac{y+1}{-6} = \frac{z+1}{1} \text{ and } \frac{x-3}{1} = \frac{y-5}{-2} = \frac{z-7}{1}$$

OR

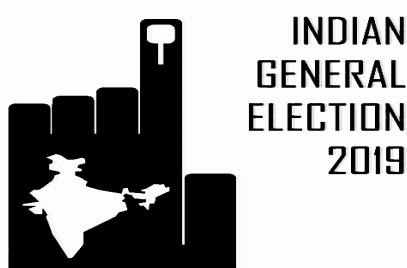
Find the shortest distance between the lines whose vector equations are $\vec{r} = (6\hat{i} + 2\hat{j} + 2\hat{k}) + \lambda(\hat{i} - 2\hat{j} + 2\hat{k})$ and $\vec{r} = (-4\hat{i} - \hat{k}) + \mu(3\hat{i} - 2\hat{j} - 2\hat{k})$ [5]

35. Solve the following linear programming problem graphically
Minimize $z = 3x + 9y$
Subject to $x + 3y \leq 60$,
 $x + y \geq 10$ and $x \leq y$, $x \geq 0, y \geq 0$

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:** A general election of Lok Sabha is a gigantic exercise. About 911 million people were eligible to vote and voter turnout was about 67%, the highest ever.



Let I be the set of all citizens of India who were eligible to exercise their voting right in general election held in 2019. A relation 'R' is defined on I as follows:

$R = \{(V1, V2) : V1, V2 \in I \text{ and both use their voting right in general election - 2019}\}$

(i) Two neighbors X and $Y \in I$. X exercised his voting right while Y did not cast her vote in general election – 2019. Verify if $(X, Y) \notin R$ is true. 1

(ii) Mr. 'X' and his wife 'W' both exercised their voting right in general election 2019, Verify if the following statement is true? 1
both (X, W) and $(W, X) \in R$

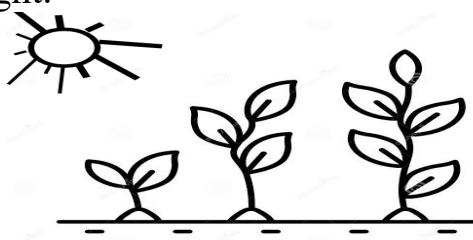
(iii) verify if the relation defined by $R = \{(V1, V2) : V1, V2 \in I \text{ and both use their voting right in general election - 2019}\}$ is equivalence relation. 2

OR

Three friends F_1, F_2 and F_3 exercised their voting right in general election-2019, then verify if the following statement is true

$(F_1, F_2) \in R, (F_2, F_3) \in R \text{ and } (F_1, F_3) \in R$

37. **Casestudy2:** The relation between the heights of the plant (y in cm) with respect to exposure to sunlight is governed by the following equation $y = 4x - \frac{1}{2}x^2$ where x is the number of days exposed to sunlight.



(i) write down the rate of growth of the plant with respect to sunlight. 1

(ii) what is the number of days it will take for the plant to grow to the maximum height ? 1

(iii) what will be the height of the plant after 2 days? 2

OR

If the height of the plant is $\frac{7}{2}$ cm, find the number of days it has been exposed to the sunlight?

38. **Casestudy3:** There are two anti aircraft guns, named as A and B. The probabilities that the shell fired from them hits an airplane are 0.3 and 0.2 respectively. Both of them fired one shell at an airplane at the same time.



(i) What is the probability that the shell fired from exactly one of them hit the plane? 2

(ii) If it is known that the shell fired from exactly one of them hit the plane, then what is the probability that it was fired from B? 2

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Name: _____ Sec: _____ Roll No.: _____
CODE:A

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

Time: 3 Hrs.

Maximum Marks:70

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, one question in each CBQ in Section D 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. $c = 3 \times 10^8 \text{ m/s}$
 - ii. $m_e = 9.1 \times 10^{-31} \text{ kg}$
 - iii. $e = 1.6 \times 10^{-19} \text{ C}$
 - iv. $\mu_0 = 4\pi \times 10^{-7} \text{ Tm A}^{-1}$
 - v. $h = 6.63 \times 10^{-34} \text{ Js}$
 - vi. $\epsilon_0 = 8.854 \times 10^{-12} \text{ C}^2 \text{ N}^{-1} \text{ m}^{-2}$
 - vii. Avogadro's number = 6.023×10^{23} per gram mole

SECTION : A

1. Which of the following is not true for equipotential surfaces? They: 1

- (a) Are closer in the region of larger electric fields compared to the regions of lower electric fields.
- (b) Will be more crowded near the sharp edges of conductor.
- (c) Will be more crowded near the regions of larger charge densities.
- (d) Will be equally spaced.

2. An electric dipole of length 2cm is placed at an angle of 30^0 with an electric field 2×10^5 N/C. If the dipole experiences a torque of 8×10^{-3} Nm, the magnitude of either charge on the dipole is 1

- (a) $4\mu\text{C}$
- (b) $7\mu\text{C}$
- (c) 8mC
- (d) 2mC

3. In a photoelectric experiment the stopping potential for the incident light of wavelength 400nm is 2 volt. If the wavelength be changed to 300nm the stopping potential will be 1

- (a) 2 volts
- (b) Less than 2 volts
- (c) Zero
- (d) More than 2 volts

4. The potential energy of an electron in the 2nd excited state in hydrogen atom is 1

- (a) -3.4eV
- (b) -3.02eV
- (c) -1.51eV
- (d) -6.8eV

5. An electron enters a uniform magnetic field with speed v . It describes a semicircular path and comes out of the field. The final speed of the electron is 1

- (a) zero
- (b) v
- (c) $v/2$
- (d) $2v$

6. A diamagnetic substance is brought near the north or south pole of a bar magnet. It will be 1

- (a) Repelled by both the poles
- (b) Attracted by both the poles
- (c) Repelled by north pole and attracted by the south pole
- (d) Attracted by north pole and repelled by the south pole.

7. In an ammeter 4% of the mains current is passing through the galvanometer. If the galvanometer is shunted with a 5Ω resistance, then the resistance of the galvanometer will be 1

- (a) 116Ω
- (b) 117Ω
- (c) 118Ω
- (d) 120Ω

8. An electron with angular momentum L moving around the nucleus has a magnetic moment given by 1

- (a) $eL/2m$
- (b) $eL/3m$
- (c) $eL/4m$
- (d) eL/m

9. An instantaneous value of EMF and current in a series AC circuit are $E=E_0\sin(\omega t)$ and $I=I_0\sin(\omega t+\pi/3)$ respectively, then it is 1

- (a) Necessarily a RL circuit
- (b) Necessarily a RC circuit
- (c) Necessarily a LCR circuit
- (d) Can be RC or LCR circuit

10 \vec{E} and \vec{B} represent the electric and magnetic field of an electromagnetic wave respectively. The direction of propagation of wave is along 1

(a) \vec{B}
(b) \vec{E}
(c) $\vec{E} \times \vec{B}$
(d) $\vec{B} \times \vec{E}$

11. The current in the primary coil of a pair of coils changes 1 from 7A to 3A in 0.04s. The mutual inductance between the two coils is 0.5H. The induced emf in the secondary coil is

(a) 50V
(b) 75V
(c) 100V
(d) 220V

12. In Bohr's model of hydrogen atom the total energy of the electron in the n^{th} discrete orbit is proportional to 1

(a) n
(b) $1/n$
(c) n^2
(d) $1/n^2$

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): Photoelectric effect demonstrates 1 particle nature of light.

Reason (R): Photoelectric current is proportional to the intensity of incident radiation for frequencies more than threshold frequency

14. **Assertion (A):** The temperature coefficient of resistance is positive for metals and negative for p-type semiconductors. 1
Reason (R): The effective charge carriers in metals are negatively charged electrons whereas in p-type semiconductors, they are positively charged.

15. **Assertion (A):** Electric field is always normal to equipotential surfaces and along the direction order of potential 1
Reason (R): Negative gradient of electric potential is electric field.

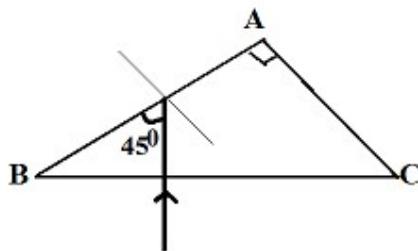
16. **Assertion (A):** If a convex lens is kept in water, its convergence power decreases. 1
Reason (R): The refractive index of convex lens relative to water is less than that relative to air.

SECTION : B

17. Draw the circuit diagram of a full wave rectifier. 2

18. Find the ratio of de Broglie wavelength associated with an alpha particle and a proton if both have 2
 (a) Same speed
 (b) Same kinetic energy

19. A ray of light enters an isosceles right angled prism ABC of refractive index 1.5 as shown in figure 2



Trace the path of refracted ray through the prism.
 $(\sin^{-1} 0.66 = 41^\circ)$

20. At room temperature (27°C) the resistance of a heating element is 100Ω . At what temperature does the resistance of the element change to 117Ω ? The temperature coefficient of the material of the resistor is $1.7 \times 10^{-4} \text{ } ^\circ\text{C}^{-1}$. 2

21. Show that the least possible distance between an object and its real image in a convex lens is $4f$ where f is the focal length of the lens? 2

OR

The total magnification produced by a compound microscope is 20. The magnification produced by eyepiece is 5. The microscope is focused on a certain object. The distance between objective and eyepiece is 14. If the least distance of distinct vision is 20cm.

Calculate the focal length of the objective and eyepiece.

SECTION : C

22. Draw a graph showing the variation of BE per nucleon with mass number. Write two inferences drawn from the graph. 3

23. If N drops of same size each having the same charge, coalesce to form a bigger drop. How will the following vary with respect to single small drop? 3

- (a) Total charge on bigger drop.
- (b) Potential on the bigger drop
- (c) Capacitance

24. A Hydrogen atom is in its 3rd excited state 3

- (a) How many spectral lines can be emitted by it before coming to the ground state? Show these transitions in the energy level diagram.
- (b) In which of the above transitions will the spectral line of shortest wavelength be emitted?

25. Derive the condition of a balance Wheatstone bridge. 3

26. A long straight wire of circular cross section (radius a) carries steady current I . The current I uniformly distributed across its cross section. Calculate the magnetic field in the region $r < a$ and $r > a$. 3

27. Electromagnetic waves with wavelength 3

- (i) λ_1 is used in satellite communication
- (ii) λ_2 is used to kill germs in water purifier.
- (iii) λ_3 is used to detect leakage in underground pipes.
- (iv) λ_4 is used to improve visibility in runways during fog.

(a) Identify and name the part of electromagnetic spectrum to which these radiations belong.
(b) Arrange these wavelengths in ascending order of their magnitude.

28. Define mutual inductance and write its SI unit. 3
Two circular loops, one of small radius r and other of larger radius R , such that $R \gg r$, are placed coaxially with centers coinciding. Obtain the mutual inductance of the arrangement.

OR

Two long straight parallel current carrying conductors are kept 'a' distant apart in air. The direction of current in both the conductors is same. Find the magnitude of force per unit length and direction of the force between them.

SECTION-D

Case Study Based Questions

Read the following paragraph and answer the questions that follow.

29. If you burst a helium filled balloon, helium atoms will 4 diffuse out into the surrounding air. This happens because there is a helium density gradient at the balloon air interface and the helium atoms move so as to reduce the gradient.
In the same way, electrons on the n- side are close to the junction plane tend to diffuse across it and into the p- side, where there are very few free electrons. Similarly, holes on the p- side are close to the junction plane tend to diffuse across the plane and into the n- side, where there are few holes. The motion of both the electrons and holes contribute to diffusion current.

(i) Silicon is doped with which of the following to obtain p- type semiconductor?
(a) Phosphorous
(b) Gallium
(c) Germanium
(d) Bismuth

(ii) A semiconductor has electron concentration of 6×10^{22} per m^3 and hole concentration of 8.5×10^9 per m^3 . Then it is

- (a) n-type semiconductor
- (b) p-type semiconductor
- (c) Intrinsic semiconductor
- (d) Conductor

(iii) In a p-n junction diode

- (a) The current in the reversed biased condition is generally very small in order of μA
- (b) The current in the reversed biased condition is generally small but the forward current is independent of the biased potential.
- (c) The reversed biased current is strongly dependent on the applied voltage.
- (d) The forward biased current is very small in comparison to reverse biased current.

(iv) The middle of depletion region of a reversed biased p-n junction the

- (a) Electric field is zero
- (b) Potential is maximum
- (c) Electric field is maximum
- (d) Potential is zero.

30. The lens maker's formula is useful to design lenses of desired focal lengths using surfaces of suitable radii of curvature. The focal length also depends on the refractive index of the material of the lens and the surrounding medium. The refractive index depends on the wavelength of the light used. 4

(i) How will the power of lens affected with an increase of wavelength of light?

- (a) Increases
- (b) Decreases
- (c) First increases and then decreases
- (d) First decreases and then increases

(ii) The radius of curvature of two surfaces of a convex lens is R . For what value of μ of its material will its focal length become equal to R ?

(a) 1
 (b) 1.5
 (c) 2
 (d) infinite

(iii) An object is immersed in a fluid. In order that the object become invisible, it should

(a) Behave as perfect reflector
 (b) Absorb all the light falling on it
 (c) Have refractive index 1
 (d) Have refractive index exactly matching with that of the surrounding fluid.

(iv) An object is placed in front of a lens which forms its erect image of magnification 3. The power of the lens is 5D. Calculate the image distance

(a) -40cm
 (b) 40cm
 (c) -80cm
 (d) 80cm

SECTION : E

31. (i) Draw a ray diagram for the formation of image of a point object by a thin double convex lens having radii of curvature R_1 and R_2 . Hence derive lens maker's formula. 5

(ii) A converging lens has a focal length of 10 cm in air. It is made of a material of refractive index 1.6. If it is immersed in a liquid of refractive index 1.3, find its new focal length.

OR

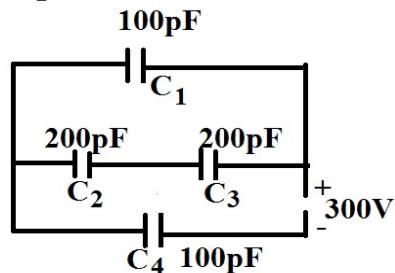
(i) Define a wave front

(ii) Using Huygens's construction of secondary wavelets draw a diagram showing the passage of a plane wave front from a denser to a rarer medium. Using it verify Snell's law.

(iii) Write two differences between interference pattern and diffraction pattern.

32. (i) Derive an expression for the capacitance of a parallel plate capacitor with air present between the two plates.

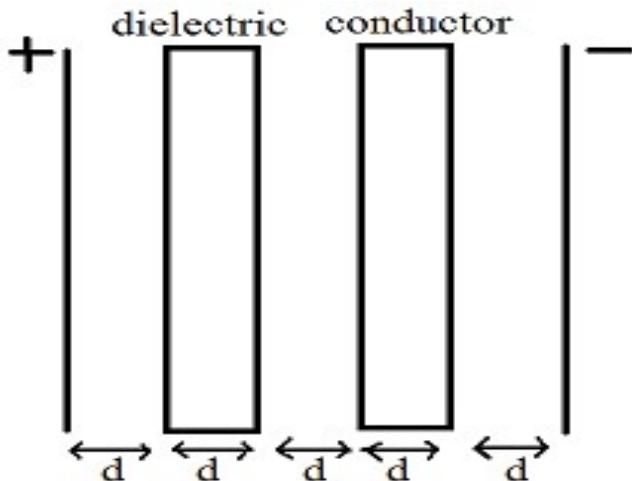
(ii) Obtain the equivalent capacitance of the network shown in figure. For a 300 V supply, determine the charge on each capacitor



OR

(i) A dielectric slab of thickness 't' is kept between the plates of a parallel plate capacitor with plate separation 'd' ($t < d$). Derive the expression for the capacitance of the capacitor. 5

(ii) Given two parallel conducting plates of area A and charge densities $+\sigma$ and $-\sigma$. A dielectric slab of constant K and a conducting slab of thickness d each are inserted in between them as shown in figure.



(a) Find the potential difference between the plates.

(b) Plot E versus x graph, taking $x = 0$ at positive plate and $x = 5d$ at negative plate.

33. (i) Draw graphs showing the variations of inductive reactance and capacitive reactance with frequency of applied ac source.

(ii) Draw the phasor diagram for a series LRC circuit connected to an AC source.

(iii) When an alternating voltage of 220V is applied across a device X, a current of 0.25A flows which lags behind the applied voltage in phase by $\pi/2$ radian. If the same voltage is applied across another device Y, the same current flows but now it is in phase with the applied voltage.

(i) Name the devices X and Y.

(ii) Calculate the current flowing in the circuit when the same voltage is applied across the series combination of X and Y.

OR

(i) A series LCR circuit is connected to an ac source. Using the phasor diagram, derive the expression for the impedance of the circuit.

(ii) Plot a graph to show the variation of current with frequency of the ac source , explaining the nature of its variation for two different resistances R_1 and R_2 ($R_1 < R_2$) at resonance

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Name: _____ Sec: _____ Roll No.: _____
CODE:B

BURNPUR RIVERSIDE SCHOOL, BURNPUR PRE-BOARD EXAMINATION:[2023-2024]

PHYSICS

CLASS : XII

Time: 3 Hrs.

Maximum Marks:70

General Instructions:

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

SECTION:A

Choose the correct option only:

Q1. Two charges +5coulomb and -3coulomb are located 16 cm apart. At what point from the positive charge along the line joining the two charges is electric potential is zero?

a. 10cm, 20cm b. 10cm, 40cm
c. 20cm, 40cm d. 20cm, 60cm

Q2. Two point charges $q_1=5 \times 10^{-6}$ C and $q_2=3 \times 10^{-6}$ C are located at positions (1m, 3m, 2m) and (3m, 5m, 1m) respectively. Then value of $\overrightarrow{F_{12}}$:

a. $5 \times 10^{-3} (2\hat{i} + 2\hat{j} - \hat{k})$ b. $5 \times 10^{-3} (2\hat{i} - 2\hat{j} - \hat{k})$
c. $-5 \times 10^{-3} (2\hat{i} + 2\hat{j} - 2\hat{k})$ d. $-5 \times 10^{-3} (\hat{i} + 2\hat{j} - \hat{k})$

Q3. A metal surface is illuminated by light of two different wave length 248nm and 310nm. The maximum speeds of photoelectrons corresponding to these wavelengths are u_1 and u_2 , respectively. If the ratio of $u_1:u_2=2:1$ and $hc=1240\text{eV}\text{nm}$ (given), then the work function of the metal is close to a value of :
(a) 2.7eV b. 3.2eV c. 2.8eV d. 3.7eV

Q4. The largest wavelength in the ultra violet region is 122nm. Then smallest wavelength in the Paschen series is:
a. 802nm b. 823nm c. 1882nm d. 1648nm

Q5. Current density (j) in a linear conductor of radius a varies with r according to the relation: $j=kr^2$, where $k=$ constant and r is the distance from the center of the conductor. 1

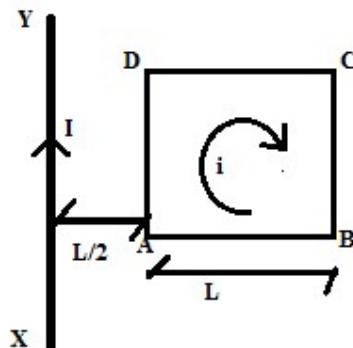
Then magnitude of the field at a point which is at a distance of r ($r < a$) from the center is given by:

a. $B=\frac{\mu_0}{4}kr^2$ b. $B=\frac{\mu_0}{4}kr^3$ c. $B=\frac{\mu_0}{2}kr^2$ d. $B=\frac{\mu_0}{2}kr^3$

Q6. Expression of magnetic moment of an electron moving with a speed of v in a circular orbit of radius r is: 1

a. evr b. $evr/2$ c. $2evr$ d. $evr^2/2$

Q7. 1



A square loop ABCD carrying a current i is placed near a and coplanar with a long straight wire XY carrying current I , then net force on the loop is :

a. $\frac{2\mu_0}{3\pi}Ii$ b. $\frac{\mu_0}{3\pi}Ii$ c. $\frac{2\mu_0}{3\pi}IiL$ d. $\frac{\mu_0}{3\pi}IiL$

Q8. Consider a hydrogen atom with its electron in the n^{th} orbital. An electromagnetic radiation of wave length 90nm is used to ionize the atom. If the kinetic energy of the ejected electron is 10.4eV, then the value of n is: 1
(given $hc=1242\text{eVnm}$)

a. $n=3$ b. $n=4$ c. $n=2$ d. $n=5$

Q9. When an inductor L and a resistor R in series are connected across a 12v, 50Hz supply, a current of 0.5 A flows in the circuit. The current differs in phase by $\pi/3$ radian angle from the voltage. Then value of R is: 1

a. 24Ω b. 4Ω c. 12Ω d. 6Ω

Q10. About 5% power of a 100watt bulb is converted to visible radiation. What is the average intensity of visible radiation at a distance of 1m from the bulb? 1
a. 0.5Wm^{-2} b. 0.4Wm^{-2} c. 0.2Wm^{-2} d. 0.1Wm^{-2}

Q11. The self-induced emf of a coil is 25volt. When current in it is changed from 10A to 25A in 1 sec, then change in energy of the inductance is: 1

a.437.5J b.637.5J c.740J d.540J

Q12. A He^+ ion is in first excited state. Its ionization energy is: 1

a.13.60eV b.6.04eV c.48.36eV d.54.40eV

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: A photon has no rest mass, yet it carries definite momentum. 1

REASON: Momentum of photon is due its energy and hence its equivalent mass.

Q14. ASSERTION: Electrons have higher mobility than holes 1

REASON: Mass of electron is less than hole.

Q15. ASSERTION: If the objective and eye piece lenses of a microscope are interchanged, then it can work as a telescope. 1

REASON: The objective lens of telescope has small focal length.

Q16. ASSERTION: Electric potential of earth is taken zero. 1

REASON: No electric field exists on earth surface.

SECTION :B

Each carry two marks

Q17. Draw energy band diagram for P-type and N-type semiconductor at temperature $T > 0$ Kelvin. 2

Q18. Prove that nuclear density is same for all nuclei. Give an estimate of nuclear density. 2

Q19. Derive the relation between angle of prism (A), minimum deviation δ_{\min} and refractive index of prism (μ) when a ray suffers minimum deviation while passing through a prism. 2

Q20. Prove lens maker's formula for a double convex lens. Use proper sign convention. 2

OR

The radii of curvature of a double convex lens are 15cm and 30 cm respectively and refractive index of lens material is 3/2. Find the focal length of the lens in air.

Q21. Derive vector form of Ohm's law. 2

SECTION :C

Each question carries 3 marks.

Q22. Draw a graph showing the variation of binding energy per nucleon with mass number of different nuclei. Give the salient features of the curve. How does this curve explain the release of energy in the process of nuclear fission and nuclear fusion? 3

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

Q24. (a) Derive the radius of nth orbital of a hydrogen like atom having atomic no Z. 3
(b) Derive the energy of an electron in hydrogen like atom in the n^{th} orbital. The atomic no of the atom is Z.

Q25. Two cells of emf e_1 and e_2 and internal resistance r_1 and r_2 are connected in parallel with their unlike poles on same side. Find the expression for equivalent emf and equivalent internal resistance of the combination. 3

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

Q27. (a)A plane electromagnetic wave of frequency 25Mhz 3
 travels in free space along x direction. At particular point in space and time , $\vec{E}=6.3\hat{j}$ Vm⁻¹.What is \vec{B} at this point.
 (b) Write two characteristics of electromagnetic wave.

Q28. Derive the expression of self -inductance of a long 3
 solenoid. Write the dimension of self-inductance of a coil.

OR

A toroidal solenoid with an air core has average radius of 15 cm, and area of cross section 12cm² and 1200 turns.
 Obtain self-inductance of the toroid. Write the dimension of mutual-inductance of a coil.

SECTION:D

Question no 29 and 30 are Case Based questions:

Q29. **Any device whose action is based on the controlled flow of 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.** 4

Answer any four question , Choose correct option only:

a.The major carrier of current in a P type semiconductor is :
 i)neutrons ii)protons iii)electrons iv)holes

b.A donor 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. Pure silicon at 300k has equal of electrons(n_e) and holes(n_h) concentration of $1.5 \times 10^{16} \text{ m}^{-3}$. Doping by indium increases n_h to $4.5 \times 10^{22} \text{ m}^{-3}$. The n_e in the doped silicon is :

i) $9 \times 10^{-5} \text{ m}^{-3}$ ii) $5 \times 10^9 \text{ m}^{-3}$ iii) $2.25 \times 10^{-5} \text{ m}^{-3}$ iv) $3 \times 10^{19} \text{ m}^{-3}$

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

i)Gallium b)Boron iii)Aluminum iv)all of these

e.If the forward voltage in a diode is increased , the width of the depletion region :

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

Q30. **An optical instrument is a device which is constructed by suitable combination of mirrors, prism and lenses so that it assists the eye in viewing an object. Principle of working of an optical instrument is based on laws of reflection and refraction of light.** 4

Answer any four question ,Choose correct option only:

a. The focal length of the objective and the eye-piece of a compound microscope are 4cm and 6cm respectively. If any object is placed at a distance of 6cm from the objective, what is magnification produced by the microscope? Distance of distinct vision is 25 cm.

i) $31/3$ ii) $31/4$ iii) $41/3$ iv) $41/4$

b. A luminous object and a screen are placed on an optical bench and a converging lens is placed between them to throw a sharp image of the object on the screen, the linear magnification of the image is found to be 2.5. The lens is now moved 30cm nearer the screen and a sharp image is again formed. Then focal length in cm is:

i) 12.3 ii) 13.3 iii) 14.3 iv) 15.3

c) A double convex lens of focal length 25cm in air. When it is dipped in a liquid of refractive index $4/3$, its focal length is increased to 100cm. Then refractive index of lens material is:

i) 1.2 ii) 1.3 iii) 1.4 iv) 1.5

d) A point 'O' marked on the surface of a glass sphere of diameter 20 cm is viewed through glass from the position directly opposite to the point O. If the refractive index of the glass is 1.5, then position of the image is:

i) -20cm ii) -30cm iii) -40cm iv) +40 cm

e) A convex lens of focal length $f=20\text{cm}$ and a concave lens of focal length 15cm are kept 30cm apart with principal axis coincident. When object is placed 30cm in front of convex lens, then position of final image formed by the combination will be at:

i) -60cm ii) -30cm iii) 40cm iv) -45cm

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 near point adjustment. Find the expression for magnifying power for near point adjustment.

b) Derive the relation between refractive index of prism, critical angle and angle of prism for no emergent ray from a prism.

OR

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

d) Calculate the value of angle of incidence when a ray of light incident on one face of an equilateral glass prism produces the emergent ray, which just grazes along the adjacent face. Refractive index of prism is $\sqrt{2}$.

Q32. Answer either (a and b) OR (c and d) 5

a) Derive the expression for capacitance of a parallel air capacitor.

b) when the two charged conductors having different capacities and different potentials are joined together, show that there is always a loss of energy.

OR

c) Derive the expression of electric potential at any general point at a distance r from the center of a dipole. Also write the vector form of expression of a potential in terms of dipole moment vector \vec{p} and position vector of point \vec{r} .

d) N drops of mercury of equal radii r and equal charge q merge together to form a bigger drop of radius R and charge Q . Compare capacitance and potential of bigger and smaller drop.

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

a) A sinusoidal emf is applied to a circuit containing an inductor only. Show that current lags behind the voltage by $\pi/2$ radian. How inductive reactance vary with frequency.

b) A sinusoidal alternating current is given by equation $I=I_0\sin\omega t$. Find the average value of this alternating current over half cycle.

OR

c) A sinusoidal emf is applied to a circuit containing an capacitor only. Show that voltage lags behind the current by $\pi/2$ radian. How capacitive reactance vary with frequency.

d) A sinusoidal alternating current is given by equation $I=I_0\sin\omega t$. Find the root mean square value of this alternating current.

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Name: _____ Sec: _____ Roll No.: _____ CODE:A

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

Time: 3 Hrs.

Maximum Marks: 70

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.***

SECTION-A

1 For which of the following compound, a graph of molar conductivity and $(\text{molarity})^{1/2}$ is obtained straight line? 1
a) CsCl b) NH₄OH c) HCOOH d) given all three

2 Ketones are the first oxidation product of: 1
a) primary alcohols b) secondary alcohols c) tertiary alcohols d) dihydric alcohols

3 Fructose reduces Tollen's reagent due to: 1
a) asymmetric carbons
b) primary alcoholic group
c) secondary alcoholic group
d) enolisation of fructose followed by conversion to aldehyde by base.

4 The IUPAC name of Crotonaldehyde is : 1
 a) Butanal b) But-2-enal c) 2-Methylbutanal d) None of these

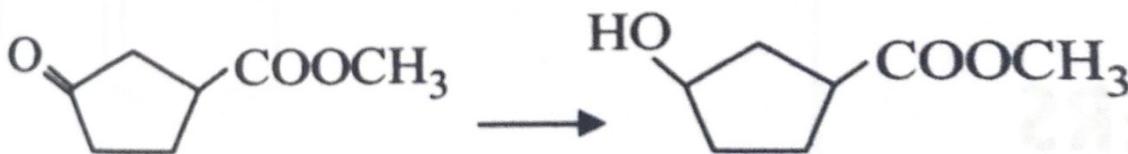
5 Carbon-halogen bond is most susceptible to cleave in 1
 a) Benzyl bromide b) Bromobenzene c) Vinyl bromide d)
 Benzyl chloride

6 Which of the following is a transition element? 1
 a) Hg b) Au c) Zn d) Cd

7 The rate constant of a reaction has same units as the rate of reaction. 1
 What is the order of the reaction?
 a) Three b) Two c) One d) Zero

8 Which of the following amine will not respond to carbylamine reaction? 1
 a) CH_3NH_2 b) $(\text{CH}_3)_2\text{NH}$ c) $\text{CH}_3\text{CH}_2\text{NH}_2$ d) Phenylamine

9



Which of the following reagents should be used to carry out the above conversion?
 a) LiAlH_4 b) NaBH_4 c) $\text{Zn-Hg}/\text{HCl}$ d) KMnO_4

10 Increase in concentration of the reactants leads to the change in: 1
 a) heat of reaction
 b) threshold energy
 c) collision frequency
 d) activation energy

11 The order of reactivity of alcohols with sodium metal is : 1
 a) $3^\circ > 2^\circ > 1^\circ$
 b) $1^\circ > 2^\circ > 3^\circ$
 c) $2^\circ > 3^\circ > 1^\circ$
 d) $3^\circ < 2^\circ > 1^\circ$

12 Lanthanide contraction is caused due to : 1
 a) appreciable shielding effect offered by 4f electrons.
 b) appreciable shielding effect offered by 5d electrons.
 c) same effective nuclear charge from Ce to Lu
 d) poor shielding effect offered by 4f electrons.

For questions given below, two statements are given- one labelled Assertion (A) and the other labelled 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: The carbon-oxygen bond length in phenol is slightly less than that in methanol. 1

Reason: The carbon -oxygen bond length in phenol has partial double bond character due to +R effect.

14 Assertion: Benzoic acid does not undergo Friedal-Craft reaction. 1

Reason: The carboxyl group is activating and undergo electrophilic reaction.

15 Assertion: Ethanoic acid is a carbohydrate. 1

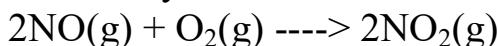
Reason: Ethanoic acid fits into the general formula $C_x(H_2O)_y$

16 Assertion: During electrolysis of molten NaCl, Na metal is produced at anode while Cl_2 gas is produced at cathode. 1

Reason: Inert electrodes do not take part in chemical reaction but act as source or sink of electrons.

SECTION-B

17 How can you determine the rate law of the following reaction? 2



18 a) Define abnormal colligative properties. 2

b) $K_3[Fe(CN)_6]$ is dissociated 30% in solution. Calculate the van't Hoff factor

19 How will you distinguish between ethyl bromide and Bromobenzene? 2

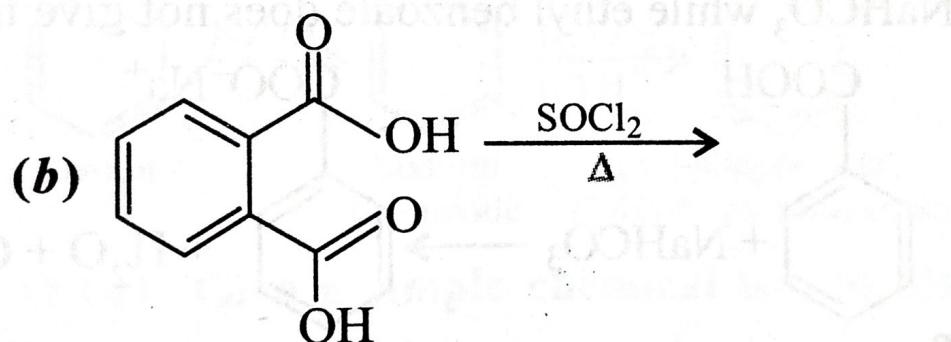
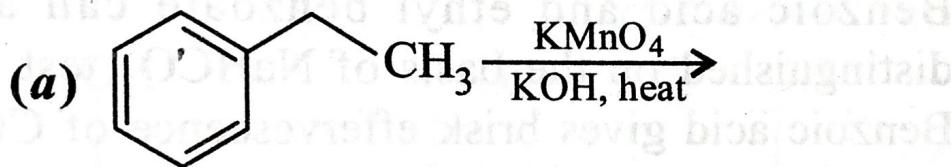
20 Answer the following: 2

a) Draw the structure of the semicarbazone of ethanal.

b) pK_a value of 4-Nitrobenzoic acid is lower than that of benzoic acid. Explain.

OR

Complete each synthesis by giving missing products:



21 Amino acids show amphoteric behaviour. Why? 2

SECTION-C

22 i) Write the IUPAC name of the following complex: 3



ii) Draw one of the geometrical isomers of the complex $[\text{Pt}(\text{en})_2\text{Cl}_2]^{2+}$ which is optically active.

iii) Out of $[\text{Ni}(\text{H}_2\text{O})_6]^{2+}$ and $[\text{Ni}(\text{NH}_2\text{CH}_2\text{CH}_2\text{NH}_2)_3]^{2+}$ which complex is more stable and why?

23 For the reaction 3

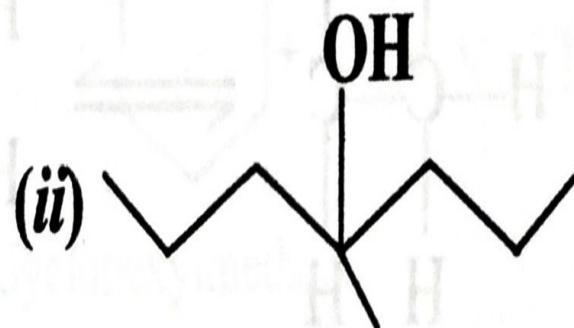
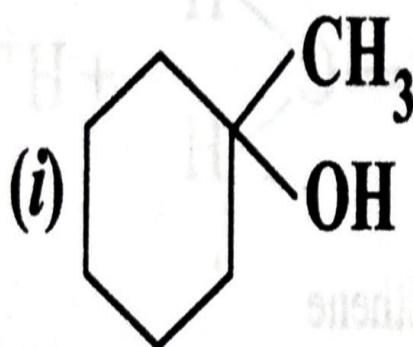


$\Delta G^\circ = -43600\text{J}$ at 25°C .

Calculate the e.m.f of the cell.

24 a) Give reason for the higher boiling point of ethanol in comparison to methoxymethane. 3

b) Show how would you synthesise the following alcohols from appropriate alkenes?



25 Predict the products formed when cyclohexane carbaldehyde reacts with the following reagents. 3

- Tollen's reagent
- Excess ethanol and acid
- Zinc amalgam and dilute hydrochloric acid

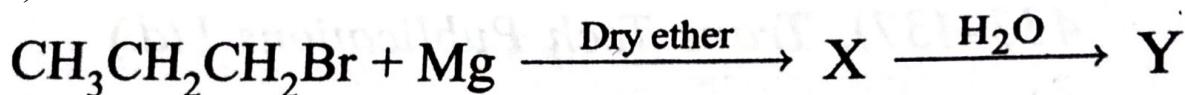
26 i) Justify the statement that half life period of a first order reaction is independent of the initial concentration of the reactant. 3

ii) What is the value of order of reaction of a radioactive decay?

iii) Name the excess energy required by the reactant molecules to undergo a chemical reaction.

27 a) Name the product formed when acetone is treated with iodine/NaOH. 3

b) Give the name of 'X' and 'Y'



28 The following results have been obtained during the kinetic studies of the reaction: 3

$$2\text{A} + \text{B} \longrightarrow \text{C} + \text{D}$$

Experiment	A/mol L ⁻¹	B/mol L ⁻¹	Initial rate of formation of D/mol L ⁻¹ min ⁻¹
I	0.1	0.1	6.0×10^{-3}
II	0.3	0.2	7.2×10^{-2}
III	0.3	0.4	2.88×10^{-1}
IV	0.4	0.1	2.40×10^{-2}

Determine the rate law for the reaction.

SECTION-D

29 Read the passage given below and answer the following questions: 4

Coordination chemistry was founded by Swiss scientist A. Werner, who won noble prize in 1913. Great contribution was further made by

Russian chemist L.A. Chugaev. Coordination entities consists of a cationic, anionic, or neutral complex. Those substances, whose molecules contains a central atom, connected with ligands , can be considered as coordination entities. The groups, surrounding directly the cation are named as ligands, the area of inorganic chemistry, studying joint behaviour of cations and their ligands, was named as coordination chemistry.

- The presence of copper (II) is detected by the formation of a deep blue colour complex on addition of ammonia solution to a solution of copper (II) salt. Name the blue complex formed in the above reaction?
- Which magnetic behaviour is possessed by the ion $[\text{Cr}(\text{NH}_3)_6]^{3+}$?
- Can a didentate ligand act as a chelating ligand ? Explain with an example.

OR

- When a coordination compound $\text{CrCl}_3 \cdot 6\text{H}_2\text{O}$ is mixed with silver nitrate solution, two moles of AgCl are precipitated per mole of the compound. What is the structural formula of the coordination compound? Also ,assign the secondary valency of the central metal ion.

30 Read the passage given below and answer the following questions: 4
If a salt is dissolved in water, the conductivity of the solution is the sum of the conductances of the anions and cations. This depends on the independent migration of ions and was deduced experimentally by the German chemist Friedrich Kohlrausch(1840-1910).

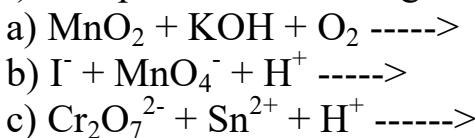
- In an aqueous solution, how does specific conductivity of electrolytes change with addition of water?
- By using Kohlrausch law how the value of limiting molar conductivity of water is determined?
- What is the unit of cell constant? Give the mathematical expression for molar conductivity in $\text{S m}^2 \text{ mol}^{-1}$ when conductivity and molarity are expressed in S m^{-1} and mol L^{-1} respectively.

OR

- What are the two problems we face while measuring the resistance of an ionic solution and how those problems can be resolved ?

SECTION-E

31 i) Complete the following reactions: 5



ii) a) How would you account for the following:

The Chemistry of actinoids is more complicated as compared to lanthanoids.

b) What creates special problems in the study of the actinoids?

32 i) Amongst the following compounds, identify which are insoluble, partially soluble and highly soluble in water? 5

a) Phenol b) Toluene c) Formic acid d) Ethylene glycol
e) Chloroform f) Pentanol

ii) 200 mL of calcium chloride solution contains $3.01 \times 10^{22} \text{ Cl}^-$ ions. Calculate the molarity of the solution.(Assume that calcium chloride is completely ionised)

OR

i) Why relative lowering in vapour pressure is a colligative property?

ii) Plants grown in marshy lands generally decay after sometime.

Assign reason.

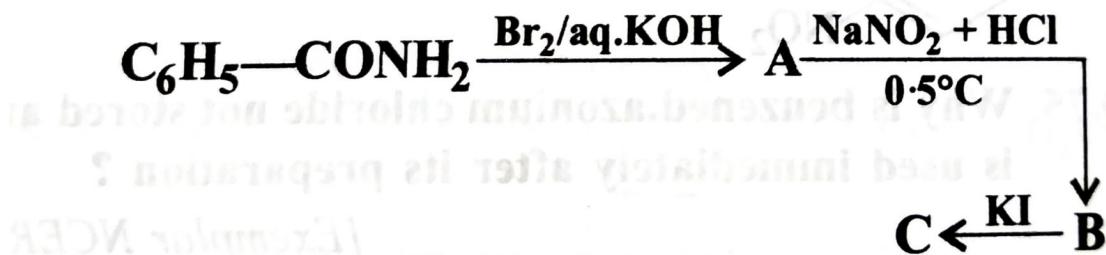
iii) Osmotic pressure of a solution containing 2g dissolved protein per 300 cm^3 of solution is 20 mm of Hg at 27°C . Calculate the molecular mass of protein.($R = 0.0821 \text{ L atm K}^{-1} \text{ mol}^{-1}$)

33 i) Write short notes on the following : 5

a) Diazotisation reaction

b) Coupling reaction

ii) Write the structures of A, B and C in the following :



OR

i) Arrange the following in increasing order of their basic strength in aqueous solution:



ii) Write the structures of the main products when benzene diazonium chloride reacts with the following reagents :



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Name: _____ Sec: _____ Roll No.: _____
CODE : B

**BURNPUR RIVERSIDE SCHOOL, BURNPUR
PRE-BOARD EXAMINATION : (2023 – 2024)**

CHEMISTRY

Class : XII

Time : 3 Hours

Maximum Marks: 70

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.*

SECTION-A

1. Standard electrode potential for $\text{Sn}^{4+}/\text{Sn}^{2+}$ couple is +0.15V and that for the Cr^{3+}/Cr couple is -0.74V. These two couples in their standard state are connected to make a cell. The cell potential will be 1
 - a. +1.19V
 - b. +0.89V
 - c. +0.18V
 - d. +1.83V
2. Benzaldehyde after nitration gives: 1
 - a. o- Nitrobenzene
 - b. p-Nitrobenzene
 - c. 2,4,6-Trinitrobenzene
 - d. m- Nitrobenzene.

3. Which one is the complementary base of cytosine in one strand to that in other strand of DNA? 1

- Guanine
- Adenine
- Uracil
- Thymine

4. The reagent which does not react with both, acetone and benzaldehyde is 1

- Sodium hydrogen sulphite
- Phenyl Hydrazine
- Fehling's solution
- Grignard Reagent

5. Major product obtained on reaction of 3 - Phenylpropene with HBr in presence of organic peroxide is 1

- 3-Phenyl-1- bromopropane
- 1-Phenyl-3- bromopropane
- 1-Phenyl-2-bromopropane
- 3-Phenyl-2-bromopropane.

6. Larger number of oxidation states are exhibited by the actinoids than those by the lanthanoids, the main reason being : 1

- 4f orbitals more diffused than the 5f orbitals
- Lesser energy difference between 5f and 6d than between 4f and 5d orbitals
- More energy difference between 5f and 6d than between 4f and 5d orbitals
- More reactive nature of the actinoids than the lanthanoids.

7. What is the value of intercept for the graph of $\log[R] \rightarrow$ time for the first order reaction . 1

- $\log[R^0]$
- $-K$
- $-K/2.303$
- $K/2.303$

8. In order to prepare a 1^0 amine from an alkyl halide with simultaneous addition of one CH_2 group in the carbon chain, the reagent used as source of nitrogen is..... 1

- Sodium amide, NaNH_2
- sodium azide, NaN_3
- Potassium cyanide , KCN
- Potassium phthalimide $\text{C}_6\text{H}_4(\text{CO})_2\text{N}^-\text{K}^+$

9. The C-O bond length in phenol is less than that in methanol due to 1

- The partial double bond character of oxygen with benzene ring
- sp^2 hybridised carbon to which oxygen is attached
- sp^3 hybridised carbon to which oxygen is attached
- Both a and b.

10. Which of the following is affected by the catalyst? 1

- Change in enthalpy
- Change in entropy
- Change in Gibb's free energy
- E_a

11. Which of the following compounds will react with sodium hydroxide solution in water? 1

- $\text{C}_6\text{H}_5\text{OH}$
- $\text{C}_6\text{H}_5\text{CH}_2\text{OH}$
- $(\text{CH}_3)_3\text{COH}$
- $\text{C}_2\text{H}_5\text{OH}$.

12. Which one of the following does not correctly represent the correct order of the property indicated against it? 1

- Ti<V<Cr<Mn ; increasing number of oxidation states
- Ti<V<Mn<Cr; increasing 2nd ionization enthalpy
- $Ti^{3+} < V^{3+} < Cr^{3+} < Mn^{3+}$; increasing magnetic moment
- Ti<V<Cr<Mn ; increasing melting point

Q.no from 13 to 16 are assertion (A) and a reason (R) type questions. Mark your answer as-

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

13. **Assertion :** p-nitro phenol is more acidic than phenol 1
Reason: Nitro group helps in stabilization of the phenoxide ion by dispersal of negative charge due to resonance.

14. **Assertion:** Acetic acid does not undergo haloform reaction. 1
Reason : Acetic acid has no alpha hydrogen.

15. **Assertion:** The two strands of double strand helical structure of DNA 1 are complementary to each other.
Reason: Disulphide bonds are formed between specific pairs of bases.

16. **Assertion :** Electrolysis of sodium chloride solution gives chlorine at anode instead of O_2 . 1
Reason : Cl_2 is liberated due to the over potential of oxygen.

SECTION - B

17. What do you understand by the rate law and rate constant of a reaction? Identify the order of reaction if the units of its rate constants are: 2

- a. $\text{L}^{-1}\text{mol}^{-1}$
- b. $\text{Lmol}^{-1}\text{s}^{-1}$.

18. A glucose solution which boils at 101.04°C at 1 atm. What will be relative lowering of vapour pressure of an aqueous solution of urea which is equimolar to given glucose solution? 2

(Given: K_b for water is $0.52 \text{ K kg mol}^{-1}$)

19. How can we distinguish between the following pairs of compounds: 2

- a) Benzyl chloride and chlorobenzene
- b) Chloroform and carbontetrachloride.

20. Write the products formed when benzaldehyde reacts with the following reagents: 2

- a) CH_3CHO in presence of dil NaOH .
- b) Conc. NaOH

OR

Draw the structure of the following compounds:-

- a) p-Nitropropiophenone
- b) Hex-2-en-4-yneic acid

21. How fibrous proteins are different from globular proteins? 2

SECTION - C

22. a. For the complex $[\text{Fe}(\text{H}_2\text{O})_6]^{3+}$, write the hybridisation, magnetic character and spin of the complex. (At. Number of Fe = 26) 3

b. Draw one of the geometrical isomers of the complex $[\text{Pt}(\text{en})_2\text{Cl}_2]^{2+}$ which is optically inactive.

23. A. Define standard electrode potential. 3
 B. The cell in which the following reaction occurs:
 $2\text{Fe}^{3+}(\text{aq}) + 2\text{I}^-(\text{aq}) \rightarrow 2\text{Fe}^{2+}(\text{aq}) + \text{I}_2(\text{s})$ has $E_{\text{cell}}^0 = 0.236\text{V}$ at 298 K, calculate the standard Gibbs energy of the cell reaction.
 C. How many electrons will flow through a metallic wire if a current of 0.5A is passed for 2 hours? (Given: $1\text{F} = 96500\text{ C mol}^{-1}$).

24. Account for the following: 3
 a) Rectified spirit cannot be converted into alcohol by simple distillation.
 b) Diethyl ether doesn't react with sodium.
 c) Phenyl methyl ether (anisole) reacts with HI to give phenol and methyl iodide and not iodobenzene and methyl alcohol.

25. (A) ,(B) and (C) are three non-cyclic functional isomers of a carbonyl compound with molecular formula $\text{C}_4\text{H}_8\text{O}$. Isomers (A) and (C) give positive Tollens' test whereas isomer (B) does not give Tollens' test but gives positive Iodoform test. Isomers (A) and (B) on reduction with $\text{Zn}(\text{Hg})/\text{conc. HCl}$ give the same product (D). 3
 (a) Write the structures of (A),(B),(C) and (D).
 (b) Out of (A), (B) and (C) isomers, which one is least reactive towards addition of HCN ?

26. The rate constant for the first order decomposition of H_2O_2 is given by the following equation: 3
 $\log k = 14.2 - 1.0 \times 10^4 \text{ K}^{-1} \text{ T}$
 Calculate E_a for this reaction and rate constant K if its half-life period be 200 minutes?

27. An optically active compound having molecular formula $\text{C}_7\text{H}_{15}\text{Br}$ reacts with aqueous KOH to give a racemic mixture of products. Write the mechanism involved in the reaction. 3

28. For the following reaction, 3
 $2\text{NO}(\text{g}) + \text{Cl}_2(\text{g}) \rightarrow 2\text{NOCl}(\text{g})$
 The following data were collected. All the measurements were taken at

263 K.

Exp. No.	Initial [NO] (M)	Initial [Cl ₂](M)	Initial rate of disappearance of Cl ₂ (M/min)
1	0.15	0.15	0.60
2	0.15	0.30	1.20
3	0.30	0.15	2.40
4	0.25	0.25	?

(a) Write the expression for rate law.
 (b) Calculate the value of rate constant and specify its units.
 (c) What is the initial rate of disappearance of Cl₂ in exp. 4?

SECTION - D

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

29. The crystal field theory is an electrostatic model which considered the metal-ligand bond to be ionic arising purely from electrostatic interaction between the metal ion and the ligands. In an octahedral coordination entity with six ligands surrounding the metal atom or ion, there will be repulsion between the electrons in the metal d-orbital and the electrons (or negative charges) of the ligands. Such a repulsion is more when the metal d-orbital is directed towards the ligands than when it is away from the ligands. The degeneracy of d-orbital has been removed due to the ligand-metal electron repulsion in the octahedral complex to yield three orbital of lower energy, t_{2g} set and two orbital of higher energy e_g set.

a. What is meant by crystal field splitting energy?
 b. On the basis of crystal field theory, write the electronic

configuration of d^4 in terms of t_{2g} and e_g in an octahedral field when $\Delta_0 > P$ and $\Delta_0 < P$.

c. Write the IUPAC name of $K[Cr(H_2O)_2(C_2O_4)_2].3H_2O$. Explain the violet colour of the complex $[Ti(H_2O)_6]^{3+}$ on the basis of crystal field theory. [At. no of Ti - 22]

OR

c. How many ions are produced from the complex $[Co(NH_3)_6]Cl_2$ in solution? The CFSE for $[(CoCl_6)]^{4-}$ complex is 18000 cm^{-1} . What will be the CFSE for tetrahedral $[CoCl_4]^{2-}$? [At. no of Co - 27]

30. A Lead storage battery is the most important type of secondary cell having a lead anode and a grid of lead packed with PbO_2 as cathode. A 38% solution of sulphuric acid is used as electrolyte. (Density = 1.294 g ml^{-1}) The battery holds 3.5 L of the acid. During the discharge of the battery, the density of H_2SO_4 falls to 1.139 g ml^{-1} . (20% H_2SO_4 by mass) 4

a. Write the reaction taking place at the cathode when the battery is in use.

b. How much electricity in terms of Faraday is required to carry out the reduction of one mole of PbO_2 ?

c. Lead storage battery is considered a secondary cell. Why?

Write the products of electrolysis when dilute sulphuric acid is electrolysed using Platinum electrodes.

OR

c. What is the molarity of sulphuric acid after discharge?

SECTION - E

31. **A.** Account for the following: 5

(a) Transition metals form large number of complex compounds.

(b) The lowest oxide of transition metal is basic whereas the highest oxide is amphoteric or acidic.

(c) E^0 value for the Mn^{+3}/Mn^{2+} couple is highly positive (+1.57 V) as compare to Cr^{3+}/Cr^{2+} .

B. Write one similarity and one difference between the chemistry of

32.

A. Give reason for the following:

5

- At high altitudes, people suffer from a disease called anoxia. In this disease, they become weak and cannot think clearly.
- When mercuric iodide is added to an aqueous solution of KI, the freezing point is raised.

B. 0.6 ml of acetic acid (CH_3COOH) having density 1.06 g/ml^{-1} is dissolved in 1 litre of water. The depression in freezing point observed for this strength of acid was 0.0205°C . Calculate the Van't Hoff factor and the dissociation constant of acid.

OR

A. Write three differences between a solution showing positive deviation and a solution showing negative deviation from Raoult's law.

B. A solution containing 15 g urea (molar mass = 60 g mol^{-1}) per litre of solution in water and a solution of glucose (molar mass = 180 g mol^{-1}) in water are isotonic in nature. Calculate the mass of glucose present in one litre of its solution.

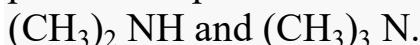
33.

A. Write the structures of main products When aniline reacts with the following reagents :

5

- Br_2 water
- HCl
- $(\text{CH}_3\text{CO})_2\text{O}$ / pyridine

B. Give a simple chemical test to distinguish between the following pair of compounds:



C. Write the IUPAC name of the following compounds:-

**OR**

A. How will you bring about the following conversions?

- Ethanamine into methanamine
- Aniline into 1,3,5-Tribromobenzene

(c) Aniline into 4-Bromoaniline

B. Account for the following:

(a). Methylamine in water reacts with ferric chloride to precipitate hydrated ferric oxide.

(b). Aniline on nitration gives good amount of m-Nitroaniline, although - NH₂ group is o/p directing in electrophilic substitution reaction.

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Name: _____ Sec: _____ Roll No.: _____
CODE :A

BURNPUR RIVERSIDE SCHOOL, BURNPUR
PRE-BOARD EXAMINATION : [2023-2024]
BIOLOGY [044]
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 a true fruit ?	1
	(a) apple (b) strawberry (c) cashew (d) mango	
2.	The female gametophyte gets it's nutrients from -	1
	(a) Nucellus (b) Tapetum (c) Hilum (d) Cotyledons	
3.	Two nucleotides in a DNA are linked through	1
	(a) Hydrogen bond (b) Phosphodiester bond (c) N-glycosidic linkage (d) Di-Sulphide bridges	

4. Female heterogamety can be seen in 1
(a) Cockroaches
(b) Humans
(c) Birds
(d) Fruit fly

5. Which of the following is a fish like reptile ? 1
(a) *Ramapithecus*
(b) *Dryopithecus*
(c) *Tyrannosaurus rex*
(d) *Ichthyosaurs*

6. The frequency of allele 'A' is 0.6 and that of allele 'a' is 0.4. 1
What would be the frequency of heterozygotes in a random mating population, at equilibrium
(a) 0.36
(b) 0.16
(c) 0.48
(d) 0.24

7. A classical example of point mutation is 1
(a) Down's Syndrome
(b) Klinefelter's Syndrome
(c) Turner's Syndrome
(d) Sickle cell anemia

8. A plant with genotype AABBCc will produce _____ kinds 1
of gametes.
(a) 2
(b) 3
(c) 4
(d) 5

9. *Propionibacterium sharmani* is used in the production of : 1
(a) Roquefort Cheese
(b) Swiss Cheese
(c) Cottage Cheese
(d) Mozzarella Cheese

10. If the restriction endonuclease BamH1 is mixed with pBR322, 1
it will disrupt -
(a) ori
(b) rop
(c) tet^R
(d) amp^R

11. Cry IAc control pests like - 1
(a) Corn root worm
(b) Corn borer
(c) Cotton bollworm
(d) Colorado potato beetle

12. What percentage of PAR can be captured by plants ? 1
(a) 1-5%
(b) 2-10%
(c) 20%
(d) 50%

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: Primary endosperm nucleus is diploid. 1
R: It is a product of double fertilisation.

14. A: Less than 2% of the genome codes for proteins. 1
R: Chromosome Y has fewest genes.

15. A: *Plasmodium falciparum* is the deadliest of all malarial pathogens. 1
R: It causes malignant malaria.

16. A: Eco R1 creates sticky ends 1
R: It is the first isolated RE.

Section – B

17. Explain the process of hormonal regulation of Spermatogenesis. 2

18. An angiosperm with genotype AaBb was self pollinated. Find out the proportion of the offsprings with parental combination. 2

19. How does smoking raise blood pressure and increase heart rate ? 2

20. How can you convert a cell into a competent host for transformation ? 2

21. Note down four limitations of ecological pyramids. 2

OR

Why is the scale of the food chain in an ecosystem typically restricted to three to four trophic levels ?

Section – C

22. Distinguish between Vas deferens and Vasa efferentia. 3

23. Diagrammatically represent the sectional view of the female reproductive system. 3

24. (a) Why are condoms regarded the most popular contraceptive ? 3
 (b) What is periodic abstinence ?

25. Write a short note on evolution of man. 3

26. Name the microbes used in the production of – 3
 (a) Butyric acid
 (b) Statins
 (c) Cyclosporin A

27. Illustrate the mechanism by which GM tobacco plants get rid of *Meloidogyne incognita*. 3

OR

How is genetically engineered insulin produced ?

28. (a) Why should we conserve biodiversity ? 3
 (b) Conceptualise “rivet popper hypothesis” proposed by Paul Ehrlich.

Section – D

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

29. Step 1 : Cut the gene of interest 4
 Step 2 : Separate the gene of interest from the other fragments
 Step 3 : Amplify the gene of interest.

Step 4 : Join the gene of interest to a vector.

Step 5 : Transform of the recombinant DNA into a competent host.

- (a) Name the enzymes used to cut a DNA and Join a DNA.
- (b) Name the process used for amplification of the gene of interest.
- (c) Why is Taq polymerase only used in the amplification process.

OR

Explain how the gene of interest is separated from other fragments.

30. There is no natural habitat on earth which is occupied by a single species. In nature, plants, animals and microbes, do not and cannot live in isolation. Inter specific interactions arise from the interaction of population of two different species.

- (a) Even a plant species, which makes its own food cannot live alone. Give two examples, where plants depend on other species for survival.
- (b) Give an example of Amensalism.
- (c) Name the type of interaction seen in the following cases –
 - (i) Cuckoo bird laying its eggs in crow's nest.
 - (ii) Clown fish living among the stinging tentacles of sea anemone.

OR

With the help of an example explain how co-evolution affects mutualism.

Section – E

31. Diagrammatically represent the various events during menstrual cycle. 5

OR

Draw the sectional view of mammary gland. Label any five parts.

32. (a) State the law of dominance. 5
(b) What is test cross.

OR

(a) Explain sex determination in honey bees.
(b) What is pedigree chart ?

33. How does the retrovirus HIV proliferate in human body ? 5

OR

What are the measures to prevent and control drug abuse among adolescents.

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Name: _____ Sec: _____ Roll No.: _____
CODE : B

BURNPUR RIVERSIDE SCHOOL, BURNPUR
PRE-BOARD EXAMINATION : [2023-2024]
BIOLOGY (044)
CLASS : XII

Time: 3 Hours

Maximum Marks : 70

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. Which of the structures are haploid in nature? 1
 - a)nucellus and antipodals
 - b)microspores mother cell and antipodals
 - c)eggcell and antipodal
 - d)egg cell and microspore mother cell
- 2. Self-pollination is fully ensured if 1
 - a) Flower is unisexual
 - b) Style is longer than filament
 - c) Flower is cleistogamous
 - d) Time of pistil and anther maturity is different.

3.	Lac operon in prokaryotes is regulated by a) Glucose b) Glactose c) Lactose d) Fructose	1
4.	ZZ/ZW type of sex determination is seen by a) Platypus b) Snails c) Cockroach d) Peacock.	1
5.	Paleontological evidences of evolution refers to a) Development of embryo b) Homologous organs c) Fossils d) Analogous organs.	1
6.	Homologous organs shows a) Natural selection b) Divergent evolution c) Parallel evolution d) Convergent evolution	1
7.	All genes located on the same chromosome a) Forms different linkage groups b) Form one linkage group c) Does not form linkage group d) Forms interactive group that affects phenotype.	1
8.	In sickle cell anaemia glutamic acid is replaced by valine. Valine is encoded by a) GGG b) AAG c) GAA d) GUG.	1
9.	<i>Monascus purpureus</i> is a yeast used commercially in the production of a) Ethanol b) Streptokinase c) citric acid d) Statins	1
10.	In EcoRI , 'co' stands for a) Colon b) Coelom c) Coenzyme d) Coli	1
11.	Human insulin is commercially produced by a) Rhizobium b) saccharomyces c) Escherichia d) Mycobacterium	1
12.	Mass of living matter at a trophic level in an area at any time is called a) Standing crop b) detritus c) humus d) standing state.	1

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:-Microspore is the first cell of the male gametophyte Reason:- It is diploid in nature.	1
14	Assertion:-The t RNA molecules possess anticodons. Reason:-It needs the message in form of codons.	1
15	Assertion:- Interferons are glycoproteins which are produced by virally infected cells. Reason:-Interferons stimulate inflammation at the site of injury.	1
16	Assertion:-Plasmids are extra-chromosomal DNA. Reason:-Plasmids are found in eukaryotes.	1

SECTION-B

17.	Placenta are endocrine tissues.Justify.	2
18.	Differentiate between codominance and incomplete dominance.	2
19.	Name the plant source of the drug popularly called smack.How does it affect the body of the abuser?	2
20.	Enlist the steps of Genetic engineering.	2
21.	What would happen to the successive trophic levels in the pyramid of energy,if the rate of reproduction of phytoplanktons was slowed down?Suggest two factors which could cause such a reduction in phytoplankton reproduction.	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 oogenesis.	3
23.	Name the stage of Human embryo at which it gets implanted.Explain the process of implantation of human embryo.	3
24.	How are assisted reproductive technologies helpful to human?How are ZIFT and GIFT different from intra-uterine transfers?	3

25. Explain adaptive radiation with the help of a suitable example. 3

26. How is activated sludge produced during sewage treatment? Explain how this sludge is used in biogas production. 3

27. Name the process involved in the production of nematode –resistant tobacco plants ,using genetic engineering. Explain the strategy adopted to develop such plants. 3

OR

An application of biotechnology in agriculture involves production of pest resistant plants using ‘cry’ genes from a bacterium, *Bacillus thuringiensis*

- a) Proteins coded by which specific Bt toxin genes control corn borer?
- b) How does Bt toxin produced by the bacteria kill the insect? Explain.

28. Alien species are highly invasive and are a threat to indigenous species. Substantiate this statement with three examples. 3

SECTION-D (Case Based)

29. **Predation and Population Dynamics in Yellowstone National Park** 4

Introduction:

Yellowstone National Park in the United States is a unique ecosystem known for its diverse wildlife, including wolves and elk. This case study focuses on the interaction between the wolf and elk populations and how it has shaped the park's ecosystem.

Population Interaction: **Predation:** Wolves are natural predators of elk. When wolves were reintroduced to Yellowstone in the mid-1990s, it had a profound impact on the elk population. Before the wolf reintroduction, the elk population had grown significantly, leading to overgrazing and damage to the park's vegetation.

Elk Behavior Change: With the return of wolves, elk behavior changed. They began to avoid areas where wolves were more likely

to be present. This avoidance altered their grazing patterns and reduced overgrazing in certain areas. This allowed vegetation to recover and led to increased biodiversity in those areas. **Cascade Effects:** The reduction in elk numbers due to predation led to a cascade of effects. Aspen and willow trees, which were previously heavily browsed by elk, started to recover. These trees provide habitat for various bird species and beavers, further enhancing the park's biodiversity.

The presence of wolves also influenced other species, such as coyotes, which had to compete with wolves for prey. This shift in predator-prey dynamics affected the coyote population and resulted in changes in their distribution and behavior.

The reintroduction of wolves to Yellowstone National Park is a remarkable example of how the interaction between predator and prey populations can have profound effects on an ecosystem. It illustrates how a top predator like the wolf can shape the entire ecosystem, promoting biodiversity and maintaining ecological balance. This case study highlights the complex web of interactions within ecosystems and the importance of preserving natural predators for the overall health and sustainability of an ecosystem."

- a) What is a food chain? (1)
- b) Construct a food chain from the above data. (1)
- c) How can a top predator have a profound effect on an ecosystem? Explain (2)

OR

- (c) What was the impact of wolf on coyotes? (2)

30. Polymerase Chain Reaction (PCR) is a widely used molecular biology technique in research. It allows scientists to amplify specific DNA sequences, making it easier to study and analyze them. PCR has various applications in research, including:- 4

DNA Amplification: PCR is used to make millions of copies of a specific DNA region, facilitating further analysis, such as DNA sequencing or gene expression studies.

Genotyping: PCR can be employed to identify genetic variations, such as single nucleotide polymorphisms (SNPs), which are associated with diseases or traits.

Gene Expression Analysis: Reverse transcription PCR (RT-PCR) is used to measure the expression levels of specific genes in different conditions, providing insights into their roles in various biological processes.

DNA Cloning: PCR is essential for cloning DNA fragments into vectors for further manipulation and expression.

Pathogen Detection: PCR is used to detect the presence of pathogens like bacteria or viruses in clinical and environmental samples, contributing to disease diagnosis and surveillance. Here specific primers may be used for various pathogens.

Forensic Science: PCR is employed in forensic research to amplify and analyze DNA from crime scene samples or for paternity testing.

Environmental Studies: PCR can be used to study microbial diversity and identify specific microorganisms in environmental samples.

Evolutionary Studies: PCR helps researchers analyze DNA from ancient or preserved specimens to study evolutionary relationships.

Drug Development: PCR is used to validate drug targets, screen for potential drug candidates, and study the effects of drugs on gene expression. **Disease Research:** PCR is vital in understanding the genetic basis of diseases, including cancer and genetic disorders.

PCR has revolutionized molecular biology and genetics research by enabling the efficient amplification and analysis of DNA, making it an indispensable tool in various fields of research.

- a) What are the steps involved in PCR? (1)
- b) What are the requirements of the process? (1)
- c) What are vectors ? Why are they manipulated? (2)

OR

How can various diseases be identified by PCR? (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. 5
Name the gonadotrophins and explain their role in oogenesis and release of ova.

OR

Write the specific location and the functions of the following cells in human males a)Leydig cells b) Sertoli cells c) Primary spermatocyte.

32. Trace the path of spermatozoa from the testes upto ejaculatory duct. 5
A non haemophilic couple was informed by their doctor that there is a possibility of a haemophilic child be born to them. Explain the basis on which the doctor conveyed this information. Give the genotypes and phenotypes of all the possible children who could be born to them.

OR

State and explain the law of dominance as proposed by Mendel. How would phenotypes of Monohybrid F1 and F2 progeny showing incomplete dominance in snapdragon and co-dominance in human blood group be different.

33. Discuss the structure of an Antibody with a diagram. 5

OR

Explain the following in context of cancer: a) Benign tumour b) Malignant tumour c) Oncogenes d) Carcinogens e) Contact inhibition.

**BURNPUR RIVERSIDE SCHOOL, BURNPUR
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]
'In Dictionaries, the updation and addition of elements are similar in syntax. But for addition, the key must not exist in the dictionary and for updation, the key must exist in the dictionary.'
2. In a table in MYSQL database, an attribute X of data type varchar(23) has the value "BRS". The attribute Y of data type char(17) has value "Burnpur". How many characters are occupied by attribute X and attribute Y? [1]
a. 23, 17 b. 3, 17 c. 20, 10 d. 10, 20

3. Which line of code will cause an error? [1]

1. num = [5,4,3,[2],1]
2. print(num[0])
3. print(num[3][0])
4. print(num[5])

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

4. Consider the code given below: [1]

b = 100

```
def test(a) :  
    _____ # missing statement  
    b=b+a  
    print (a, b)  
test(10)  
print(b)
```

Which of the following statements should be given in the blank for # Missing Statement, if the output produced for *print(b)* is 110?

Options:

- a. global a
- b. global b=100
- c. global b
- d. global a=100

5. Consider the table with structure as: [1]

Student (Admission_No, Name, Class, Sec)

In the above table, which attribute will form the primary key?

- a. Admission_No
- b. Name
- c. Class
- d. Sec

6. Which device broadcasts any data to all devices on a network? [1]

- a. Router
- b. Switch
- c. Hub
- d. Bridge

7. You have the following code segment: [1]
String1 = “my”
String2 = “work”
print(String1 + String2)
What is the output of this code?
a. my work b. work c. mywork d. my

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 is the correct form of declaration of dictionary? [1]
a. Day = {1:’Monday’, 2:’Tuesday’, 3:’wednesday’}
b. Day = {1;’Monday’, 2;’Tuesday’, 3;’wednesday’}
c. Day = [1:’Monday’, 2:’Tuesday’, 3:’wednesday’]
d. Day = {1’Monday’, 2’Tuesday’, 3’wednesday’}

10. What possible outputs(s) will be obtained when the following code isexecuted? [1]
import random
myNumber = random.randint(0, 3)
COLOR = [“YELLOW”, “WHITE”, “BLACK”, “RED”]
for I in range (1, myNumber):
 print (COLOR[I], end = “*”)
 print ()

a. RED*
 WHITE*
 BLACK*

b. WHITE*
 BLACK*

c. WHITE* WHITE*
 BLACK* BLACK*

d. YELLOW*
 WHITE*WHITE*
 BLACK* BLACK* BLACK*

11. _____ is a communication methodology designed to deliver both voice and multimedia communications over Internet protocol. [1]
a. VoIP b. SMTP c. PPP d. HTTP

12. Select the correct output of the code: [1]
s = "Python is fun"
l = s.split()
s_new = "-".join ([l[0].upper(), l[1], l[2].capitalize()])
print (s_new)

Options:
a. PYTHON-IS-Fun
b. PYTHON-is-Fun
c. Python-is-fun
d. PYTHON-Is –Fun

13. State whether the following statement is **True or False**: [1]
'Functions readline() and readlines() are essentially the same'

14. In MYSQL database, if a table, **Student** has degree 8 and cardinality 4, and another table, **Teacher** has degree 4 and cardinality 8, what will be the degree and cardinality of the Cartesian product of **Student** and **Teacher** ? [1]
a. 4, 8 b. 8, 4 c. 12, 32 d. 32, 12

15. Fill in the blank: [1]
A _____ is networking device that connects computers in a network by using packet switching to receive, and forward data to the destination.

16. The correct syntax of seek() is: [1]
(a) file_object.seek(offset [, reference_point])
(b) seek(offset [, reference_point])
(c) seek(offset, file_object)
(d) seek.file_object(offset)

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:** Lists and Tuples are similar sequence types of [1] Python, yet they are two different datatypes.

REASON: List sequences are mutable and Tuple sequences are immutable.

18. **ASSERTION:** A function declaring a variable having the same [1] name as a global variable, cannot use that global variable.

REASON: A local variable having the same name as a global variable hides the global variable in its function.

SECTION-B

19. (i) Expand the following terms: [2]
 URI , MIME

(ii) What is the use of TELNET?

OR

- (i) Differentiate between Web server and web browser.
- (ii) What do you understand by ‘Domain Name Resolution’?

20. The code given below accepts a number as an argument and returns the reverse number. Observe the following code carefully and rewrite it after removing **all syntax and logical errors**. Underline all the corrections made. [2]

```
define revNumber (num) :  
    rev = 0  
    rem = 0  
    While num > 0:  
        rem ==num %10  
        rev = rev*10 + rem  
        num = num//10  
    return rev  
print (revNumber (1234))
```

21. 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. [2]

Sample Input Data of the list
Arr= [10,20,30,40,12,11], n=2
Output
Arr = [30,40,12,11,10,20]

OR

Write a function AMCount() in Python, which should read each character of a text file STORY.TXT, should count and display the occurrence of alphabets A and M (including small cases a and m too).

Example:

If the file content is as follows:

Updated information
As simplified by official websites.

The EUCount() function should display the output as:

A or a:4
M or m :2

22. Predict the output of the following code: [2]

```
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)
```

23. Write the Python method for **each** of the following tasks: [2]

- (i) returns all of the items in the dictionary as a sequence of (key, value) tuples.
- (ii) returns all of the keys in the dictionary as a sequence of keys (in form of a list).

OR

- (i) adds an item to the end of a list.
- (ii) Adds multiple elements (given in the form of a list) to a list.

24. Write SQL queries for the following: [2]

- (a) Insert the following record into the ‘RESULT’ table:
Roll_No – 10, Name – ‘Suresh’, Sem1 – 470, Sem2 – 444, Sem3 – 475, Div – I.
- (b) Increase the Sem2 marks of the students by 3% whose name begins with ‘N’.

OR

- (a) Delete the record of students securing IV division from the ‘RESULT’ table.
- (b) Add a column REMARKS in the table with datatype as varchar with 50 characters.

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

```
def Display(str):
    m=""
    for i in range(0,len(str)):
        if(str[i].isupper()):
            m=m+str[i].lower()
        elif str[i].islower():
            m=m+str[i].upper()
        else:
            if i%2==0:
                m=m+str[i-1]
            else:
                m=m+"#"
    print(m)
Display('Fun@Python3.0')
```

SECTION-C

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) ‘1a’
- (ii) 1bzz
- (iii) ‘xyz’

27. Write the outputs of the SQL queries (i) to (iii) based on the relations **Teacher** and **Posting** given below: [3]

Table : Teacher						
T_ID	Name	Age	Department	Date_of_join	Salary	Gender
1	Jugal	34	Computer Sc	10/01/2017	12000	M
2	Sharmila	31	History	24/03/2008	20000	F
3	Sandeep	32	Mathematics	12/12/2016	30000	M
4	Sangeeta	35	History	01/07/2015	40000	F
5	Rakesh	42	Mathematics	05/09/2007	25000	M
6	Shyam	50	History	27/06/2008	30000	M
7	Shiv Om	44	Computer Sc	25/02/2017	21000	M
8	Shalakha	33	Mathematics	31/07/2018	20000	F

Table : Posting		
P_ID	Department	Place
1	History	Agra
2	Mathematics	Raipur
3	Computer Science	Delhi

- i. `SELECT Department, count(*)
FROM Teacher GROUP BY Department;`
- ii. `SELECT Max(Date_of_Join), Min(Date_of_Join)
FROM Teacher;`
- iii. `SELECT Teacher.name, Teacher.Department,
Posting.Place FROM Teacher, Posting
WHERE Teacher.Department = Posting.Department
AND Posting.Place="Delhi";`

28. Write a function, vowelCount() in Python that counts and displays the number of vowels in the text file named Life.txt. [3]

OR

Write a function in Python to read a text file, Leaf.txt and displays those lines which begin with the word 'Me'.

29. Consider the following **MOVIE** table and write the SQL queries based on it: [3]

M_ID	M_Name	Category	ReleaseDate	ProductionCost
001	Kingkong	Action	2018/04/23	124500
002	Superman	Action	2016/05/17	112000
003	Jungle Book	Adventure	2017/08/06	245000
004	The Dark	Horror	2017/01/04	72000
005	Thor	Action	-	100000
006	The Escape	Comedy	-	30500

- (a) List Movie ID, Movie Name and cost of all movies with production cost greater than 10000 and less than 100000.
- (b) List details of all movies which fall in the category of Comedy or Action.
- (c) List details of all movies which have not been released yet.

30. A list contains following record of a customer: [3]
[Customer_name, Phone_number, City]

Write the following user defined functions to perform given operations on the stack named '**status**':

- (i) Push_element() - To Push an object containing name and Phone number of customers who live in Goa 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:

[“Gurdas”, “99999999999”, “Goa”]
 [“Julee”, “8888888888”, “Mumbai”]
 [“Murugan”, “7777777777”, “Cochin”]
 [“Ashmit”, “1010101010”, “Goa”]

The stack should contain

[“Ashmit”, “1010101010”]
 [“Gurdas”, “9999999999”]

The output should be:

[“Ashmit”, “1010101010”]
 [“Gurdas”, “9999999999”]

Stack Empty

SECTION-D

31. Write the Mysql commands for the following queries :- [4]

EMPLOYEE

EMPNO	E_DID	SALARY
334	909	60000
232	808	75000
512	909	80000
156	808	65000

DEPARTMENT

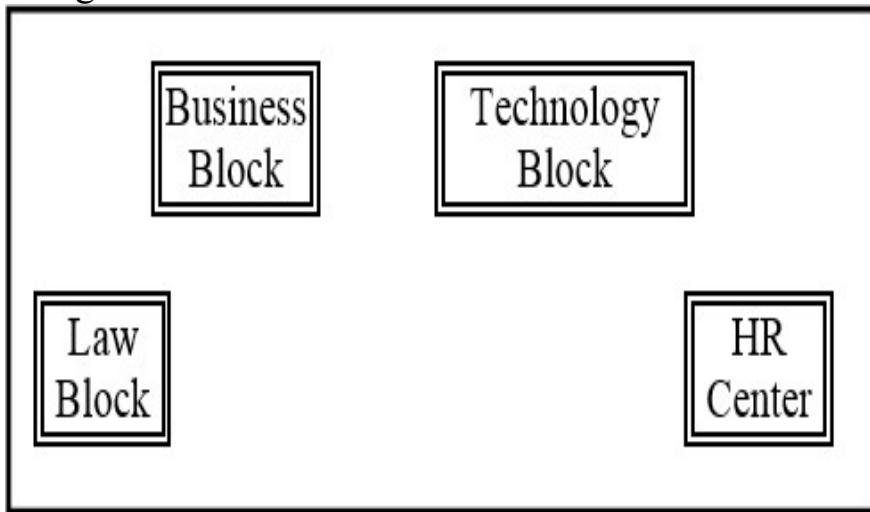
DID	DNAME	NO_OF_EMP	PROFIT
909	STEEL	5500	25000
808	IRON	5000	10500

- (a) To find all the employee numbers, department name for department ID as 808.
- (b) To find the total salary amount from each department name.
- (c) To display all the tables created in the current database.
- (d) To delete table DEPARTMENT along with the information in it.

32. Ratul wants to store the details of sports' performance (sport, competitions, prizes-won) of his school into a csv file delimited with tab character. Write a program code which would help him to do so. [4]

SECTION-E

33. MyPace 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 center	105 m
Business Block to technology Block	30 m
Business Block to HR Center	35 m
Technology block to HR center	15 m

Number of computers in each of the blocks/Center is as follows:

Law Block	15
Technology Block	40
HR Center	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) Write the file mode that will be used for opening the following files. Also, write the Python statements to open the following files: [2+3]

- A text file “example.txt” in both read and write mode.
- A binary file “bfile.dat” in write mode.

(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 75. Also display number of students scoring above 75%.

OR

(i) Write the file mode that will be used for opening the following files. Also, write the Python statements to open the following files:

- A text file “try.txt” in append and read mode.
- A binary file “btry.dat” in read only mode.

(ii) A Binary file, TEACHER.DAT has the following structure:
{TID:[TNAME, TDEPT]}
Where
TID – Teacher ID
TNAME – Teacher Name
TDEPT is Teacher Department

Write a user defined function, finddept(tdept), that accepts tdept as parameter and displays all the records from the binary file TEACHER.DAT, that have the value of Teacher Department as tdept.

35. (i) What is the function of **cursor.rowcount**? [1+4]

(ii) Sachin wants to write a program in Python to insert the following record in the table named **Stu** in MySQL database, **STUTEACH**:

- srollno (Roll number)- integer
- sname (Name) - string
- sdob (Date of birth) – Date
- sfee – float

Note the following to establish connectivity between Python and MySQL:

- Username - brs
- Password - brschool
- Host - localhost

The values of fields srollno, sname, sdob and sfee has to be accepted from the user. Help Sachin to write the program in Python.

OR

(i) Differentiate between `fetchone()` and `fetchall()` method.

(ii) Sourav has created a table named Stu in MYSQL database, **STUTEACH**:

- `srollno`(Roll number) - integer
- `sname`(Name) - string
- `sdob` (Date of birth) – Date
- `sfee` – float

Note the following to establish connectivity between Python and MySQL:

- Username - brs
- Password – brschool
- Host – localhost

Sourav, now wants to display the records of students whose fee is less than 9000. Help Sourav to write the program in Python.

Name: _____ Sec: _____ Roll No.: _____
CODE: B

**BURNPUR RIVERSIDE SCHOOL, BURNPUR
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 True / False** [1]
Variables can assigned only once.
2. Consider the following SQL statements, what type of statement is this? [1]
Select * from employee ;
a)DML b)DDL c)DCL d)Integrity constraint
3. The keys of a dictionary must be of _____ types . [1]
a)integer b)mutable c)immutable d)any of these
4. What is variable defined outside all the functions referred to as? [1]
a) A static variable b)A global variable
c)A local variable d) An automatic variable
5. The term _____ is used to refer to a field in a table. [1]
a)Attribute b)Tuple c)Row d)Instance

6. Which of the following devices can be used at the centre of a star topology? [1]

a) Router b) Repeater c) Modem d) Hub

7. Consider the statements given below and then choose the correct output from the given options: [1]

```
pride="#G20 Presidency"
```

```
print(pride[-2:2:-2])
```

a) ndsr b) ceieP0 c) ceieP d) yndsr

8. What will the following expression be evaluated to in Python? [1]

```
print(15.0 / 4 + (8 + 3.0))
```

a) 14.75 b) 14.0 c) 15 d) 15.5

9. Which of the following is valid arithmetic operator in Python ? [1]

a) // b) ? c) < d) and

10. import random [1]

```
AR=[20,30,40,50,60,70];
```

```
FROM=random.randint(1,3)
```

```
TO=random.randint(2,4)
```

```
for K in range(FROM,TO+1):
```

```
    print (AR[K],end="#")
```

a) 10#40#70# b) 30#40#50#

c) 50#60#70# d) 40#50#70#

11. The modem at the sender's computer end acts as a _____. [1]

a. Model b. Modulator c. Demodulator
d. Convertor

12. What is the result of the code? [1]

```
def print_double(x):
```

```
    print(2**x)
```

```
print_double(3)
```

a) 8 b) 6 c) 4 d) 10

13. A _____ file is a file that stores information in the form of a stream of ASCII or Unicode characters. [1]

14. The term _____ is used to refer to a record in a table. [1]
a)Attribute b)Tuple c)Field d) Instance

15. A _____ is a device that connects dissimilar networks. [1]

16. Which of the following functions changes the position of file pointer and returns its new position? [1]
a) flush() b) tell() c) seek() d)offset()

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: List and Tuples are similar sequence types of Python, yet they are two different data types. [1]
REASON: List sequences are mutable and Tuple sequences are immutable.

18. ASSERTION : A variable declared inside a function cannot be used outside it. [1]
REASON : A variable created inside a function has a function scope.

SECTION-B

19. i. What is a Hub? [1+1=2]

ii. Expand the following terms with respect to networking:
Modem , WLL

OR

i. What is Voip ?

ii. Differentiate between XML and HTML.

20. Rao has written a code to input a number and check whether it is prime or not. His code is having errors. Rewrite the correct code and underline the corrections made. [2]

```
def prime():
    n=int(input("Enter number to check :: "))
    for i in range (2, n//2):
        if n%i==0:
            print("Number is not prime \n")
            break
        else:
            print("Number is prime \n")
```

21. What will be the output of the following code? [2]

```
def Diff(N1,N2):
    if N1>N2:
        return N1-N2
    else:
        return N2-N1
NUM= [10,23,14,54,32]
for CNT in range (4,0,-1):
    A=NUM[CNT]
    B=NUM[CNT-1]
    print(Diff(A,B),'#', end=' ')
```

OR

What will be 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)
```

22. 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+'bb'
    print(m)
fun('cbseEXAM@2023')
```

23. Write the Python statement for **each** of the following tasks using [2]
BUILT-IN functions/methods only:

- (i) To insert an element **200** at the third position, in the list **L1**.
- (ii) To check whether a string named, **message** ends with a full stop / period or not.

OR

A list named **studentAge** stores age of students of a class.
Write the Python command to import the required module and
(using built-in function) to display the most common age
value from the given list.

24. Ms. Sunita has just created a table named “**Employee**” containing [2]
columns **Ename**, **Department** and **Salary**.

After creating the table, she realized that she has forgotten to add a primary key column in the table. Help her in writing an SQL command to add a primary key column **EmpId** of integer type to the table **Employee**.

Thereafter, write the command to insert the following record in the table:

EmpId- 999

Ename- Shweta

Department: Production

Salary: 26900

OR

Raj is working in a database named SPORT, in which he has created a table named “Sports” containing columns SportId, SportName, no_of_players, and category.

After creating the table, he realized that the attribute, category has to be deleted from the table and a new attribute TypeSport of data type string has to be added. This attribute TypeSport cannot be left blank. Help Zack write the commands to complete both the tasks.

25. Differentiate between actual parameters and formal parameters with [2] a suitable example for each.

SECTION-C

26. Predict the output of the code given below: [3]

```
s="welcome2csWORLD"
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. Write the outputs of the SQL queries (i) to (iv) based on the relations Teacher and Placement given below: [3]

Table : **SPORTS**

StudentNo	Class	Name	Game1	Grade1	Game2	Grade2
10	7	Sameer	Cricket	B	Swimming	A
11	8	Sujit	Tennis	A	Skating	C
12	7	Kamal	Swimming	B	Football	B
13	7	Veena	Tennis	C	Tennis	A
14	9	Archana	Basket Ball	A	Cricket	A
15	10	Arpit	Cricket	A	Athletics	C

- (i) select count(*) from SPORTS;
- (ii) select distinct Class from SPORTS;
- (iii) select max(Class) from STUDENT;

28. Write a function in Python to read a text file, Story.txt and displays those lines which begin with the word ‘You’. [3]

OR

Write a function ETCount() in Python, which should read each character of a text file “TESTFILE.TXT” and then count and display the count of occurrence of alphabets E and T individually (including small cases e and t too).

Example:

If the file content is as follows:

Today is a pleasant day.

It might rain today.

It is mentioned on weather sites

The ETCount() function should display the output as:

E or e: 6

T or t : 9

29. [3]

P_ID	NAME	DESIG	SALARY	ALLOWANCE
P01	Rohit	Manager	89000	4800
P02	Kashish	Clerk	NULL	1600
P03	Mahesh	Superviser	48000	NULL
P04	Sahil	Clerk	31000	1900
P05	Ravina	Superviser	NULL	2100

Based on the given table, write SQL queries for the following:

- Increase the salary by 5% of personals whose allowance is known.
- Display Name and Total Salary (sum of Salary and Allowance) of all personals. The column heading ‘Total Salary’ should also be displayed.
- Delete the record of personals who have salary greater than 25000

30. A list, NList contains following record as list elements: [3]

[City, Country, distance from Delhi]

Each of these records are nested together to form a nested list. Write the following user defined functions in Python to perform the specified operations on the stack named travel.

(i) Push_element(NList): It takes the nested list as an argument and pushes a list object containing name of the city and country, which are not in India and distance is less than 3500 km from Delhi.

(ii) Pop_element(): It pops the objects from the stack and displays them. Also, the function should display “Stack Empty” when there are no elements in the stack.

For example: If the nested list contains the following data:

NList=[["New York", "U.S.A.", 11734],

["Naypyidaw", "Myanmar", 3219],

["Dubai", "UAE", 2194],

["London", "England", 6693],

["Gangtok", "India", 1580],

["Columbo", "Sri Lanka", 3405]]

The stack should contain:

['Naypyidaw', 'Myanmar'],

['Dubai', 'UAE'],
['Columbo', 'Sri Lanka']

The output should be:
['Columbo', 'Sri Lanka']
['Dubai', 'UAE']
['Naypyidaw', 'Myanmar']
Stack Empty

SECTION-D

31. Consider the tables PRODUCT and BRAND given below: [4]

Table: PRODUCT

PCODE	PNAME	UPRICE	RATING	BID
P01	Shampoo	120	6	M03
P02	Toothpaste	54	8	M02
P03	Soap	25	7	M03
P04	Toothpaste	65	4	M04
P05	Soap	38	5	M05
P06	Shampoo	245	6	M05

Table : BRAND

BID	BNAME
M02	Dant Kanti
M03	Medimix
M04	Pepsodent
M05	Dove

Write **SQL queries** for the following:

- (i) Display product name and brand name from the tables PRODUCT and BRAND.
- (ii) Display the structure of the table PRODUCT.
- (iii) Display the average rating of Medimix and Dove brands
- (iv) Display the name, price, and rating of products in descending order of rating

32. Vedansh is a Python programmer working in a school. For the Annual Sports Event, he has created a csv file named Result.csv, to store the results of students in different sports events. The structure of Result.csv is : [4]

[St_Id, St_Name, Game_Name, Result]

Where

St_Id is Student ID (integer)

ST_name is Student Name (string)

Game_Name is name of game in which student is participating(string)

Result is result of the game whose value can be either 'Won', 'Lost' or 'Tie'

For efficiently maintaining data of the event, Vedansh wants to write the following user defined functions:

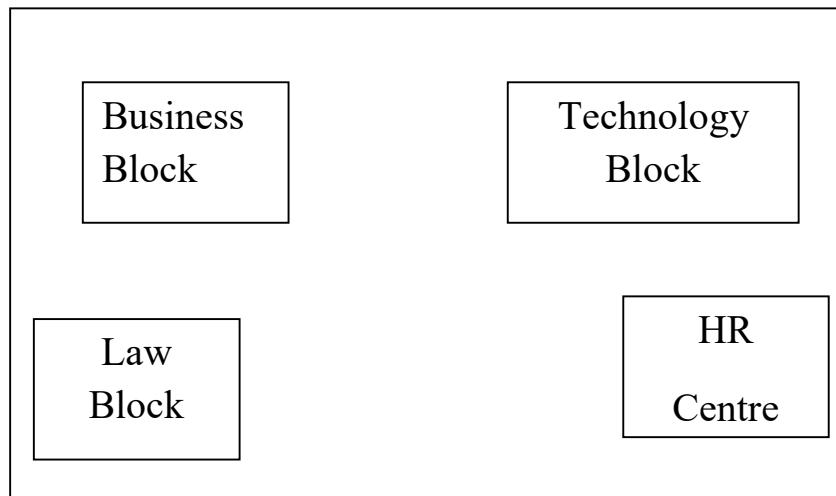
Accept() – to accept a record from the user and add it to the file Result.csv. The column headings should also be added on top of the csv file.

wonCount() – to count the number of students who have won any event.

As a Python expert, help him complete the task.

SECTION-E

33. ABC 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:



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) Differentiate between r+ and w+ file modes in Python. [2+3]

ii) Write a method/function **DISPLAYWORDS()** in python to read lines from a text file **STORY.TXT**, and display those words, which are less than 4 characters.

OR

- i) How are text files different from binary files?
- ii) Consider a file, **SPORT.DAT**, containing records of the following structure:
[SportName, TeamName, No_Players]

Write a function, **copyData()**, that reads contents from the file **SPORT.DAT** and copies the records with Sport name as “**Basket Ball**” to the file named **BASKET.DAT**. The function should return the total number of records copied to the file **BASKET.DAT**.

35 (i) Define the term Domain with respect to RDBMS. Give one [1+4] example to support your answer.

(ii) Avishek wants to write a program in Python to insert the following record in the table named `Student` in MySQL database, `SCHOOL`:

`rno`(Roll number)- integer
`name`(Name) - string
`DOB` (Date of birth) – Date
`Fee` – float

Note the following to establish connectivity between Python and MySQL:

Username - root
Password - school
Host - localhost

The values of fields `rno`, `name`, `DOB` and `fee` has to be accepted from the user. Help Avishek to write the program in Python.

OR

(i) Give one difference between alternate key and candidate key.

ii) Subir has created a table named `Student` in MySQL database, `SCHOOL`:

`rno`(Roll number)- integer
`name`(Name) - string
`DOB` (Date of birth) – Date
`Fee` – float

Note the following to establish connectivity between Python and MySQL:

Username - root
Password - tiger
Host - localhost

Subir, now wants to display the records of students whose fee is more than 5000. Help Subir to write the program in Python.

=====

Name: _____ Sec: _____ Roll No.: _____

CODE - A

BURNPUR RIVERSIDE SCHOOL, BURNPUR
PRE-BOARD EXAMINATION : [2023-24]
ACCOUNTANCY
CLASS – XII

Time: 3 Hrs.

Maximum Marks: 80

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.*

1 A, B, C and D are in partnership sharing profits and losses in the ratio of 1 36:24:20:20. E joins the partnership for 20% share and A, B, C and D in future would share profits among themselves as 3:4:2:1. Calculate new profit sharing ratio of A,B,C,D and E after E's admission
(a) 6:4:5:2:1 (b) 5:4:3:2:1 (c) 4:4:2:2:1 (d) 6:8:4:2:5

2 Assertion(A): D, E and F are partners in a firm. The partnership deed provided, salary to E of ₹ 5,000 per month. D and F also demanded the same salary, i.e. ₹ 60,000 p.a. each. Thus salaries are allowed. 1
Reason (R): In absence of Partnership Deed, provisions of the Partnership Deed, provisions of the Partnership Act, 1932 apply. Thus salaries are not be allowed to them.
(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 If 10,000 shares of ₹ 10 each were forfeited for non-payment of final call money of ₹ 3 per share and only 7,000 shares were re-issued @ ₹11 per share as fully paid up, then what is the amount of maximum possible discount that company can allow at the time of reissue of the remaining 3,000 shares? 1
(a) ₹28,000 (b) ₹ 21,000 (c) ₹ 16,000 (d) ₹ 9,000

OR

On 2nd March,2023, LB Ltd. issued 635, 9% Debentures of ₹ 500 each. Company wants to raise its capital so they issued debentures. Debentures were issued at 5% discount, redeemable at 10% premium. How much amount is debited in loss on issue of debentures accounts?

(a) ₹47,000 (b) ₹47625 (c) ₹50,000 (d) ₹ 52,000

4 Value of stock given in Balance Sheet is ₹ 50,000. If value of stock is under-valued by 20% then 1

(a) Revaluation A/c will be credited by ₹ 12,500 (b) revaluation A/c will be debited by ₹12500 (c) revaluation A/c will be debited by ₹10,000 (d) revaluation A/c will be credited by ₹ 10,000.

OR

P, Q and R are in a partnership business. Q used ₹ 10,000 belonging to the firm without the information to other partners and incurred a loss of ₹ 1,000 by using this amount. Which decision should be taken by the firm to rectify this situation?

(a) Q need to return ₹ 10,000 to the firm. (b) Q wants that the firm should bear loss ₹ 1,000 (c) Q is required to pay back ₹ 9,000 only equally to P and R (d) Q need to return only ₹ 9,000 to the firm.

5 Which one of the following items is not an appropriation out of profits 1
(a) Interest on capital (b) Salary to a partner (c) Commission to a partner
(d) Interest on partner's loan

6 A company issued debentures of ₹ 100 each at par for the purchases of the following assets and liabilities from G.Bros. at purchase consideration of ₹ 15,00,000. 1

Plant ₹ 350,000; Stock ₹ 450,000; Land and Building ₹ 600,000 Sundry

Creditors ₹100,000. What is the value of goodwill?

(a) ₹ 100,000 (b) ₹ 200,000 (c) ₹ 250,000 (d) ₹ 400,000

OR

Which of the following statements is correct about debentures?

(a) Interest on debentures is an appropriation of profits.
(b) A Debenture issued at a discount, can be redeemed at a premium
(c) A debenture-holder is an owner of the company.
(d) A debenture-holder receives interest only in the event of profits.

7 Assertion(A): Securities Premium can be utilised to write off preliminary expenses of a company. 1

Reason (R): The excess of issue price of shares over its face value is termed

as securities premium.

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

8 A and B are partners in a firm. Their capitals were A ₹ 300,000; B ₹ 1 200,000. During the year 2022 the firm earned a profit of ₹ 150,000. What is the value of goodwill of the firm assuming that the normal rate of return is 20%? (a) ₹200,000 (b) ₹ 250,000 (c) ₹ 300,000 (d) ₹ none of these

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. 1

J and V were partners sharing profit in 4:1 with capitals of ₹ 300,000 and ₹ 200,000 respectively. Interest on capital was agreed @5% pa. V's annual salary was decided ₹ 25,000 during 2022-23. After V's salary but before interest on capital, profit amounted to ₹ 140,000. A provision for manager's commission was to be provided @5% of profits.

J was allowed for commission on turnover @2%. V will get commission

of 5% on profit after deducting interest, salary and commission (including his own commission). Turnover for the year was 500,000. Following is their Profit and Loss Appropriation A/c.

Particulars	₹	Particulars	₹
To V's capital(Salary)	25000	By Net Profit	_(2)_
To Capital A/c-			
Interest on capital			
J	-----		
V	-----		
To Capital A/c-			
Commission			
J	-----		
V	-----		
To Capital A/c-			
Share of Profit			
J	_(1)_		
V	-----		

	=====		=====

9 The amount to be reflected in blank (1) will be 1
 (a) ₹ 55,000 (b) ₹ 36,858 (c) ₹ 55,285 (d) none of these

10 The amount to be reflected in blank (2) will be 1
 (a) ₹ 156,750 (b) ₹ 140,000 (c) ₹ 165,000 (d) none of these

11 What is the meaning of mutual agency in a partnership firm? 1
 (a) The firm will carry on a lawful business (b) The partners will share the profits/losses of the business (c) Business may be carried on by all the partners or by any of them acting for all (d) none of these

12 A company forfeited 1,000 shares of ₹ 10 each originally issued at par held by X for non-payment of allotment money of ₹ 4 per share. The called up value per share was ₹ 8. On forfeiture, the amount debited to share capital account will be (a) ₹ 2,000 (b) ₹ 8,000 (c) ₹ 10,000 (d) ₹ 18,000.

13 G.Ltd. had allotted 10,000 shares to the applicants of 14,000 shares on pro-rata basis. The amount payable on application is ₹ 2 per share. M applied for 420 shares. The number of shares allotted and the amount carried forward for adjustment against allotment money due from M are
(a) 340 shares, ₹ 120 (b) 300 shares, ₹ 120 (c) 300 shares, ₹ 240 (d) 320 shares, ₹ 240

A company forfeited 3,000 shares of ₹ 10 each, on which only ₹ 5 per share (including ₹ 1 premium) has been paid. Out of these few shares were re-issued at a discount of ₹ 1 per share and ₹ 6,000 were transferred to capital reserve. How many shares were re-issued? (a) 1000 shares (b) 1500 shares (c) 2000 shares (d) 3000 shares

14 Goodwill of the firm is valued at ₹ 40,000. It is appearing in the books at ₹ 10,000. C is admitted for $1/4^{\text{th}}$ share. What amount C will bring for his share of goodwill? (a) ₹3,000 (b) ₹4,500 (c) ₹ 10,000 (d) ₹ 12,000

15 What is the interest on drawings @12%pa for the year ended 31st December, 2022 of Asok, a partner, if he withdrew ₹ 5,000 at the middle of each quarter (a) ₹ 1800 (b) ₹ 1500 (c) ₹ 1200 (d) none of these

OR

G and B are partners in a firm. G withdrew ₹ 800 per month at the beginning of each month for 6 months ending on 31st December, 2022. B withdrew ₹800 per month at the end of every month for 6 months ending on 31st December, 2022 Calculate interest on drawings @15%pa on 31st December, 2022.

the year 2022 amounted to ₹ 3,00,000. Sales of ₹1,00,000 amounted between the period from 1st January 2023 to 31st March 2023. The profit for the year 2022 amounted to ₹ 30,000. What is the amount of profit upto B's death.

18 A and B are partners sharing profits and losses in the ratio of 1:2. Their drawings were ₹20,000 and ₹ 30,000. Interest on drawings @ 6% pa was charged, though there was no provision in their partnership deed. Rectify the above by passing an adjustment entry. Show workings clearly. 3

OR

R and M were partners sharing profits and losses in the ratio of 7:5. Their fixed capitals were ₹ 10,00,000 and ₹ 7,00,000 respectively. The partnership deed provided for the following: (a) Interest on capital @ 12% pa. (b) R's salary ₹ 6,000 per month and M's salary ₹ 60,000 per year. The profit for the year ended 31.03.2023 was ₹ 504,000 which was distributed equally, without providing for the above. Rectify the above by passing an adjustment entry. Show workings clearly.

19 X Ltd. obtained a loan of ₹ 400,000 from State Bank of India. The company issued 5000, 9% Debentures of ₹ 100 each as a collateral security for the same. Pass necessary journal entries and show how these items will be presented in the Balance Sheet of the company. 3

OR

M Ltd. took over assets of ₹ 840,000 and liabilities of ₹ 80,000 of R Ltd. at an agreed value of ₹ 720,000. M Ltd. paid to R Ltd. by issue of 9% Debentures of ₹ 100 each at a premium of 20%. Pass necessary journal entries to record the above transactions in the books of M Ltd.

20 A business earned an average profit of ₹ 800,000 during the last few years. The normal rate of profit in the similar type of business is 10%. The total value of assets and liabilities of the business were ₹ 22,00,000 and ₹560,000 respectively. Calculate the value of goodwill of the firm by super profit method if it is valued at $2\frac{1}{2}$ years' purchase of super profits. 3

21 The authorised capital of S.Ltd. is ₹ 45,00,000 divided into 30,000 shares of ₹ 150 each. Out of these, company issued 15,000 shares of ₹ 150 each at a premium of ₹ 10 per share. The amount was payable as follows. ₹ 50 on application, ₹ 40 per share on allotment (including premium), ₹ 30 per share on first call and balance on final call. Public applied for 14,000 shares. All the money was duly received. 4
 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 A and S were partners in a firm sharing profits and losses in the ratio 3:2. 4
 They decided to dissolve the firm on 31st December,2022, when their Balance Sheet was as under.

Liabilities	₹	Asset	₹
Capital A/cs			
A 17,500		Machinery	16,000
S <u>10,000</u>	27,500	Investments	4,000
Profit and Loss A/c	1,500	Stock	3,000
Creditors	<u>2,000</u>	Debtors	2,000
	<u>31,000</u>	Cash at Bank	<u>6,000</u>
			<u>31,000</u>

The firm was dissolved on the following terms:

- (a) Assets were realised as follows: Debtors ₹ 1800 and Stock ₹ 2800
- (b) Machinery was sold for ₹ 20,000 at commission of 10%
- (c) A took over the investments at an agreed value of ₹ 3800
- (d) Creditors of the firm agreed to accept 5% less.
- (e) Expenses of realisation of assets amounted to ₹ 400
- (f) An unrecorded furniture is sold for ₹ 10,000.

Prepare Realisation A/c to close the books of the firm.

23 (a)L.Ltd. issued 2,000, 10% Debenture of ₹ 200 each at a discount of 7% 6
 redeemable at a premium of 8% after 9 years. Pass necessary entries in the books of L.Ltd.

(b) Z.Ltd. issued ₹ 100,000, 9% Debenture of ₹100 each at a premium of 5% and redeemable at a premium of 5%. Pass necessary entries in the books of Z.Ltd.

24 A,B and C were partners in a firm sharing profits and losses in the ratio 6 5:3:2. Their Balance Sheet as at 31st March,2022 was as follows:

Balance Sheet as at 31.03.2022

Liabilities	₹	Assets	₹
Capital A/cs			
A 30,000		Building	20,000
B 25,000		Machinery	30,000
C 15,000	70,000	Patents	6,000
General Reserve	10,000	Stock	10,000
Creditors	7,000	Cash in hand	21,000
	<u>87,000</u>		<u>87,000</u>

C died on 1st October, 2022. It was agreed between the executors and the remaining partners that

- (a) Goodwill to be valued at 2 years' purchase of the average profits of the previous 5 years which were 2018: ₹ 15,000; 2019: ₹ 13,000; 2020: ₹ 12,000; 2021: ₹ 15,000 and 2022: ₹ 20,000.
- (b) Patents be valued at ₹ 8,000; Machinery at ₹ 28,000 and Buildings at ₹ 30,000.
- (c) Profit for the year 2022-23 be taken as having accrued at the same rate as that of the previous year.
- (d) Interest on capital be provided at 10%pa
- (e) A sum of ₹ 7750 was paid to his executors immediately.

Prepare C's Capital Account at the time of his death. Show workings clearly.

25 S.Ltd. invited applications for issuing 200,000 shares of ₹ 100 each at 6 premium of ₹ 10 per share. The amount was payable as follows:

On Application - ₹ 40 per share (including premium)

On Allotment -₹ 30 per share

On First and Final call - Balance

Applications for 300,000 share were received. Applications for 40,000 shares were rejected and pro-rata allotment was made to the remaining applicants. Over-payment on applications were adjusted towards sum due on allotment. M who was allotted 2,000 shares failed to pay the allotment and first and final call money. His shares were forfeited. The forfeited

shares were reissued @ ₹ 90 per share fully paid-up.

Pass necessary journal entries in the books of S.Ltd, showing the workings clearly.

OR

X Ltd. issued 50,000 shares of ₹10 each at a premium of ₹2 per share payable as follows:

On application : ₹3

On Allotment : ₹6 (including premium)

On first and final call : ₹3

Applications were received for 75,000 shares and a pro rata allotment was made as follows:

To the applicants of 40,000 shares, 30,000 shares were issued and for the rest, 20,000 shares were issued. All the money due was received except the allotment and call money from R, who had applied for 1,200 shares (out of the group of 40,000 shares). All his shares were forfeited. The forfeited shares were re-issued for ₹7 per share fully paid up.

Pass necessary journal entries for the above transactions.

26 X and Y were partners in a firm sharing profits in the ratio 5:3. They 6 admitted Z as a new partner for $\frac{1}{3}$ rd share in the profits. Z was to contribute ₹ 20,000 as his capital. The Balance Sheet of X and Y on 1st April, 2022 on the date of Z's admission was as follows.

Balance Sheet as at 31.03.2022

Liabilities	₹	Assets	₹
Capital A/cs		Land and Building	25,000
X 50,000		Plant & Machinery	30,000
<u>Y 35,000</u>	85,000	Investment	20,000
		Stock	15,000
General Reserve	16,000	Debtors 20,000	
Creditors	<u>27,000</u>	Less Provision for Bad Debt <u>1,500</u>	18,500
	<u>128,000</u>	Cash	<u>19,500</u>
			<u>128,000</u>

Other terms agreed upon were:

(a) Goodwill of the firm was valued at ₹ 12,000

(b) Land and Building were to be valued at ₹ 35,000 and Plant and

Machinery at ₹ 25,000.

- (c) The provision for bad debts was found to be in excess by ₹ 400
- (d) A liability for ₹ 1,000 included in creditors was not likely to arise.
- (e) The capitals of the partners be adjusted on the basis of Z's contribution of capital in the firm
- (f) Excess or shortfall, if any, to be transferred to current accounts.

Prepare Revaluation A/c and Partners' Capital A/c of the reconstituted firm.

OR

A, G and S were partners in a firm sharing profits and losses in proportion to their capitals. Their Balance Sheet as at 31st March, 2022 was as follows:

Balance Sheet as at 31.03.2022

Liabilities				
Capital A/cs			Land and Building	500,000
A	200,000		Investments	120,000
G	200,000		Debtors	150,000
S	<u>100,000</u>	500,000	Less Provision for Bad Debt <u>10,000</u>	140,000
Investment Fluctuation Fund		40,000		
General Reserve		30,000	Stock	100,000
Creditors		<u>460,000</u>	Cash at Bank	<u>170,000</u>
		<u>1030,000</u>		<u>1030,000</u>

On the above date A retired from the firm and the remaining partners decided to carry on the business. It was agreed to revalue the assets and liabilities as follows.

- (a) Goodwill of the firm was valued at ₹ 3,00,000 and A's share of goodwill was adjusted in the capital accounts of the remaining partners G and S.
- (b) Land and Building was to be brought upto 120% of its book value.
- (c) Bad debts amounted to ₹ 20,000. A provision for bad debts was to be maintained at 10% on debtors
- (d) Market value of investments was ₹ 110,000.
- (e) ₹ 100,000 was paid immediately by cheque to A out of the amount due and the balance was to be transferred to his loan account which was to be paid in two equal annual instalments along with interest @ 10% pa.

Prepare Revaluation A/c and Partners' Capital A/c of the reconstituted firm.

PART B
Analysis of Financial Statements

27 The main objective of analysis of financial statement is _____ 1

- (a) to assess the total liabilities of the firm
- (b) to assess the total expenses of the firm
- (c) to measure the financial strength of the business
- (d) to know about historical cost concept.

OR

Which one of the following is correct?

- (i) Quick Ratio can be more than Current Ratio
- (ii) High Inventory Turnover Ratio is good for an organisation, except when goods are bought in small lots or sold quickly at low margins to realise cash. (iii) Sum of Operating Ratio and Operating Profit Ratio is always 100%

- (a) All are correct (b) Only (i) and (iii) are correct.
- (c) Only (ii) and (iii) are correct (d) Only (i) and (ii) are correct

28 If total sales is ₹250,000 and credit sales is 25% of cash sales, the amount 1 of credit sales will be:(a) ₹ 16,000 (b) ₹ 50,000 (c) ₹ 200,000 (d) ₹ 300,000

29 Statement I: Purchase of goodwill is classified as Investing Activity in 1 case

of all the enterprises.

Statement II: Purchase of goodwill by a finance company is classified under

Financing Activity while preparing Cash Flow Statement.

In the context of above two statements, which of the following is correct?

- (a) Both statements are correct
- (b) Both statements are incorrect
- (c) Statement I is correct and Statement II is incorrect
- (d) Statement I is incorrect and Statement II is correct

OR

Which of the following transactions will not result in flow of cash?

- (a) Purchases of building of ₹10,00,000 for cash
- (b) Issue of equity shares of ₹ 12,00,000 for cash
- (c) Cash deposited into bank ₹ 12,00,000
- (d) Redemption of 8% Debenture of ₹ 5,00,000 for cash

30 Profit before tax of a company was ₹ 274000. Calculate before working 1 capital changes from the following information.

- (i) Depreciation on fixed assets ₹ 20,000
- (ii) Transfer to general reserve ₹ 44,000
- (iii) Loss on sale of furniture ₹ 1,000
- (iv) Profit on sale of machinery ₹ 6,000.

(a) ₹ 289,000 (b) ₹ 301,000 (c) ₹ 295,000 (d) ₹ 299,000

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) Loose Tools (b) Sundry Creditors (c) Stock-in-trade (d) Outstanding Salary (e) Provision for Tax (f) Capital Reserve

32 From the following information calculate (a) Debt-Equity ratio and (b) 3 Return on Investment.

Information:

Equity Share Capital ₹ 50,000; General Reserve ₹ 5,000 Statement of Profit and Loss (Profit after Interest and Tax) ₹ 15,000; 9% Debentures ₹ 20,000; Creditors ₹ 15,000; Land and Building ₹ 65,000; Equipments ₹ 15,000 Debtors ₹ 14,500 and Cash ₹ 5,500.

33 From the following information related to Statement of Profit and Loss of 4 M Ltd. for the years ended

Particulars	Note No.	2020-21 (₹)	2021-22 (₹)
Revenue from Operations		16,00,000	20,00,000
Employee Benefit Expenses		800,000	10,00,000
Other Expenses		200,000	100,000
Income Tax		40%	40%

OR

Prepare a common size income statement of S.Ltd. with the help of following information:

Particulars	Note No.	2020-21 (₹)	2021-22 (₹)
Revenue from Operations		600,000	800,000
Gross Profit		50% of Sales	45% of Sales
Indirect Expenses		25% of Gross Profit	25% of Gross Profit
Cost of Goods Sold		428,000	728,000
Other Incomes		10,000	12,000
Income tax		30%	30%

34 From the following Balance Sheet of D Ltd. and additional information as at 31st March,2022, prepare a Cash Flow Statement: 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		30,00,000	21,00,000
(b) Reserves and Surplus	1	4,00,000	5,00,000
2. Non-Current Liabilities			
Long-term Borrowings	2	8,00,000	5,00,000
3. Current Liabilities			
(a) Trade Payables		1,50,000	1,00,000
(b) Short-Term Provisions	3	<u>76,000</u>	<u>56,000</u>
Total		<u>44,26,000</u>	<u>32,56,000</u>
II. ASSETS			
1. Non-Current Assets			
Property, Plant and Equipment and Intangible Assets	4		
(a) Property,Plant &Equipment		27,00,000	20,00,000
(b) Intangible Assets		8,00,000	7,00,000
2. Current Assets			
(a) Current Investments		89,000	78,000
(b) Inventories		8,00,000	4,00000
(c) Cash and Cash Equivalents		<u>37,000</u>	<u>78,000</u>
Total		<u>44,26,000</u>	<u>32,56,000</u>

Notes to Accounts

Particulars	31.3.2022(₹)	31.3.2021(₹)
1. Reserve and Surplus		
Surplus,i.e.,Balance in Statement of Profit or Loss	<u>4,00,000</u>	<u>5,00,000</u>
2. Long term Borrowings		
8% Debenture	<u>8,00,000</u>	<u>5,00,000</u>
3. Short term Provisions		
Provision for Tax	<u>76,000</u>	<u>56,000</u>
4. Property, Plant and Equipment		
Machinery	33,00,000	25,00,000
Less Accumulated Depreciation	<u>(6,00,000)</u>	<u>5,00,000)</u>
	<u>27,00,000</u>	<u>(20,00,000)</u>

Additional Information:

- (a) During the year a machinery costing ₹ 800,000 on which accumulated depreciation was ₹ 320,000 was sold for ₹ 640,000.
- (b) Debentures were issued on 1st April,2021

Name: _____ Sec: _____ Roll No.: _____

CODE - B

BURNPUR RIVERSIDE SCHOOL, BURNPUR
PRE-BOARD EXAMINATION : [2023-24]
ACCOUNTANCY
CLASS – XII

Time: 3 Hrs.

Maximum Marks: 80

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.

1 Which one of the following items is not an appropriation out of profits 1
(a) Interest on capital (b) Salary to a partner (c) Commission to a partner
(d) Interest on partner's loan

2 Value of stock given in Balance Sheet is ₹ 50,000. If value of stock is 1
under-valued by 20% then
(a) Revaluation A/c will be credited by ₹ 12,500 (b) revaluation A/c will
be debited by ₹ 12500 (c) revaluation A/c will be debited by ₹ 10,000 (d)
revaluation A/c will be credited by ₹ 10,000.

OR

P, Q and R are in a partnership business. Q used ₹ 10,000 belonging to the firm without the information to other partners and incurred a loss of ₹ 1,000 by using this amount. Which decision should be taken by the firm to rectify this situation?

(a) Q need to return ₹ 10,000 to the firm. (b) Q wants that the firm should

bear loss ₹ 1,000 (c) Q is required to pay back ₹ 9,000 only equally to P and R (d) Q need to return only ₹ 9,000 to the firm.

3 A and B are partners in a firm. Their capitals were A ₹ 300,000; B ₹ 1 200,000. During the year 2022 the firm earned a profit of ₹ 150,000. What is the value of goodwill of the firm assuming that the normal rate of return is 20%?
(a) ₹ 200,000 (b) ₹ 250,000 (c) ₹ 300,000 (d) none of these

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

4 Assertion(A): D, E and F are partners in a firm. The partnership deed provided, salary to E of ₹ 5,000 per month. D and F also demanded the same salary, i.e. ₹ 60,000 p.a. each. Thus salaries are allowed. 1

Reason (R): In absence of Partnership Deed, provisions of the Partnership Deed, provisions of the Partnership Act, 1932 apply. Thus salaries are not be allowed to them.

(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

5 What is the meaning of mutual agency in a partnership firm? 1
(a) The firm will carry on a lawful business (b) The partners will share the profits/losses of the business (c) Business may be carried on by all the partners or by any of them acting for all (d) none of these

6 At the time of dissolution of a firm, creditors are ₹ 70,000; firm's capital is ₹ 1,20,000; cash balance is ₹ 10,000. Other assets realised ₹ 150,000. Gain/Loss in the realisation account will be 1
(a) ₹ 30,000 (Gain) (b) ₹ 30,000 (Loss)
(c) ₹ 40,000 (Gain) (d) ₹ 40,000 (Loss)

7 What is the interest on drawings @12%pa for the year ended 31st December,2022 of Asok ,a partner, if he withdrew ₹ 5,000 at the middle of each quarter
(a) ₹ 1800 (b) ₹ 1500 (c) ₹ 1200 (d) none of these

OR

G and B are partners in a firm. G withdrew ₹ 800 per month at the beginning of each month for 6 months ending on 31st December,2022. B withdrew ₹800 per month at the end of every month for 6 months ending on 31st December, 2022 Calculate interest on drawings @15%pa on 31st December, 2022.

(a) G - ₹ 320, B- ₹ 280 (b) G - ₹ 180, B- ₹ 220
(c) G - ₹ 210, B- ₹ 150 (d) none of these

8 A company issued debentures of ₹ 100 each at par for the purchases of the following assets and liabilities from G.Bros. at purchase consideration of ₹ 15,00,000.
Plant ₹ 350,000; Stock ₹ 450,000; Land and Building ₹ 600,000 Sundry Creditors ₹100,000. What is the value of goodwill?
(a)₹ 100,000 (b) ₹ 200,000 (c) ₹ 250,000 (d) ₹ 400,000

OR

Which of the following statements is correct about debentures?

(a) Interest on debentures is an appropriation of profits.
(b) A Debenture issued at a discount, can be redeemed at a premium
(c) A debenture-holder is an owner of the company.
(d) A debenture-holder receives interest only in the event of profits.

Read the following hypothetical situation, answer question no. 9 and 10. 1
J and V were partners sharing profit in 4:1 with capitals of ₹ 300,000 and ₹ 200,000 respectively. Interest on capital was agreed @5% pa. V's annual salary was decided ₹ 25000 during 2022-23. After V's salary but before interest on capital, profit amounted to ₹ 140,000. A provision for manager's commission was to be provided @ 5% of profits.

J was allowed for commission on turnover @ 2%. V will get commission of 5% on profit after deducting interest, salary and commission (including

his own commission). Turnover for the year was 500,000. Following is their Profit and Loss Appropriation A/c.

Particulars	₹	Particulars	₹
To V's capital(Salary)	25000	By Net Profit	_(2)_
To Capital A/c-			
Interest on capital			
J	-----		
V	-----		
To Capital A/c-			
Commission			
J	-----		
V	-----		
To Capital A/c-			
Share of Profit			
J	_(1)_		
V	-----		
	-----		-----
	-----		-----

9 The amount to be reflected in blank (1) will be 1
 (a) ₹ 55,000 (b) ₹ 36,858 (c) ₹ 55,285 (d) none of these

10 The amount to be reflected in blank (2) will be 1
 (a) ₹ 156,750 (b) ₹ 140,000 (c) ₹ 165,000 (d) none of these

11 If 10,000 shares of ₹ 10 each were forfeited for non-payment of final call 1
 money of ₹ 3 per share and only 7,000 shares were re-issued @ ₹11 per
 share as fully paid up, then what is the amount of maximum possible
 discount that company can allow at the time of reissue of the remaining
 3,000 shares?
 (a) ₹ 28,000 (b) ₹ 21,000 (c) ₹ 16,000 (d) ₹ 9,000

OR

On 2nd March, 2023, LB Ltd. issued 635, 9% Debentures of ₹ 500 each. Company wants to raise its capital so they issued debentures. Debentures were issued at 5% discount, redeemable at 10% premium. How much amount is debited in loss on issue of debentures accounts?

(a) ₹47,000 (b) ₹ 47625 (c) ₹ 50,000 (d) ₹ 52,000

12 Assertion(A): M Ltd. had issued 10,000 equity shares of ₹ 10 each. It received nominal (face) value of the shares except first and final call of ₹ 3 per share on 1000 shares. These 1000 equity shares will be shown as 'Subscribed but not fully paid up' under 'Subscribed Capital'.

Reason(R): The company has not received ₹ 3 per share on 1000 equity shares. Hence these shares are not fully paid up. They will be shown as 'Subscribed but not fully paid up' under 'Subscribed capital'.

(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

13 A company forfeited 1,000 shares of ₹ 10 each originally issued at par held by X for non-payment of allotment money of ₹ 4 per share. The called up value per share was ₹ 8. On forfeiture, the amount debited to share capital account will be

(a) ₹ 2,000 (b) ₹ 8,000 (c) ₹ 10,000 (d) ₹ 18,000.

14 G.Ltd. had allotted 10,000 shares to the applicants of 14,000 shares on pro-rata basis. The amount payable on application is ₹ 2 per share. M applied for 420 shares. The number of shares allotted and the amount carried forward for adjustment against allotment money due from M are
(a) 340 shares, ₹ 120 (b) 300 shares, ₹ 120 (c) 300 shares, ₹ 240 (d) 320 shares, ₹ 240

15 Goodwill of the firm is valued at ₹ 40,000. It is appearing in the books at ₹ 10,000. C is admitted for 1/4th share. What amount C will bring for his share of goodwill?

(a) ₹ 3,000 (b) ₹ 4,500 (c) ₹ 10,000 (d) ₹ 12,000

16 A, B, C and D are in partnership sharing profits and losses in the ratio of 1 36:24:20:20. E joins the partnership for 20% share and A, B, C and D in future would share profits among themselves as 3:4:2:1. Calculate new profit sharing ratio of A,B,C,D and E after E's admission
(a) 6:4:5:2:1 (b) 5:4:3:2:1 (c) 4:4:2:2:1 (d) 6:8:4:2:5

17 X Ltd. obtained a loan of ₹ 400,000 from State Bank of India. The company issued 5000, 9% Debentures of ₹ 100 each as a collateral security for the same. Pass necessary journal entries and show how these items will be presented in the Balance Sheet of the company.

OR

M Ltd. took over assets of ₹ 840,000 and liabilities of ₹ 80,000 of R Ltd. at an agreed value of ₹ 720,000. M Ltd. paid to R Ltd. by issue of 9% Debentures of ₹ 100 each at a premium of 20%. Pass necessary journal entries to record the above transactions in the books of M Ltd.

18 A business earned an average profit of ₹ 8,00,000 during the last few 3 years. The normal rate of profit s in the similar type of business is 10%. The total value of assets and liabilities of the business were ₹ 22,00,000 and ₹5,60,000 respectively. Calculate the value of goodwill of the firm by super profit method if it is valued at $2\frac{1}{2}$ years' purchase of super profits.

19 A and B are partners sharing profits and losses in the ratio of 1:2. Their drawings were ₹20,000 and ₹ 30,000. Interest on drawings @ 6% pa was charged, though there was no provision in their partnership deed. Rectify the above by passing an adjustment entry. Show workings clearly.

OR

R and M were partners sharing profits and losses in the ratio of 7:5. Their fixed capitals were ₹ 10,00,000 and ₹ 7,00,000 respectively. The partnership deed provided for the following: (a) Interest on capital @ 12% pa. (b) R's salary ₹ 6,000 per month and M's salary ₹ 60,000 per year. The profit for the year ended 31.03.2023 was ₹ 504,000 which was distributed equally, without providing for the above. Rectify the above by passing an adjustment entry. Show workings clearly.

20 A, B and C are partners sharing profits in the ratio 2:2:1. B died on 31st 3 March,2023. Accounts are closed on 31st December every year. Sales for the year 2022 amounted to ₹ 3,00,000. Sales of ₹ 1,00,000 amounted between the period from 1st January 2023 to 31st March 2023. The profit for the year 2022 amounted to ₹ 30,000. What is the amount of profit upto B's death.

21 A and S were partners in a firm sharing profits and losses in the ratio 3:2. 4 They decided to dissolve the firm on 31st December,2022, when their Balance Sheet was as under.

Liabilities	₹	Asset	₹
Capital A/cs			
A 17,500		Machinery	16,000
S <u>10,000</u>	27,500	Investments	4,000
Profit and Loss A/c	1,500	Stock	3,000
Creditors	<u>2,000</u>	Debtors	2,000
	<u>31,000</u>	Cash at Bank	<u>6,000</u>
			<u>31,000</u>

The firm was dissolved on the following terms:

- (a) Assets were realised as follows: Debtors ₹ 1800 and Stock ₹ 2800
- (b) Machinery was sold for ₹ 20,000 at commission of 10%
- (c) A took over the investments at an agreed value of ₹ 3800
- (d) Creditors of the firm agreed to accept 5% less.
- (e) Expenses of realisation of assets amounted to ₹ 400
- (f) An unrecorded furniture is sold for ₹ 10,000.

Prepare Realisation A/c to close the books of the firm.

22 The authorised capital of S.Ltd. is ₹ 45,00,000 divided into 30,000 shares 4 of ₹ 150 each. Out of these, company issued 15,000 shares of ₹ 150 each at a premium of ₹ 10 per share. The amount was payable as follows. ₹ 50 on application, ₹ 40 per share on allotment (including premium), ₹ 30 per share on first call and balance on final call. Public applied for 14,000 shares. All the money was duly received.

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 A,B and C were partners in a firm sharing profits and losses in the ratio 6:5:3:2. Their Balance Sheet as at 31st March,2022 was as follows:

Balance Sheet as at 31.03.2022

Liabilities	₹	Assets	₹
Capital A/cs			
A 30,000		Building	20,000
B 25,000		Machinery	30,000
C 15,000	70,000	Patents	6,000
General Reserve	10,000	Stock	10,000
Creditors	7,000	Cash in hand	21,000
	<u>87,000</u>		<u>87,000</u>

C died on 1st October, 2022. It was agreed between the executors and the remaining partners that

- (a) Goodwill to be valued at 2 years' purchase of the average profits of the previous 5 years which were 2018: ₹ 15,000; 2019: ₹ 13,000; 2020: ₹ 12,000; 2021: ₹ 15,000 and 2022: ₹ 20,000.
- (b) Patents be valued at ₹ 8,000; Machinery at ₹ 28,000 and Buildings at ₹ 30,000.
- (c) Profit for the year 2022-23 be taken as having accrued at the same rate as that of the previous year.
- (d) Interest on capital be provided at 10%pa
- (e) A sum of ₹ 7750 was paid to his executors immediately.

Prepare C's Capital Account at the time of his death. Show workings clearly.

24 (a)Y.Ltd. issued 9,000, 9% Debenture of ₹ 50 each at a discount of 8% 6 redeemable at par any time after 9 years. Pass necessary entries in the books of Y.Ltd.

(b) Z.Ltd. issued 80, 9% Debenture of ₹1,000 each at a premium of 5% and redeemable at par any time after 5 years. Pass necessary entries in the books of Z.Ltd.

25 X and Y were partners in a firm sharing profits in the ratio 5:3. They 6 admitted Z as a new partner for $1/3^{\text{rd}}$ share in the profits. Z was to contribute ₹ 20,000 as his capital. The Balance Sheet of X and Y on 1st April,2022 on the date of Z's admission was as follows.

Balance Sheet as at 31.03.2022

Liabilities	₹	Assets	₹
Capital A/cs		Land and Building	25,000
X 50,000		Plant & Machinery	30,000
Y <u>35,000</u>	85,000	Investment	20,000
General Reserve	16,000	Stock	15,000
Creditors	<u>27,000</u>	Debtors 20,000	
	<u>128,000</u>	Less Provision for Bad Debt <u>1,500</u>	18,500
		Cash	<u>19,500</u>
			<u>128,000</u>

Other terms agreed upon were:

- (a) Goodwill of the firm was valued at ₹ 12,000
- (b) Land and Building were to be valued at ₹ 35,000 and Plant and Machinery at ₹ 25,000.
- (c) The provision for bad debts was found to be in excess by ₹ 400
- (d) A liability for ₹ 1,000 included in creditors was not likely to arise.
- (e) The capitals of the partners be adjusted on the basis of Z's contribution of capital in the firm
- (f) Excess or shortfall, if any, to be transferred to current accounts.

Prepare Revaluation A/c and Partners' Capital A/c of the reconstituted firm.

OR

A, G and S were partners in a firm sharing profits and losses in proportion to their capitals. Their Balance Sheet as at 31st March, 2022 was as follows:

Balance Sheet as at 31.03.2022

Liabilities				
Capital A/cs				
A	200,000		Land and Building	500,000
G	200,000		Investments	120,000
S	<u>100,000</u>	500,000	Debtors	150,000
Investment Fluctuation Fund		40,000	Less Provision for Bad Debt	<u>10,000</u>
General Reserve		30,000	Stock	100,000
Creditors		<u>460,000</u>	Cash at Bank	<u>170,000</u>
		<u>1030,000</u>		<u>1030,000</u>

On the above date A retired from the firm and the remaining partners decided to carry on the business. It was agreed to revalue the assets and liabilities as follows.

- (a) Goodwill of the firm was valued at ₹ 3,00,000 and A's share of goodwill was adjusted in the capital accounts of the remaining partners G and S.
- (b) Land and Building was to be brought upto 120% of its book value.
- (c) Bad debts amounted to ₹ 20,000. A provision for bad debts was to be maintained at 10% on debtors
- (d) Market value of investments was ₹ 110,000.
- (e) ₹ 100,000 was paid immediately by cheque to A out of the amount due and the balance was to be transferred to his loan account which was to be paid in two equal annual instalments along with interest @ 10% pa.

Prepare Revaluation A/c and Partners' Capital A/c of the reconstituted firm.

26 S.Ltd. invited applications for issuing 200,000 shares of ₹ 100 each at 6 premium of ₹ 10 per share. The amount was payable as follows:

On Application - ₹ 40 per share (including premium)

On Allotment - ₹ 30 per share

On First and Final call – Balance

Applications for 300,000 share were received. Applications for 40,000 shares were rejected and pro-rata allotment was made to the remaining applicants. Over-payment on applications were adjusted towards sum due

on allotment. M who was allotted 2,000 shares failed to pay the allotment and first and final call money. His shares were forfeited. The forfeited shares were reissued @ ₹ 90 per share fully paid-up.

Pass necessary journal entries in the books of S.Ltd, showing the workings clearly.

OR

X Ltd. issued 50,000 shares of ₹10 each at a premium of ₹2 per share payable as follows:

On application : ₹3
On Allotment : ₹6, (including premium)
On first and final call : ₹3

Applications were received for 75,000 shares and a pro rata allotment was made as follows:

To the applicants of 40,000 shares, 30,000 shares were issued and for the rest, 20,000 shares were issued. All the money due was received except the allotment and call money from R, who had applied for 1,200 shares (out of the group of 40,000 shares). All his shares were forfeited. The forfeited shares were re-issued for ₹7 per share fully paid up.

Pass necessary journal entries for the above transactions.

PART B **Analysis of Financial Statements**

27 If total sales is ₹ 250,000 and credit sales is 25% of cash sales, the amount of credit sales will be: (a) ₹ 16,000 (b) ₹ 50,000 (c) ₹ 200,000 (d) ₹ 300,000 1

28 Profit before tax of a company was ₹ 274000. Calculate before working capital changes from the following information. 1

(i) Depreciation on fixed assets ₹ 20,000
(ii) Transfer to general reserve ₹ 44,000
(iii) Loss on sale of furniture ₹ 1,000
(iv) Profit on sale of machinery ₹ 6,000.

(a) ₹ 289,000 (b) ₹ 301,000 (c) ₹ 295,000 (d) ₹ 299,000

29 The main objective of analysis of financial statement is _____ (a) to 1
assess the total liabilities of the firm (b) to assess the total expenses of the
firm (c) to measure the financial strength of the business (d) to know about
historical cost concept.

OR

Which one of the following is correct?

(i) Quick Ratio can be more than Current Ratio
(ii) High Inventory Turnover Ratio is good for an organisation, except
when goods are bought in small lots or sold quickly at low margins to
realise cash. (iii) Sum of Operating Ratio and Operating Profit Ratio is
always 100%

(a) All are correct (b) Only (i) and (iii) are correct.
(c) Only (ii) and (iii) are correct (d) Only (i) and (ii) are correct

30 Statement I: Purchase of goodwill is classified as Investing Activity in 1
case

of all the enterprises.

Statement II: Purchase of goodwill by a finance company is classified
under

Financing Activity while preparing Cash Flow Statement.

In the context of above two statements, which of the following is correct?

(a) Both statements are correct (b) Both statements are incorrect (c)
Statement I is correct and Statement II is incorrect (d) Statement I is
incorrect and Statement II is correct

OR

Which of the following transactions will not result in flow of cash?

(a) Purchases of building of ₹10,00,000 for cash
(b) Issue of equity shares of ₹ 12,00,000 for cash
(c) Cash deposited into bank ₹ 12,00,000
(d) Redemption of 8% Debenture of ₹ 5,00,000 for cash

31 From the following information calculate (a) Liquid ratio and (b) Gross 3
Profit Ratio.

Information:

Revenue from Operation (net sales) ₹ 400,000; Opening Inventory ₹

10,000; Closing Inventory ₹ 3000 less than the Opening Inventory; Net Purchase 80% of Revenue from Operation; Direct Expenses ₹ 20,000; Current Assets ₹ 1,00,000; Prepaid Expenses ₹ 3,000; Current Liabilities ₹ 60,000; 9% Debenture ₹ 400,000; Long term Loan from Bank ₹1,50,000; Equity Share Capital ₹ 800,000 and 8% Preference Share Capital 300,000.

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) Debentures (b) Sundry Debtors (c) Stores and Spares (d) Prepaid Insurance (e) Goodwill (f) Securities Premium

33 From the following information related to Statement of Profit and Loss of 4 M Ltd. for the years ended

Particulars	Note No.	2020-21 (₹)	2021-22 (₹)
Revenue from Operations		16,00,000	20,00,000
Employee Benefit Expenses		800,000	10,00,000
Other Expenses		200,000	100,000
Income Tax		40%	40%

OR

Prepare a common size income statement of S.Ltd. with the help of following information:

Particulars	Note No.	2020-21 (₹)	2021-22 (₹)
Revenue from Operations		600,000	800,000
Gross Profit		50% of Sales	45% of Sales
Indirect Expenses		25% of Gross Profit	25% of Gross Profit
Cost of Goods Sold		428,000	728,000
Other Incomes		10,000	12,000
Income tax		30%	30%

34 From the following Balance Sheet of R. Ltd. and additional information as at 31st March,2022, prepare a Cash Flow Statement: 6

Balance Sheet of D Ltd. as at 31st March,2023

Particulars	Note No.	31.3.2023(₹)	31.3.2022(₹)
I. EQUITY AND LIABILITIES			
1. Shareholders' Funds			
(a) Share Capital		9,00,000	7,00,000
(b) Reserves and Surplus	1	2,50,000	1,00,000
2. Non-Current Liabilities			
Long-term Borrowings	2	4,50,000	3,50,000
3. Current Liabilities			
(a) Short-term Borrowings	3	1,50,000	75,000
(b) Short-Term Provisions	4	<u>2,00,000</u>	<u>1,25,000</u>
Total		<u>19,50,000</u>	<u>13,50,000</u>
II. ASSETS			
(a) Non-Current Assets			
Property, Plant and Equipment and Intangible Assets			
(i) Property, Plant & Equipment	5	14,65,000	9,15,000
(ii) Intangible Assets	6	1,00,000	1,50,000
(b) Non-Current Investments		1,50,000	1,00,000
2. Current Assets			
(a) Current Investments		40,000	70,000
(b) Inventories		1,22,000	72,000
(c) Cash and Cash Equivalents		<u>73,000</u>	<u>43,000</u>
Total		<u>19,50,000</u>	<u>13,50,000</u>

Notes to Accounts

Particulars	31.3.2023(₹)	31.3.2022(₹)
1. Reserve and Surplus		
Surplus, i.e., Balance in Statement of Profit or Loss	<u>2,50,000</u>	<u>1,00,000</u>
2. Long term Borrowings		
12% Debenture	<u>4,50,000</u>	<u>3,50,000</u>
3. Short term Borrowings		
Bank Overdraft	<u>1,50,000</u>	<u>75,000</u>
4. Short term Provisions		
Provision for Tax	<u>2,00,000</u>	<u>1,25,000</u>
5. Property, Plant and Equipment		
Machinery	16,75,000	10,55,000
Less Accumulated Depreciation	(2,10,000)	(1,40,000)
	<u>14,65,000</u>	<u>9,15,000</u>
6. Intangible Assets		
Goodwill	<u>1,00,000</u>	<u>1,50,000</u>
4. Inventories		
Stock-in-Trade	<u>1,22,000</u>	<u>72,000</u>

Additional Information:

(a) ₹ 1,00,000, 12% Debentures were issued on 31st March, 2023.

(b) During the year a piece of machinery costing ₹ 80,000 on which accumulated depreciation was ₹ 40,000 was sold at a loss of ₹ 10,000.

Name: _____ Sec: _____ Roll No.: _____

CODE - A

BURNPUR RIVERSIDE SCHOOL, BURNPUR
PRE-BOARD 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 company must adhere to the provisions of the Company Act while 1 taking the dividend decision. Identify the related factor of dividend decision being mentioned in the above line.
(a) Contractual constraints (b) Legal constraints
(c) Access to capital market (d) Preferences of shareholders

2 Prabir has decided to start a business of manufacturing crockery and 1 cutlery items. In order to give a unique identification to his products, he has decided to assign the brand name 'Elegan' 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 Asok's grandfather while telling him about the past of Indian economy 1 told him that even after opening up of our new economy in 1991, foreign companies found it very difficult to cut through the bureaucratic red tape to get permit for doing business in India. Sometimes it took months to process.
As a result these companies were discouraged from investing in India but the situation has improved overtime. Identify the element of business environment which was the cause for discouragement to foreign companies based on above case.
(a) Economical (b) Social (c) Political (d) Legal

4 Ecosys Ltd. has decided to launch solar jackets, which will have an inbuilt 1 solar charges as well. In order to make its product competitive, the company has decided to offer it for sale within the range of ₹ 1500 to ₹ 4000. Identify the related function of marketing being mentioned in the above case.
(a) Promotion (b) Packaging and labelling (c) Branding (d) Pricing

5 The process of holding shares in electronic form is known as 1
(a) Demutualisation (b) Dematerialisation (c) Speculation (d) none of these

6 "Anyone can we called a manager irrespective of educational qualification 1 possessed". Identify the characteristics of the profession that management does not fulfil in the statement being discussed above.
(a) Ethical code of conduct (b) professional association (c) restricted entry (d) service motive

7 When does the Earning per share of the company rise with higher debt. 1
(a) When the rate of return on investment is higher than the rate of interest
(b) When the rate of return on investment is lower than the rate of interest
(c) When the rate of interest is more than the rate of return
(d) none of the above

8 E Ltd. is a renowned name for quality dry fruits since 1985. R, the owner 1 of E Ltd. was worried as the sales had fallen during the last two months. The Marketing Manager conducted a research and found out that customers felt that the packaging of the dry fruits was not effective in

preserving its quality. Therefore R visited the factory for sample checking of packages of dry fruits. Name the function of management being described in the above lines.

(a) Planning (b) Organising (c) Directing (d) Controlling

9 In an inter school quiz competition, the participants were shown empty bottles of soft drinks and were asked to identify the brands. All the participant were able to do so. Identify the related point highlighting the importance of packaging which is being described in the given case. 1

(a) Raising standards of health and sanitation
(b) Facilitates product differentiation
(c) Innovative packaging adds value to a product
(d) Useful in self service outlets.

10 Read the following statements: Assertion(A) and Reason(R) . Choose the correct alternative from those given below. 1

Assertion(A): The activities of each department need to be linked through coordination.

Reasoning (R): Specialists usually think that they only are qualified to evaluate, judge and decide according to their professional criteria.

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 and Reason(R) is not the correct explanation of Assertion(A).
(c) Assertion(A) is true but the Reason(R) is false
(d) Assertion(A) is false but Reason(R) is true

11 R has joined as a creative head in an entertainment company. He always ensures that the work has been divided into small and manageable activities and also the activities of similar nature are grouping together. Identify the related step in organizing process being mentioned in above lines. 1

(a) Identification and division of work (b) departmentation
(c) Establishing reporting relationship (d) Assignment of duties

12 It is an important principle of management control based on belief that an attempt to control everything results in controlling nothing. Identify the principle. 1
(a) Critical Point Control (b) Management by exception
(c) Deviation (d) All of these

13 For the following two statements choose the correct option. 1
Statement I: Advertising is an impersonal form of communication
Statement II: Advertising lacks direct feedback
(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 “The increase in the demand for any Ayurvedic medicines, health products and services in the past few months, is related to the need for building immunity and an increased awareness for health care due to the spread of Corona virus.” Identify the feature of business environment being discussed here. 1
(a) Specific and general forces (b) Inter-relatedness
(c) Relativity (d) None of these

15 B Ltd. Is one of the India’s largest information technology Services company. It has organised itself in a manner that allows customer orientation to dominate over other goals and diversified on the basis of product lines. What type of organizational structure allows for the addition of the new product lines without interrupting the existing operations in order to facilitate expansion and growth of a business enterprise? 1
(a) Functional structure (b) Divisional structure
(c) Matrix structure (d) none of these

16 One of the common irregularities noted by SEBI during the inspection of a stock exchange was that it was dealing with unregistered sub-brokers. Identify the related function of the Securities and Exchange Board of India. 1
(a) Protective function (b) Regulatory function
(c) Development function (d) None of these.

17 Which of the following is not an element of social environment? 1
(a) Birth and Death rate (b) Rates of savings and investment
(c) Population shifts (d) Life expectancy

18 Match the concept of marketing in Column I with their respective definition in Column II. 1

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 In T Ltd. The purchase department purchased 20 tonnes of raw material for the production department. However the production department required only 15 tonnes. Due to this reason, goods were produced beyond required level and were not accepted by sales department. As a result, many goods remained unsold. Identify that aspect of management lacking in the given case. 1

(a) Planning (b) coordination (c) directing (d) none of these

20 Which of the following statements is not true with regard to money market? 1

(a) It involves low market risks.
(b) It is situated at specific location
(c) Deals in unsecured and short term debt instruments
(d) The instruments traded are highly liquid.

21 S Nigam the famous playback singer always spends time for practice and adds his creativity in his singing. Like S.Nigam, Rajeev, the manager of X Ltd uses his creativity and practices management principles under different situation to manage the business. The employees are happy and satisfied as he everyday rewards employees for their punctuality and efficiency. 3

(a) Identify the nature of management highlighted above.
(b) Justify the above nature of management by explaining any two points.

22 Planning and controlling are inseparable twins of management. Explain 3 any three points to establish the relationship between planning and controlling.

OR

Explain, with example, how 'critical point control' helps in controlling process.

23 Differentiate between recruitment and selection on the basis of 3
(a) Meaning (b) Nature and (c) Contract of service

24 Mr.A is a teacher, having a reputed job with good earnings. He wants to 3 trade on a stock exchange. Explain the first three steps involved for purchase and sale of securities in a stock exchange.

OR

Explain any three regulatory functions of SEBI.

25 Explain any four barriers to communication which are concerned with 4 problems and obstructions in the process of encoding and decoding the message into words or impressions.

OR

Gaurav believes that 'money is the only motivator' therefore he accordingly offers different kinds of incentives to his employees. Sagar, who works in Gaurav's company as marketing manager feels discontentment despite his financial needs being completely fulfilled by the company and wants to leave the company. Suggest any four ways in which Gaurav can provide non-financial incentives to Sagar in order to fulfil his social and esteem needs in particular.

26 Explain any four types of tests conducted by an organisation in the process 4 of selection of its employees.

OR

Explain any four external sources of recruitment followed by an organisation.

27 Explain the following rights of a consumer as provided under Consumer Protection Act,2019. 4
(a) Right to be Heard (b) Right to seek redressal
(c) Right to be assured and (d) Right to information.

28 S.Ltd. is manufacturing steel at its plant in India. It is enjoying a buoyant demand for its products product as economic growth is about 7% to 8% and the demand for steel is growing. 4
Therefore, it is planning to set up a new steel plant to take benefit of such trends in demand. It is estimated that such an expansion will require about ₹ 5000 crore to set up and about ₹ 500 crore for working capital. As the finance manager of the company explain any four factors that should be considered while determining the capital structure for the new venture.

29 Akhil decided to set up a designer studio in a posh market in Udaipur. 4
Through a survey he has assessed that the level of competition in this segment is high. Describe briefly any four factors which he has not assessed so far and are likely to affect high pricing decisions.

30 Name the decision, a financial manager takes keeping in view the overall objective of maximising shareholders' wealth. Also explain any three factors affecting that decision. 4

31 Explain the followings. 6
(a) Fatigue Study (b) Functional Foremanship (c) Motion Study
OR
Explain the followings with example, if possible.
(a) Unity of Direction (b) Initiative (c) Subordination of individual interest to general interest.

32 Explain any six limitations of planning. 6
OR
Explain first six steps involved in the process of planning.

33 "It refers to the act of designing and producing the container or wrapper of a product." Explain briefly any six functions of the concept being described in the above lines. 6

34 After completing a course in journalism Amit joined a leading newspaper 6 company as sub-editor. Over the years, due to his hard-work, he was promoted to the post of chief editor of the company. He believes in capabilities of his subordinates. Therefore, he follows policy of selective dispersal of authority in all levels of different divisions.

(a) In the above context, state the concept used by Amit.
(b) Explain any five importance of that concept.

Name: _____ Sec: _____ Roll No.: _____

CODE - B

BURNPUR RIVERSIDE SCHOOL, BURNPUR
PRE-BOARD 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.*
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3. *Answers should be brief and to the point.*
4. *Answers to questions 1 mark may be in one word or one sentence.*
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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 It serves as an intermediary between the investor and the depository who is 1
authorised to maintain the accounts of dematerialised shares
(a) Depository (b) Depository Participant
(c) Stock Exchange (d) None of these.

2 B Ltd. Is one of the India's largest information technology Services 1
company. It has organised itself in a manner that allows customer
orientation to dominate over other goals and diversified on the basis of
product lines. What type of organizational structure allows for the addition
of the new product lines without interrupting the existing operations in
order to facilitate expansion and growth of a business enterprise?
(a) Functional structure (b) Divisional structure (c) Matrix structure
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3 In T Ltd. The purchase department purchased 20 tonnes of raw material 1 for the production department. However the production department required only 15 tonnes. Due to this reason, goods were produced beyond required level and were not accepted by sales department. As a result, many goods remained unsold. Identify that aspect of management lacking in the given case.
(a) Planning (b) Coordination (c) Directing (d) none of these

4 Since more number of people have become more health and beauty 1 conscious, our economy has witnessed an unprecedented surge I the number of health and beauty spas and wellness clinics. Related feature on business environment being described in the above lines is (a) totality of eternal forces (b) Interrelatedness (c) Dynamic nature (d) Uncertainty

5 E Ltd. is a renowned name for quality dry fruits since 1985. R, the owner 1 of E Ltd. was worried as the sales had fallen during the last two months. The Marketing Manager conducted a research and found out that customers felt that the packaging of the dry fruits was not effective in preserving its quality. Therefore R visited the factory for sample checking of packages of dry fruits. Name the function of management being described in the above lines.
(a) Planning (b) Organising (c) Directing (d) Controlling

6 R has joined as a creative head in an entertainment company. He always 1 ensures that the work has been divided into small and manageable activities and also the activities of similar nature are grouping together. Identify the related step in organizing process being mentioned in above lines.
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7 It is an important principle of management control based on belief that an attempt to control everything results in controlling nothing. Identify the principle. 1
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9 “Anyone can we called a manager irrespective of educational qualification possessed”. Identify the characteristics of the profession that management does not fulfil in the statement being discussed above. 1
(a) Ethical code of conduct (b) professional association (c) restricted entry (d) service motive

10 A company must adhere to the provisions of the Company Act while taking the dividend decision. Identify the related factor of dividend decision being mentioned in the above line. 1
(a) Contractual constraints (b) Legal constraints
(c) Access to capital market (d) Preferences of shareholders

11 It is a market for short term funds which deals in monetary assets whose period of maturity is upto one year 1
(a) Primary market (b) secondary market (c) Capital market (d) Money market

12 Match the concept of marketing in Column I with their respective 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

13 Read the following statements: Assertion(A) and Reason(R) . Choose the correct alternative from those given below.

Assertion(A): Management must be effective and efficient.

Reasoning (R): Management is a continuous process as all the management functions are simultaneously performed on continuous basis.

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 and Reason(R) is not the correct explanation of Assertion(A).
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15 Asok's grandfather while telling him about the past of Indian economy told him that even after opening up of our new economy in 1991, foreign companies found it very difficult to cut through the bureaucratic red tape

to get permit for doing business in India. Sometimes it took months to process.

As a result these companies were discouraged from investing in India but the situation has improved overtime. Identify the element of business environment which was the cause for discouragement to foreign companies based on above case. (a) Economical (b) Social (c) Political (d) Legal

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17 When does the Earning per share of the company rise with higher debt. (a) When the rate of return on investment is higher than the rate of interest (b) When the rate of return on investment is lower than the rate of interest (c) When the rate of interest is more than the rate of return (d) none of the above

18 "The increase in the demand for any Ayurvedic medicines, health products and services in the past few months, is related to the need for building immunity and an increased awareness for health care due to the spread of Corona virus." Identify the feature of business environment being discussed here. (a) Specific and general forces (b) Inter-relatedness (c) Relativity (d) None of these

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Explain, with example, how 'critical point control' helps in controlling process.

22 Mr.A is a teacher, having a reputed job with good earnings. He wants to 3 trade on a stock exchange. Explain the first three steps involved for purchase and sale of securities in a stock exchange.

OR

Explain any three protective functions of SEBI.

23 S Nigam the famous playback singer always spends time for practice and 3 adds his creativity in his singing. Like S.Nigam, Rajeev, the manager of X Ltd uses his creativity and practices management principles under different situation to manage the business. The employees are happy and satisfied as he everyday rewards employees for their punctuality and efficiency.

(a) Identify the nature of management highlighted above.
(b) Justify the above nature of management by explaining any two points.

24 Differentiate between training and development on the basis of (a) 3
Suitability (b) Nature and (c) Centered

25 Explain the following rights of a consumer as provided under Consumer Protection Act,2019. 4
(a) Right to Safety (b) Right to Representation
(c) Right to Consumer Education and (d) Right to Choose.

26 Explain first four steps may be conducted by an organisation in the process of selection of its employees. 4

OR

Explain, with suitable example,internal sources of recruitment followed by an organisation.

27 Akhil decided to set up a designer studio in a posh market in Udaipur. Through a survey he has assessed that the level of competition in this segment is high. Describe briefly any four factors which he has not assessed so far and are likely to affect high pricing decisions. 4

28 Explain any four barriers to communication which are concerned with problems and obstructions in the process of encoding and decoding the message into words or impressions. 4

OR

Gaurav believes that ‘money is the only motivator’ therefore he accordingly offers different kinds of incentives to his employees. Sagar, who works in Gaurav’s company as marketing manager feels discontentment despite his financial needs being completely fulfilled by the company and wants to leave the company. Suggest any four ways in which Gaurav can provide non-financial incentives to Sagar in order to fulfil his social and esteem needs in particular.

29 Name the decision, a financial manager takes keeping in view the overall objective of maximising shareholders’ wealth. Also explain any three factors affecting that decision. 4

30 S.Ltd. is manufacturing steel at its plant in India. It is enjoying a buoyant 4 demand for its products product as economic growth is about 7% to 8% and the demand for steel is growing. Therefore, it is planning to set up a new steel plant to take benefit of such trends in demand. It is estimated that such an expansion will require about ₹ 5000 crore to set up and about ₹ 500 crore for working capital. As the finance manager of the company explain any four factors that should be considered while determining the capital structure for the new venture.

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(a) In the above context, state the concept used by Amit.
(b) Explain any five importance of that concept.

32 Explain any six importance of planning. 6
OR
Explain six steps involved in the process of planning after setting-up of objectives.

33 Explain the followings. 6
(a) Time Study (b) Science, not rule of thumb (c) Method Study
OR
Explain the followings with example, if possible.
(a) Unity of Command (b) Principle of Order
(c) Centralisation and Decentralisation.

34 “It refers to the act of designing and producing the container or wrapper of 6 a product.” Explain briefly any six functions of the concept being described in the above lines.



Name: _____ Sec: _____ Roll No.: _____

CODE - A

BURNPUR RIVERSIDE SCHOOL, BURNPUR
PRE-BOARD EXAMINATION : (2023-2024)
ECONOMICS(030)
CLASS – XII

Time: 3 Hrs.

Maximum Marks : 80

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.

Q.NO.	SECTION A- MACRO ECONOMICS	MARKS
1.	<p>Read the following statements carefully.</p> <p>Statement 1:In a two sector economy, consumption expenditure and investment expenditure are the two components of aggregate demand.</p> <p>Statement 2:Aggregate Demand curve always starts from point of origin with positive slope.</p> <p>In light of the given statements, choose the correct alternative from the following:</p> <p>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</p>	1

2. When subsidies are greater than indirect taxes? 1
 a. GDP at MP = GDP at FC
 b. GDP at MP > GDP at FC
 c. GDP at MP < GDP at FC
 d. None of these

3. If increase in National Income is equal to increase in savings, the value of MPC would be _____ (fill up the blank with correct alternative) 1
 a. Equal to unity
 b. Greater than 1
 c. Less than 1
 d. Equal to zero

4. 'Owing to the Russia- Ukraine crisis, the world is experiencing rising crude oil prices due to supply -side issues'. Identify the most likely impact on the Balance of Payment situation of the Indian economy from the following: 1
 a. Production of cars in India will rise
 b. Production and sale of cycles in India will rise
 c. Inflow of US dollars in India will rise
 d. Outflow of US dollars from India will rise

5. 'Money is an asset which can be stored for use in future'. On the basis of the given statement identify the functions performed by money.(choose the correct alternative) 1
 a. A measure of value
 b. A standard of deferred payments
 c. A store of value
 d. A medium of exchange

6. Complete the table:- 1
 If the initial deposit in an economy is rupees 4000 crore.

LLR	Credit creation
5%	(i)
8%	(ii)

a.(i) 50000. (ii) 80000
 b. (i) 40000 (ii) 20000
 c. (i) 80000 (ii) 50000
 d. (i) 20000. (ii) 40000

7. In an economy, autonomous consumption is rupees 40 crore and MPS is 0.2, the resultant saving functions is _____. (choose the correct alternative to fill up the blanks). 1

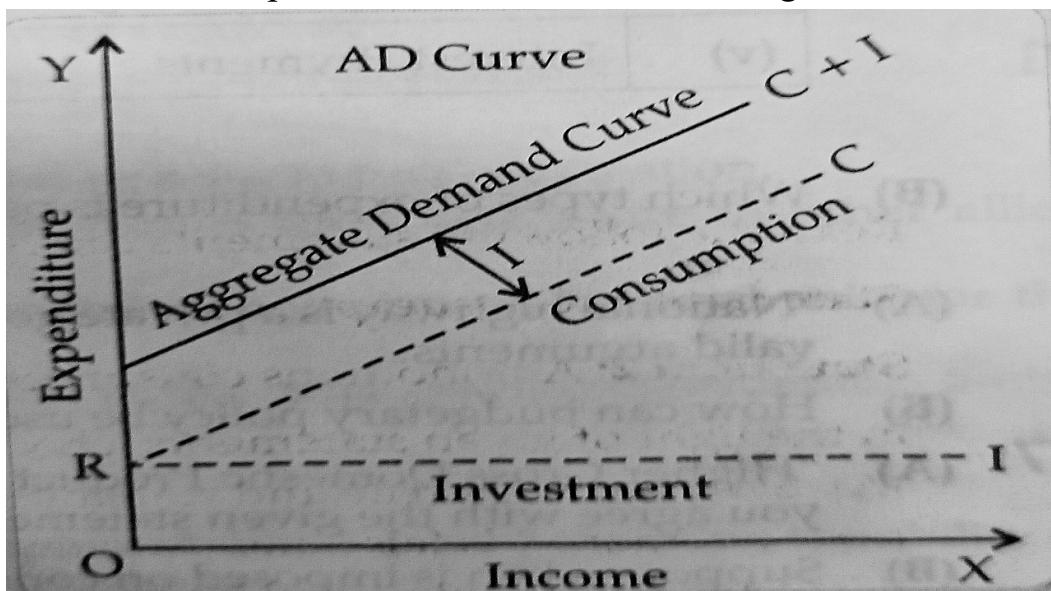
- $S = 40 + 0.8Y$
- $S = -40 + 0.8Y$
- $S = 40 + 0.2Y$
- $S = -40 + 0.2Y$

8. Identify the sources of supply of foreign exchange in the country. 1

- Exports
- Lending to abroad
- Investment from abroad
- Imports

- I and II
- II and III
- I and III
- IV only

9. The total consumption and investment charts are given here: 1

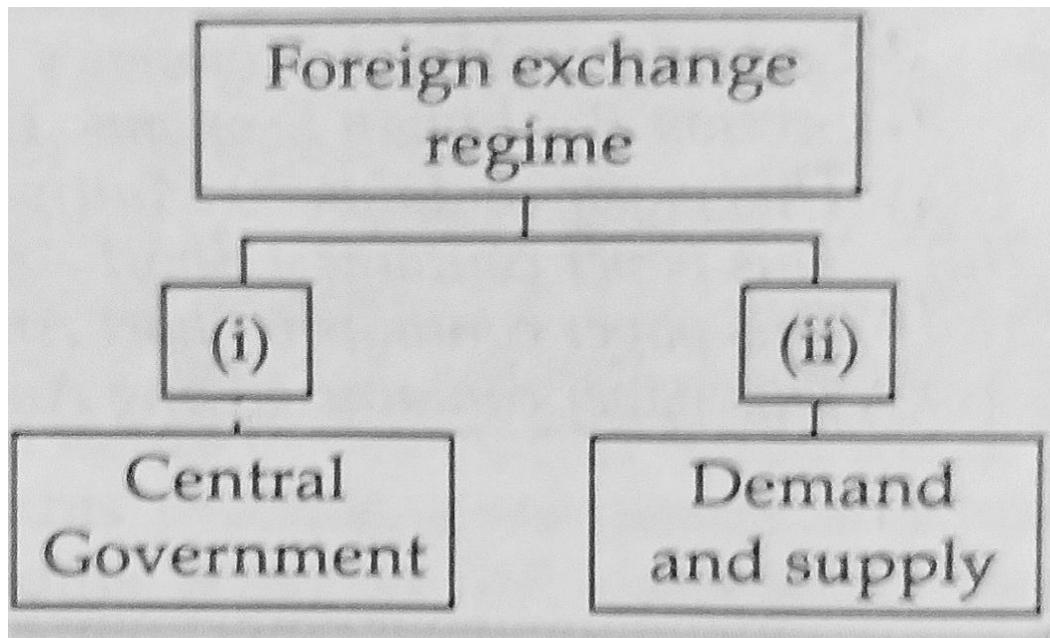


Identify which of the following represents “Autonomous Consumption”.

- OR
- RC
- RY
- RI

10. Read the following chart carefully and choose the correct Alternative.

1



- a. (i) BOP (ii) BOT
- b. (i) Debit (ii) Credit
- c.(i) Current account (ii) Capital account
- d.(i) Fixed (ii) Flexible

11. Suppose the price of one UK pound (S) has increased from rupees 7 to rupees 8, owing to market forces. This indicates that Indian currency has devalued.

3

Do you agree with the given statement? Give valid reasons in support of your answer.

12.

Serial no.	Items	Amt.(in Rupees)
1	Households consumption expenditure	600
2	Gross fixed capital formation	200
3	Change in stock	40
4	Government final consumption expenditure	200
5	Net exports	-40
6	Net indirect taxes	120
7	Net factor income from abroad	20
8	Consumption of fixed capital	40

 3

Serial no.	Items	Amt.(in Rupees)
1	Households consumption expenditure	600
2	Gross fixed capital formation	200
3	Change in stock	40
4	Government final consumption expenditure	200
5	Net exports	-40
6	Net indirect taxes	120
7	Net factor income from abroad	20
8	Consumption of fixed capital	40

On the basis of the given data estimate the value of domestic income.

OR

State the meaning of the following:

- a. Externalities
- b. Operating surplus
- c. Consumption goods

13. If an economy plans to increase its income by rupees 2000 crore and the MPC is 75%, estimate the increase in investment required to achieve the targeted increase in income. 4

14. A. Explain the impact of excess demand in economy. How it can be minimised? 4

OR

B. As per the following news published in "The Hindu" on 6th August 2022, the Monetary Policy Committee(MPC) of the RBI raised the repo rate by 50 basis points.

Identify and explain the likely cause and consequences behind this type of action taken by the RBI.

15 " The process of credit creation by commercial banks comes to an 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. From the given information, calculate: 5

- i) Revenue receipts
- ii) Fiscal deficit
- iii) Primary deficit

Particulars	Rs. In crores
1. Revenue deficit	6000
2. Revenue expenditure	11000
3. Capital expenditure	14000
4. Non debt creating capital receipts	8000
5. Interest payments	7000

B. Which types of expenditure is payment of salaries to Government employees and why? 1

OR

A. “National Highway is a private good because it is funded by taxes.” Defend or refute the given statement with valid arguments. 3

B. How can budgetary policy be used to reduce inequalities of income? 3

17(A) Give valid reasons, explain how the following would be treated while estimating domestic income. 3

- i. Payment made by American tourist for goods purchased in India.
- ii. Tomatoes grown by Miss Pooja in her kitchen garden.

Distinguish between ‘value of output’ and ‘value added’.

(B) “Machine purchased by a firm is always a capital good.” Do you agree with the given statement? Give valid reasons for your answer. 3

SECTION B- INDIAN ECONOMIC DEVELOPMENT

18. Identify which of the following indicates the adverse impact of British rule in India. 1

- a. Introduction of communication networks in India.
- b. Change in composition of India’s foreign trade.
- c. Introduction of modern administrative system in India.
- d. Introduction of railways in India.

19. Special economic zones were set up in China to: 1

- a. Attract foreign investors
- b. To develop the backward regions
- c. To maintain economic equality
- d. To promote private sector

20. There are two statements given below about the changes in India’s structural composition in the period 1950 to 1990. 1

P: At the beginning of this period, the share of agriculture in the GDP was the highest.

Q: Increase in agriculture productivity during this period lead to a further increase in the share of agriculture in the GDP by the end of this period.

Which of these statements is or are true?

- a. Only P
- b. Only Q
- c. Both P and Q
- d. Neither P nor Q

21.

1



Study the following picture and answer the given statement:-

Activity reflected in the given picture is: _____ (Choose the correct alternative to fill up the blank)

- a. Animal husbandry
- b. Fisheries
- c. Horticulture
- d. Poultry

22. Read the following statements- Assertion(A) and Reason(R). 1

Choose one of the correct alternatives given below:-

Assertion(A)- Under foreign exchange reforms, rupee was devalued.

Reason(R)- Rupee was devalued in order to promote self sufficiency in the country.

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. Under ___ in China, farmers and industrial units were required to buy and sell fixed quantities of inputs and outputs on the basis of prices fixed by the government and the rest were purchased and sold at market prices. (Choose the correct alternatives to fill up the blank). 1

- a. Commune system
- b. Great Leap Forward
- c. Dual Pricing
- d. Great Proletarian Cultural Revolution

24. Identify which of the following is a source of non institutional credit in India:- 1

(Choose the correct alternative to fill up the blank).

- i. Money lender
- ii. NABARD
- iii. Commercial banks

Alternatives:

- a. i and ii
- b. Only i
- c. i and iii
- d. Only ii

25. Human Resource refers to ___ 1

- a. Skill and expertise of human beings to contribute to the process of value addition in the economy.
- b. Skill and expertise of human beings to contribute to the process of income generation in the economy.
- c. Skill and expertise of human beings of a nation at a point of time.
- d. None of these.

26. Read the following statements carefully:- 1

Statement 1: Unemployment and poverty are inseparable twins.

Statement 2: Unemployment is the root cause of all social economic evils.

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. First five year plan in India	1. 1956
B. 5 year plan in Pakistan	2. Mid term plan
C. People's Republic of China	3. 1949
D. Major contributor to GDP in Pakistan	4. Service sector

Alternatives:

- a. A-1
- b. B-2
- c. C-3
- d. D-4

28. At the time of independence, agricultural production in India received a major setback. Discuss the main reasons of the setback. 3

Or

“Modernisation as a planning objectives shows a dichotomy with employment generation.” Justify the statement.

29. Government of India has announced NEP. Government is taking steps to implement the policy earliest that can change the school system of India and give it a big turn. Explain the impact of such step on human capital formation. 3

30. “ India and China initiated their development path almost at the same time, but China was able to maintain the double digit growth rate in comparison to India.” Justify the statement. 4

31. State and elaborate whether the following statements are true or false with valid arguments:

i. Agricultural marketing is a process that ensures the transportation of various agriculture commodities only. 2

ii. Jan dhan Yojana has been a crucial step for financial resource mobilization in the Indian economy. 2

Or

“Since independence the government has been playing an important role in generating employment directly or indirectly.” 4

Discuss.

32. Identify and explain the type of unemployment given in the image. 4

What factors might have led to this type of employment? Explain any two factors.



33.

A. “ Foreign exchange crisis was the basis of economic policies of liberalisation, privatisation and globalisation”. Justify. 3

B. “ Recently the Government of India has decided to merge MTNL and BSNL on account of rising losses.” 3

Justify the step taken by the Government of India.

OR

A. “ Some economists believe that the economic reforms have adversely affected the agriculture sector in India.” Do you agree with the given statement? Justify your answer with valid reason. 3

B. India is often called as ‘Outsourcing Destination ’of the world. Discuss the prime reasons for this name given to India. 3

34. Read the following hypothetical text and answer the given questions:

The main factors that contribute to global warming are burning of fossil fuels, deforestation, animal waste, etc. Global warming may cause a rise in sea levels and tropical storms. It may further involve economic loss and destruction of life, land and other natural and man made assets.

Ozone depletion refers to the reduction in the amount of ozone in the stratosphere. It is mainly the result of increasing atmospheric concentrations of chlorine origination from CFCs(used as a cooking substance in air conditioners and refrigerators) .Aerosol Propellants and Bromofluorocarbons(halons used in fire extinguisher). Ozone layer prevent the most harmful ultraviolet rays from passing through the earth’s atmosphere.

(A) What are the main factors that contributes to the environment degradation? 2

(B) Why is environment getting depleted because of the factors mentioned above? Which function of environment is affected? 4

Name: _____ Sec: _____ Roll No.: _____

CODE - B

BURNPUR RIVERSIDE SCHOOL, BURNPUR
PRE-BOARD EXAMINATION : (2023-2024)
ECONOMICS(030)
CLASS – XII

Time: 3 Hrs.

Maximum Marks : 80

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.

Q.NO.	SECTION A- MACRO ECONOMICS	MARKS
1.	<p>Read the following statements carefully.</p> <p>Statement 1: The induced consumption shows the direct relation between consumption and income.</p> <p>Statement 2: With a certain increase in income, induced consumption also increases.</p> <p>In light of the given statements, choose the correct alternative from the following:</p> <p>a. Statement 1 is true and Statement 2 is false</p> <p>b. Statement 1 is false and Statement 2 is true</p> <p>c. Both statements are true</p> <p>d. Both statements are false</p>	1

2. For a closed economy (with no foreign trade), which one of the following is correct: 1
a.GDP=GNP
b. GDP>GNP
c. GDP<GNP
d.GDP+GNP=0

3. Which among the following can be greater than one:- 1
(Choose the correct alternative to fill up the blank)
a.MPC
b. APC
c. MPS
d. APS

4. Suppose, country X, has more inflation than country Y. Which of the following is most likely situation to happen in such a case, assuming other factors being constant? 1
(Choose the correct alternative)
I. A surplus trade balance in country X
II. A deficit trade balance for country X
III. A rise in exports from country X to country Y
IV. A surplus trade balance for country Y.
a. I and II
b.II and III
c. II and IV
d. I and IV

5. Miss Iqra Ansari, a teacher, was explaining in her class about various types of deposits with the commercial banks. She quoted that 1
“These deposits form a part of M1 measure of money supply and are payable on demand by the commercial banks.”
Identify the type of deposits she was explaining about and choose the correct alternative:
i.Demand deposits
ii. Time deposits
iii. Post office deposits

Alternatives:

- a. Only i
- b. Only ii
- c. i and ii
- d. i, ii, and iii

6. Credit cards are excluded from all measures of the quantity of 1 money, because they are not really a method of payments, but a

method of deferring payment. When you buy a meal with a credit card, the bank that issued the card pays the restaurant the amount that is due. At a later date, you will have to repay the bank, perhaps with interest. For this you might use the money in your demand deposits, and that money is included in the economy's stock of money.

Which of the following can happen with an increased use of credit cards in an economy?

- a. Increase in money supply
- b. Decrease in money supply
- c. Increase in money demand
- d. Decrease in money demand

7. As the MPS increases, the value of the investment 1 multiplier ____.(choose the correct alternative).

- a. Increases
- b. Decreases
- c. Becomes zero
- d. Does not change

8. Two friends Mira and Sindhu where discussing the exchange rate 1 systems.

‘Under this system, the exchange rates are determined by the market forces of demand and supply. However, deliberate efforts are made by the competent authority to keep the exchange rates within a specific range’.

The above mentioned statement was given by Sindhu. Identify the type of exchange rate system she was talking about?

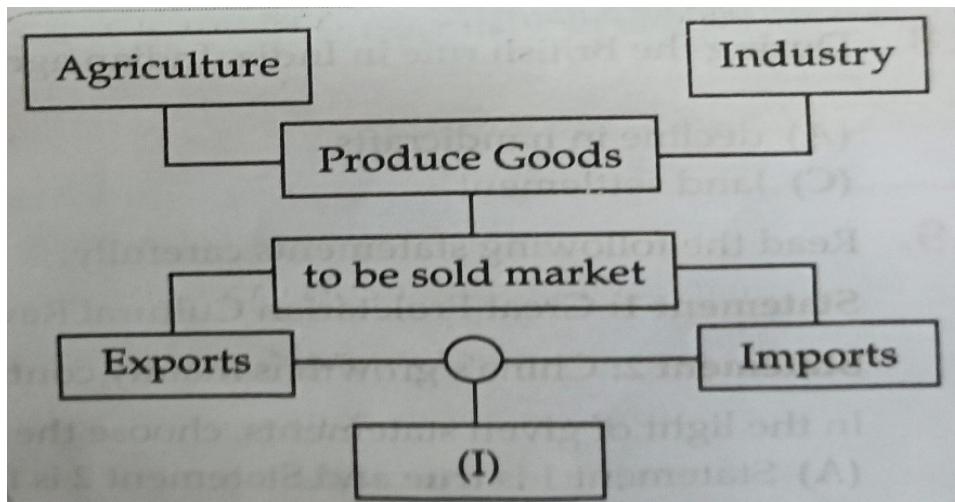
- a. Fixed exchange rate
- b. Floating exchange rate
- c. Managed floating exchange rate
- d. Managed fixed exchange rate

9. In an economy, the value of MPS is 0.25. what will be the value of increase in income, if investment increased by rupees 200 crores? 1

- a. Rupees 200 crores
- b. Rupees 150 crores
- c. Rupees 1000 crores
- d. Rupees 800 crores

10. Read the following chart carefully and choose the correct alternative. 1

- a. BOP
- b. Balance of invisible items
- c. Balance of visible items
- d. Balance on capital account



11. Give valid reasons, state whether the following statements are true or false: 3

- I. Dividend received from investment abroad is recorded on the credit side of the capital account.
- II. Depreciation of the Indian currency will lead to promotion of Indian exports.

12.	Serial no.	Items	Amt.(in Rupees)	3
1	1	Rent and royalties	1300	
2	2	Net Indirect taxes	200	
3	3	Wages and salaries in cash and kind	1700	
4	4	Corporate tax	400	
5	5	Depreciation	400	
6	6	Retained earning	300	
7	7	Dividends	400	
8	8	Net factor income from abroad	(-)120	
9	9	Mixed income of self employed	1400	
10	10	Change in stock	(-)200	

calculate the value of domestic income from the above data.

OR

Suppose in a hypothetical economy there are only two firms A and B . Firm A sold goods for rupees 2000 to firm B and purchased goods for rupees 1000. Firm B exported goods for rupees 2500 and had domestic sales of rupees 1500. Calculate Net Domestic Product at market price, if consumption of fixed capital is rupees 200.

13. For a hypothetical economy, the government incurs an investment expenditure of rupees 1000 crore. If the value of marginal propensity to save falls from 0.25 to 0.10, calculate the value of increase in income due to change in the value of MPS. 4

14.A. What changes will take place in inventories and income when planned savings are less than planned investment in the economy? 4

OR

B. As per the following news published in ‘The Economic Times’ on 26th Dec., 2021:

‘Reserve Bank of India has sold Government security worth rupees 8710 crore in the secondary market, over the last four weeks, to drain out excessive liquidity’.

Identify the likely cause and the consequences behind this type of action plan of the Reserve Bank.

15 'Reserve Ratio and Credit Creation are inversely related'. Do you agree with the given statement? Justify your answer with a suitable numerical example. 4

16. A. On the basis of the given information calculate the value of : 3

- i) Fiscal deficit
- ii) Primary deficit

Total receipts= Rs. 40,000 crore

Capital expenditure= Rs. 6500 crore

Revenue expenditure= Rs 1000 crore

Borrowings= Rs. 550 crore

Interest paid= 5% of fiscal deficit

B. Why National Saving certificates issued by govt. is a capital receipts? 3

OR

A. Distinguish between Revenue receipts and capital receipts of the Govt., with suitable example. 3

B. "Recently Govt. has decided to increase the direct tax and subsidies". What can be the reason and consequence behind such a step taken by Govt. 3

17(A) Give valid reasons, explain how the following would be treated while estimating domestic income. 4

- i. Interest on car loan taken by a firm.
- ii. Interest on car loan taken by a household.

(B) "Gross domestic capital formation is always greater than gross domestic fixed capital formation". Do you agree with the given statement? Give valid reasons for your answer. 2

SECTION B- INDIAN ECONOMIC DEVELOPMENT

18. During the British rule in India, Indian agricultural output witnessed stagnation due to _____.
(Fill up the blank with correct alternative)
a. Decline in handicrafts
b. Drain of Indian wealth
c. Land settlement
d. Introduction of railways

19. Read the following statements carefully. 1
Statement 1: Great Proletarian Cultural Revolution was introduced in China in 1950's.
Statement 2: China's growth is mainly contributed by the manufacturing sector.
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 was/were adopted before 1990 with an objective to promote Indian industries:- 1
I. Import substitution
II. Mechanization of agriculture
III. Privatisation of industries
IV. Key role of public sector
Alternatives:
a. I, II, IV
b. I, II, III
c. II, III, IV
d. I, III, IV



Study the following picture and answer the given question.

Women in rural households take up beekeeping as an entrepreneurial activity. Such kind of activities may be envisaged under _____ as diversification activity.

(Choose the correct alternative to fill up the blank)

- a. Animal husbandry
- b. Fisheries
- c. Horticulture
- d. Poultry

22. Read the following statements-Assertion(A) and Reason(R).

Choose one of the correct alternatives given below:-

Assertion(A)- India witnessed export surplus under the colonial rule.

Reason(R)-Export surplus was the result of emerging Indian economy due to fast growing industries and contribution by Britishers in infrastructural development.

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. Identify the incorrect statement from the following:(Choose the correct alternative). 1

- a.China's economic growth rate is better than that of Pakistan.
- b. Pakistan is behind India in Human Development Index ranking.
- c.One Child Policy norm was adopted in Pakistan.
- d. In 1991, India adopted New Economic Reform.

24. Identify the incorrect statement from the following: 1

Alternatives:

- a. Diversification in agriculture sector provides sustainable livelihood options to rural population.
- b. Diversification includes change in cropping pattern. Shift of workforce from agriculture to other allied activities and non agriculture sector.
- c. Objective of investment in new agriculture avenues (non farm activities) increases financial risks for the rural population.
- d. Diversification reduces the proportion of unemployed population in the rural areas to considerable limits.

25. Choose the correct statements. 1

- i. Human capital is not traded in the market, however it's services are traded.
- ii. Human capital is intangible in nature
- iii. Human capital and Human Development are identical concepts

- a.i and ii
- b. ii and iii
- c. i and iii
- d.i, ii, iii

26. Read the following statements carefully:- 1

Statement 1: The nature of unemployment problem in India is unifaceted.

Statement 2: Worker Population Ratio is an indicator used for analysing the employment situation in a country.

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. Adoption of mixed economic system	1. The common development policy of India and China
B. Introduction of economic reforms in China	2. Imposed by World Bank
C. Great leap forward campaign	3. Focused on massive industrialisation
D. First 5 year plan of Pakistan	4. Announced in 1953

Alternatives:

- a. A-1
- b. B-2
- c. C-3
- d. D-4

28. ‘Land ceiling promotes equity’. Support the given statement with valid explanation.

3

Or

“Institutional reforms have played a significant role in transforming Indian agriculture”. Justify the above statement with valid explanation.

29. “Expenditure on on- the- job training is an important means of human capital formation in an economy”. Give valid reasons to justify the given statement.

3

30. Compare and analyse the following information related to imports and exports of the three neighbouring Nations:- 4

Export from India(in crore). Imports from India(in crore)

Country	2004-05	2018-19	Annual growth rate(%)	2004-05	2018-19	Annual growth rate (%)
Pakistan	2341	14426	3.7	427	3476	5.1
China	25232	117289	2.6	31892	492079	10.3

31. “ Microcredit societies have emerged as a hope to overcome the lack of credit requirements for the poor.” Elaborate the statement highlighting the role of micro credit units. 4

Or

“Casual wage work is the major source of employment in rural India”. Discuss

32. Identify the type of employment stated in the give image. State any three features of this type of employment in reference to India. 4



33. A. “ Indian industries witnessed a change since second half of the 19th century.” Justify the statement giving reasons in support of your answer. 3

B. “ Industrial sector of India has seen a boost after 1991.” Discuss the rationale behind the statement. 3

OR

A. "Growth and equity must be achieved simultaneously to have an effective planning in the country." Justify the statement. 3

B. "Green revolution has made self sufficient in food grains but it has led to new sets of problems for farmers." Do you agree with the given statement? Give valid reasons in support of your answer. 3

34. Read the following hypothetical text and answer the given questions:

Sustainable development is synonymous in the minds of many with the colour green and for good reasons. 20 years ago, at the first Earth summit at Rio de Janeiro, in Brazil, world leaders set out what today is conventional wisdom: SOCIAL AND ECONOMIC HUMAN

PROGRESS – cannot be divorced from environment and protection unless both are advanced together, both will flounder together.

Sustainable development is as much about health, education and jobs as it is about the ecosystem. It is about ever whitening inclusion and movement away from decisions that code democratic space and do not address social inequality, intolerance and violence.

Sustainable development is about changes that transform impoverished people, communities and countries into informed educated, healthy and productive societies. It is about wealth creation that generates equality and opportunity.

Sustainable development is about consumption and production patterns that respect planetary boundaries, it is also about increasing tolerance and respect for human rights at all level. Building on Human

Development legacy that oriented with economist like Amartya Sen and Mahbub Ul Haq and was captured by the first Human Development Report in 1990.

United Nations Development Program (UNDP) has long promoted alternative approaches to measure human progress, along with the Human Development Index (HDI). Today we are building on this legacy by exploring how to adjust the index to reflect environment sustainability, so that governments and citizens might better track real progress towards truly sustainable development. This must be our collective objective.

(A) Why the need of sustainable development arises? 2

(B) Briefly elaborate, what sustainable development is all about as per the case study mentioned above. 4



Name: _____ Sec: _____ Roll No.: _____

CODE - A

BURNPUR RIVERSIDE SCHOOL, BURNPUR
PRE-BOARD EXAMINATION : (2023-2024)
GEOGRAPHY
CLASS – XII

Time: 3 Hrs.

Maximum Marks : 70

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.

SECTION - A
MULTIPLE CHOICE QUESTIONS

1. Assertion (A): For the sustainability of our resources, the world will have to control the Rapid population increase. 1
Reason (R): Population growth beyond a certain level leads to the growth of resources.

- (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 has played an important role to decline the death rate rapidly throughout the world? 1
(a) Big hospital chains.
(b) Revolution in surgery.
(c) Medical help through insurance schemes.
(d) Innoculation against epidemics and communicable diseases.

3. Which of the following is not a push factor? 1
(a) Water shortage.
(b) Medical/ educational facilities.
(c) Unemployment.
(d) Epidemics.

4. The iron and steel industries are called ----- 1
(a) Foot loose industries.
(b) High tech industries.
(c) Cottage industries.
(d) Basic industries.

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. What characteristics does manufacturing not involve? 1
(a) Application of power.
(b) Mass production of industrial products.
(c) Dissemination of information.
(d) Specialised labour in factory setting.

7. Which one of the following physical factor is responsible for the uneven distribution of population in India? 1
(a) Availability of water.
(b) Agriculture development.
(c) Transport network.
(d) Urbanization.

8. Study the following statements I and II and choose the correct option: 1

I) The decades 1951 -1981 are referred to as the period of population expansion in India.

II) During this period there was a rapid fall in the mortality rate and high fertility rate in the country.

Option:

(a) Only I is correct.

(b) Only II is correct.

(c) I and II both are correct.

(d) I and II both are incorrect.

9. Which of the following are features of urban settlements in India? 1

(a) Complex way of life, manufacturing of finished goods, modes of economic growth.

(b) Intimate social relation, mainly primary economic activities, people are less mobile.

(c) Mainly based on primary activities, producing food and raw materials, and social relations are formed.

(d) Provide a variety of services, poor transport networks, social relations are intimate.

10. Palli and Nagla belong to which one of the following rural settlements: 1

(a) Clustered.

(b) Semi Clustered.

(c) Hamleted.

(d) Dispersed or isolated.

11. Consider the following statements and choose the correct option from the given options. 1

I) Towns flourished since prehistoric times in India

II) The first foreign trading port in India was established by the British in Goa.

Options:

(a) Only statement I is correct.

(b) Both the statements are true and statement II correctly presents the reason for the statement I .

(c) Only statement II is correct.

(d) Both the statement I and II are incorrect.

12. Consider the following statements: 1
(I) Kharif crops are grown after the onset of monsoon (June and September)
(II) Kharif crops are harvested in the month of April – May.
Select the correct statement:
(a) Only I is correct.
(b) Only II is correct.
(c) Both I and II are correct.
(d) Neither I nor II are correct.

13. Consider the following statements and choose the correct option from the given options: 1
I) Water is the most important factor for life.
II) So, people prefer to live in areas where fresh water is easily available.
Options:
a. Only statement I is correct.
b. Both the statements are true and statement II correctly presents the reason for statement I.
c. Only statement II is correct.
d. Both the statements I and II incorrect.

14. Identify the land locked harbour from the following: 1
(a) Visakhapatnam
(b) Mumbai
(c) Ennor
(d) Both c & b.

15. Consider the following statements and choose the correct option from the given options: 1
I) The WTO however has been criticized and opposed by those who are worried about the effects of free trade and economic globalisation.
II) Free trade does not make ordinary peoples lives more prosperous.
Option:
(a) Only statement I is correct.
(b) Both the statements are true and statement II correctly present the reason for statement I.
(c) Only statement II is correct.
(d) Both the statements I and II are incorrect.

16. Glassware, plastic containers, polythene bags, ashes, floppies, CD's are examples of: 1
(a) Pollutants.
(b) Solid waste.
(c) Fertilizers.
(d) Poison.

17. Choose the incorrect source out of the following sources of water pollution. 1
(a) Sewage and municipal waste.
(b) Industrial and domestic discharges.
(c) Combustion of fossil fuels.
(d) Infiltration of chemicals used in agriculture.

SECTION – B (SOURCE BASED QUESTIONS)

18. Read the passage given below and answer the questions that follow: 3

Services occur at many different levels. Some are geared to industry, some to people and some to both industry and people, eg. the transport systems, low order services such as grocery shops and laundries, are more common and wide spread than high order services or more specialized ones like those of accountants, consultants and physician. Services are provided to individual consumers who can afford to pay for them. For example, the gardeners, the launderers, and the barber do primary physical labour. Teacher, lawyers, physicians and musicians and others perform mental labour.

Many services have now been regulated. Making and maintaining highways and bridges, maintaining fire fighting departments and supplying or supervising education and customer care are among the important services most often supervised or performed by governments or companies. State and union legislation have established Corporation to supervise and control the marketing of such services as transport, telecommunication, energy and water supply. Professional services are primary health care, engineering, law and management. The location of recreational and entertainment services depends on the market. Multiplexes and restaurant might find location within or near Central Business District (CBD) whereas a golf course would choose a site where land costs are lower than in the CBD.

- (a) What is meant by service?
- (b) Write down four examples of high order services.
- (c) Why do services need to be regulated?

19. Read the passage given below and answer the questions that follow: 3

Ramesh has been working in contract as a welder on construction site in Talcher(Kolar region of Odisha) for the last two years. He moved with the contractor to various places like Surat, Mumbai, Gandhinagar Bharuch, Jamnagar and so on. He remits Rs.20000 to his father in his native village. The remittances have been mainly used for daily consumption, healthcare, schooling of children, etc. Part of the money is also used in agriculture, purchasing of land and building of houses etc. The standard of living of Ramesh's family improved significantly. Fifteen years ago, the situation was not the same. The family was passing through very tough times. Three of his brothers and their family had to survive on three acres of land. The family was highly in debt. Ramesh had to discontinue his studies after 9th standard. He was further hard pressed when he got married.

Simultaneously, he was also impressed by some successful out migrants of his village who had been working in Ludhiana and supporting their family in village by sending money and some consumer goods. Thus, due to abject poverty in the family and perceived job promises at Ludhiana he made a move to Punjab with his friend. He worked there in a woolen factory for 6 months at the rate of only Rs 20 per day in 1988. Apart from the crisis of managing the personal expenditure from this meagre income, he was also facing difficulty in assimilation to the new culture and environment. Then he decided to change his place of work from Ludhiana to Surat under the guidance of his friend. He learnt the skills of welding in Surat and after that he has been moving to different places with the same contractor. Though the economic condition of Ramesh's family at village improved, he is bearing the pain of separation of his near and dear ones. He cannot shift them with him ,as the job is temporary and transferable.

- a. What were the problems faced by Ramesh when he moved out of his village?
- b. What were the remittances sent by Ramesh utilized for?
- c. What were the conditions that forced Ramesh to move out of the village?

SECTION – C (SHORT ANSWER TYPE QUESTIONS)

20. “The approaches to the study of human geography have been evolving over a period of time”. 3

How have these schools of thought changed the approaches of study of human geography?

OR

Explain the concept of environmental determinism with examples.

21. How does the Suez Canal serve as a Gateway of Commerce for both the Western and Eastern worlds? Explain with suitable examples. 3

22. When was the National Youth Policy launched by the Government of India? 3

Write down the major thrust areas.

OR

Give an account of the occupational structure of India's population.

23. What are the development plans taken for the Hill Area Development Program (HADP)? 3

SECTION – D : (LONG ANSWER TYPE QUESTIONS)

24. How have good governance and people oriented policies with reference to the pillars of Human Development, increased the values of freedom and capabilities? 5

25. Differentiate between subsistence agriculture and commercial agriculture? 5

26. Write a note on the role of World Trade Organisation in International Trade. 5

OR

What is International trade? Describe three basis of International trade in the world.

27. Why is the development and utilisation of non conventional sources of energy becoming increasingly important? 5

Explain your answer with suitable examples.

OR

Mineral distribution in India is mainly confined in the three major belts of Peninsular India. Support the statement with suitable examples of minerals from each belt.

Also enlist two reasons why minerals should be conserved in India?

28. "Waterways is an important mode of transport for both passengers and cargo traffic in India." Justify the statement. 5

OR

What is the importance of satellite system?

Describe in brief the two groups of satellite systems used in India?

SECTION – E : (MAP BASED QUESTIONS)

29. On the given political map of the world, the following seven geographical features are seen, identify any five of those features and write the correct names on the line marked near each feature. 5

- a. An area of mixed farming.
- b. A major airport of Asia.
- c. A waterway.
- d. An industrial region.
- e. A major seaport in Australia.
- f. Greenlands of Africa.
- g. A major seaport in Canada.

30. On the given political map of India locate and label any five of the following with appropriate symbols: 5

- a. A major seaport located in Goa.
- b. A major seaport located in Orissa.
- c. International airport in Punjab.
- d. Iron ore mine in Karnataka.
- e. Cotton textile industry in Gujarat.
- f. An iron and steel plant in Bengal.
- g. The international airport in Kerala.

=====

Name: _____ Sec: _____ Roll No.: _____

CODE - B

BURNPUR RIVERSIDE SCHOOL, BURNPUR
PRE-BOARD EXAMINATION : (2023-2024)
GEOGRAPHY
CLASS – XII

Time: 3 Hrs.

Maximum Marks : 70

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 17 are Multiple Choice Questions

1 Who remarked that “Asia has many places where people are few and few place where people are very many”? 1

- a. Dr. Mahbub-ul-Haq
- b. Prof. Amartya Sen
- c. Griffith Taylor
- d. George B. Cressey

2

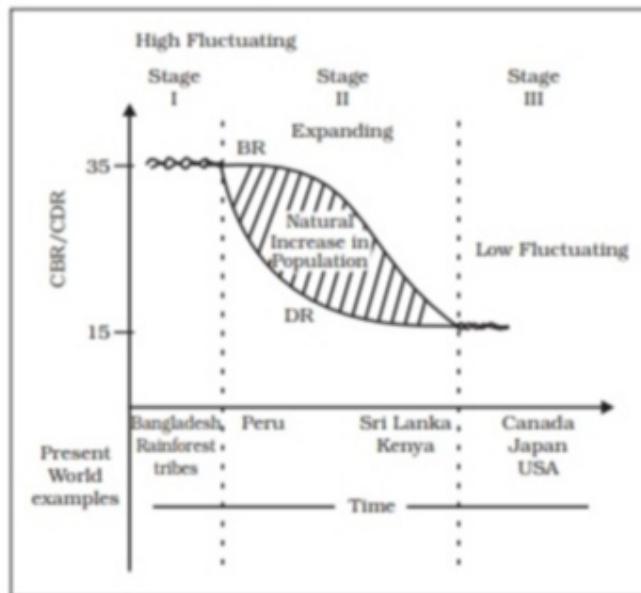
If the population decreases between two points of time, it is known as

1

- a. Neutral Growth of population
- b. Positive Growth of population
- c. Negative Growth of population
- d. Zero Growth of population

3

1



Which one of the following factors is responsible for the increase in population in Bangladesh?

- a. Birth rate + Migration
- b. Birth rate – Death rate
- c. Birth rate + Death rate
- d. Migration – Death rate

4

1

Which one of the following is not a feature of foot loose industries?

- a. They are dependent on the raw material.
- b. They produce in small quantity and also employ a small labour force.
- c. These are generally not polluting industries.
- d. The important factor in their location is accessibility by road network.

5

1

Consider the following statements and choose the correct answer with the help of given options.

Statement I: Cottage manufacturing is the smallest manufacturing unit.

Statement II: Some artefacts and crafts are made out of bamboo, wood obtained locally from the forests.

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 II.
- d. Both the statements are true but not related with each other.

6 **Which one of the following types of industries produces raw materials for other industries?** 1

- a. Cottage industries
- b. Small-scale industries
- c. Basic industries
- d. Footloose industries

7 **Which of the following is incorrectly matched?** 1

COLUMN I (Population Growth) **COLUMN II(Period)**

a. Stagnant growth	1901-1921
b. Steady growth	1931-1951
c. Population explosion	1951-1981
d. Period of declining growth	After 1981

8 **The number of farmers per unit area of farmland is known as** 1
a. Agricultural density of population
b. Working density of population
c. Industrial density of population
d. Rural density of population

9 **There are two statements marked as Assertion(A) and Reason(R).** 1
Mark your answer as per the codes provided below.

ASSERTION(A): Settlements can be of various types.

REASON(R): Various physical factors affect the growth of settlements.

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

10	Identify which one of the following group of cities have been arranged in the sequence of their ranks 1, 2, 3 and 4 in size?	1
	a) Greater Mumbai, Bengaluru, Kolkata, Chennai b) Delhi, Greater Mumbai, Chennai, Kolkata c) Greater Mumbai, Kolkata, Delhi, Chennai d) Chennai, Kolkata, Greater Mumbai, Delhi	
11	Nainital, Mussoorie, Shimla, Pachmarhi, Jodhpur are	1
	a) Transport towns b) Tourist towns c) Industrial towns d) Educational towns	
12	Who is/are dependent on the CPRs?	1
	a. Landless farmers b. Marginal farmers c. Other weaker sections d. All of these	
13	Which of these programmes is related to construction of water harvesting structures in Alwar, Rajasthan?	1
	a. Neeru Meelu b. Arvary Pani Sansad c. Both (a) and (b) d. None of these	
14	There are two statements marked as Assertion(A) and Reason(R). Mark your answer as per the codes provided below. ASSERTION (A) – India fared serious food shortage during 1920's and 1930's. REASON (R)- The major item of import at that time are foodgrain, capital goods, machinery and equipment.	1
	<u>OPTIONS</u> 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	

15	Which of the following is a feature of Kandla port?	1
	a. It is the biggest port of the country. b. Its harbour is situated at Zuari estuary. c. It is situated at the head of Gulf of Kuchchh d. It is the oldest port of India	
16	Which one of the following rivers is highly polluted?	1
	a. Brahmaputra b. Satluj c. Yamuna d. Godavari	
17	Combustion of coal, petrol and diesel are the sources of which type of pollution?	1
	a. Air pollution b. Water pollution c. Land pollution d. Noise pollution	

SECTION-B

Question 18 & 19 are Source based questions.

18	Read the given Passage carefully and answer the questions that follow: In the initial stages of economic development, larger proportion of people worked in the primary sector. In a developed economy, the majority of workers get employment in tertiary activity and a moderate proportion is employed in the secondary sector. Tertiary activities include both production and exchange. The production involves the 'provision' of services that are 'consumed'. The output is indirectly measured in terms of wages and salaries. Exchange, involves trade, transport and communication facilities that are used to overcome distance. Tertiary activities, therefore, involve the commercial output of services rather than the production of tangible goods. They are not directly involved in the processing of physical raw materials. Common examples are the work of a plumber, electrician, technician, launderer, barber, shopkeeper, driver, cashier, teacher, doctor, lawyer and publisher etc. The main difference between secondary activities and tertiary activities is that the expertise provided by services relies more heavily on specialised skills, experience and knowledge of the workers rather than on the production techniques, machinery and factory processes.
----	---

i.	State one example of tertiary sector.	1
ii.	How tertiary sector is important to our country?	1
iii.	Name an important component of the service sector.	1
19	Read the given Passage carefully and answer the questions that follow:	

Dharavi

.... Only one main road traverses the slum, the miscalled ‘ninety-foot road’, which has been reduced to less than half of that for most of its length. Some of the side alleys and lanes are so narrow that not even a bicycle can pass. The whole neighbourhood consists of temporary buildings, two or three storeyed high with rusty iron stairways to the upper part, where a single room is rented by a whole family, sometimes accommodating twelve or more people; it is a kind of tropical version of the industrial dwelling of Victorian London’s East End. But Dharavi is a keeper of more sombre secrets than the revulsion it inspires in the rich; a revulsion, moreover, that is, in direct proportion to the role it serves in the creation of the wealth of Bombay. In this place of shadowless, treeless sunlight, uncollected garbage, stagnant pools of foul water, where the only non-human creatures are the shining black crows and long grey rats, some of the most beautiful, valuable and useful articles in India are made. From Dharavi come delicate ceramics and pottery, exquisite embroidery and zari work, sophisticated leather goods, high-fashion garments, finely-wrought metalwork, delicate jewellery settings, wood carvings and furniture that would find its way into the richest houses, both in India and abroad... Dharavi was an arm of the sea, that was filled by waste, largely produced by the people who have come to live there: Scheduled Castes and poor Muslims. It comprises rambling buildings of corrugated metal, 20 metres high in places, used for the treatment of hides and tanning. There are pleasant parts, but rotting garbage is everywhere...”

i.	Name the Asia’s largest slum.	1
ii.	What are the main economic activities practised in Dharavi?	1
iii.	What are the problems of living in Dharavi slum?	1

SECTION-C

Question numbers 20 to 23 are Short Answer type questions.

20	“Possibilities can be created within the limit, which do not damage the environment and there is no free run without accidents”. Analyse the statement.	3
----	---	---

21 Describe the journey of development of land transport from the days of humans as carriers and the cableways of today. 3

OR

Explain in details the significance of transport and communication services.

22 What do you mean by growth of population? How natural growth is different from induced component? 3

23 What were the main objectives of Drought Prone Area Programme? 3

OR

What do you mean by target area planning? Give four examples of programmes towards development of target areas.

SECTION-D

Question numbers 24 to 28 are Long Answer Type questions.

24 What are the different pillars of human development? Explain. 5

25 Describe the main characteristics of Intensive Subsistence Agriculture. 5
In which parts of the world this type of agriculture is practised?

OR

Differentiate between Nomadic Herding and Commercial Livestock rearing, stating any five points of distinction.

26 What is the role of 'World Trade Organisation' as an international organisation? Why has the World Trade Organisation been criticised by some countries? Explain the role of World Trade Organisation. 5

OR

Why are ports known as gateways of international trade? Explain any three characteristics of inland ports.

27 Write a detailed note on the petroleum resources of India. 5

OR

Write a note on the distribution of iron ore in India.

28 Why is the distribution of roads not uniform in India? Explain with examples. 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 any five with the help of the following information and write their correct names on the lines drawn near each feature.** 5

- A. An international airport
- B. An international seaport
- C. An area of extensive commercial grain farming
- D. An area of nomadic herding
- E. A major airport
- F. An area of Subsistence Gathering
- G. A major seaport

30 **Locate and label any five of the following geographical features on the political outline map of India with appropriate symbols.** 5

- a. An important seaport in Andhra Pradesh.
- b. An important coal mine in Jharkhand
- c. An oil refinery in Bihar
- d. Hazaribagh- Copper mine
- e. The state with lowest population density
- f. The state leading in the production of cotton
- g. An international airport in West Bengal

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Name: _____ Sec: _____ Roll No.: _____
CODE: A

**BURNPUR RIVERSIDE SCHOOL, BURNPUR
PRE-BOARD EXAMINATION: [2023-2024]
INFORMATION TECHNOLOGY (802)
CLASS - XII**

Time: 3 Hrs.

Maximum Marks: 60

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.

SECTION-A
OBJECTIVE TYPE QUESTIONS

1.

**Answer any 4 out of the given 6 questions on
Employability Skills (1 x 4 = 4 marks)**

i.	Give an example of Unrealistic goal.	1
ii.	How many rows are there in LibreOffice Calc worksheet?	1
iii.	What do you understand by entrepreneur?	1
iv.	Identify the type of sentence: 'Kindly put off the lights.'	1
	a. Declarative Sentences	b. Interrogative sentences
	c. Imperative Sentences	d. none
v.	_____ is a personality disorder that is characterized by a lack of interest in social relationships and people tend to be distant, detached and indifferent.	1
	a. Paranoid b. Schizoid c. Schizotypal d. none	
vi.	State whether the following statement is TRUE or FALSE. 'IEO stands for International Employers Organization'.	1

2.

**Answer any 5 out of the given 7 questions
(1 x 5 = 5 marks)**

i.	Which of the following is a server-side script?	1
	a. PHP b. ASP c. Both (a) & (b) d. none	
ii.	Which of the following is an email program?	1
	a. Yahoo b. AOL c. Both (a) & (b) d. none	
iii.	If a variable can have fractional values, then what should be its datatype?	1
	a. float b. double c. Both (a) & (b) d. none	
iv.	select distinct dept_name from department;	1

What does the above query do?

- a) It gives all the tuples having dept_name
- b) It gives the dept_name attribute values of all tuples without repetition
- c) It gives all the dept_name attribute of all the tuples
- d) It gives all the dept_name attribute of all the tuples

v. Name the domain where database applications may be used for storing information regarding hotel staff, menu items and infrastructure. 1

vi. Which in-built class is used to take user input in Java? 1

vii. Which command is used to modify the value of attribute of one or more tuple in a table. 1

3.

Answer any 6 out of the given 7 questions
(1 x 6 = 6 marks)

i. Which keyword is used to display the structure of SQL table? 1

ii. Define Referential Integrity. 1

iii. Name the domain where database applications may be used for storing details of PAN cards, AADHAR cards, vehicle registration, birth/death certificate registration. 1

iv. In ‘<https://>’, what does ‘s’ stands for? 1

a. standard b. standalone c. secure d. none

v. Never share _____ with anyone while doing any online transaction. 1

a. OTP b. PIN c. Both (a) & (b) d. none

vi. NIC stands for _____. 1

vii. Find the error and give correct code. 1

```
int n = 1;
while (n<=5)
{ System.out.print ("Square of " + n);
System.out.println (" = " + n * n);}
```

4.

Answer any 5 out of the given 6 questions
(1 x 5 = 5 marks)

i. Which of the following is **not** an example of e-Governance? 1

a. To file property tax

b. To apply for renewal of Passport

c. To start an online coding course for 3 months

d. To get Voters ID card issued

ii. Name the domain where database applications may be used for storing information about customers' accounts and loans related information. 1

iii. Which SQL keyword is used to sort the result? 1

iv. Reema wants to input the price of shoes as 999.99. what should be the datatype and size of the column price in the table? 1

v. NeGP was formulated in _____. 1

a. 2004 b. 2005 c. 2006 d. none

vi. Name special method that every Java application must have. 1

5. **Answer any 5 out of the given 6 questions**
(1 x 5 = 5 marks)

i. Expand NIC. 1

ii. Name the domain where database applications may be used for storing information about flight details. 1

iii. What do you understand by Attribute in a Database System? 1

iv. Differentiate between Primary key constraint and Unique constraint. 1

v. What is web-based application? 1

vi. Predict the Output: 1

```
int x=9, k=0;
int y=10;
y=++x;
x+=y;
k=x;
What will be the value of k?
```

6. **Answer any 5 out of the given 6 questions**
(1 x 5 = 5 marks)

i. Name the Indian e-governance portal where you can get comprehensive information regarding the National Conference on e-governance and reports on earlier conferences. 1

ii. Name the domain where database applications may be used for keeping track of online and offline reservations of trains. 1

iii. _____ commands deletes the tuples from a Table 1

- Drop
- Delete
- Modify
- None of the above

iv. While entering the data in the table, Arya is not able to leave the column age as blank in the table. What can be the possible reason? 1

v. What is the importance of using updated and latest version browser and operating system during online transaction? 1

vi. Which method of a String Class returns true if the length of the string is 0? 1

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.	What is the use of SMART model? Expand SMART.	2
8.	If you want to make series of numbers from 1 to 15 in cell A1:A15, then there are two ways of doing so. Mention the two ways.	2
9.	Name the four types of supporting parts of speech.	2
10.	Who are Technical Entrepreneurs?	2
	Technical Entrepreneurs are also known as what?	
11.	What is the role of Waste Water Treatment Workers?	2

Answer any 3 out of the given 5 questions (2 x 3 = 6 marks)

16. The following code has some error(s). Rewrite the correct code underlining all the corrections. 2

```
int p
p = 14;
do;
    p = p-2;
    System.out.displayln(p);
}while p >= 2
```

Answer any 2 out of the given 3 questions (3 x 2 = 6 marks)

17. (a) Mention at least 2 work areas which uses Database Management Systems. 3 (1)

(b) Jatin has given the following query from the table Student but he is unable to execute it successfully. Write the correct query after rectifying the error. (2)

Select Name, Marks
From student Table
Where Name =”P%”;

18. How e-Governance does empowers the citizens. Give 3 points. 3

19. Predict the output of the following code; Also categorize the loop as Entry / Exit Control Loop. 3

```
int j=1,s=0;
while (j<10)
{
    System.out.print(j++"+");
    s=s+j;
    j=j+j%3;
}
System.out.println("==" + s);
```

Answer any 3 out of the given 5 questions (4 x 3 = 12 marks)

20. a. Name the user defined method in the code given below. 4

Also predict the output:

```
static int myMethod(int x)
{ return ( 5 + x); }
public static void main(String[] args) {
    System.out.println(myMethod(3)); }
```

b. Explain any two access modifiers.

21. Write a code in java using a for loop to display all odd numbers between 1 to 10 and their sum. (3)
Is for loop an entry controlled loop or exit control loop? (1) 4

22. How students are benefitted from online learning? What are the various ways of online learning? Name 2 educational websites. 4

23. Write the Mysql commands for the following queries :- 4

BUS	
BusID	BusStand
0001	ASANSOL
0002	DURGAPUR

COUNTER			
TicketID	Date	Cost	BusNo
T1	12/3/24	700	0001
T2	15/5/24	600	0002
T3	15/5/24	700	0001

(a) To find all the stations, date for ticket id as T1.
 (b) To find the total ticket amount collected from each bus stand.
 (c) To display all the tables created in the current database.
 (d) To delete table counter along with the information in it.

24. Name the built-in aggregate functions used for the following tasks given below. Also, write an SQL query, with respect to the tasks given below, for each as an example to support your answer. 4

- To find out the total marks of five subjects.
- To find out the maximum marks out of the five subjects.
- To find out the minimum marks out of the five subjects.
- To count the number of subjects having marks more than 60.

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Name: _____ Sec: _____ Roll No.: _____
CODE: B

**BURNPUR RIVERSIDE SCHOOL, BURNPUR
PRE-BOARD EXAMINATION: [2023-2024]
INFORMATION TECHNOLOGY (802)
CLASS - XII**

Time: 3 Hrs.

Maximum Marks: 60

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.

SECTION-A
OBJECTIVE TYPE QUESTIONS

1.

**Answer any 4 out of the given 6 questions on
Employability Skills (1 x 4 = 4 marks)**

i.	Give an example of Realistic goal.	1
ii.	How many columns are there in LibreOffice Calc worksheet?	1
iii.	What do you understand by waged employee?	1
iv.	Identify the type of sentence: 'Diwali is the festival of lights.'	1
	a. Declarative Sentences	b. Interrogative sentences
	c. Imperative Sentences	d. none
v.	OCPD stands for Obsessive _____ personality disorder.	1
	a. commutive b. compulsive c. comparative d. none	
vi.	State whether the following statement is TRUE or FALSE.	1
	'ILO stands for International Labour Organization'.	

2.

**Answer any 5 out of the given 7 questions
(1 x 5 = 5 marks)**

i.	DISNIC stands for:	1
	a. District Information System of the National Intelligence Centre	
	b. Direct Information System of the National Informatics Centre	
	c. District Information System of the National Informatics Centre	
	d. none of the above	
ii.	Which of the following is a client-side script?	1
	a. JavaScript b. HTML c. Both (a) & (b) d. none	
iii.	How many primitive data types does Java supports?	1
	a. six b. seven c. eight d. none	
iv.	_____ replaces zero or more number of random character, when used with Like keyword.	1
	a. _	
	b. %	
	c. \$	
	d. @	
v.	Name the domain where database applications may be used for storing details of PAN cards, AADHAR cards, vehicle registration, birth/death certificate registration.	1

vi. In which package of Java is the in-built Scanner class available? 1
 vii. Which command displays list of databases available on the current server? 1

3.

Answer any 6 out of the given 7 questions
(1 x 6 = 6 marks)

i. Which constraint is used to restrict the values of an attribute within a range? 1
 ii. Define Data Redundancy. 1
 iii. Name the domain where database applications may be used for storing information regarding hotel staff, menu items and infrastructure. 1
 iv. Never share _____ with anyone while doing any online transaction. 1
 a. OTP b. PIN c. Both (a) & (b) d. none
 v. In 'https://', what does 's' stands for? 1
 a. standard b. standalone c. secure d. none
 vi. _____ is an e-commerce application where the customer can purchase goods over the Internet. 1
 vii. What will be the value of n after the execution of the following selection statement : 1
`int n = 0;
 if (6 > 7 || 5 > 4)
 { n = 5 ; }
 else n = 7;`

4.

Answer any 5 out of the given 6 questions
(1 x 5 = 5 marks)

i. NeGP was formulated in _____. 1
 a. 2004 b. 2005 c. 2006 d. none
 ii. Name the domain where database applications may be used for storing information about flight details. 1
 iii. "We can use 'LIKE' keyword along with two more reserved characters". Name the two reserved characters. 1
 iv. In the table 'TEACHER', Riya doesn't want repeated values in column 'Marks'. Write the correct SQL command. 1

v. Which of the following is **not** an example of e-Governance? 1

- To file property tax
- To apply for renewal of Passport
- To start an online coding course for 3 months
- To get Voters ID card issued

vi. Predict the output: 1

```
double[]Qty = {346, 142, 103, 26.5, 387.5};  
System.out.println(Qty[3]);
```

5. **Answer any 5 out of the given 6 questions**
(1 x 5 = 5 marks)

- Expand NSP. 1
- Name the domain where database applications may be used for storing information about customers' accounts and loans related information. 1
- What do you understand by Alternate key? 1
- What is the function of Null Value Constraint? 1
- What is a project? 1
- Identify the type of operator used:
if (A >=B) 1

6. **Answer any 5 out of the given 6 questions**
(1 x 5 = 5 marks)

- What does MOOCs stands for? 1
- Name the domain where database applications may be used for storing information regarding employees such as name, address, contact number, salary, position, joining date. 1
- _____ is not an aggregate function 1
 - Sum()
 - Count()
 - Round()
 - Avg()
- Which command is used to create a new table or relation? 1
- What is the importance of password field on online reservation site? 1
- Which method of a String Class appends a string to the end of another string? 1

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.	Mention any four techniques that can help you to maintain positive attitude.	2
8.	Mention the four types of vertical alignments in Calc.	2
9.	What do you understand by Interviewing skills?	2
10.	Mention four qualities that motivate an entrepreneur.	2
11.	What is the role of Water Quality technician?	2

Answer any 3 out of the given 5 questions (2 x 3 = 6 marks)

12.	The following commands are giving errors. Write the correct MySQL commands.	2
	(a) SELECT AVERAGE(MARKS) FROM STUDENT;	
	(b) UPDATE EMPLOYEE SALARY = SALARY + SALARY*0.1;	
13.	Explain Drop table with Cascade command. Write an SQL query as an example.	2
14.	Explain Work integrated learning with respect to Medical / Hospital sector. (<i>Write two valid points</i>)	2
15.	What is the need of JVM?	2
16.	What will be the value of rem after the execution of the following code snippet? why? code =2; switch(code) {case 1: rem= 8; case 2: rem= 9; case 3: rem= 10; break; case 4: rem= 11; break;}	2

Answer any 2 out of the given 3 questions (3 x 2 = 6 marks)

17.	(a) Which aggregate function is used to find the total of all the values for a selected attribute of a table? (1)	3
	(b) Give any two characteristics of a relational model. (2)	
18.	Mention the advantages of online reservation / booking system for providers.	3

19.

Consider the following code:

3

```
int x = 1;  
while(x<=5);  
x = x +1;
```

- (a) Name the coding error shown in the above code.
- (b) What is the reason of the error?
- (c) Write correct java code.

Answer any 3 out of the given 5 questions (4 x 3 = 12 marks)

20.

Write a code in java using a for loop to display all even numbers between 1 to 10 and their sum. (3)

Is for loop an entry controlled loop or exit control loop? (1)

21.

What are String Class Methods in Java? Consider the statement
String name = “Hello World”.

4

Write a single line Java code using String methods to perform the following :

- (a) Convert the name to lowercase.
- (b) Replace “Hello” by “Welcome” in the given string.
- (c) Check whether the name contains “Sin” in it or not
- (d) Add a new string “jackpot” at the end of original string.

22.

Virat wants to shop shoes online. Write detailed Steps/ procedure to be followed while shopping online. (4)

23.

Name the built-in aggregate functions used for the following tasks given below. Also, write an SQL query, with respect to the tasks given below, for each as an example to support your answer.

4

- a) To find out the average marks of six subjects.
- b) To count the number of subjects having marks less than 45.
- c) To find out the minimum marks out of the six subjects.
- d) To find out the maximum marks out of the six subjects.

TRAIN	
TrainID	Station
0001	DELHI
0002	MUMBAI

COUNTER			
TicketID	Date	Cost	TrainNo
T1	12/3/24	500	0001
T2	15/5/24	450	0002
T3	15/5/24	500	0001

- (a) To find all the stations, date for ticket id as T1.
- (b) To find the total ticket amount collected from each station.
- (c) To display all the tables created in the current database.
- (d) To delete table counter along with the information in it.

=====

Name: _____ Sec: ____ Roll No.: ____
CODE: A

**BURNPUR RIVERSIDE SCHOOL, BURNPUR
PRE-BOARD EXAMINATION : (2023-24)
PHYSICAL EDUCATION
CLASS – XII**

Time: 3 Hours **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. Consolation tournaments are a part of which type of fixture? 1
a) Knock out b) League
c) Combination d) None of these

2. If the menstruation cycle does not begin at puberty, the condition is called 1
 a) Primary amenorrhea b) Secondary amenorrhea
 c) Oligomenorrhea c) Dysmenorrhea

3. Which of the following asana is not used to cure Asthma? 1
 a) Tadasana b) Dhanurasana
 c) Parvatasana c) Bhujangasana

4. Identify the asana: 1



a) Pawanmuktasana b) Sukhasana
 c) Chakrasana d) Gomukhasana

5. School management needs to recognise the essential place of physical activity in the education of children with special needs. Which of these is not one of the results of physical activities in children with special needs? 1
 a) Improvement in confidence
 b) Improvement in endurance
 c) Increase in depression
 d) Better hand – eye coordination

6. In first Paralympic games were organized in which country in 1960? 1
 a) USA b) Germany c) France d) Rome

7. In all carbohydrates, the ratio of hydrogen atoms to oxygen atoms is 1
 a) 2:1 b) 3:1 c) 3:2 d) 1:1

8. Which mineral is required for the developing strong bones and teeth? 1
 a) Copper b) Potassium c) Sodium d) Phosphorus

9. 50 m run/ walk aims to measure an athlete's 1
 a) Endurance b) Speed c) Power d) Abdominal Strength

10.is the ability of a muscle or muscles group to rest fatigue. 1
 a) Agility b) Flexibility
 c) Muscular endurance d) Muscular strength

11. Is the fracture which occurs when a bone bends and cracks, instead of breaking completely in to separate pieces. a) Transverse b) Greenstick c) Comminuted d) Impacted	1
12.	Sprain is an injury of the a) Muscles b) Ligament c) Joint d) Bone	1
13.	Which of the following is not the factor affecting projectile trajectory? a) Gravity b) Angle of release c) Buoyant force d) Air resistance	1
14.	Which of the following laws of motion given by Issac Newton is also known as ‘Law of Intertia’? a) First Law b) Third Law c) Second Law d) None of these	1
15.	Given below are the two statements labeled as Assertion (A) and Reason (R). Assertion (A): Aggression is part of human behavior and is necessary for an individual to live and struggle for higher achievement. Reason (R): Aggression is inevitable and inseparable in sport activities. In the context of the above two 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 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 false.	1
16.	A person who is characterised by sociability, assertiveness and high amount of emotional expressiveness is said to have personality traits. a) Openness b) Extroversion c) Agreeableness d) Conscientiousness	1
17.	Continuous training was developed by? a) Drvan Aaken b) O Astrand c) Gosta Holma d) Greshler	1

18.

Match the following:

1

LIST I	LIST II
A. Continuous training	1. Perrine
B. Isotonic exercise	2. O Astrand
C. Isokinetic exercise	3. Van Aaken
D. Fartlek	4. De Loone

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

SECTION - B

19.

Write the importance yoga.

2

20.

Your grandmother feels she has reduced her upper body flexibility and therefore she wants to test herself. Which test would you suggest her?

2

21.

Differentiate between instrumental aggression and hostile aggression.

2

22.

What do you understand by Goal setting? Enlist its types.

2

23.

Classification of sports injuries.

2

OR

What is Newton's second law of motion?

SECTION - C

24.

Write in brief the corrective measure of bow leg, knock knee and flat feet.

3

25.

Explain any three strategies to make physical activities accessible for CWSN.

3

26.

Elucidate any six effects of exercise on muscular system.

3

27.

How can Newton's third law of motion be applied in swimming sport?

3

28.

Briefly explain interval training method. State its advantages and disadvantages.

3

OR

What is personality? Write down three dimension of personality.

SECTION - D

29. On the basis of the pictures given below, answer the following question. 4



- a) Identify the deformity.
- b) List any two causes for this deformity.
- c) Yoga asanas to cure this deformity are and
- d) Mention two precaution of this deformity.

30. On the basis of the pictures given below, answer the following question. 4



- a) The given sources are rich in.....
- b) Is this a water soluble nutrient?
- c) Vitamin B5 is also known as
- d) Deficiency of causes Pellagra.

OR

Deficiency of causes Beri Beri.

31. On the basis of the pictures given below, answer the following question. 4



- a) Identify the type of psychological behavior portrayed in the image above.
- b) What are type of this psychological behavior.
- c) ----- is a positive type of aggression.
- d) In -----, the main aim is to achieve a goal by using aggression.

SECTION –E

32. What is a fixture? What are the different methods to draw fixtures for tournament? Draw a single knockout fixture of 17 teams. 1+2+2

33. Describe the types of joint injuries. 5

34. Briefly explain the Newton's first and second law of motion. 5

OR

Anil is a hockey coach. He stresses on the need to develop coordinative abilities to his students specially needed in hockey. Do you agree with it? Also explain five types of coordinative abilities.

Name: _____ Sec: _____ Roll No.: _____
CODE: B

**BURNPUR RIVERSIDE SCHOOL, BURNPUR
PRE-BOARD EXAMINATION : (2023-24)
PHYSICAL EDUCATION
CLASS – XII**

Time: 3 Hours

Maximum Marks: 70

GENERAL INSTRUCTIONS:-

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- *Section E consists of questions 32-34 carrying 5 marks each and are short answer types and should not exceed 200-300 words.*

SECTION-A

01. In single league tournament, if 16 teams are taking part, the number of total matches will be _____. 1

- a) 99
- b) 120
- c) 146
- d) 110

02. Flat foot deformities is also known as _____

1

- a) Pes planus
- b) Genu valgum
- c) Genu varum
- d) None of these

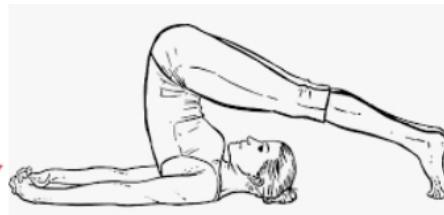
03. Identify the below given asanas and write their names.

1

a)



b)



04.

Match the following:-

1

	Column-I		Column-II
a)	Vajrasana	i)	Reduce fat around waist
b)	Katichakrasana	ii)	Cures obesity
c)	Bhujangasana	iii)	Make digestive system function smooth
d)	Ardha Matsyendrasana	iv)	Spine gets a good stretch

Select the correct answer:-

- A)(a)-(iii); (b)-(i); (c)-(iv); (d)-(ii)
- B)(a)-(iv); (b)-(iii); (c)-(ii); (d)-(i)
- C)(a)-(iii); (b)-(iv); (c)-(ii); (d)-(i)
- D)(a)-(iv); (b)-(iii); (c)-(i); (d)-(ii)

05. The headquarters of Paralympics is in 1

- a) USA
- b) Germany
- c) France
- d) Sweden

06. **Assertion-Reason Type Questions:-** 1

Given below are the two statements labelled Assertion and Reason.

Assertion (A):

People with intellectual disabilities can learn, enjoy and benefit from participation in sports with proper help and encouragement.

Reason (R): Consistent training helps these people develop their sports skills and provides incentives for personal growth.

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.
- c) Assertion (A) is true but Reason (R) is false.
- d) Assertion (A) is false but Reason (R) is true.

07. **Assertion-Reason Type Questions:-** 1

Given below are the two statements labelled Assertion (A) and Reason (R).

Assertion (A):- Physical Education is an elective discipline.

Reason (R):- Physical Education borrows principles from other allied fields.

**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.

08. _____ regulates the body temperature. It is made up of Hydrogen and Oxygen elements in 2:1. 1

- a) Carbohydrates
- b) Water
- c) Roughage
- d) Antibodies

09. **Match the following:-** 1

	Column-I		Column-II
a)	Chair Sit and Reach Test	i)	Agility
b)	Arm Curl Test	ii)	Lower body strength
c)	Eight Foot Up and Go Test	iii)	Upper body strength
d)	Chair Stand Test	iv)	Lower body flexibility

Select the correct answer:-

- A)(a)-(i); (b)-(ii); (c)-(iii); (d)-(iv)
- B)(a)-(iv); (b)-(iii); (c)-(ii); (d)-(i)
- C)(a)-(iv); (b)-(i); (c)-(ii); (d)-(iii)
- D)(a)-(iv); (b)-(iii); (c)-(i); (d)-(ii)

10. Which equipment is required for plate tapping test? 1
a) Brick
b) Yoga mat
c) A4 size paper and 2disc
d) Stadiometer

11. Injury to the ligaments due to fall is called? 1
a) Strain
b) Sprain
c) Abrasion
d) Bruise

12. The amount of oxygen which can be consumed by the working muscles from the blood is known as _____.
a) Oxygen intake
b) Oxygen diffusion
c) Cardiac output
d) Oxygen uptake

13. Mechanical analysis of the Javelin thrown by Neeraj Chopra will be done under _____. 1
a) Biology
b) Biomechanics
c) Physiology
d) Anatomy

14. Diving from diving board in swimming is an example of which law? 1
a) Third law
b) Second law
c) First law
d) None of these

15. _____ is not included in aggression in sports. 1
a) Physical
b) Assertive
c) Instrumental
d) Scolding by coach.

16. Aggression is not planned and often takes place in the heat of the moment known as _____ 1

- Hostile
- Impulsive
- Instrumental
- Assertive

17. Interval training is used for developing.... 1

- Flexibility
- Agility
- Education
- Speed

18. Fartlek Training was developed in..... 1

- Sweden
- USA
- India
- UK

SECTION-B

19. Write at list two contraindications of Shavasana. 2

20. What is BMR? 2

21. What is sports psychology? 2

22. Write any two advantages of Fartlek Training programme. 2

23. What is contusion? 2

OR

Write down four factors, which affecting projectile trajectory. 2

SECTION-C

24. What do you mean by osteoporosis? Explain any two factors, those lead to osteoporosis in women. 3

25. Briefly discuss the implementation of inclusive education in India. 3

26. Discuss physiological changes in sense due to ageing process. 3

27. What do you mean by lever? Explain any two types of leavers with examples. 3

28. Define motivation and discuss its types. 3

OR

What is circuit training? Discuss the advantages of circuit training programme. 3

SECTION-D

29. **Read the given case study carefully and answer the questions that follow :-** 4

Rittam, a student of class XII, used to read books in the school library. One day she was studying the history of eating disorder and amenorrhea and felt that more girls and women must be encouraged to create awareness about female athlete traid. She believed that impossible things can be achieved through participating in sports.

a) What is female athlete traid?

- i) Osteoporosis
- ii) Amenorrhea
- iii) Eating disorder
- iv) All of the above

b) Disordered eating includes _____

- i) Anorexia nervosa
- ii) Bulimia nervosa
- iii) Both (i) and (ii)
- iv) None of them

c) Irregularity in menstrual Cycle is common among women athlete. It is called _____.

- i) Menstrual dysfunction
- ii) Menarch
- iii) Amenorrhea
- iv) All of the above

d) A healthy normal menstrual period is called _____.

- i) Menarch
- ii) Menopause
- iii) 28 day cycle
- iv) None of the above

30. Read the given case study carefully and answer the questions that follow:- 4

Ritu, a student of class XII joined Zumba Aerobics class near her house. Her fitness was poor because of which she kept taking intervals in between. Her gym trainer advised her to consult some good nutritionist and also advised her to increase protein intake in her diet.

a) Which food items are rich in proteins.....

- i) Meat, Fish
- ii) Potato, Banana
- iii) Guava, Rice
- iv) None of the above

b) Proteins are also known as.....

- i) Fatty food
- ii) Energy food
- iii) Body building food
- iv) All of these

c) The daily requirement of proteins in our diet is about _____ gram.

- i) 46-56
- ii) 20-30
- iii) More than 60
- iv) None of the above

d) A balance diet has protein, fat, carbohydrates in a ratio of.....

- i) 1:2:4
- ii) 2:1:3
- iii) 1:2:3
- iv) 1:1:4

31. Read the given case study carefully and answer the questions that follow:- 4

Kabir, was a good athlete of our school. He used to undergo training regularly for the best results. In spite of his constant effort he could not succeed. He got frustrated with his poor performance and stopped expressing his feelings and meeting friends. His

parents took him to a psychologist for help. After a few consultations, he was able to focus well and succeeded.

- a) Kabir can be motivated using _____
 - i) Blame
 - ii) Praise
 - iii) Recognition
 - iv) Both (ii) and (iii)
- b) A person having both traits of introvert and extrovert is known as _____.
 - i) Mesomorph
 - ii) Extroversion
 - iii) Ambivert
 - iv) Endomorph
- c) Taking help of psychologist becomes _____ kind of motivation.
 - i) Intrinsic
 - ii) Extrinsic
 - iii) Ambivert
 - iv) Both (i) and (ii)
- d) Person with emotional instability and negative emotions are termed as _____.
 - i) Neuroticism
 - ii) Introvert
 - iii) Openness
 - iv) Extrovert

SECTION-E

32. Draw a knock-out fixture for 25 teams with all steps involved.	5
33. Explain the soft tissue injuries and its types in detail.	5
34. With suitable examples explain the application of Newton's law in sports.	5

OR

What is endurance? How can endurance be developed through Fartlek Training method? 5

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