

Name: _____ Sec: _____ Roll No.: _____

CODE - A

BURNPUR RIVERSIDE SCHOOL, BURNPUR

HALF YEARLY EXAMINATION: [2022-2023]

ENGLISH

CLASS – XII

Time: 3 Hours

Maximum Marks : 80

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GENERAL INSTRUCTIONS:

- 1. The Question Paper contains THREE sections-READING, WRITING and LITERATURE.*
 - 2. Attempt questions based on specific instructions for each part.*
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SECTION A : READING SKILLS (22 marks)

Reading Comprehension Through Unseen Passages

1. **Read the following text.**

12

- 1. Can you imagine a college without walls, professors or classrooms? Educator Bunker Roy can. More than 40 years ago, Roy, now 69, founded the Barefoot College in Tilonia, Rajasthan. His school admits rural women, often grandmothers and teaches them the basics of solar engineering and freshwater technology. His efforts have yielded enormous benefits. When the women return to their homes, they are trained enough to provide their communities, some of the world's most lonely places, with electricity and*

clean water. They also gain something important: a new-found self-confidence.

2. The Barefoot model has already been used to empower women throughout Asia, Africa, and Latin America. Last year, former President, Bill Clinton presented Roy with Clinton Global Citizen Award, which honours leaders who are solving the world's problems in effective ways.
3. If you go all over the world, to very remote villages, you will often find only very old people and very young people. The men have already left. So two ideas were put into practice in order to make the Barefoot Model work. First it was declared that men are untrainable, restless, always ready to move, ambitious, and they all want a certificate to show for their efforts. And the moment you give one of them a certificate, he leaves the village looking for a job in the city. That is how, the simple, practical solution of training grandmothers came up. They are sympathetic, tolerant, willing to learn, and patient. All the qualities you need are there. And the second idea was not to give out certificates. Because the moment a certificate is given, a woman, like a man, will see it as a passport for leaving rural areas and going to urban areas to find a job.
4. Barefoot College follows a simple lifestyle: Students eat, sleep, and work on the floor. They can work for 20 years or they can go home the next day. As of today, 604 women solar engineers from 1083 villages in 63 countries have been

trained. The engineers have given solar power to 45,000 houses. These were done by women who had never left their homes before. They hate the idea of leaving their families and getting on a plane. When they reach India, sometimes after 19 hours of travel, they are faced with strange food, strange people, and a strange language. All the training is done in sign language. Yet in six months, they will know more about solar engineering than most university graduates.

5. Some women face problems at home for attending college. Most of the husbands do not like their wives going to these colleges and tell them not to come back if they do so. But, on her return when she is able to help provide her village with solar electricity, her husband wants her to get back home. The respect she now has is enormous and she considers herself no less than solar engineers. Bunker Roy dreams of providing the world's 47 least developed countries with Barefoot College trained grandmothers and solar electrify more than 1,00,000 houses.

Answer the following questions, based on the passage above

- (a) Select the option that describes the efforts of Bunker Roy, correctly.
- i. Altruism
 - ii. Philanthropy
 - iii. Self reliance in villages
 - iv. All of the above

1

- (b) *So two ideas were put into practice in order to make the Barefoot Model work.* The ideas include: 1
- i. Men are restless, always ready to move, ambitious, and they seek recognition for their efforts.
 - ii. Training grandmothers and not to give out certificates.
 - iii. Students can eat, sleep, and work on the floor and they can work for 20 years or they can go home the next day.
 - iv. All of the above
- (c) Select the option that is similar in meaning to ‘tolerant’: 1
- i. open-minded
 - ii. sympathetic
 - iii. harmless
 - iv. timid
- (d) *“Can you imagine a college without walls, professors or classrooms?”* The question means/ is: 1
- i. Such a college cannot be even dreamt of.
 - ii. Educator Bunker Roy can.
 - iii. A college of such a nature really exists.
 - iv. The question iterates an impractical idea.
- (e) *Barefoot College defies stereotyped college notions.* Share an evidence from the text in support of the view. 1
- (f) *The achievement for women from Barefoot College is something beyond the ordinary.* Cite an instance from the text to highlight the statement. 1

- (g) *Certificates not given out after training.* How was that justified? 2
- (h) How is lifestyle simple at Barefoot College? 2
- (i) How does male chauvinism rear its ugly head in the passage? 2

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

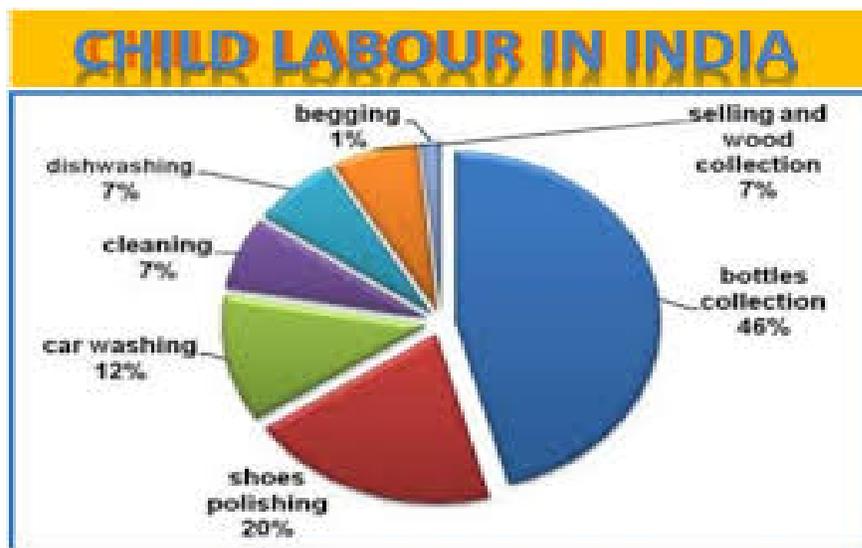
1. From the ramparts of the Red Fort for some years now, our prime ministers have been promising the eradication of child labour in hazardous industries.
2. The truth is, if the government really wanted, child labour in hazardous industries could have been eliminated long time ago; and yes, every Indian child would have been in school by 2003.
3. The government has failed to eliminate this dehumanisation of childhood. It has also failed to launch compulsory primary education for all, despite the rhetoric. Between 60 and 100 million children are still at work instead of going to school and around 10 million are working in hazardous industries. India has the biggest child population of 380 million in the world, plus the largest number of children who are forced to earn a living.
4. We have many laws that ban child labour in hazardous industries. According to the *Child Labour (Prohibition and Regulation) Act, 1986*, the employment of children (below the age of 14) in hazardous occupations has been strictly banned. But each state has different rules regarding the

minimum age of employment; this makes implementation of these laws difficult.

5. Also, there is no ban on child labour in non-hazardous occupations. The Act applies to the organised or factory sector and not to the unorganised or informal sector where most children find employment as cleaners, servants, porters, waiters, among other forms of unskilled work. Thus, child labour continues because the implementation of the existing laws is lax.
6. There are industries which have a '*special*' demand for child labour because of their nimble fingers, high level of concentration and capacity to work hard at abysmally low wages. The carpet industry in UP and Kashmir employs children to make hand-knotted carpets; there are 80,000 child workers in J&K alone. In Kashmir, because of the political unrest, children are forced to work while many schools are shut. Industries like gem-cutting and polishing, pottery and glass want to remain competitive by employing children.
7. The truth is that it's poverty which is pushing children into the brutish labour market. We have 260 million people below the poverty line in India, a large number of them are women. Poor, vulnerable parents, especially women-headed families, have no option but to push their little ones in this hard life in hostile conditions, with no human or labour rights.
8. There is a lobby which argues that there is nothing wrong

with children working as long as the environment for work is conducive for learning new skills. But studies have shown that children are made to do boring, repetitive and tedious jobs and are not taught new skills as they grow older. In these hell-holes, like the sweatshops of old, there is no hope.

9. Children working in hazardous industries are prone to debilitating diseases which can cripple them for life. By sitting in cramped, damp, unhygienic spaces, their limbs become deformed for life. Their mental and physical development is permanently impaired by long hours of work. Once trapped, they can't get out of the vicious circle of poverty. They remain uneducated and powerless. Finally, in later years, they too are compelled to send their own children to work. Child labour perpetuates its own nightmare.
10. Surely, if 380 million children are given a better life and elementary education, India's human capital would be greatly enhanced. But that needs, as President Abdul Kalam says, a "*second vision*". Can our political establishment see beyond the haze of shallow realpolitik?



- (a) “...every Indian child would have been in school by 2003.” The expression hints out – 1
- i. A possibility
 - ii. A failure
 - iii. A beginning
 - iv. An opportunity
- (b) “In these hell-holes, like the sweatshops of old, there is no hope.” The statement depicts the – 1
- i. boring, repetitive and tedious jobs carried out by children.
 - ii. abject, dismal condition of child labourers.
 - iii. agonizing working conditions
 - iv. All of the above
- (c) “We have many laws that ban child labour ... Even then child labour continues.” What makes implementation of laws difficult? 1
- (d) How does political turmoil contribute to child labour? 1
- (e) Families with no male heads are in even worse conditions with regards to child labour. How does the text justify this? 1
- (f) A suitable title to the passage is _____ . 1
- (g) Attempt 02 inferences from your observation of the figure. 2

- (h) *The menace of Child labour does not end with a single life. It carries over generations.* Cite an instance from the text that highlights this. 2

SECTION B : CREATIVE WRITING SKILLS (18 marks)

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

- (a) You are Simar / Smriti of Lotus International School, Jodhpur. Your school has decided to contribute in controlling traffic near your school and requires the names of volunteers from IX to XII. Draft a **notice** to be displayed on the notice board. (50 words)

OR

- (b) You are Pushpak /Pooja. As the Secretary of the Social Service League of your school, you have organised a cultural benefit show in aid of mentally challenged children of your town, Durgapur. Draft a **notice** in not more than 50 words for your school notice board, giving necessary information about the programme.

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

- (a) You are a student of Calcutta Public School, Kolkata. **Create an invitation**, inviting students, parents and other dignitaries to its 30th Foundation Day. The Chief Justice, Calcutta High Court is invited as the Chief Guest. Share information about the organisers and include other necessary details.

OR

- (b) You are Vivek Chatterjee. Create an **appropriate reply**, accepting an invitation to a ‘**Musical Nite**’ organised by your neighbour, Mr. Ishan Kumar. Your address is 64, College Road, Kolkata.

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

5

You are Ram/Rajani, living at 1, Rana Pratap Marg, New Delhi. Read the advertisement given below and **apply for the job** that suits you giving your bio-data separately.

Sun Professional University requires Lecturers in English and Demonstrators in Physics, Chemistry and Botany for their new Campus at Panipat. Candidates with a minimum of 5 year experience alone can apply. Excellent command of English is a must. Excellent package and compensation for experienced persons. Those interested may e-mail to sununiversityjobs@gmail.com or mail their response to The Director, Academics & Placement, Sun Professional University, New Delhi – 03.

OR

You are Dr. Tridib Roy, Assistant Professor at Netaji Subhash University, Kolkata. Outside your college, there is the River Hoogly which is being polluted by the locals. You want to organize a rally to make people aware of the issue. Write a **letter to the editor** highlighting the need for awareness among people and to motivate people to join the rally.

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

5

You are Rani / Raghav. Many organizations have come forward with the idea of education for all. In spite of their best efforts, it is still a dream. Compose **an article** for publication in a local daily, giving suggestions to make it a reality, as education is the only way to progress.

OR

The members of Greater Asansol Welfare Association held a protest rally at the District Park against the decision of the Municipal Corporation to cut down trees for widening the stretch of the G. T. Road from Ushagram to Gopalpur to ease traffic congestion. As Sneha Ganguly, the local correspondent of the neighbourhood newsletter, write **a report**, covering this event.

**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

*...let's not speak in any language,
let's stop for one second...
Fishermen in the cold sea
would not harm whales...
Those who prepare green wars,
wars with gas, wars with fire,
victory with no survivors...*

- (a) The poet uses the word “*let’s*” to _____
- i. initiate a conversation between the poet and the readers.
 - ii. invite readers as part of the poem’s larger call to humanity.
 - iii. welcome readers into the world of the poem and its subject.
 - iv. address readers as fellow members of the human race.
- (b) What statement does Neruda make about ‘*wars*’?
- i. Wars are of varied kinds
 - ii. Wars are wasteful and cause irrecoverable loss and damage to property.
 - iii. Wars never yield any winners, and the loss is far greater than what can be measured.
 - iv. Wars are unavoidable in the enduring struggle for human dignity and power.
- (c) **Complete the sentence appropriately.**
- ‘*Keeping Quiet*’ uses ‘*fishermen*’ to symbolize man’s _____
- (d) “...*let’s not speak in any language...*” Why does the poet call for silence?
- (e) Bring out the significance of the word “*arms*” given in the extract.

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

“Green wars” refer to battles between kings for possession of large tracts of land.

OR

*I saw my mother, beside me,
doze, open mouthed, her face ashen like that
of a corpse and realised with pain
that she was as old as she looked but soon
put that thought away*

- (a) **Choose the option that displays the same literary device as in the given lines of the extract.**

her face / ashen like that /of a corpse...

- i. Just as I had this thought, she appeared and...
- ii. My thoughts were as heavy as lead that evening...
- iii. I think like everyone else who...
- iv. I like to think aloud when ...

- (b) The tone of the poet in the poem is primarily a combination of _____ and _____.

- 1. dauntlessness
- 2. apprehension
- 3. dejection
- 4. disappointment

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

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

The poet “*soon put that thought away*” by _____.

(d) Bring out the significance of the word “*corpse*” given in the extract.

(e) What ‘*pained*’ the poet?

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

The poet realized, for the first time, the pain for her ageing mother while travelling in the car to Cochin airport.

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

“But certainly I do not want this man to live,” he thought...

“This man will live in spite of all,” he said to Hana and sighed.

The young man woke, so weak, his blue eyes so terrified when he perceived where he was, that Hana felt compelled to apologise. She herself served him, for none of the servants would enter the room.

- (a) “*But certainly I do not want this man to live*”. This is so because _____
- i. he was their enemy, a menace, living or dead.
 - ii. if they turned him over as a prisoner, he would certainly die.
 - iii. having given shelter to a white man, there was the fear of being arrested.
 - iv. All of the above.
- (b) What prompts Dr. Sadao to say, “*This man will live in spite of all*”?
- (c) “*...for none of the servants would enter the room.*” This tells of their _____.
- (d) Why do you think, did Dr. Sadao, operate upon the ‘*white man*’?

OR

MR LAMB: So now you keep your ears shut

DERRY: You're....peculiar. You say peculiar things. You ask questions I don't understand.

MR LAMB: I like to talk. Have company. You don't have to answer questions. You don't have to stop here at all. The gate's open.

DERRY: Yes, but...

MR LAMB: I've a hive of bees behind those trees over there. Some hear bees and they say, bees buzz...

- (a) Derry calls Mr. Lamb ‘*peculiar*’, the reason being _____
- i. his physical impairment.
 - ii. he has friends everywhere.
 - iii. he says things strange; he asks questions, Derry does not understand.
 - iv. he grows weeds in his garden.
- (b) *Mr. Lamb advises Derry to keep his ears shut.* This is because _____.
- (c) How does Mr. Lamb hear the bees?
- (d) What does “*Yes, but...*” of Derry express?

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

This morning, Saheb is on his way to the milk booth. In his hand is a steel canister. “I now work in a tea stall down the road,” he says, pointing in the distance. “I am paid 800 rupees and all my meals.” Does he like the job? I ask. His face, I see, has lost the carefree look. The steel canister seems heavier than the plastic bag he would carry so lightly over his shoulder. The bag washes. The canister belongs to the man who owns the tea shop. Saheb is no longer his own master!

“I want to drive a car”

Mukesh insists on being his own master. “I will be a motor mechanic,” he announces... His dream looms like a

*mirage amidst the dust of streets that fill his town
Firozabad*

- (a) *Saheb is no longer his own master!* The statement expresses –
- the loss of an individuality.
 - not having achieved his dream.
 - the sadness of his present menial existence.
 - All of the above.
- (b) *Mukesh insists on being his own master.* The word ‘insists’ highlights the Mukesh’s _____.
- living for his dream.
 - his will and determination.
 - standing firm despite his circumstances
 - All of the above
- (c) **State whether the given statement is TRUE or FALSE, with reference to the extract.**
- “*Does he like the job?*” is a question more asked to herself (the author) than to Saheb.
- (d) ““*I now work in a tea stall...*” cannot be called a happy statement because _____.
- (e) Why does the author say, ‘*His dream looms like a mirage...*’?
- (f) What unites the anecdotes of Saheb and Mukesh?

OR

“I only wonder how many silver spoons are left in the cupboard by this time.”

The wagon had hardly stopped at the front steps when the ironmaster asked the valet whether the stranger was still there...The valet answered that the fellow had gone and that he had not taken anything with him at all. On the contrary, he had left behind a little package ...

The young girl opened the package...She gave a little cry of joy.

- (a) Edla gave a cry of joy, the reason being _____.
- i. The peddler had left.
 - ii. The peddler had left behind a present for her.
 - iii. He had, in his letter, thanked Edla for her hospitality.
 - iv. The three 10 kronor notes had been returned; evidently the peddler had reformed.
- (b) What could precisely the mental state of Edla at this moment?
- i. Relief and joy
 - ii. Honoured and privileged
 - iii. Nostalgic and longing
 - iv. Apprehensive and doubtful
- (c) **State whether the given statement is TRUE or FALSE, with reference to the extract.**

The valet’s answer came as a big relief to Edla.

- (d) Why did the ironmaster inquire of the stranger immediately as the wagon stopped?
- (e) ‘*I only wonder*’ expresses the ironmaster’s _____.
- (f) The reason for Edla to open up the package in haste is _____.

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

- (a) “*What a thunderclap these words were to me!*” Why do you think, the words so shocked and surprised Franz?
- (b) *Determination was the key that helped him overcome his fear of water.* How did Douglas feel when he did get his victory over his fear of water?
- (c) *Untouchability is a crime against humanity.* How was, even, Gandhiji a victim of it?
- (d) What does the story of Subbu’s success in the film industry reveal about the importance of loyalty, creativity, and versatility in this field? (*Poets and Pancakes*)
- (e) How can the importance of interview be justified in modern journalism?
- (f) “*Maybe I give the impression of doing many things. But in the end, I am convinced I am always doing the same thing.*” How does Umberto Eco explain his statement?

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

- (a) What convinced Charley that he had reached the third level at Grand Central Station and not the second level?
- (b) Global warming, today, has reached alarming proportions. Justify why a visit to Antarctica can be important to realise the effects of global warming? (*Journey to the end of the Earth*)
- (c) Do you think Dr. Sadao's final decision was the best possible one in the circumstances? Why/Why not? (*The Enemy*)

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

Imagine you are William Douglas, the author of *Deep Water*.

Pen down your experiences, in a **letter** to a dear friend about your conquest over your fear of water.

OR

“The Rattrap” brings up the idea that the latent spark of human goodness is inherent in humans and it can be awakened through love, trust and understanding.

You have been asked to address through a speech your classmates on this very theme. Compose the draft, with reference to the text.

You may begin this way:

Good morning, everyone.

As I analysed the story...

You may end this way.

To conclude, I'd like to say that ...

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

In the story, '*The Tiger King*' by Kalki, the Dewan sees the fall / death of his king because of his unfounded beliefs, whims and fancies and his excessive obsession for power. He makes a note of events that led to the death of the king.

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

You may begin this way:

I have been with the Tiger King for long and I have known him to be courageous and brave. However, he had his weaknesses too...

OR

"You're....peculiar. You say peculiar things. You ask questions I don't understand." Thus notes Derry of Mr. Lamb.

The many qualities of Mr. Lamb have impressed you too. Create a **diary entry** on the impression, the character of Mr. Lamb has left on you.

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Name: _____ Sec: _____ Roll No.: _____

CODE : B

BURNPUR RIVERSIDE SCHOOL, BURNPUR

HALF YEARLY EXAMINATION: [2022-2023]

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. “But have you been to Nimtita? Have you been to the palace there?” asked the old man in the tea-shop, with the thatched roof. We were in the village of Lalgola, one hundred and fifty miles from Kolkata and we had just seen our thirteenth nobleman’s palace and found it unsuitable.
2. “Nimtita? Where is that?” we asked without much interest. We had never heard of the place. “It is sixty miles to the north of here. You drive up the highway. Then you come to a river which you have to cross. A ferry will take your car across. Then up the highway again for twenty miles. A sign tells you where to branch off...It’s on the river Padma, on the Eastern bank. It’s the palace of the Choudhary’s. I’ve been listening to your talk and I feel you ought to see this one before you give up.”

3. We were not very hopeful. We had enough trouble taking free advice from people who had no idea of our needs. Anyway, the question was: do we or do we not undertake this last trip? If we did not like the palace, it might mean either giving up making this film altogether or seriously changing its nature. We tossed a coin to decide whether to go or not. The coin said, 'Go!' and we set out on our sixty-mile journey.
4. It was when I was in bed with my right leg in plaster that I had decided the film on Tarashanker Banerji's famous short story, 'The Music Room' (Jalsaghar). A nasty fall on the stone steps at Banaras had brought about a serious knee injury. I lay in bed and read all the Bengali books I could lay my hands on. Just then, the film distributors were not too keen to take my film for distribution and may be this was one of the things that made me choose 'The Music Room.'
5. Here was a dramatic story which could naturally bring in music and dancing and distributors loved music and dancing. But here, too, was a story full of feelings. So, it would be satisfying for me as an artist. I would cast Chhabi Biswas, our greatest actor, in the leading role of the zamindar – the zamindar whose love for the big musical entertainments brings about his ruin. But the most important thing was to find a palace. As we had a low budget, there was no question of having studio-built sets. I knew that, if we had the money, my art director could easily build a set which looked like our old palace with the right style. But we just did not have the money for it.
6. Nimitita turned out to be everything that the old man had claimed – and more. No one could have described in words the feeling of utter sadness that surrounded the palace. The river Padma had changed its course over the years, so that now there were endless stretches of sand where once had been villages. The palace itself – Greek pillars and all – was a perfect realization of my dream image. It stood looking out over the stretches of sand with a sad dignity. It had somehow escaped being totally destroyed when the river changed its course. The river had reached within ten yards of the front of the palace – having swallowed the garden – and then stopped. Ganendra

Narayan Choudhary, who is seventy and owns a British title and the palace, told us how it happened: “We were having breakfast one morning when we heard a low rumble. We went out to the verandah and saw a big chunk of our estate – almost a square mile of it – going under water, disappearing forever. It all happened in a few seconds. Padma’s appetite is legendary.”

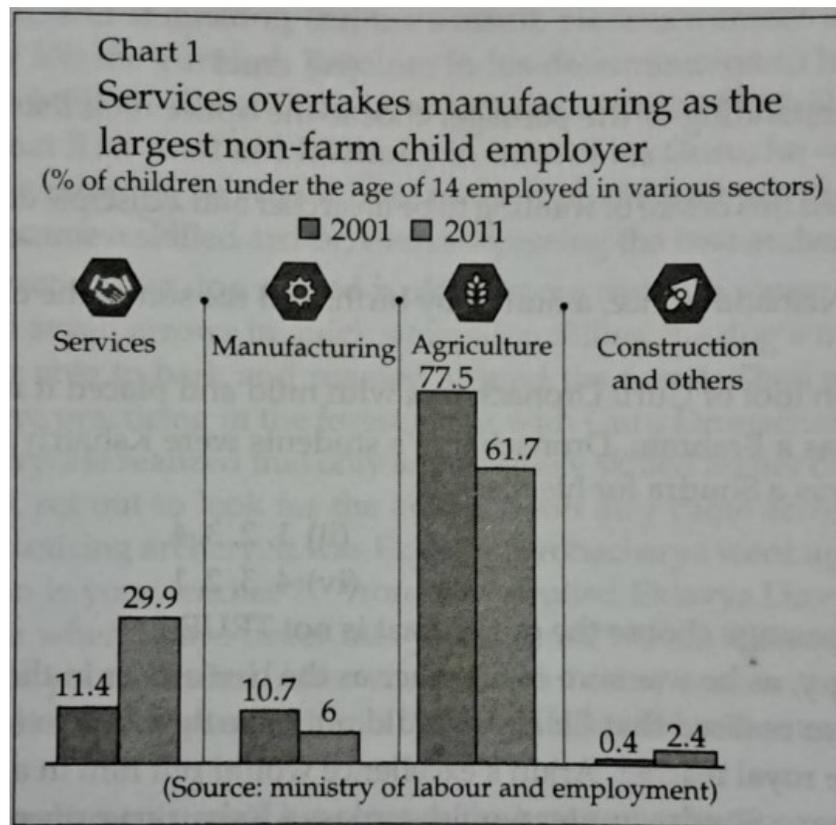
7. “But aren’t you afraid that the river might encroach further?”
8. “Oh, yes, the rains bring with them the usual fears.”
9. On returning from our first trip to Nimtita, I telephoned the author, Mr. Banerji. He had been just as anxious about the location as we were.
10. “We have found our palace at last, Mr. Banerji,” I said.
11. “Have you? And where is it?”
12. “At a little-known place called Nimtita.”
13. “Nimtita?” There was a note of recognition in his voice. “You do not mean the palace of the Choudhary’s, do you?”
14. “That’s the one.”
15. “But that is extraordinary! I have not been to Nimtita myself but I have read about the Choudhary’s in a history of Bengal zamindars and it was the music-loving Upendra Narayan Choudhary who served as the model for my rajah.”

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

- i The narrator of the passage is a by profession. 1
- a. painter
 - b. filmmaker
 - c. photographer
 - d. journalist

- ii What helped the narrator and his friends to decide whether or not to go to Nimitita? 1
- a. The suggestion made by the old man at the tea-shop.
 - b. Their own intuitive feeling.
 - c. Description of the palace in a travel book.
 - d. Tossing of a coin.
- iii Why was the idea of building a set for shooting given up? 1
- a. Shooting at a set would not give a real-life effect.
 - b. They did not have the money for the set.
 - c. Building a set is very time consuming.
 - d. Shooting at the actual palace would be more authentic.
- iv What did the narrator like most about the palace? 1
- a. Facilities for the visitors
 - b. Wood carvings at the ceiling
 - c. Its huge central hall
 - d. Its Greek pillars
- v What suggestion did the old man at the tea-shop make to the narrator and his friends? 1
- vi What brought about the ruin of the zamindar in the story, 'The Music Room'? 1
- vii Why did the narrator choose the story, 'The Music Room' for his film? 2
- viii How do you know that reaching Nimitita was not easy? 2
- ix What havoc did the river Padma cause when it changed its course? 2

1. 1 in every 10 worker in India is a child; a child who is guaranteed protections under the Indian law and guaranteed an education and mid-day meals, till the age of 14. The sight of a 'chhotu' running to fetch you a chai on the train platform or at your local tea stall, isn't much of a sight in India. In fact, one could almost say that the 'chhotu' has become so ubiquitous, that him not being there would be a bit confusing for some of the regulars. It has been normalized and has become an internalized personality trait of the larger Indian society, which tacitly continues to support the 'chhotu' culture at the tea stall and within the home.
2. In fact, it's become so natural that, when engaging with some of our more conscientious friend, both 'chhotu' and we, know the routine to pull off. You casually ask 'chhotu' how old he is as he cleans your table and he, with a pail the size of his torso, responds saying he's 18. His gangly limbs and prepubescent face are a dead giveaway but now that he's said he's 18, there's not much you can do ... is there?



3. According to the UNICEF, there are about 10.1 million children employes in child labour in India today. That amounts to approximately 13% of our workforce. India has been trying to combat this blight since before it became a republic, with the passing of the Employment of Children Act, 1938. While primitive, it was evident that even under an extractive colonial regime, it was understood that the use of children in the production process was anathema. Post-independence, the Factories Act, 1948 and the Mines Act, 1952, banned the practice of using children below the age of 14 and 18, in their respective production processes.
4. This set the tone for the Child Labour (Prohibition and Regulation) Act of 1986 which prevents the employment of children below the age of 14 years in life-threatening occupations identified in a list by the law and finally the Juvenile Justice (Care and Protection of Children) Act of 2000 made the employment of children a punishable offence.
5. The JJ Act came into force shortly after India ratified the Convention on the Rights of the Child (CRC), in 1992 and made the offence punishable with imprisonment from three months to one year or with fine no less than INR 10,000 – 20,000 or with both. The Right to Education Act, passed in 2009, was supposed to go beyond punishing people for child labour to creating a conducive environment for building the capabilities of all Indian children, so that they could have a complete education and enter the workforce out of choice and not compulsion. However, even after all this, child labour continues to be the norm in a lot of industries.
6. Oxfam India is working on ground in the 5 poorest states in India (Uttar Pradesh, Chhattisgarh, Jharkhand, Odisha and Bihar) enroll children to schools and help them achieve their fundamental right of educations as promised under the Right to Education Act (2009).

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

- i The 'chhotu' culture in India has been promoted silently by 1
- a. the government
 - b. the offices
 - c. the people
 - d. Indian society
- ii List the Acts restricting Child Labour in chronological order. 2
- iii As per the chart given in the passage, which sector is the lowest child employer? 1
- a. construction
 - b. agriculture
 - c. manufacturing
 - d. services
- iv For which occupation does the Juvenile Justice (Care and Protection of Children) Act of 2000 made the employment of children a punishable offence? 1
- v In which year 29.9% of children were employed in the service sector? 1
- vi The JJ Act made the employment of children punishable offence with imprisonment 1
- vii Why was the Employment of Children Act passed? 2
- viii Which word in the passage means the same as 'universal'? (para 1) 1

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

- A** Power supply will remain suspended for seven hours, i.e., from 10 am to 5 pm in your area on 20th September due to some cable work. Write a notice informing the residents about it and bear with the authorities for a day. You are Sonia / Sanjay, Secretary, Modern Housing Society, Noida. 4

OR

- B** You are Karishma / Karan Patel of Alps International School, Jaipur. Your school is organizing its 10th Inter-school Musical Carnival for the students of classes VI-X. Write a notice for your school notice board. 4

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

- A** Your brother Anil is getting married to Sakshi (D/o Mrs. & Mr. K. M. Bhargava). Your father has planned to hold the wedding at Hotel Ananta, Shimla on 22nd November, 2023 at 8.00 pm. Write a formal invitation on behalf of Mrs. & Mr. S. N. Sharma, inviting guests to solicit the occasion. 4

OR

- B** You are Garima / Girish of 78-C, Sector-12, Income Tax Colony, Thane. You have received an invitation for your friend Sumit's daughter's wedding. Write an informal reply accepting the invitation. 4

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

- A You are Anchal / Ankit of 21, Brij Nagar, Rajkot. You saw an advertisement in The Hindustan Times for the post of Marketing Manager in a reputed firm in Mumbai. You would like to apply for the same. Write a letter to the Public Relations Officer, Skyline Enterprises, Mumbai, applying for the job. Write the letter submitting your candidature with a detailed bio-data. 5

**Skyline Enterprises Mumbai
REQUIRES
MARKETING MANAGER**
Minimum graduates with proficiency in **COMPUTER &
ACCOUNTS.**
WALK IN INTERVIEW for interested candidates on:
30th September, 2023 (Saturday)
10:00 a.m. to 12:00 p.m.
At Skyline Enterprises, Galaxy Road, Mumbai

OR

- B You recently came across an article in the newspaper about the effect of social networking sites on children. Write a letter to the editor of national newspaper expressing your concern about it and offer suggestions to solve the problem. 5

Social websites harm children's brains: Chilling warning to parents from top neuroscientists

Social networking websites are causing alarming changes in the brains of young users, an eminent scientist has warned. Sites such as Facebook, Twitter and Bebo are said to shorten attention spans, encourage instant gratification and make young people more self-centered. The claims from neuroscientist Susan Greenfield will make disturbing reading for the millions whose social lives depend on logging on to their favourite websites each day.

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

A By 2050, India will be amongst the countries which will face acute water shortage. You are Anindita / Anirban. You are highly alarmed and terrified of the future without water. Write an article on “Save water – are we doing enough?” for the local daily. You may use the cues along with your own ideas. 5

- Requirement of water for every need
- Scarcity of water in the world
- Steps to be taken to save this dwindling resource
- Rain water harvesting
- Conservation of water for future needs

OR

B Green Valley School, Jabalpur, recently organized a science symposium on the topic: ‘Effect of pollution on quality of life.’ You are Nikita / Nikhil, editor of the school magazine. Write a report on the event for your school magazine, you may use the cues given below along with your own ideas. 5

- Campaign to raise awareness on the effect of pollution on life
- Participants included science students along with the teachers from both junior and senior section
- Felicitation of Chief Guest
- Participants made aware of the objectives and goals of the workshop
- Reduce pollution – 3R’s (Reduce, Reuse, Recycle)
- Segregation of waste
- Vote of thanks

**SECTION C: LITERATURE TEXTBOOK AND
SUPPLEMENTARY READING TEXT**

40

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

A For once on the face of the Earth 6
let's not speak in any language,
let's stop for one second,
and not move our arms so much.
It would be an exotic moment
without rush, without engines,
we would all be together
in a sudden strangeness.
(Keeping Quiet)

i The poet uses the word “let’s” to 1

ii Margaret Atwood said, “Language divides us into fragments I wanted to be whole.” 1

Choose the option that correctly comments on the relationship between Margaret Atwood’s words and the line from the above extract – “let’s not speak in any language.”

- a. Atwood endorses poet’s call to not speak in any language.
- b. Atwood justifies poet’s request to not engage in any speaking.
- c. Atwood undermines poet’s intent to stop and not speak in any language
- d. Atwood surrenders to poet’s desire for silence and not speak in any language.

iii What does ‘exotic’ mean? 1

- iv Choose the option that correctly matches the idioms given in Column A with their meanings in Column B. 1

Column A	Column B
1. On the face of the Earth	A. In existence
2. What on earth	B. To do all possible to accomplish something
3. Move heaven and earth	C. To express surprise or shock
4. The salt of the earth	D. To be good and worthy

- a. 1-A, 2-D, 3-C, 4-B
- b. 1-A, 2-C, 3-B, 4-D
- c. 1-B, 2-A, 3-D, 4-C
- d. 1-D, 2-B, 3-C, 4-A

- v What is the poet propagating through the given lines? 1
- vi What do we mean by 'arms' in the given extract? 1

OR

B ...I looked again at her, wan, 6
 pale
 as a late winter's moon and felt that
 old
 familiar ache, my childhood's fear,
 but all I said was, see you soon,
 Amma,
 all I did was smile and
 smile and smile.....
 (*My mother at Sixty-six*)

- i What is the speaker's emotional state when looking at her mother? 1
- a. Confused and disoriented
 - b. Nostalgic and longing
 - c. Empathetic and understanding
 - d. Fearful and apprehensive

- ii What does the use of the word "but" at the beginning of the line, ‘but all I said ...’, suggest? 1

- iii Select the word that WILL NOT complete the sentence appropriately. 1
The description of the mother as "wan, pale / as a late winter's moon" creates a vivid image of
 - a. vulnerability
 - b. sensitivity
 - c. frailty
 - d. mortality

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

The poetic device used in the line, ‘pale as a winter’s moon’ is the same as the one used in the line, ‘the winter wind wistfully wailed at night.’

- v What message do these lines highlight, in the context of familial relationships, and the speaker’s sense of anxiety and fear at the prospect of losing her mother? 1

- vi Complete the sentence appropriately. The repetition of the word, ‘smile’ suggests that 1

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

A “Oh, how he is bleeding!” Hana whispered again in a solemn voice. The mists screened them now completely and at this time of day no one came by. The fishermen had gone home and even the chance beachcombers would have considered the day at an end. 4

(The Enemy)

- i 'Hana whispered again in a solemn voice,' what does this indicate? 1
- a. fright
 - b. serious concern
 - c. indifference
 - d. none of these
- ii What kind of weather it was? 1
- iii How many people were there at the beach that time? 1
- iv Who are beachcombers? 1

OR

B They talk about me. Downstairs. When I'm not there. 'What'll he ever do? What's going to happen to him when we've gone? How ever will he get on in this world? Looking like that? With that on his face? That's what they say. 4

(On The Face Of It)

- i Who are 'They'? 1
- a. The two women
 - b. Children
 - c. Derry's parents
 - d. People in the hospital
- ii Whose concern is being expressed and for whom? 1
- iii How did the listener encourage the speaker? 1
- iv Do we find any impact of the motivational words on the listener? 1

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

A Unaware of what his name represents, he roams the streets with his friends, an army of barefoot boys who appear like the morning birds and disappear at noon. Over the months, I have come to recognise each of them. 6

“Why aren’t you wearing chappals?” I ask one. “My mother did not bring them down from the shelf,” he answers simply.

“Even if she did, he will throw them off,” adds another who is wearing shoes that do not match.

When I comment on it, he shuffles his feet and says nothing. “I want shoes,” says a third boy who has never owned a pair all his life. Travelling across the country I have seen children walking barefoot, in cities, on village roads. It is not lack of money but a tradition to stay barefoot, is one explanation.

(Lost Spring)

- i What is the writer’s purpose in allowing the boys to speak for themselves via dialogue, as opposed to only a writer’s commentary? 1
- ii The line, "It is not lack of money but a tradition to stay barefoot" can be best classified as: 1
 - a. A fact
 - b. An opinion
 - c. A theme
 - d. A plot point
- iii Explain any one possible inference that can be drawn from the line, "an army of barefoot boys who appear like the morning birds and disappear at noon." 1

- iv Identify the line from the text that bears evidence to the fact that the writer's association with the boys is not a recent one. 1
- v Based on the context provided in the extract, select the most likely comment that the writer would have made, based on the boy's reaction to the mismatched shoes. 1
 - a. "Why are your shoes mismatched? That's not a good look."
 - b. "Don't worry about your shoes, you can wear a matching pair later."
 - c. "I like your shoes. What matters is that they protect your feet."
 - d. "Have you chosen to mismatch your shoes?"
- vi Complete the sentence with ONE word. The phrase "he answers simply", suggests that the boy's response to the writer's question about why he wasn't wearing chappals was 1

OR

B The old man was just as generous with his confidences as with his porridge and tobacco. The guest was informed at once that in his days of prosperity his lost had been a crofter at Ramsjo Ironworks and worked on the land. Now that he was no longer able to do day labour, it was his cow which supported him. Yes, that bossy was extraordinary. (*The Rattrap*) 6

- i Who were the 'old man' and the 'guest'? 1
- ii Why was the 'old man' so friendly with his 'guest'? 1
- iii In what ways was the 'old man' generous? 1
- iv 'That bossy was extraordinary', has been referred to the cow. In what sense has the speaker said these words for cow? 1
 - a. the cow was beautiful
 - b. the crofter was proud of his cow
 - c. the cow was overbearing
 - d. All of the above

- v Who supported him in his old days? 1
- a. his old master
 - b. his cow
 - c. his relatives
 - d. his companions

- vi How was the 'bossy' extraordinary? 1

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

- i Who did M. Hamel blame when Franz was unable to answer a question on French participles? 2

(The Last Lesson)

- ii Mention any two long-term consequences of the drowning incident on Douglas. 2

(Deep Water)

- iii What can be inferred from Rajendra Prasad's recorded upshot of the lawyer consultations, at Motihari? 2

(Indigo)

- iv Why is the Englishman's visit referred to as unexplained mystery? 2

(Poets and Pancakes)

- v What did Rudyard Kipling's wife had to say about Kipling's attitude towards interviews and interviewers? 2

(The Interview: Part I)

- vi Umberto Eco, with reference to "The Name of the Rose" says, "I think if I had written The Name of the Rose ten years earlier or ten years later, it wouldn't have been the same." What could he have meant? 2

(The Interview: Part II)

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

i How did 'The World' help Charley to confirm his doubts regarding the existence of a third level? 2

(The Third Level)

ii What was the objective of the 'Students on Ice' programme? 2

(Journey to the End of the Earth)

iii What happened on the seventh day after Dr. Sadao had typed the letter? 2

(The Enemy)

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

i 'Deep Water' brings out the importance of overcoming fear, in order to be able to lead our lives successfully. 5

Imagine yourself to be a motivational speaker who has to address high school students. Write the speech in 120-150 words elaborating on occurrences from the text to inspire your audience and to convince them about the importance of overcoming fear.

You may begin like this

Good morning students!

We all know what it's like to be afraid. Fear is our body's natural response to a perceived threat or danger. But when

OR

ii Imagine that you overheard the following snippet of an interaction between the valet and the housekeeper at the ironmaster's mansion at the end of the story 'The Rattrap.' 5

Speaker 1: Trust is a difficult choice, which may or may not be

rewarded.

Speaker 2: Yes, indeed. Ms. Willmansson really believed in that fellow, didn't she? And he didn't disappoint. She was so happy reading his letter, oh her tears of joys filled my heart with so much admiration for her. Such a kind, wonderful young lady.

Speaker 1: Absolutely. But I wonder, what if that vagabond had run away with the silver spoons? Would you speak so glowingly of Ms. Willmansson then? Our master's daughter was a bit too gullible. Wouldn't you say?

Speaker 2: But she did what was right. That must count for something. It's Christmas and she helped that poor man. It didn't matter what he did. Surely the choice of right and wrong does not depend on the outcome.

Speaker 1: Wouldn't it? I should jolly well think so.

How would you respond to the questions raised in this conversation in relation to the story? Write your response in the form of an entry in your diary.

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

i How would you describe the behaviour of the Maharaja's minions towards him? Do you find them truly sincere towards him or are they driven by fear when they obey him? Do you find a similarity in today's political order? 5

(The Tiger King)

OR

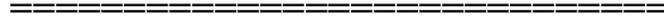
ii Imagine that the encounter with Mr. Lamb marked a turning point in Derry's life. Many years later, Derry is invited to speak on the challenges he faced and overcame. He thinks about the bitterness he carried earlier towards people and the world and how his attitude changed. 5

He decides to speak about the transformation in his relationship with

himself and understanding what kindness towards oneself might actually means.

He agrees to weave his speech on 'Not the face of a victim.' As Derry, write the speech.

(On The Face Of It)



BURNPUR RIVERSIDE SCHOOL, BURNPUR
HALF – YEARLY EXAMINATION : [2023 – 2024]
MATHEMATICS
CLASS - XII

Time: 3 Hrs.

Maximum Marks: 80

General Instructions:

1. This question paper contains – **five sections A, B, C, D and E**. Each section is compulsory. However, there are internal choices in some questions.
 2. **Section A** has 18 MCQ's and 02 Assertion – Reason based questions of 1 mark each.
 3. **Section B** has 05 Very Short Answer (VSA) – type questions of 2 marks each.
 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 each with sub parts.
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SECTION – A

(Multiple Choice Questions)
Each question carries 1 mark.

1. Let $A = \{a, b, c\}$ and let $R = \{(a, a), (a, b), (b, a)\}$. Then R is: 1
 - (a) Reflexive and symmetric but not transitive
 - (b) Reflexive and transitive but not symmetric
 - (c) Symmetric and transitive but not reflexive
 - (d) An equivalence relation
2. Let $R = \{(a, b) : a, b \in \mathbb{N} \text{ and } b = a + 5, a < 4\}$. Then the domain of R is 1
 - (a) (1, 2, 3)
 - (b) (4, 5, 6)
 - (c) (2, 5, 7)
 - (d) (2, 3, 5)
3. The function $f: \mathbb{N} \rightarrow \mathbb{N} : f(x) = x^2 + x + 1$ is: 1
 - (a) One to one and onto
 - (b) One to one and into
 - (c) Many to one and into
 - (d) Many to one and onto

4. Let $f(x) = e^{\sqrt{x^2-1}} \log(x-1)$. Then the dom(f) is: 1
- (a) $(-\infty, 1]$
 - (b) $[-1, \infty)$
 - (c) $(1, \infty)$
 - (d) $(-\infty, -1] \cup (1, \infty)$
5. The principal value of: $\sin^{-1}(\sin \frac{3\pi}{5}) =$ 1
- (a) $\frac{2\pi}{5}$
 - (b) $\frac{\pi}{5}$
 - (c) $\frac{3\pi}{5}$
 - (d) $\frac{4\pi}{5}$
6. If $A = \begin{bmatrix} 1 & \lambda & 2 \\ 1 & 2 & 5 \\ 2 & 1 & 1 \end{bmatrix}$ is not invertible, then λ is:
- (a) 2
 - (b) 1
 - (c) -1
 - (d) 0
7. If A is a square matrix then $(A + A')$ is 1
- (a) A null matrix
 - (b) An identity matrix
 - (c) A symmetric matrix
 - (d) A skew-symmetric matrix
8. If A is a three rowed square matrix and $|3A| = k|A|$, then the value of k is: 1
- (a) 3
 - (b) 9
 - (c) 27
 - (d) 1
9. The value of k for which the points A (1, -1), B (2, k) and C (4, 5) are collinear is: 1
- (a) 1
 - (b) 2
 - (c) 3
 - (d) 4

10. The vertices of triangle ABC are A (-2, 4), B (2, -6) and C (5, 4), then the area of triangle ABC is: 1
- (a) 17.5 square units
 (b) 35 square units
 (c) 32 square units
 (d) 28 square units
11. If $y = \frac{\cos x - \sin x}{\cos x + \sin x}$ then the value of $\frac{dy}{dx} + y^2 + 1$ is: 1
- (a) 0
 (b) 1
 (c) 2
 (d) 3
12. If $y = \sec^{-1}\left(\frac{x+1}{x-1}\right) + \sin^{-1}\left(\frac{x-1}{x+1}\right)$, then $\frac{dy}{dx} =$ 1
- (a) -1
 (b) -2
 (c) 0
 (d) 1
13. If $y = \tan^{-1}\left(\frac{2x}{1+15x^2}\right)$, then $\frac{dy}{dx} =$ 1
- (a) $\frac{5}{1+25x^2} - \frac{3}{1+9x^2}$
 (b) $\frac{5}{1+25x^2} + \frac{3}{1+9x^2}$
 (c) $\frac{3}{1+25x^2} - \frac{5}{1+9x^2}$
 (d) $\frac{3}{1+25x^2} + \frac{5}{1+9x^2}$
14. The radius of a circle is increasing at the rate of 0.7 centimeter per second. What is the rate of increase of its circumference? 1
- (a) 4.4 cm/sec
 (b) 3.4 cm/sec
 (c) 2.4 cm/sec
 (d) 1.4 cm/sec

15. $\int \frac{e^{\tan^{-1}x}}{1+x^2} dx =$ 1
- (a) $e^{\tan^{-1}x} + c$
 (b) $-e^{\tan^{-1}x} + c$
 (c) $e^{\cot^{-1}x} + c$
 (d) $-e^{\cot^{-1}x} + c$
16. $\int \left[\frac{1}{\log x} - \frac{1}{(\log x)^2} \right] dx =$ 1
- (a) $\frac{x}{\log x} + c$
 (b) $\frac{1}{\log x} + c$
 (c) $-\frac{x}{\log x} + c$
 (d) $-\frac{1}{\log x} + c$
17. $\int \frac{(x+1)(x+\log x)^2}{x} dx =$ 1
- (a) $\frac{1}{3}(x + \log x)^3 + c$
 (b) $\frac{x^2}{2} + x + c$
 (c) $\frac{x^3}{3} + \frac{x^2}{2} + x + c$
 (d) All of these.
18. The value of k for which the function: 1
- $$f(x) = \begin{cases} \frac{x^2-9}{x-3}, & \text{when } x \neq 3 \\ k, & \text{when } x = 3 \end{cases}$$
- is continuous at $x = 3$ is:
- (a) 3
 (b) 6
 (c) 9
 (d) 12

ASSERTION – REASON BASED QUESTIONS

19. Assertion (A): The function $f: \mathbb{R} \rightarrow \mathbb{R}$ defined by $f(x) = x^3$ is one – one 1
Reason (R): A function $f: X \rightarrow Y$ is one - one if $f(x) = f(y) \Rightarrow x = y$ for all $x, y \in X$.
(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): the function $f(x) = \frac{|x|}{x}$ is discontinuous at $x = 0$ 1
Reason (R): the left hand and right hand limit of the function $f(x) = \frac{|x|}{x}$ are not equal at $x = 0$.
(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.

SECTION - B

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

21. Find the principal value of : $\cos^{-1}\left(\frac{-\sqrt{3}}{2}\right)$ 2
- OR**
- Find the principal value of : $\tan^{-1}(-\sqrt{3})$
22. If $F(x) = \begin{bmatrix} \cos x & -\sin x & 0 \\ \sin x & \cos x & 0 \\ 0 & 0 & 1 \end{bmatrix}$, show that $F(x) \cdot F(y) = F(x+y)$. 2
23. Show that the points A(a, b + c), B (b, c + a) and C(c, a + b) are collinear. 2
24. The volume of a spherical balloon is increasing at the rate of 25 cubic centimetres per second. Find the rate of change of its surface at the instant when its radius is 5 cm. 2

OR

The radius of an air bubble is increasing at the rate of 0.5 centimetre per second. At what rate is the volume of the bubble increasing when the radius is 1 centimetre?

25. If the following function $f(x)$ is continuous at $x=0$, find the value of k : 2
- $$f(x) = \begin{cases} \frac{1-\cos 2x}{2x^2}, & x \neq 0 \\ k, & x = 0. \end{cases}$$

SECTION - C

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

26. Show that $f:N \rightarrow N$, defined by 3
- $$f(n) = \begin{cases} \frac{n+1}{2}, & \text{if } n \text{ is odd} \\ \frac{n}{2}, & \text{if } n \text{ is even} \end{cases}$$
- is a many-one onto function.

27. If $y \log x = (x - y)$, prove that $\frac{dy}{dx} = \frac{\log x}{(1+\log x)^2}$ 3

28. Differentiate $\tan^{-1}\left(\frac{\sqrt{1+x^2}-1}{x}\right)$ with respect to $\sin^{-1}\left(\frac{2x}{1+x^2}\right)$ 3

OR

If $(x^x + y^x) = 1$, then find $\frac{dy}{dx}$.

29. Find the intervals in which the function $f(x) = x^3 - 12x^2 + 36x + 17$ is 3
(i) increasing and (ii) decreasing.

30. Integrate: $\int \frac{(\sin x + \cos x)}{\sqrt{\sin 2x}} dx$. 3

OR

Integrate: $\int e^x \frac{x-3}{(x-1)^3} dx$.

31. Evaluate: $\int \frac{(x^2 + 1)}{(x^4 + x^2 + 1)} dx$. 3

SECTION - D

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

32. If $y = \frac{\sin^{-1} x}{\sqrt{1-x^2}}$, show that $(1-x^2) \frac{d^2y}{dx^2} - 3x \frac{dy}{dx} - y = 0$. 5

33. Evaluate: $\int \frac{dx}{(\sin x + \sin 2x)}$ 5

OR

Evaluate: $\int \frac{2}{(1-x)(1+x^2)} dx$.

34. If the following function $f(x)$ is continuous at $x = 0$, find the values of a , b and c . 5

$$f(x) = \begin{cases} \frac{\sin(a+1)x + \sin x}{x}, & \text{if } x < 0 \\ c, & \text{if } x = 0 \\ \frac{\sqrt{x + bx^2} - \sqrt{x}}{bx^{3/2}}, & \text{if } x > 0. \end{cases}$$

OR

Given that

$$f(x) = \begin{cases} \frac{(1 - \cos 4x)}{x^2}, & \text{if } x < 0 \\ a, & \text{if } x = 0 \\ \frac{\sqrt{x}}{\sqrt{16 + \sqrt{x}} - 4}, & \text{if } x > 0. \end{cases}$$

If $f(x)$ is continuous at $x = 0$, find the value of a .

35. Find the maximum value of $Z = 3x + 5y$, subject to the constraints $-2x + y \leq 4$, $x + y \geq 3$, $x - 2y \leq 2$, $x \geq 0$ and $y \geq 0$. 5

SECTION – E

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

36. A relation R on a set A is said to be an equivalence relation on A iff it is 4

- Reflexive i.e $(a, a) \in R, \forall a \in A$
- Symmetric i.e $(a, b) \in R \Rightarrow (b, a) \in R, \forall a, b \in A$
- Transitive i.e $(a, b) \in R \& (b, c) \in R \Rightarrow (a, c) \in R, \forall a, b, c \in A$

Based on the above information, answer the following questions:

- (i) If the relation $R = \{(1, 1), (1, 2), (1, 3), (2, 1), (2, 2), (2, 3), (3, 1), (3, 2), (3, 3)\}$ defined on the set $A = \{1, 2, 3\}$, then R is
- (a) Reflexive
 - (b) Symmetric
 - (c) Transitive
 - (d) Equivalence

- (ii) If the relation $R = \{(1, 2), (2, 1), (1, 3), (3, 1)\}$ defined on the set $A = \{1, 2, 3\}$, then R is
- Reflexive
 - Symmetric
 - Transitive
 - Equivalence
- (iii) If the relation R on the set N of all natural numbers defined as $R = \{(x, y): y = x + 5 \text{ and } x < 4\}$, then R is:
- Reflexive
 - Symmetric
 - Transitive
 - Equivalence
- (iv) If the relation R on the set $A = \{1, 2, 3, \dots, 13, 14\}$ defined as $R = \{(x, y): 3x - y = 0\}$, then R is
- Reflexive
 - Symmetric
 - Transitive
 - None of these.

37. The sum of three numbers is 2. If twice the second number is added to the sum of first and third, we get 1. On adding the sum of second and third numbers to five times the first, we get 6. Find the three numbers by using matrices. 4
38. A square piece of tin of side 12 cm is to be made into a box without a lid by cutting a square from each corner and folding up the flaps to form the sides. What should be the side of the square to be cut off so that the volume of the box is maximum? Also, find this maximum volume. 4

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

BURNPUR RIVERSIDE SCHOOL, BURNPUR
HALF YEARLY EXAMINATION: [2022-2023]
MATHEMATICS
CLASS: XII

Time: 3 Hrs.

Maximum Marks : 80

General Instructions:

- (i) *All the questions are compulsory.*
 - (ii) *This question paper is divided into five sections: A, B, C, D and E*
 - (iii) *Section A contains 18 MCQ's and 2 Assertion-Reason based question of 1 mark each.*
 - (iv) *Section B contains 5 VSA type questions of 2 marks each.*
 - (v) *Section C contains 6 SA type questions of 3 marks each.*
 - (vi) *Section D contains 4 LA type questions of 5 marks each.*
 - (vii) *Section E has 3 case-based of 4 marks each with sub parts.*
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-

SECTION- A

- 1. If $R = \{(x, y) : x + 2y = 8\}$ is a relation on a set of natural numbers, then range of R is 1
(a) $\{3,4,5\}$ (b) $\{3,1,2\}$ (c) $\{1,4,5\}$ (d) $\{2,4,5\}$
- 2. Given set $A = \{1,2,3\}$ and a relation $R \{(1,2), (2,1)\}$, the relation R will be 1
(a) reflexive if $(1, 1)$ is added
(b) Symmetric if $(2, 3)$ is added
(c) Transitive if $(1, 1)$ is added
(d) Symmetric if $(3, 2)$ is added
- 3. Let $f: R \rightarrow R$ defined by $f(x) = x^2$. choose the correct answer 1
(a) f is one one onto
(b) f is many one onto
(c) f is one -one but not onto
(d) f is neither one- one nor onto

4. Let N be the set of natural numbers and the function $f: N \rightarrow N$ be defined by $f(n) = 2n + 3 \quad \forall n \in N$. Then f is
 (a) Surjective (b) injective (c) bijective (d) none 1
5. The principal value of $\cot^{-1}\left(\frac{-1}{\sqrt{3}}\right)$ is
 (a) $\frac{-2\pi}{3}$ (b) 2π (c) $\frac{3\pi}{2}$ (d) $\frac{2\pi}{3}$ 1
6. If $A' = \begin{bmatrix} 4 & 3 \\ 2 & -1 \\ 1 & 0 \end{bmatrix}$ and $B = \begin{bmatrix} 2 & -1 & 1 \\ 2 & 1 & 3 \end{bmatrix}$ then $2A' - 3B' =$
 (a) $\begin{bmatrix} 0 & 0 \\ 2 & 2 \\ 1 & 0 \end{bmatrix}$ (b) $\begin{bmatrix} 2 & 1 & 7 \\ 3 & 1 & -4 \end{bmatrix}$ (c) $\begin{bmatrix} 2 & 0 \\ 7 & -5 \\ -1 & -9 \end{bmatrix}$ (d) $\begin{bmatrix} 0 & 2 \\ 7 & 1 \\ 9 & 1 \end{bmatrix}$ 1
7. If $A = [a \quad b \quad c]$, then $AA' =$
 (a) $\begin{bmatrix} a^2 & b^2 \\ c^2 & a^2 \end{bmatrix}$ (b) $[a^2 + b^2 + c^2]$ (c) $[0]$ (d) $\begin{bmatrix} a^2 \\ b^2 \\ c^2 \end{bmatrix}$ 1
8. If A is a square matrix of order 3 and $|2A| = k|A|$, then the value of k is
 (a) 4 (b) 6 (c) 8 (d) 16 1
9. If $\begin{vmatrix} x & 12 \\ 18 & x \end{vmatrix} = \begin{vmatrix} 6 & 12 \\ 18 & x \end{vmatrix}$, then $x =$
 (a) 0 or 6 (b) 0 or -6 (c) 6 or -6 (d) -6 only. 1
10. If vertices of ΔABC are $A(k, 0)$, $B(4, 0)$, $C(0, 2)$. If area of ΔABC is 4 sq units, then $k = ?$
 (a) 3, 0 (b) -4, 8 (c) 0, 8 (d) 4, 8 1
11. If $y = Ae^{5x} + Be^{-5x}$ then $\frac{d^2y}{dx^2}$ is equal to
 (a) $25y$ (b) $5y$ (c) $-25y$ (d) $10y$ 1
12. The derivative of $\tan^{-1}\left(\frac{1+x}{1-x}\right)$ with respect x is
 (a) $\frac{1}{1+x^2}$ (b) $\frac{2}{1+x^2}$ (c) $\frac{1}{1-x^2}$ (d) $\frac{2}{1-x^2}$ 1
13. If $y = a\sin^3 t$ and $x = a\cos^3 t$, then $\frac{dy}{dx}$ at $t = \frac{3\pi}{4}$ is
 (a) -1 (b) $\frac{-1}{\sqrt{3}}$ (c) $-\sqrt{3}$ (d) 1 1
14. The radius of a circle is increasing at the rate of 0.7 cm/sec. what is the rate of increase of its circumference?
 (a) 1.4π cm/sec (b) 14π cm/sec (c) 2.4π cm/sec (d) 0.4π cm/sec 1
15. $\int \frac{\cos\sqrt{x}}{\sqrt{x}} dx = ?$
 (a) $\sin\sqrt{x} + c$ (b) $2\sin\sqrt{x} + c$ (c) $-\sin\sqrt{x} + c$ (d) $-2\sin\sqrt{x} + c$ 1

16. $\int e^x \sec x (1 + \tan x) dx =$ 1
 (a) $e^x \sec x + c$ (b) $e^x \tan x + c$ (c) $e^x \sec x \tan x + c$ (d) $\sec x + c$
17. $\int \frac{e^{\tan^{-1}x}}{1+x^2} dx =$ 1
 (a) $\frac{e^{\tan^{-1}x}}{1+x^2} + c$ (b) $e^{\tan^{-1}x} + c$ (c) $e^x \tan^{-1} x + c$
 (d) $\tan^{-1} x + c$
18. Find k, if $f(x) = \begin{cases} kx, & \text{if } x < 0 \\ |x|, & \text{if } x \geq 0 \end{cases}$ is continuous at $x=0$. 1
 (a) 3 (b) -3 (c) 0 (d) 2

Each question consists of two statements, namely, Assertion (A) and Reason (R). For selecting the correct answer, use the following code:

- I. Both assertion (A) and Reason (R) are true and Reason (R) is a correct explanation of Assertion (A).
 II. Both assertion (A) and Reason (R) are true but Reason (R) is not a correct explanation of Assertion (A).
 III. Assertion (A) is true and Reason (R) is false.
 IV. Assertion (A) is false and Reason (R) is true.

19. **Assertion (A):** $n(A)=5, n(B) = 5$ and $f: A \rightarrow B$ is one-one then f is bijection 1
Reason (R) : If $n(A) = n(B)$ then every one-one function from A to B is onto
 (a) I (b) II (c) III (d) IV
20. **Assertion (A):** The function $f(x) = \frac{|x|}{x}$ is continuous at $x=0$ 1
Reason (R) : The left hand limit and the right hand limit of the function $f(x) = \frac{|x|}{x}$ are not equal at $x = 0$.
 (a) I (b) II (c) III (d) IV

SECTION- B

21. Evaluate: $\cos^{-1} \left(\frac{1}{2} \right) + 3 \sin^{-1} \left(\frac{-1}{2} \right)$ 2
OR
 Evaluate : $\sin \left\{ \frac{\pi}{3} - \sin^{-1} \left(\frac{-1}{2} \right) \right\}$
22. Find the value of x, if $[1 \ x \ 1] \begin{bmatrix} 1 & 3 & 2 \\ 2 & 5 & 1 \\ 15 & 3 & 2 \end{bmatrix} \begin{bmatrix} 1 \\ 2 \\ x \end{bmatrix} = 0$ 2

23. Evaluate : $\left| \begin{matrix} \sin 23^\circ & -\sin 7^\circ \\ \cos 23^\circ & \cos 7^\circ \end{matrix} \right|$ 2

24. The sides of an equilateral triangle are increasing at the rate of 2cm/sec. Find the rate at which the area is increasing when the side is 10 cm. 2

OR

Find two numbers whose sum is 16 and the sum of whose cubes is minimum.

25. Show that $f(x) = |x - 2|$ is not differentiable at $x = 2$. 2

SECTION- C

26. Find the domain and range of the real function, defined by $f(x) = \frac{x^2}{(1+x^2)}$. show that f is many-one. 3

OR

Show that $f: \mathbb{N} \rightarrow \mathbb{N}$, defined by $f(n) = \begin{cases} \frac{n+1}{n}, & \text{if } n \text{ is odd} \\ \frac{n}{2}, & \text{if } n \text{ is even} \end{cases}$

Is a many-one onto function.

27. Find $\frac{dy}{dx}$, if $y = (\log x)^x + x^{\log x}$ 3

28. If $y = \frac{\sin^{-1} x}{\sqrt{1-x^2}}$, show that $(1 - x^2) \frac{d^2y}{dx^2} - 3x \frac{dy}{dx} - y = 0$ 3

OR

If $x^m y^n = (x + y)^{m+n}$, then prove that $\frac{dy}{dx} = \frac{y}{x}$

29. Find the intervals on which the function $f(x) = (x + 1)^3(x - 3)^3$ is increasing and decreasing. 3

30. Evaluate: $\int \cos^4 x \, dx$ 3

OR

Evaluate : $\int e^x \frac{(x-1)}{(x+1)^3} \, dx$

31. Evaluate: $\int \sin^{-1} \left(\frac{2x}{1+x^2} \right) \, dx$. 3

SECTION-D

32. If $x = a \cos^3 t$, $y = a \sin^3 t$, find $\frac{d^2y}{dx^2}$ at $t = \frac{\pi}{4}$ 5

33. Evaluate: $\int \frac{2}{(1-x)(1+x^2)} \, dx$ 5

OR

Evaluate: $\int \frac{(\sin x + \cos x)}{\sqrt{\sin 2x}} dx$.

34

If the function $f(x) = \begin{cases} 3ax + b, & \text{for } x > 1 \\ 11, & \text{for } x = 1 \\ 5ax - 2b, & \text{for } x < 1 \end{cases}$

5

Is continuous at $x = 1$, find the values of a and b .

OR

Find the value of k for which the function

$f(x) = \begin{cases} \frac{k \cos x}{\pi - 2x}, & x \neq \frac{\pi}{2} \\ 3, & x = \frac{\pi}{2} \end{cases}$ is continuous at $x = \frac{\pi}{2}$

35

Solve the following problem graphically:

5

Minimize and maximize $z = 3x + 9y$

Subject to the constraints, $x + 3y \leq 60$, $x + y \geq 10$, $x \leq y$, $x \geq 0$
and

$y \geq 0$

SECTION-E

36.

A teacher has given a project on relation and function on parallel lines to a 12th class student. Teacher has given two boxes A and B containing 8 blue sticks and 8 red sticks respectively to be used for set of parallel or unparallel lines of two kinds



Based on above information answer the following questions:

- i) Find the set of all lines related to the line $y = 2x + 4$ 1
- ii) Find the number of different relations from set A to B 1
- iii) Check whether the relation R on set of blue lines defined by $R = \{(L_1, L_2) : L_1 \text{ is parallel to } L_2\}$ is reflexive, symmetric or transitive. 2

OR

Check whether the relation R on set of red lines defined by $R = \{(L_1, L_2) : L_1 \text{ is perpendicular to } L_2\}$ is equivalence relation.

37. Amit, Biraj and Mohan were given the task of creating a square matrix of order 2. Below are the matrices created by them. A, B, C are the matrices created by Amit, Biraj and Mohan respectively.

$$A = \begin{bmatrix} 1 & 2 \\ -1 & 3 \end{bmatrix} \quad B = \begin{bmatrix} 4 & 0 \\ 1 & 5 \end{bmatrix} \quad C = \begin{bmatrix} 2 & 0 \\ 1 & -2 \end{bmatrix}$$

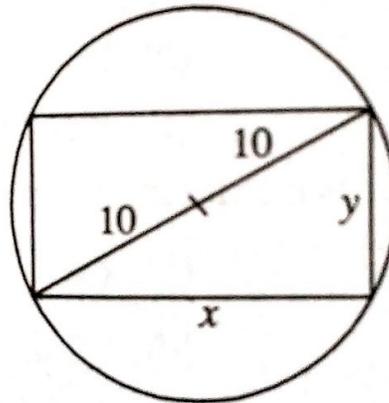
If $a = 4$ and $b = -2$, based on the above information answer the following :

- | | | |
|------|---|---|
| i) | Find the sum of the matrices A, B and C | 1 |
| ii) | Find the value of $(A^T)^T$ | 1 |
| iii) | Find the value of $(bA)^T$ | 2 |

OR

Find the value of $(a+b)B$

38. A farmer has a circular field of radius 10m in which he wants to sow wheat in a rectangular area which should be maximum as possible in that circular field and in remaining area he wants to sow some flower plants.



If x and y be length and breadth of rectangular field then answer the following questions:

- | | | |
|------|--|---|
| i) | Find the relation between x and y | 1 |
| ii) | Find the area of the rectangle in terms of x | 1 |
| iii) | Find the maximum area of rectangular field | 2 |

OR

Find the area where farmer is sowing flowers plant

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Name: _____ Sec: _____ Roll No.: _____

CODE:A

**BURNPUR RIVERSIDE SCHOOL, BURNPUR
HALF YEARLY 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, 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. $\mu_0 = 4\pi \times 10^{-7} \text{ TmA}^{-1}$
 - 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

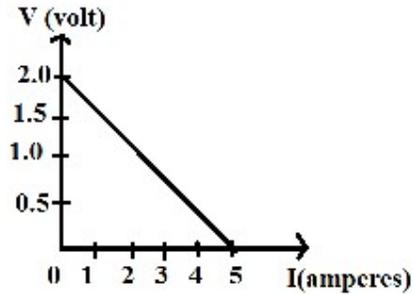
SECTION : A

1. Two charged spheres A and B having their radii in the ratio 1:2 are connected together with a conducting wire. The ratio of their surface charge densities (σ_A/σ_B) will be: 1
 - (a) 1:2
 - (b) 2
 - (c) 1:4
 - (d) 4
2. The magnitude of electric field intensity E is such that, an electron placed in it would experience an electrical force equal to its weight, is given by: 1
 - (a) mge
 - (b) mg/e
 - (c) e/mg
 - (d) e^2g/m^2
3. A charge Q is located at the center of a circle of radius r. The work done in moving a test charge q_0 from point A to B (at opposite ends of diameter AB) so as to complete a semicircle is: 1
 - (a) kq_0Q/r
 - (b) q_0Q/r^2
 - (c) kq_0Qr
 - (d) zero
4. Which of the following option is correct? 1

In a region of constant potential

 - (a) The electric field is uniform
 - (b) The electric field is zero
 - (c) There can be charge inside the region
 - (d) The electric field shall necessarily change if a charge is placed outside the region.
5. A wire is stretched so as to change its length by 0.1%, the percentage increase in its resistance will be 1
 - (a) 0.2%
 - (b) 0.02%
 - (c) 0.5%
 - (d) 0.05%

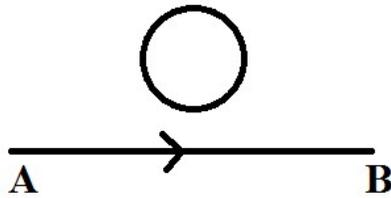
6. For a cell, the graph between the potential difference (V) across the terminals of the cell and the current(I) drawn from a cell is shown below 1



The emf and the internal resistance of the cell are

- (a) $2V, 0.5\Omega$
 (b) $2V, 0.4\Omega$
 (c) $>2V, 0.5\Omega$
 (d) $>2V, 0.4\Omega$
7. An electron is projected with velocity \vec{v} along the axis of a current carrying long solenoid. Which one of the following statement is true? 1
- (a) The path of the electron will be circular about the axis.
 (b) The electron will be accelerated along the axis.
 (c) The path of the electron will be helical.
 (d) The electron will continue to move with the same velocity \vec{v} along the axis of the solenoid.
8. A charged particle after being accelerated through a potential difference 'V' enters in a uniform magnetic field and moves in a circle of radius r . If V is doubled, the radius of the circle will be 1
- (a) $2r$
 (b) $\sqrt{2} r$
 (c) $4r$
 (d) $r/\sqrt{2}$
9. Curie temperature is the temperature above which 1
- (a) A ferromagnetic material becomes paramagnetic
 (b) A ferromagnetic material becomes diamagnetic
 (c) A paramagnetic material becomes diamagnetic
 (d) A paramagnetic material becomes ferromagnetic

10. The current flows from A to B is increasing as shown in figure. The direction of induced current in the loop is 1



- (a) Clockwise
 (b) Anticlockwise
 (c) Straight line
 (d) No induced emf
11. A square of side L meters lies in the x-y plane in a region where the magnetic field is given by $B = B_0(2\hat{i} + 3\hat{j} + 4\hat{k})$ T where B_0 is constant. The magnitude of flux passing through the square is 1
- (a) $2B_0L^2\text{Wb}$
 (b) $3B_0L^2\text{Wb}$
 (c) $4B_0L^2\text{Wb}$
 (d) $\sqrt{29} B_0L^2\text{Wb}$
12. A capacitor and an inductor are connected to two different ac circuits with a bulb glowing in each circuit. The bulb glows more brightly when: 1
- (a) The number of turns in the inductor is increased.
 (b) The separation between the plates of the capacitor is increased.
 (c) An iron rod is introduced into the inductor.
 (d) A dielectric is introduced into the gap between the plates of the capacitor.

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):** Electric field is zero inside a conductor. 1
Reason (R): Charge reside on the surface of the conductor and not inside the conductor.
14. **Assertion (A):** Work done in moving a charge around a closed path, in an electric field is zero. 1
Reason (R): Electric force is a conservative force.
15. **Assertion (A):** It is advantageous to transmit electric power at high voltage. 1
Reason (R): High voltage means high current.
16. **Assertion (A):** The reactance of an inductor in an AC circuit increases with increase in frequency 1
Reason (R): Inductive reactance is proportional to the frequency of the AC voltage applied.

SECTION : B

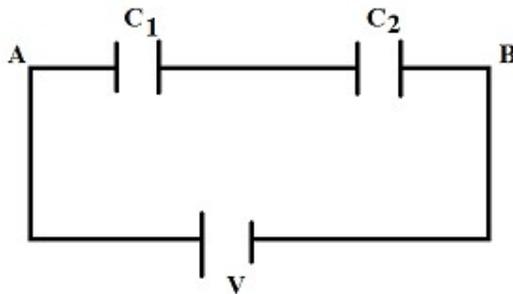
17. Two charges q and $-3q$ are placed fixed on x axis separated by a distance d . Where a third charge $2q$ should be placed such that it will not experience any force? 2
18. Two point charges q and $-q$ are located at $(0,0,-a)$ and $(0,0,a)$ respectively. 2
 (a) Depict the equipotential surface due to this arrangement.
 (b) Find the amount of work done in moving a small test charge q_0 from $(1,0,0)$ to $(0,0,0)$
19. Using the concept of free electrons derive the expression for the conductivity of a wire in terms of number density and relaxation time. 2
20. Derive an expression for the torque acting on a current carrying loop suspended in a uniform magnetic field. 2
21. State Lenz's law. Does it violate the principle of conservation of energy? Justify. 2

OR

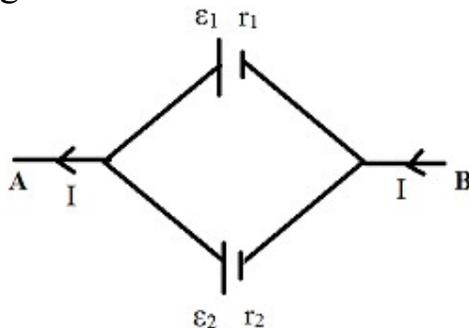
The magnetic flux through a coil perpendicular to its plane is varying according to the relation $\phi = (5t^3 + 4t^2 + 2t - 5) \text{Wb}$. Calculate the induced current through the coil at $t=2\text{sec}$ if the resistance of the coil is 5Ω .

SECTION : C

22. Apply Gauss's theorem to find electric field intensity due to a long charged straight wire. 3
23. An electric dipole is held in a uniform electric field 3
- (a) Using suitable diagram show that it does not undergo any translatory motion.
- (b) Derive an expression for the torque acting on it and specify its direction.
24. Two air filled capacitors C_1 and C_2 of capacitances $2C$ and C are connected in series to a battery as shown in figure 3



- (a) Find across which capacitor, the potential difference is high?
- (b) Draw the graph for variation of potential with distance from A to B.
25. Two cells of emf ε_1 and ε_2 and internal resistance r_1 and r_2 respectively are connected in parallel as shown in figure 3



Deduce the expression for

- (a) Equivalent emf of the combination
- (b) Equivalent resistance of the combination
26. Using Biot Savart's law, derive the expression for the magnetic field in the vector form at a point on the axis of a circular current loop. 3

27. Draw a diagram to show the magnetic field lines produced by two parallel straight wires carrying currents in the same direction. Obtain the expression for the force per unit length between these wires. 3
28. (a) Define mutual inductance and write its S.I. unit. 3
(b) Derive an expression for the mutual inductance of two long coaxial solenoids of same lengths wound one over the other.

OR

A metallic rod of length L is rotated at an angular speed ω normal to a uniform magnetic field B . Derive the expression for:

- (a) Emf induced in the rod
(b) Current induced
(c) Heat dissipated if resistance of the rod is R

SECTION-D

Case Study Based Questions

Read the following paragraph and answer the questions that follow.

29. An equipotential surface is a surface with a constant value of potential at all points on the surface. Equipotential surfaces of a single point charge are cocentric spherical surfaces centered at the charge. Electric field lines for a single charge q are radial lines starting from or ending at the charge, depending on whether q is positive or negative. The electric field at every point is normal to the equipotential surface passing through that point. 4
- (i) Equipotentials at a great distance from a collection of charges whose total sum is not zero are approximately
- (a) spheres
(b) planes
(c) paraboloids
(d) ellipsoids

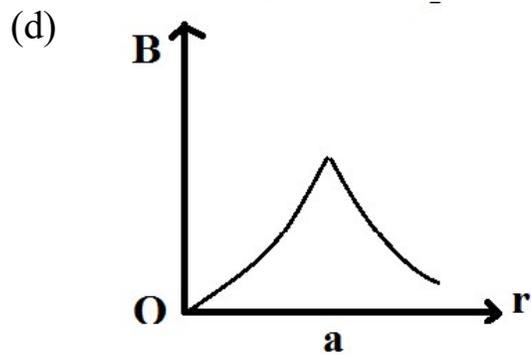
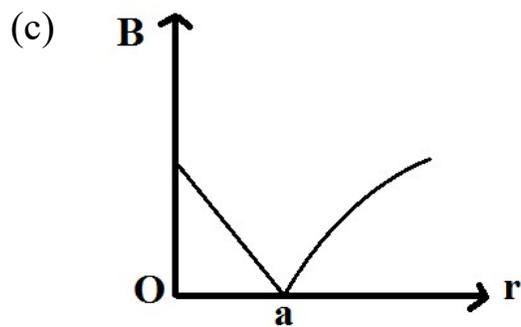
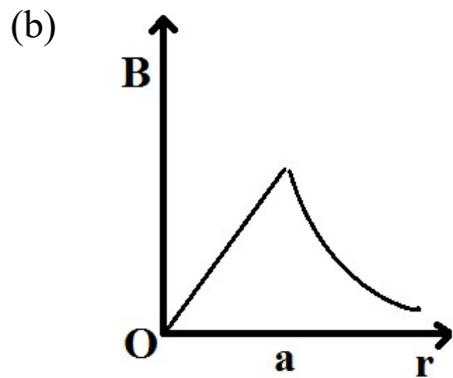
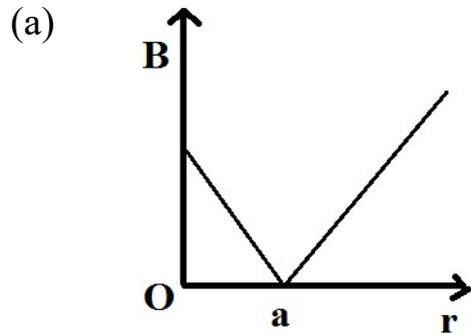
- (ii) Between any two points on the equipotential surface there is no
 - (a) voltage
 - (b) work
 - (c) potential difference
 - (d) work and potential difference
- (iii) For a single charge q the potential is given by
 - (a) $q^2/4\pi\epsilon_0$
 - (b) $q/4\pi\epsilon_0 r$
 - (c) $q/4\pi\epsilon_0 r^2$
 - (d) $(q/4\pi\epsilon_0 r)^{1/2}$
- (iv) For uniform electric field E say along the x axis the equipotential surface are planes
 - (a) normal to the y axis
 - (b) normal to the z axis
 - (c) normal to the x axis
 - (d) parallel to the x - z axis

30. Ampere's law gives a method to calculate the magnetic field due to given current distribution. According to it the circulation $\oint \vec{B} \cdot d\vec{l}$ of the resultant magnetic field along a closed plane curve is equal to μ_0 times the total current crossing the area bounded by the closed curve provided the electric field inside the loop remains constant. 4

Ampere's law is more useful under certain symmetrical conditions. Consider one such case of a long straight wire with circular cross section (radius R) carrying current I uniformly distributed across its cross section.

- (i) The magnetic field at a radial distance r from the center of the wire in the region $r > R$ is
 - (a) $\mu_0 I / 2\pi r$
 - (b) $\mu_0 I / 2\pi$
 - (c) $\mu_0 I R^2 / 2\pi r^2$
 - (d) $\mu_0 I r^2 / 2\pi R$
- (ii) The magnetic field in the distance r in the region $r < R$ is
 - (a) $\mu_0 I / 2r$
 - (b) $\mu_0 I r^2 / 2\pi R$
 - (c) $\mu_0 I / 2\pi r^3$
 - (d) $\mu_0 I r / 2\pi R^2$

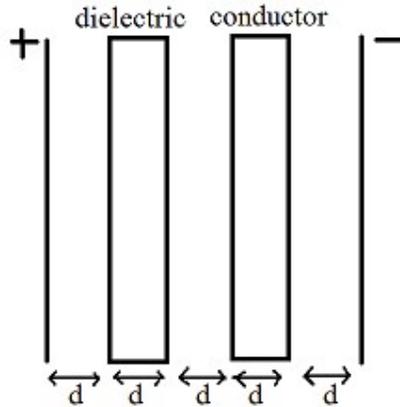
(iii) A long straight wire of a circular cross section (radius a) carries a steady current I and the current I is uniformly distributed across the cross section. Which of the following plots represents the variation of magnitude of magnetic field B with distance r from the center of the wire?



- (iv) A long straight wire of radius R carries a steady current I . The current is uniformly distributed across its cross section. The ratio of magnetic field at $R/2$ and $2R$ is
- $1/3$
 - 2
 - $1/5$
 - 1

SECTION : E

31. (a) Compare the dipole moment for H_2O and O_2 molecules when placed in
- absence of external electric field
 - presence of external electric field
- (b) 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.



- Find the potential difference between the plates.
- Plot E versus x graph, taking $x = 0$ at positive plate and $x = 5d$ at negative plate.

OR

A dielectric slab of thickness t is introduced between the plates of a parallel plate capacitor, separated by a distance d ($t < d$).

- Derive an expression for the capacitance of the capacitor.
 - What will be its capacitance when $t = d$?
32. (a) Use Kirchoff's laws to obtain balance condition in Wheatstone bridge. 5
- (b) Write the advantage of measuring resistance by Wheatstone bridge method over other methods.

OR

- (a) Show that the efficiency of a battery when delivering maximum power is only 50%.
 - (b) Two wires made of tinned copper having identical cross section ($=10^{-6}\text{m}^2$) and length 10cm and 15cm are to be used as fuses. Show that the fuses will melt at the same value of current in each case.
33. (a) With the help of labelled diagram, describe briefly the underlying principle and working of a step up transformer. 5
- (b) Write any two sources of energy loss in a transformer.
 - (c) A step up transformer converts low input voltage into a high output voltage. Does it violate the law of conservation of energy? Justify.

OR

- (i) Write the principle of working of an ac generator.
- (ii) Derive the expression for induced emf generated in it.
- (iii) Show a plot of variation of:
 - (a) magnetic flux and
 - (b) alternating emf versus time generated by the generator.

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

BURNPUR RIVERSIDE SCHOOL, BURNPUR
HALF-YEARLY EXAMINATION : (2023-2024)
PHYSICS
CLASS-XII

Time: 3 Hours

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. A square of side length L is placed in a horizontal plane and four equal charges q are fixed at four vertices of the square. A point P is located vertically above the center of the square, at a height of $L/\sqrt{2}$ from the plane of the square. Find the electric field at point P. 1
- (a) $q/2\pi\epsilon_0L^2$ (b) $q/\sqrt{2}\pi\epsilon_0L^2$ (c) $q/\pi\epsilon_0L^2$ (d) $q/4\pi\epsilon_0L^2$
- Q2. Two point charges placed at a distance of r in air and exert a force of F on each other. The value of the distance R at which they experience force 4F when placed in a medium of dielectric constant $k=16$ is : 1
- (a)r (b)r/4 (c)r/8 (d)2r
- Q3. Electric field intensity at a point at a distance of 2m from point charge q is 4N/C. The amount of work done by external agent in slowly bringing a charge of 2C from infinity to this point is: 1
- (a) 4J (b) 8J (c) 16J (d) 32J
- Q4. The plates of a parallel capacitor are being moved away with a constant speed v. If the plate separation at any instant is x, then rate of change of capacitance with time is proportional to : 1
- (a) 1/x (b) $1/x^2$ (c) $1/x^3$ (d) x^2

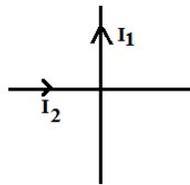
Q5. The current passing through a wire decreases linearly from 10Amp to 0Amp in 8sec. Then total charge flown through the wire is : 1

- (a)20C (b)30C (c) 40C (d)80C

Q6. What is the dimension of resistance : 1

- (a) $ML^2T^{-3}A^{-2}$ (b) $ML^2T^{-3}A^2$ (c) $ML^{-2}T^{-3}A^{-2}$ (d) $ML^{-2}T^3A^{-2}$

Q7. Two long wires carries a current I_1 and I_2 lie mutually perpendicular to each other as shown. The locus of the point where net magnetic field is zero : 1



- (a) $y = \frac{I_2}{I_1}X$ (b) $y^2 = \frac{I_2}{I_1}X$ (c) $y = \frac{I_1}{I_2}X$ (d)None of these

Q8. An electron is moving northwards with a velocity of 10^7 m/s in a magnetic field of 3T, directed eastward. Instantaneous force on the electron is : 1

- (a) $48 \times 10^{-12}N$, downward (b) $48 \times 10^{-12}N$, upward
(c) $4.8 \times 10^{-12}N$, downward (d) $4.8 \times 10^{-12}N$, upward

Q9. An iron rod has susceptibility of 599. Then magnetic permeability of iron is : 1

- (a) $9.536 \times 10^{-4}TmA^{-1}$ (b) $8.536 \times 10^{-4}TmA^{-1}$
(c) $7.536 \times 10^{-4}TmA^{-1}$ (d) $6.536 \times 10^{-4}TmA^{-1}$

Q10. Dimension of coefficient of self-induction is : 1

- (a) $ML^2T^{-2}A^{-2}$ (b) $ML^2T^2A^{-2}$ (c) $MLT^{-2}A^{-2}$ (d) $ML^2T^{-2}A$

Q11. A coil is having area of A is placed in a magnetic field which changes from B Tesla to 4B Tesla in t seconds. If the resistance of coil is R ,then charge flowing in loop is 1
(a) $3BAR^2$ (b) $3BA/R$ (c) $BA/3R$ (d) $3BA/R^2$

Q12. In a series LR circuit $X_L=3R$. Now a capacitor with $X_C=R$ is added in series. Then ratio of new to old power factor is :

- (a) $\sqrt{2}$ (b) 2 (c) $1/2$ (d) $1/\sqrt{2}$

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) Assertion is incorrect, reason is correct.

Q13. ASSERTION: If the bob of a pendulum is kept in horizontal electric field, its time period changes. 1

REASON: If the bob is charged and kept in horizontal electric field, its time period decreases.

Q14. ASSERTION: Work done in moving a charge between two points in a uniform electric field is independent of path followed by the charge between the points. 1

REASON: electrostatic force is non-conservative in nature.

Q15. ASSERTION: though there are large no of free electrons are present in a metal. Yet there is no current in absence of electrical field. 1

REASON: In absence of electric field electrons move randomly in all directions.

Q16. ASSERTION: At resonance, the inductive reactance is equal and opposite to capacitive reactance. 1

REASON: In a series L-C-R circuit, the inductive reactance is equal and opposite to the capacitive reactance.

SECTION :B

Each carry two marks

- Q17. A hollow charged conductor has a tiny hole cut on its surface. Show that electric field in the hole is $\frac{\sigma}{2\epsilon_0}$, where σ is the surface density. 2
- Q18. N spherical droplets, each of radius r, have been charged to have a potential of V. If all these droplets merge together to form a bigger drop, what would be the potential of the large drop. 2
- Q19. Calculate the electric field in a copper wire of cross sectional area 2mm^2 carrying a current of 10Amp. The resistivity of copper is 1.7×10^{-8} ohm-m. 2
- Q20. Derive the expression of magnetic field at center of a long solenoid. 2
- Q21. A 12volt battery connected to a 6 ohm coil having self-inductance $L=10$ Henry through a switch. A constant current passes through the coil. The switch is suddenly opened If it takes 1 millisecond to open the switch, find average emf induced across the coil. 2

OR

Derive coefficient of self- inductance L for a long solenoid.

SECTION :C

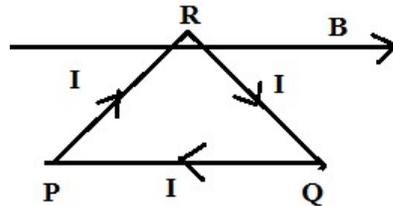
Each question carries 3 marks.

- Q22. Derive expression of field due to dipole at an equatorial point. Also draw equipotential surfaces for a dipole. 3
- Q23. A particle of mass m and charge -q enters region between charged plates initially moving along X axis with speed u. The length of the plates is L and a uniform electric field E is maintained between the plates directed from top plate to bottom plate. Show that deflection of the particle at far edge of the plate is given by $qEL^2/(2mu^2)$. 3
- Q24. Derive the expression for electric potential at any general point at a distance r from center of a dipole making angle θ with the axis of the dipole. Write the dimensional formula of electric potential. 3

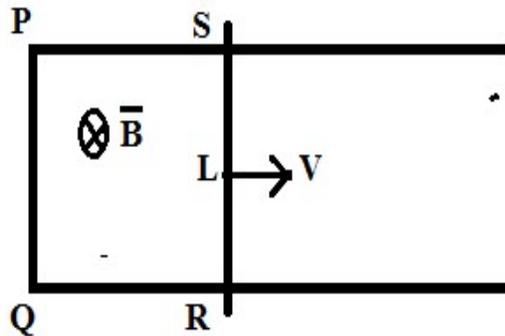
Q25. Two wires made of tinned copper having identical cross sectional area (10^{-6}m^2) and length 10 cm and 15 cm are to be used as fuses. Show that fuses will melt at same value of current in each case. 3

Q26. Apply Biot-Savart's law to find magnetic field due to a circular current carrying coil at a point on the axis of the loop at a distance X away from the center of the loop. Take current flowing in loop to be I and radius as R. 3

Q27. Figure shows a triangular loop PQR carrying current I. The triangle is equilateral with each side length equal to L. If uniform magnetic field B exists parallel to PQ, then find forces acting on the three wires QP, PR and RQ separately. 3

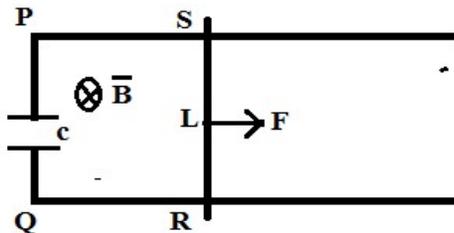


Q28. Figure shows a rectangular loop PQRS in which arms RS of length L is movable. The loop is kept in a uniform magnetic field B directed downward perpendicular to plane of loop. The RS is moved with uniform speed V. Then find value of emf across the arm RS. Also find the external force required to move the arm and the power dissipated as heat. Which end R or S is positive. Take resistance as R. 3



OR

Figure shows a wire RS of mass m and length L which can slide on a pair of rails smooth horizontal rails placed perpendicular to magnetic field B . The rails are connected by a capacitor C . The electric resistance of rail and wire is zero. If a constant force F acts on the wire RS, then find the acceleration of the wire RS.



SECTION : D

Q29. Question no 29 and 30 are Case Based questions: 4
Coulomb's law is about force between two point charges. When the linear sizes of charged bodies are much smaller than distance between them, their sizes may be ignored and charged bodies are called point charges. Coulomb's law is analogous to Newton's law of gravitation.

Choose correct option only:

a. The minimum value of force acting between two point charges placed 1m apart from each other is :

- i) ke^2 ii) $ke^2/2$ iii) $ke/4$ iv) $ke/2$

b. In the process of charging, the mass of negatively charged body:

- i) increases ii) decreases
 iii) remains same iv) not related to the charging process

c. For coulomb's law to be operative the least size of atom is :

- i) 10^{-12} m ii) 10^{-15} m iii) 10^{-10} m iv) 10^{10} m

d. Two charges of equal magnitudes and at a distance r exerts a force of F on each other. If the charges are halved and distance between them is doubled, then new force acting on each charge is :

- i) $F/8$ ii) $F/4$ iii) $4F$ iv) $F/16$

Q30. When a conductor carrying current is placed in an external magnetic field, it experiences a force. A current is an assembly of moving charges and magnetic field exerts force on moving charges. 4

Choose correct option only:

a. Force on a conductor of length 5m carrying a current of 8A kept perpendicular to magnetic field of 1.5 tesla is:

- i) 100N ii) 60N iii) 50N iv) 75N

b) A straight wire of mass 200gm and length 1.5m carries a current of 2A. It is suspended in midair by uniform horizontal field B . Taking $g=9.8\text{m/s}^2$, then value of B in Tesla is :

- i) 2 ii) 1.5 iii) 0.55 iv) 0.65

c) Electric current is passed through a long wire. At a distance 5cm from wire, magnetic field is B . Then field at 20 cm is

- i) $B/2$ ii) $B/3$ iii) $B/4$ iv) $B/5$

d) Two circular coils of diameter 10cm and 20cm have same no of turns. The ratio of magnetic field produced at the center of the coils when connected in series is :

- i) 1:2 ii) 2:1 iii) 3:2 iv) 2:3

SECTION –E

Long answer type question.

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

(a) When two charged conductors each having different capacities and different potentials are joined together. Show that there is always a loss of energy; hence find the expression of loss of energy.

(b) Find the ratio of potential differences that must be applied across the parallel and series combination of two capacitors C_1 and C_2 with their capacitance in a ratio of 1:2 so that energy stored in two cases become same.

OR

(c) When two charged conductors having different capacities and different potentials are joined together. Show that there is always a loss of energy; hence find the expression of loss of energy.

(d) A parallel plate capacitor is charged to a potential difference. When a 3mm thick slab is slipped in between the plates, then to maintain the same potential difference between the plates, the plate separation is increased by 2.4 mm. Find the dielectric constant of the slab.

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

(a) Derive the condition for obtaining maximum current through an external resistance (R) connected across a mixed grouping of cells. (Take emf of each cell as e , internal resistance as r , take no cells in each row as n and no of rows as m)

(b) A cell of emf e and internal resistance r is connected across external resistance R . Draw the graph of variation of terminal voltage across the cell vs external resistance. Also draw the graph of variation of terminal voltage vs current flowing in external resistance.

OR

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

(d) 36 cells each of internal resistance $r=0.5$ Ohm and emf 1.5 volt are used to send current through an external resistance of 2 Ohm. Find the best mode of grouping and current through external resistance.

Q33. a) Prove that in a capacitor current leads from the voltage by a phase angle of $\pi/2$ when AC source is applied across it. Also draw graph of variation of capacitive reactance vs frequency 5

(b) An AC circuit consists of a series combination of circuit elements X and Y. The current is ahead of the voltage by phase angle of $\frac{\pi}{4}$. If the element X is a pure resistor of 100 Ohm, then name the element Y, also calculate the RMS value of current if RMS voltage is 141 volt.

OR

(c) Prove that in an inductor voltage leads from current by a phase angle of $\pi/2$. Also draw graph of variation of Inductive reactance vs frequency.

(d) In a series L and R circuit current flowing in the circuit is 1 Amp. Voltage across the resistor is 120 volt. The supply voltage is 200 volt. Then find the voltage across the inductor and impedance of the circuit.

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

BURNPUR RIVERSIDE SCHOOL ,BURNPUR
HALF YEARLY 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.*
-
-

SECTION-A

- 1. The boiling point of an azeotropic mixture of water and ethanol is less than that of water and ethanol. The mixture shows 1
 - (a) no deviation from Raoult's Law.
 - (b) positive deviation from Raoult's Law.
 - (c) negative deviation from Raoult's Law.
 - (d) that the solution is unsaturated.

- 2. The van't Hoff factor (i) accounts for 1
 - (a) degree of solubilisation of solute.
 - (b) the extent of dissociation of solute.
 - (c) the extent of dissolution of solute.
 - (d) the degree of decomposition of solution.

3. An increase in equivalent conductance of a strong electrolyte with dilution is mainly due to: 1
- (a). increase in ionic mobility of ions
 - (b). 100% ionization of electrolyte at normal dilution
 - (c). increase in both the number of ions and ionic mobility of ions
 - (d). increase in number of ions
4. A solution of $\text{Ni}(\text{NO}_3)_2$ is electrolysed between platinum electrodes using 0.1 Faraday electricity. How many moles of Ni will be deposited at the cathode? 1
- (a) 0.10
 - (b) 0.15
 - (c) 0.20
 - (d) 0.05
5. The reaction rate constant can be defined as the rate of reaction when each reactant's concentration is _____. 1
- a) Zero
 - b) Unity
 - c) Doubled the initial concentration
 - d) Infinite
6. What effect does temperature have on the half-life of a first-order reaction? 1
- a) It increases
 - b) It decreases
 - c) It remains the same
 - d) Both increases as well as decrease
7. Reaction of t-butyl bromide with sodium methoxide produces: 1
- (a) Isobutane
 - (b) Isobutylene
 - (c) Sodium- t- butoxide
 - (d) t- butyl methyl ether.

8. What is the class of the substitution product of LiAlH_4 and an alkyl halide reaction? 1
- a) Haloalkane
 - b) Alkyl nitrite
 - c) Nitroalkane
 - d) Hydrocarbon
9. IUPAC name of the $\text{CH}_3\text{-O-C}_2\text{H}_5$ is 1
- (a) Ethoxymethane
 - (b) Methylethylether
 - (c) Methoxyethane
 - (d) Ethylmethyl ether
10. o-nitrophenol is less soluble in water than p-nitrophenols because: 1
- (a) o-nitrophenol is more volatile in steam than those of m- and p-isomers.
 - (b) o-nitrophenol shows intermolecular H-bonding
 - (c) o-nitrophenol shows intramolecular H-bonding
 - (d) None of these
11. The molal elevation constant depends upon 1
- (a) nature of solvent
 - (b) nature of the solute.
 - (c) vapour pressure of the solution.
 - (d) enthalpy change.
12. Which of the following does not belong in the category of electrochemical cells? 1
- a) Voltaic cell
 - b) Fuel cell
 - c) Electrolytic cell
 - d) Photovoltaic Cell

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

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

13. **Assertion :** If a liquid solute more volatile than the solvent is added to the solvent, the vapour pressure of the solution may increase i.e., $p_s > p_o$. 1
Reason : In the presence of a more volatile liquid solute, only the solute will form the vapours and solvent will not.
14. **Assertion:** Current stop flowing when $E_{\text{cell}} = 0$. 1
Reason : Equilibrium of the cell reaction is attained.
15. **Assertion:** Hydrolysis of methyl ethanoate is a pseudo-first-order reaction. 1
Reason: Water is present in large excess and therefore its concentration remained constant throughout the reaction.
16. **Assertion :** Phenol is more reactive than benzene towards electrophilic substitution reaction. 1
Reason : In the case of phenol, the intermediate carbocation is more resonance stabilized.

SECTION - B

17. Why are aquatic species more comfortable in cold water in comparison to warm water? 2
18. Consider a cell given below $\text{Cu}|\text{Cu}^{2+}||\text{Cl}^-|\text{Cl}_2,\text{Pt}$ 2
Write the reactions that occur at anode and cathode

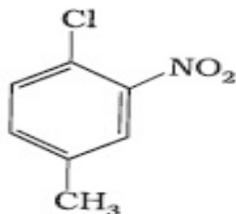
19. Define the following : 2
(i) Elementary step in a reaction
(ii) Rate of a reaction

20. How does anisole reacts with 2
(i) Br_2/CS_2
(ii) $\text{Conc. H}_2\text{SO}_4 + \text{Conc. HNO}_3$.

OR

How are the following conversions carried out?

- (i) Propene to propan-2-ol
(ii) Ethylmagnesium chloride to propan-1-ol
21. Give the IUPAC name of the following:- 2
a. $\text{CH}_3\text{CH}(\text{Cl})\text{CH}(\text{Br})\text{CH}_3$
b.



SECTION - C

22. Henry's law constant for CO_2 in water is 1.67×10^8 Pa at 298 K. 3
Calculate the quantity of CO_2 in 500 ml of soda water when packed under 2.5 atm CO_2 pressure at 298 K.

23. When a steady current of 2A was passed through two electrolytic cells A and B containing electrolytes ZnSO_4 and CuSO_4 connected in series, 2g of Cu were deposited at the cathode of cell B. How long did the current flow? What mass of Zn was deposited at cathode of cell A? 3

At mass of Cu=63.5g/mol

At mass of Zn=65g/mol

24. The thermal decomposition of HCOOH is a first order reaction with a rate constant of $2.4 \times 10^{-3} \text{ s}^{-1}$ at a certain temperature. Calculate how long will it take for three-fourths of initial quantity of HCOOH to decompose. ($\log 0.25 = -0.6021$) 3
25. Explain :- 3
- A. The dipole moment of chlorobenzene is lower than that of cyclohexyl chloride.
- B. Alkyl halides though polar are immiscible with water
- C. Grignard reagents should be prepared under anhydrous conditions.
26. Write the equations involved in the following reactions:- 3
- A. Reimer-Tiemann reaction.
- B. Kolbe's reactio
- C. Fridlecraft acylation.
27. Give reason for the following:- 3
- A. Oxygen is available in plenty in air yet fuels do not burn by themselves at room temperature.
- B. The molecularity of any reaction can never be equal to zero.
- C. We can not determine the order of a chemical reaction by taking a balanced chemical equation into consideration.
28. Define the terms specific conductance, molar conductance and equivalent conductance. 3

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 spontaneous flow of solvent molecules from a dilute solution into a concentrated solution when the two are separated by a perfect semipermeable membrane is called osmosis. Osmotic pressure (π) is the pressure which must be applied to the solution side (more concentrated solution) to just prevent the 4

passage of pure solvent into it through a semipermeable membrane. Isotonic solutions are those solutions which have the same osmotic pressure. Also they have same molar concentration.

- a. What is meant by 'reverse osmosis'?
- b. How is the osmotic pressure related to the concentration of a solute in a solution?
- c. Determine the osmotic pressure of a solution prepared by dissolving 2.5×10^{-2} g of K_2SO_4 in 2L of water at $25^\circ C$, assuming that it is completely dissociated.
($R = 0.0821 \text{ L atm K}^{-1} \text{ mol}^{-1}$, Molar mass of $K_2SO_4 = 174 \text{ g mol}^{-1}$)

OR

c. Define osmotic pressure and write any two application of osmosis.

30. Nucleophilic substitution reactions are of two types; substitution nucleophilic bimolecular (S_N2) and substitution nucleophilic unimolecular (S_N1) depending on molecules taking part in determining the rate of reaction. Reactivity of alkyl halide towards S_N1 and S_N2 reactions depends on various factors. 4

- a. Which mechanism is followed when Isopropyl chloride undergoes hydrolysis?
- b. Out of S_N1 and S_N2 which reaction takes place with
 - (i) Inversion of configuration
 - (ii) Racemisation.
- c. Write the factors affecting S_N2 mechanism.

OR

c. Why is t-butyl bromide more reactive towards S_N1 reaction as compared to n butyl bromide?

SECTION - E

31. A. Two half cell reactions of an electrochemical cell are given below : 5
- $MnO_4^-(aq) + 8H^+(aq) + 5e^- \rightarrow Mn^{2+}(aq) + 4H_2O(l)$, $E^\circ = + 1.51 \text{ V}$
 $Sn^{2+}(aq) \rightarrow 4Sn^{4+}(aq) + 2e^-$, $E^\circ = + 0.15 \text{ V}$
- Construct the redox equation from the two half cell reactions and predict if this reaction favour formation of reactants or product

shown in the equation.

B. Why is alternating current used for measuring resistance of an electrolytic solution?

C. Why rusting of iron pipe can be prevented by joining it with a piece of Magnesium?

32. **I.** Write the structural isomers of C_7H_7Cl containing a benzene ring. Which structure has weakest C-Cl bond? 5

II. The treatment of alkyl chloride with aqueous KOH lead to the formation of alcohol but in presence of alcoholic KOH alkene are the major product. Explain why?

OR

I. Write the structure of the following organic compounds:-

a. 2 -Chloro-3 -methylpentane.

b. p -Bromochlorobenzene.

c. 4 – tert – Butyl -3 -iodoheptane.

II. How can the following conversions be carried out?

a. Aniline to chlorobenzene

b. 2-Chlorobutane to 3, 4-dimethylhexane.

33. **I.** Name the reagents used in the following:- 5

a. Bromination of phenol to 2,4,6-Trinitrophenol.

b. Butan-2-one to Butane-2-ol

c. Fridel craft alkylation of anisole

d. Oxidation of primary alcohol to carboxylic acid.

II. Write the mechanism of hydration of ethene to yield ethanol.

OR

I. What happens when

a. Salicylic acid is treated with $(CH_3CO)_2O / H^+$.

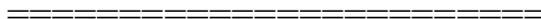
b. Phenol is oxidized with $Na_2Cr_2O_7 / H^+$.

II. Explain why :-

a. presence of electron withdrawing group increases the acidic character of phenol.

b. solubility of alcohols in water decreases with increase in molecular mass

c. phenol reacts with NaOH but alcohols cannot.



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

BURNPUR RIVERSIDE SCHOOL, BURNPUR
HALF YEARLY 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 Low concentration of oxygen in the blood and tissues of people living at higher altitude is due to 1
a) low temperature b) low atmospheric pressure c) high atmospheric pressure d) both low temperature and high atmospheric pressure.
- 2 The values of Van't Hoff factors for KCl, NaCl and K₂SO₄ respectively, are 1
a) 2,2 and 2 b) 2,2 and 3 c) 1,1 and 2 d) 1,1 and 1
- 3 A device that converts energy of combustion of fuels like hydrogen and methane directly into electrical energy is known as: 1
a) Dynamo b) Ni-Cd cell c) Fuel cell d) Electrolytic cell.

- 4 An electrochemical cell can behave like an electrolytic cell when 1
a) $E_{\text{cell}} = 0$ b) $E_{\text{cell}} > E_{\text{ext}}$ c) $E_{\text{ext}} > E_{\text{cell}}$ d) $E_{\text{cell}} = E_{\text{ext}}$
- 5 The role of a catalyst is to change 1
a) Gibbs energy of reaction.
b) Enthalpy of reaction.
c) Activation energy of reaction.
d) Equilibrium constant.
- 6 The unit of rate constant of a zero order reaction is 1
a) litre second^{-1} b) $\text{litre mole}^{-1} \text{second}^{-1}$
c) $\text{mole litre}^{-1} \text{second}^{-1}$ d) mole second^{-1}
- 7 Toluene reacts with a halogen in the presence of iron (III) chloride 1
giving ortho and para halo compounds. The reaction is
a) Electrophilic elimination reaction
b) Electrophilic substitution reaction
c) Free radical addition reaction
d) Nucleophilic substitution reaction
- 8 The position of - Br in the compound in $\text{CH}_3\text{CH}=\text{CHC}(\text{Br})(\text{CH}_3)_2$ 1
can be classified as
a) Allyl b) Aryl c) Vinyl d) Secondary
- 9 $\text{CH}_3\text{CH}_2\text{OH}$ can be converted into CH_3CHO by 1
a) catalytic hydrogenation
b) treatment with LiAlH_4
c) treatment with pyridinium chlorochromate
d) treatment with KMnO_4
- 10 The compound that reacts fastest with Lucas reagent at room 1
temperature is
a) Butan-1-ol
b) Butan-2-ol
c) 2-Methyl propan-1-ol
d) 2-Methyl propan-2-ol
- 11 Which is not a colligative property? 1
a) ΔT_f b) π c) ΔT_b d) K_b

- 12 $\text{Zn(s)} | \text{Zn}^{2+}(\text{aq}) || \text{Cu}^{2+}(\text{aq}) | \text{Cu(s)}$ is 1
a) Weston cell b) Daniel cell c) Calomel cell. d) Standard cell.

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 vapour pressure of a liquid decreases if some non volatile solute is dissolved in it. 1

Reason: The relative lowering of vapour pressure of a solution containing a non volatile solute is equal to the mole fraction of the solute in the solution.

- 14 Assertion: Conductivity of all electrolytes decreases on dilution. 1

Reason: On dilution number of ions per unit volume decreases.

- 15 Assertion: All collision of reactant molecules lead to product formation. 1

Reason: Only those collisions in which molecules have correct orientation and sufficient kinetic energy lead to product formation.

- 16 Assertion: p-nitro phenol is more acidic than phenol. 1

Reason: Nitro group helps in the stabilization of the phenoxide ion by dispersal of negative charge due to resonance.

SECTION-B

- 17 State Henry's law. Write its one application. 2

- 18 The conductivity of 0.20 M solution of KCl at 298K is 0.025 S cm^{-1} 2
Calculate its molar conductivity.

- 19 Calculate the overall order of a reaction which has the rate expression, 2

i) $\text{Rate} = k [\text{A}]^{1/2} [\text{B}]^{3/2}$

ii) $\text{Rate} = k [\text{A}]^{3/2} [\text{B}]^{-1}$

- 20 How would you obtain 2
i) Picric acid (2,4,6-trinitrophenol) from phenol?
ii) 2-Methylpropene from 2-Methylpropanol?

OR

Write the structures of the products when Butan-2-ol reacts with the following:

- i) CrO_3 ii) SOCl_2
21 What are ambident nucleophiles? Explain with an example. 2

SECTION-C

- 22 Calculate the freezing point of a solution when 3 g of CaCl_2 3
(Molecular mass = 111 g/ mol) was dissolved in 100 g of water, assuming CaCl_2 undergoes complete Ionisation. (K_f for water = $1.86 \text{ K Kg mol}^{-1}$)

- 23 In a galvanic cell the following reaction takes place, 3
 $\text{Zn(s)} + 2\text{Ag}^+(\text{aq}) \rightarrow \text{Zn}^{2+}(\text{aq}) + 2\text{Ag(s)}$
Show:

i) Which of the electrode is negatively charged?

ii) The carriers of the current in the cell.

iii) Individual reaction at each electrode.

- 24 Write three differences between order and molecularity of a 3
reaction.

- 25 Give reasons for the following: 3

i) Chloroethane is insoluble in water.

ii) Thionyl chloride method is preferred for preparing alkyl chlorides from alcohols.

iii) p-dichlorobenzene has higher melting point than those of o- and m- isomers.

- 26 Explain the following with an example: 3

i) Kolbe's reaction

ii) Reimer-Tiemann reaction

iii) Williamson ether synthesis.

- 27 A first order reaction is 50% complete in 25 minutes. Calculate the 3
time for 80% completion of the reaction. ($\log 2 = 0.301$, $\log 5 = 0.699$)

- 28 Calculate the emf of the cell in which the following reaction takes place: 3
- $$\text{Ni(s)} + 2\text{Ag}^+(0.002\text{M}) \longrightarrow \text{Ni}^{2+}(0.160\text{M}) + 2\text{Ag(s)}$$
- Given that $E^\circ_{\text{cell}} = 1.05 \text{ V}$, $\log 4 = 0.602$

SECTION-D

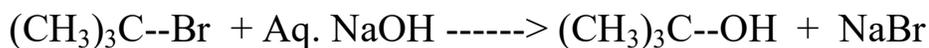
- 29 Read the passage given below and answer the following questions: 4
- When the impurities such as salt are added to ice, its freezing point decreases. This means that salted ice will start melting at a temperature below 0°C due to which a salty ice water bath will remain in its liquid state at temperatures below 0°C . This fact is used for efficient freezing of ice cream. This phenomenon is referred to as freezing point depression and was reported by Francois-Marie-Raoult in 1882.
- What is an antifreeze?
 - Which substance is usually added into water in the car radiator to act as antifreeze?
 - Cutting onions taken from refrigerator is more comfortable than cutting onions at room temperature. Explain why.

OR

- How does sprinkling of salt help in clearing the snow covered roads in hilly areas? Explain the phenomenon involved in the process.
- 30 Read the passage given below and answer the following questions: 4
- Nucleophilic substitution reaction of haloalkane can be conducted according to both $\text{S}_{\text{N}}1$ and $\text{S}_{\text{N}}2$ mechanism. However, which mechanism it is based on is related to such factors as the structure of haloalkane and properties of leaving group, nucleophilic reagent and solvent.
- In the following pair of halogen compounds, which would undergo $\text{S}_{\text{N}}2$ reaction faster?
 CH_3Br or CH_3I
 - Which type of solvents are generally used to carry out $\text{S}_{\text{N}}1$ reactions?
 - Out of chlorobenzene and benzyl chloride, which one gets easily hydrolysed by aqueous NaOH and why?

OR

c) Write the mechanism of the following S_N1 reaction

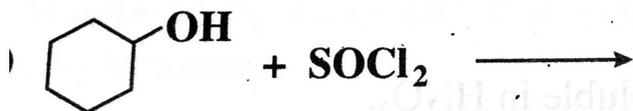


SECTION-E

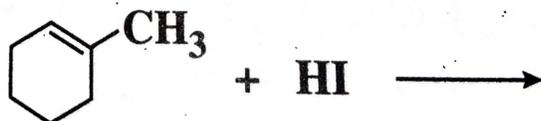
- 31 i) What are primary and secondary cells? 5
ii) How much charge is required for the following reduction:
a) 1 mol of Al^{3+} to Al
b) 1 mol of Cu^{2+} to Cu
c) 1 mol of MnO_4^- to Mn^{2+}

- 32 i) Write the structures of the following compounds: 5
a) 2-Chloro-3-methylpentane
b) 1,4-Dibromobut-2-ene
ii) Draw the structures of major monohalo product in each of the following reactions:

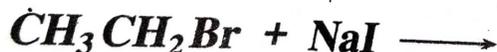
a)



b)



c)



OR

- i) Write the structure of the following organic compounds:
a) p-Bromochlorobenzene
b) 1-Chloro-4-ethylcyclohexane
ii) How will you bring the following conversions?
a) Propene to propan-1-ol
b) Chloroethane to butane
c) Aniline to Chlorobenzene

33 i) Write the structures of the following compounds:

5

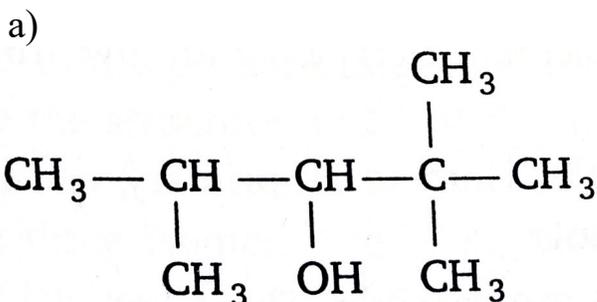
- a) 2- Methylpropan-2-ol
- b) 2- Methyl cyclopentanol

ii) Name the different reagents needed to perform the following reactions:

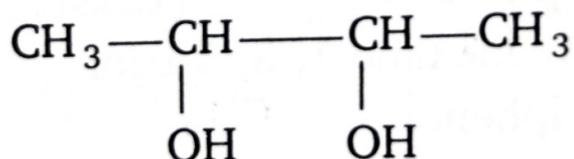
- a) Phenol to benzene
- b) Friedel-Crafts acylation of anisole
- c) Oxidation of primary alcohol to carboxylic acid

OR

i) Write the IUPAC names of



b)



ii) How will you convert the following:

- a) Phenol to benzoquinone
- b) Propanone to 2-methyl propan-2-ol
- c) Propene to propan-2-ol

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

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

Time: 3 Hours **Maximum Marks : 70**

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General Instructions:

- i All questions are compulsory.*
 - ii The question paper contains five sections-A, B, C, D and E. There are 33 questions in the question paper.*
 - iii **Section A** has 16 questions of 1 mark each. **Section B** has 05 questions of 2 marks each. **Section C** has 07 questions of 3 marks each. **Section D** has 02 case based question carries 4 marks each. It has three sub-questions (a), (b) and (c). Parts (a) and (b) are compulsory. An internal choice has been provided in part (c), one has to attempt any one of the choices and **Section E** has 03 questions of 5 marks each.*
 - iv There is no overall choice. However, internal choices have been provided in some questions. A student has to attempt only one of the alternatives in such questions.*
 - v Wherever necessary, neat and properly labeled diagrams should be drawn.*
- =====

SECTION-A

1. Which of the following nourishes the pollen grains: 1
a) Tapetum b) Epidermis
b) c) Middle layer d) Endothecium.
2. A typical angiosperm embryo sac is 1
a) 8 nucleate 7 celled b) 8 nucleate 8 celled
c) 6 nucleate 7 celled d) 6 nucleate 8 celled.
3. At which stage of life the oogenesis process is initiated: 1
a) embryonic development stage b) birth
c) adult d) puberty.

4. Lippes loop is a type of contraceptives used as: 1
a) vault barrier b) non-medicated IUD
c) copper releasing IUD d) cervical barrier.
5. The number of contrasting characters studied by Mendel 1
for his experiments was:
a) 14 b) 4 c) 2 d) 7
6. Which of the following RNAs is not required for the 1
synthesis of proteins?
a) mRNA b) tRNA c) rRNA d) siRNA
7. After how many years of formation of earth, life appeared 1
on this planet?
a) 500 billion years b) 50 million years
c) 500 million years d) 4 billion years
8. The infectious stage of plasmodium that enters the human 1
body is
a) Sporozoites b) Female gametocytes c) Male
gametocytes d) Trophozoites.
9. Yeast is used in the production of 1
a) citric acid and lactic acid b) lipase and pectinase
c) bread and beer d) cheese and butter.
10. Cyclosporin A is produced from 1
a) *Monascus purpureus* b) *Saccharomyces cerevisiae*
c) *Penicillium notatum* d) *Trichoderma polysporum*.
11. Which one of the following is not a desirable feature of 1
cloning vector
a) Presence of marker gene
b) Presence of single restriction site
c) Presence of two or more recognition sites
d) Presence of origin of replication site
12. First discovered restriction endonuclease that cuts DNA 1
molecule at a specific sequence of six base pairs is
a) EcoRI b) Adenosine Deaminase
c) TaqDNA polymerase d) Hind II.

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:-Sperm formation remains continue even in old men. 1

Reason:- Ovum formation ceases in women around the age of 50.

14 Assertion:-Inheritance is the process by which chartacters are passed from parents to progenies. 1

Reason:-Variation is the degree by which progeny or offspring differ from their parents.

15 Assertion:- DNA acts as the genetic material in most of the organisms. 1

Reason:-RNA also acts as the genetic material in some viruses like HIV.

16 Assertion:-Normal cells show a property of contact inhibition. 1

Reason:- Cancer cells are devoid of contact inhibition.

SECTION-B

17. How many microspore mother cells would be required to produce 100 pollen grains in a pollen sac? And why? 2

18. What is cleavage? Name the embryonic stage that gets implanted in the uterine wall of human female. 2

19. How is GIFT different from ZIFT? 2

20. State the difference between a gene and an allele? 2

21. How do fossils help us in understanding the evolutionary history? 2

OR

Explain convergent evolution with an example.

SECTION-C

22. Where are the following structures present in a male gametophyte of angiosperms? Mention the function of each of them. a) Germ pore b) Sporopollenin c) generative cell. 3
23. Explain the process of implantation of human embryo. 3
24. What is artificial insemination in ART? What are the conditions, when it becomes necessary? 3
25. How many types of RNA polymerases are there in a eukaryotic cell? Mention the steps of formation of mRNA from hnRNA. 3

OR

- What is DNA fingerprinting? Mention two applications.
26. Mention and explain the types of evolution, with thorns of *Bougainvillea* and tendrils of *Cucurbita*. 3
27. Differentiate between the roles of B-lymphocytes and T-lymphocytes in generating immune response. 3
28. Why is aerobic degradation more important than anaerobic degradation for the treatment of large volumes of waste water rich organic matter? Discuss. 3

SECTION-D (Case Based)

29. Gene interaction refers to the intricate collaboration and interdependence of genes within an organism's genome, influencing the expression of traits and determining the ultimate phenotype. The concept highlights that genes do not act in isolation; rather, they work in conjunction with other genes to produce observable characteristics. Epistasis, a notable form of gene interaction, occurs when the effect of one gene masks or modifies the effect of another gene. Complementary gene interaction involves the combined action of multiple genes to achieve a specific trait. Lethal interactions can arise when certain gene combinations result in non-viable individuals, impacting survival. Supplementary gene interaction 4

requires the presence of multiple genes to collectively contribute to a trait. These multifaceted interactions underscore the complexity of genetic inheritance, contributing to the diversity and variability seen in living organisms. Studying gene interactions enhances our understanding of genetic mechanisms and aids in deciphering the underlying genetic basis of various traits and diseases.

- a) What does Gene interaction refers to in the passage? (1)
- b) What is epistasis? (1)
- c) How complimentary Gene interaction differs from Lethal interactions? (2)

OR

Why is study of Gene interaction important?

30. Microbes, often invisible to the naked eye, wield a remarkable influence on human welfare across a spectrum of fields. In agriculture, they play a pivotal role in promoting soil fertility and plant health through nitrogen-fixing bacteria and mycorrhizal fungi. Microbes are harnessed in biotechnology for the production of enzymes, biofuels, and pharmaceuticals, revolutionizing industries and advancing medical treatments. Fermentation processes involving microbes give rise to an array of food products, such as cheese, yogurt, and bread, enhancing nutritional value and taste. In waste management, certain microorganisms aid in the breakdown of organic matter, facilitating composting and waste treatment. Additionally, probiotics containing beneficial bacteria are integrated into diets to enhance gut health and immunity. However, microbes can also pose
- 4

challenges, causing diseases that require diligent monitoring and effective treatments. Through a nuanced balance of exploiting their advantageous attributes while mitigating potential risks, the realm of microbes in human welfare remains a captivating avenue of scientific exploration and application.

- a) How do microbes help in agriculture? (1)
- b) What is the importance of microbes in Biotechnology? (1)
- c) How do microbes help in fermentation processes. (2)

OR

What are probiotics? Mention its importance.

SECTION-E

- 31. Write in details the salient features of genetic code. OR 5
Discuss mechanism of gene regulation with a suitable example.
- 32. Discuss the structure of an Antibody with a diagram. OR 5
In your view what motivates youngsters to take alcohols or drugs? How can this be avoided?
- 33. Explain the steps of polymerase chain reaction. 5
OR
Discuss the steps of recombinant DNA technology.

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Name: _____ Sec: _____ Roll No.: _____

CODE : B

BURNPUR RIVERSIDE SCHOOL, BURNPUR
HALF YEARLY 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. The mature embryo in an angiosperm has: 1
- a) 7 cells and 8 nuclei.
 - b) 8 cells and 7 nuclei.
 - c) 7 cells and 7 nuclei.
 - d) 8 cells and 8 nuclei.
2. _____ has a non-albuminous seed. 1
- a) Wheat
 - b) Pea
 - c) Maize
 - d) Castor

3. The endometrial layer during pregnancy is maintained by which hormone? 1
- a) Progesterone
 - b) Estrogen
 - c) Luteinising hormone
 - d) FSH
4. ART stands for- 1
- a) Assorted Reproductive Technologies
 - b) Assisted Reproductive Technologies
 - c) Assorted Reductional Technologies
 - d) Assisted Reusable Technologies
5. T.H. Morgan chose *Drosophila melanogaster* as its experimental organism because- 1
- a) They are very colourful
 - b) Easily available
 - c) Cannot be grown in synthetic media
 - d) They have many types of heredity variations that can be seen with low power microscope.
6. A typical nucleosome contains how many base pairs? 1
- (a) 100
 - (b) 150
 - (c) 200
 - (d) 250
7. Which of the following is a paleontological evidence? 1
- (a) Fossils
 - (b) Biochemical similarities
 - (c) Natural selection
 - (d) Anthropogenic causes of evolution.
8. Smack is obtained from- 1
- (a) *Erythroxylum coca*
 - (b) *Papaver somniferum*
 - (c) *Cannabis sativa*
 - (d) *Datura*

9. Members of genus *Glomus* form mycorrhiza that help plants in the absorption of _____. 1
(a) phosphorus
(b) nitrogen
(c) calcium
(d) zinc
10. _____ is a non-distilled beverage. 1
(a) Whisky
(b) Beer
(c) Brandy
(d) Rum
11. Molecular scissors are basically – 1
(a) ligases
(b) lipases
(c) isomerase
(d) restriction endonuclease
12. In gel electrophoresis DNA fragments travel from – 1
(a) positive to negative
(b) positive to positive
(c) negative to positive
(d) negative to negative

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: hCG and hPL are produced only during pregnancy. 1
R: Colostrum contains IgA.
14. A: A man with blood group A and his wife with blood group B have a son with O blood group. 1
R: The father and the mother, both are heterozygous.
15. A: Chromosome 1 has the least genes. 1
R: The Human Genome Project completed in 2003.

16. A: *P. falciparum* causes typhoid. 1
R: Typhoid can be confirmed by Widal test.

Section – B

17. What is the ploidy of the cells of nucellus, MMC, functional megaspore and female gametophyte in an angiosperm? 2
18. Who is responsible for the sex of a child? Justify. 2
19. Name two curable and two non-curable venereal diseases. 2
20. Conceptualize sex determination in honey bees. 2
21. Differentiate between homologous and analogous organs. 2

OR

What are the causes of adaptive radiation?

Section – C

22. Describe pollination in *Vallisneria*. 3
23. Explain how implantation takes place in mother's uterus after a zygote is formed? 3
24. Elaborate on the three natural methods of contraception. 3
25. Mention three features of genetic code. 3

OR

Write a note on transcription.

26. (a) State the three points of Hardy-Weinberg Principle. 3
(b) What factors affect the Hardy-Weinberg Principle?
27. State any three types of barriers in innate immunity. 3
28. Why is secondary treatment of sewage called biological treatment? Elaborate the process. 3

Section – D

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

29. Genetic disorders may be Mendelian or chromosomal. These Mendelian disorders may be sex linked or autosome linked. Chromosomal disorders like Down's syndrome, Turner's syndrome and Klinefelter's syndrome are either trisomic or

monosomic at particular chromosome number.

(a) Which chromosomal disorder has – 21 pairs of autosomes + trisomy at 21st chromosome + XX/XY?

(b) The family pedigree of Queen Victoria shows a number of descendents with a disease called “the royal disease”. What is the common name of this Mendelian disorder?

(c) Briefly mention the genotypic change and hence the phenotypic change in people suffering from sickle cell anaemia.

OR

(c) What is the number of chromosomes in people suffering from Turner’s syndrome? Mention two features of such people.

30. Microbes are used in household products as well as in the production of chemicals, enzymes and bioactive molecules. 4

They are extensively used in the commercial production of citric acid, acetic acid, butyric acid, lipases, streptokinase, cyclosporine-A and statins.

(a) Lipases are used in which industry?

(b) Name the clot buster synthesized from *Streptococcus* and used by patients who have undergone myocardial infarction.

(c) Name the yeast used to produce statins. Why is it so important in the medical industry?

OR

(c) What is the role of the bioactive molecule cyclosporin-A? Name the source organism used for its production.

Section – E

31. Elaborate the Hershey-Chase experiment. 5

OR

Conceptualize the functioning of lac operon.

32. With the help of a schematic diagram explain the replication of HIV in human body. 5

OR

What measures should be taken to prevent and control alcohol and drug abuse?

33. Discuss DNA amplification by using a PCR. 5

OR

Write a note on the features of an ideal cloning vector.

=====

6. Which of the following mode in file opening statement results or generates an error if the file does not exist? [1]
a) a+ b) r+ c) w+ d) None of the above
7. Which of the following keywords marks the beginning of the function block ? [1]
a)func b)define c)def d)function
8. Which device is more intelligent when sending data packets? [1]
a)Router b)Switch c)Modem d)None
9. What will the following expression be evaluated to in Python? `print(15.0 / 4 + (8 + 3.0))` [1]
a) 14.75 b)14.0 c) 15 d) 15.5
10. 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)`
11. In a stack , all insertions take place at end(s). [1]
a)top b)front c)rear d)any
12. Fill in the blank: [1]
The modem at the sender's computer end acts as a _____.
a) Model b) Modulator c) Demodulator d) Convertor
13. 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()`
14. Which of the following is an incorrect Logical operator in Python? [1]
a)not b)in c)or d)and
15. The _____ statement is an empty statement in Python. [1]
16. What is a 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

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:** Python is said to have broadly two types of files, even when three are CSV and TSV files also. [1]
Reason: The CSV and TSV are types of delimited text files only where the delimiters are comma and tab respectively.
18. **Assertion:** A stack is a linear data structure implemented in LIFO manner. [1]
Reason : In stacks, the elements are processed in the reverse order of their insertion- the elements inserted lasts, are removed first

SECTION-B

19. Write two points of difference between Circuit Switching and Packet Switching. [2]
20. Predict the output of the following code fragment? [2]
def check (n1=1,n2=2):
 n1=n1+n2
 n2+=1
 print(n1,n2)
check()
check(2,1)
check(3)
21. What is the difference between readline() and readlines() function? [2]

22. What will be the output(s) of the following code? [2]

```
import random
myNumber=random.randint(0,3)
COLOR=["YELLOW", "WHITE","BLACK", "RED"]
for I in range(1,myNumber):
    print(COLOR[I],end= "**")
    print()
```

23. Write two points of difference between XML and HTML. [2]

24. What is string slice? How is it useful? [1+1]

25. Predict the **output** of the Python code given below: [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)
```

SECTION-C

26. (a) Write the full forms of the following: [2+1]

(i) SMTP (ii) PPP

(b) What is the use of TELNET?

27. Write a program to read a text file (Answer.txt) and display the count of lowercase and uppercase letters in the file [3]

28. Write a function INDEX_LIST(L), where L is the list of [3]
elements passed as argument to the function. The
function returns another list named 'indexList' that
stores the indices of all Non-Zero Elements of L.
For example:
If L contains [12,4,0,11,0,56]
The indexList will have - [0,1,3,5]

29. Predict the **output** of the Python code given below: [3]

```
p=5
def sum(q,r=2):
    global p
    p=r+q**2
    print(p, end= '#')
a=10
b=5
sum(a,b)
sum(r=5,q=1)
```

30. Write a function ETCount() in Python, which should [3]
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

SECTION-D

31. a) Differentiate between actual parameter(s) and a formal parameter(s) with a suitable example for each. [2]
- b) Rewrite the following code in Python after removing all **syntax error(s)**. Underline each correction done in the code. [2]

```
Value=30
for VAL in range(0,Value)
If val%4==0:
print (VAL*4)
Elseif val%5==0:
print (VAL+3)
else
print(VAL+10)
```

32. a) What is the difference between Video Conferencing and Chat? [2]
- b) Expand the following terms with respect to networking? [2]
i)MODEM ii)WLL iii)FTP iv)TCP/IP

SECTION-E

33. a) Write a function in Python to read a text file, **Alpha.txt** and displays those lines which begin with the word 'You'. [2]
- b) Write a function, lenWords(STRING), that takes a string as an argument and returns a tuple containing length of each word of a string. [3]

For example, if the string is "Come let us have some fun", the tuple will have (4, 3, 2, 4, 4, 3)

34.

A list contains following record of a customer:
[Customer_name, Phone_number, City]

[5]

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

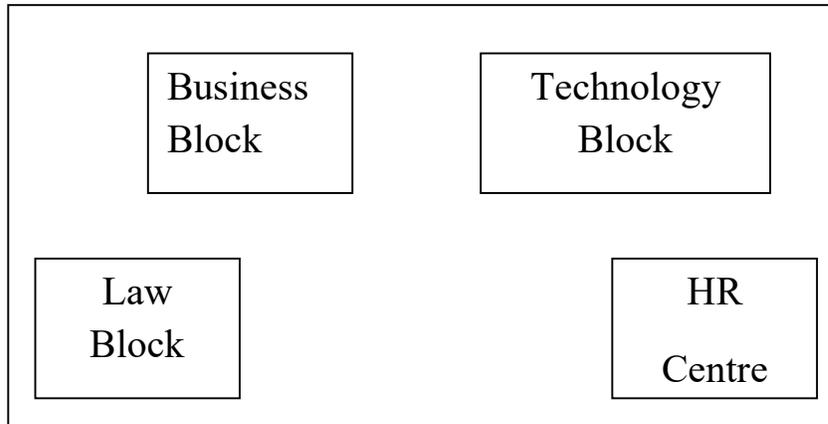
(ii) Pop_element() - To Pop the objects from the stack and display them. Also, display "Stack Empty" when there are no elements in the stack. For example: If the lists of customer details are:

```
[“Gurdas”, “9999999999”,”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

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 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.

=====

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

BURNPUR RIVERSIDE SCHOOL, BURNPUR
HALF YEARLY EXAMINATION : [2023-2024]
COMPUTER SCIENCE
CLASS – XII

Time: 3 Hrs.

Maximum Marks: 70

General Instructions:

1. *This question paper contains five sections, Section A to E.*
2. *All questions are compulsory.*
3. *Section A has 18 questions carrying 01 mark each.*
4. *Section B has 07 Very Short Answer type questions carrying 02 marks each.*
5. *Section C has 05 Short Answer type questions carrying 03 marks each.*
6. *Section D has 02 Long Answer type questions carrying 04 marks each.*
7. *Section E has 03 questions carrying 05 marks each.*
8. *All programming questions are to be answered using Python Language only.*

SECTION-A

Each question carries 1 mark

Answer the following questions:

1. **State True or False –** 1
“Tuple slice is an extracted part of tuple; tuple slice is a tuple in itself”
2. Given the lists L=[2,4,6,8,10,12,14,16] 1
Write the output of print(L[4:6])
a. [10, 12, 14] b. [12, 14]
c. [10, 12] d. none
3. Identify the valid declaration of d: 1
d = {1 : 'Jan', 2 : 'Feb', 3 : 'Mar'}
a. string b. dictionary c. list d. tuple

4. Consider the code below. What will the list NL be storing? 1
Lst = [('a', 2), ('b', 4), ('c', 6)]
NL = [n * 10 for (x, n) in Lst if x == 'b' or x == 'c']
5. A parameter having default value in the function header is known as a _____. 1
6. The _____ function places the file pointer at specified position. 1
a. tell() b. dump() c. seek() d. none
7. Which command(s) modifies the current namespace with the imported object name? 1
a. import <module>
b. import <module1>, <module2>
c. from <module> import <object>
d. none
8. Which device broadcasts any data to all devices on a network? 1
a. Router b. Switch c. Hub d. Bridge
9. Which of the following is valid arithmetic operator in Python: 1
a. ? b. < c. // d. and
10. _____ is the process whereby a Python object hierarchy is converted into a byte-stream. 1
a. Pickling b. Unpickling
c. Both (a) & (b) d. none
11. What will be the output of the following Python code? 1
lst = [3,4,6,1,2]
lst[1:2] = [7,8]
print(lst)
a. [3,7,8,6,1,2] b. Syntax error
c. [3,[7,8],6,1,2] d. [3,4,6,7,8]
12. Which device filters data packets and only sends to those that require the data? 1
a. Router b. Switch c. Hub d. Bridge

13. Which of the following mode in file opening statement results or generates an error if the file does not exist? 1
a. a+ b. r+ c. w+ d. None
14. _____ form of access is used to add/remove nodes from a stack. 1
a. LIFO b. FIFO c. Both (a) & (b) d. None
15. We can suppress EOL translation in text file by giving _____ argument in open(). 1
16. Which of the given argument types can be skipped from a function call? 1
a. positional arguments b. keyword arguments
c. named arguments d. default arguments

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 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 (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:** CSV (Comma Separated Values) is a file format for data storage which looks like a text file. 1
- REASON:** The information is organized with one record on each line and each field is separated by comma.
18. **ASSERTION:** Stacks have found their applications in storing and evaluating expressions. 1
- REASON:** Postfix form of expression can be created using stacks and for evaluating postfix expressions also, the stacks are used.

SECTION-B
Each question carries 2 marks

Answer the following questions:

19. How is **IP address** different from **MAC address**? Discuss briefly. 2
20. Mention the four possible combinations of functions in Python. 2
21. Differentiate between **<file-object>.tell()** function and **<file-object>.seek()** function. 2
22. What would be the output produced by the following code:
import math
import random
print (math.ceil(random.random()))
Justify your answer. 2
23. Differentiate between **Hub** and **Switch**. 2
24. What will be the output of the following python code: 2
dc1={}
dc1[1] = 1
dc1['1'] = 2
dc1[1.0] = 5
sum = 0
pro = 1
for k in dc1:
sum += dc1[k]
pro *= dc1[k]
print (sum)
print (pro)
25. What are the four basic operations that can be performed on stacks? 2

SECTION-C

Each question carries 3 marks

Answer the following questions:

26. a. Expand the following protocols: SLIP and PPP. (1) 3
b. Mention the functions of SLIP and PPP. (2)

27. Consider the file p2.txt. 3

A poem by Paramhansa Yogananda
Better than Heaven or Arcadia
I love thee, O my India!
And thy love I shall give
To every brother nation that lives.

Now predict the output of following code that works with p2.txt.

```
fp1 = open ( "p2.txt", "r")  
print (fp1.readline(20))  
s1 = fp1.readline(30)  
print (s1)  
print (fp1.readline(25))
```

28. What will be the output of the following code? 3

```
def interest (prnc, time = 3, rate = 0.20) :  
    return ( prnc * time * rate)  
print ( interest ( 5200, 2 ) )  
print ( interest ( 6500, rate = 0.10 ) )  
print ( interest ( time = 5, prnc = 6000 ) )
```

29. What will be the output of the following code snippet? 3

```
values=[ ]  
for i in range(1,4):  
    values.append(i)  
print(values)
```

30. Sachin has a list containing 8 integers. You need to help him to create a program with separate user defined functions to perform the following operations based on this list. 3
- Traverse the content of the list and push the even numbers into a stack.
 - Pop and display the content of the stack.

For Example:

If the sample content of the list is as follows:

N=[6, 2, 7, 5, 6, 5, 4, 1]

Sample Output of the code should be:

4 6 2 6

SECTION-D

Each question carries 4 marks

Answer the following questions:

31. Consider a function with following header: 4
def check(A, B=10, C=1):
Here are some function calls given below. Find out which of these are correct and which of these are incorrect :
- a. check (obj1)
 - b. check (B=20)
 - c. check (obj2, 12)
 - d. check (obj11, A=obj12)
 - e. check (obj3, C=0)
 - f. check ()
 - g. check (C=0, obj3)
 - h. check (B=15, A=obj4)
32. 4
- a. Give the full form of NFS and FTP. (1)
 - b. What do you understand by firewall? (1)
 - c. Differentiate between downloading and uploading. (2)

SECTION-E

Each question carries 5 marks

Answer the following questions:

33. A given text file “data.txt” contains: 5

```
Line 1\n\nLine 3\nLine 4\n\nLine 6
```

What will be the output of following code?

```
fh = open (“data.txt”, “r”)\nlst = fh.readlines()\nprint( lst[0], end = “ ”)\nprint( lst[2], end = “ ”)\nprint( lst[5], end = “ ”)\nprint( lst[1], end = “ ”)\nprint( lst[4], end = “ ”)
```

34. A list, NList contains following record as list elements: 5

[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:

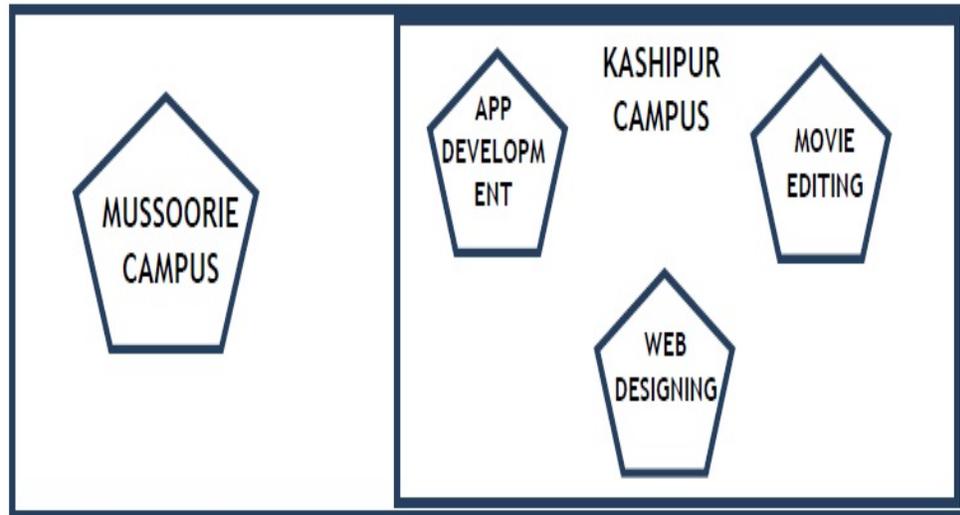
```
['Naypyidaw', 'Myanmar'],
['Dubai', 'UAE'],
['Columbo', 'SriLanka']
```

The output should be:

```
['Columbo', 'SriLanka']
['Dubai', 'UAE']
['Naypyidaw', 'Myanmar']
Stack Empty
```

35. SeeIndia Corporation, an Uttarakhand based IT training company, is planning to set up training centres in various cities in next 2 years. Their first campus is coming up in Kashipur district. At Kashipur campus, they are planning to have 3 different blocks for App development, Web designing and Movie editing. Each block has number of computers, 5

which are required to be connected in a network for communication, data and resource sharing. As a network consultant of this company, you have to suggest the best network related solutions for them for issues/problems raised in question nos.(i) to (v), keeping in mind the distances between various blocks/locations and other given parameters.



Distance between various blocks/locations:

Block	Distance
App development to Web designing	28 m
App development to Movie editing	55 m
Web designing to Movie editing	32 m
Kashipur Campus to Mussoorie Campus	232 km

Number of computers

Block	Number of Computers
App development	75
Web designing	50
Movie editing	80

- (i) Suggest the most appropriate block/location to house the SERVER in the Kashipur campus (out of the 3 blocks) to get the best and effective connectivity. Justify your answer.

- (ii) Suggest a device/software to be installed in the Kashipur Campus to take care of data security.
- (iii) Suggest the best wired medium and draw the cable layout (Block to Block) to economically connect various blocks within the Kashipur Campus.
- (iv) Suggest the placement of the following devices with appropriate reasons:
 - a. Switch / Hub
 - b. Repeater
- (v) Suggest a protocol that shall be needed to provide Video Conferencing solution between Kashipur Campus and Mussoorie Campus.

=====

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

BURNPUR RIVERSIDE SCHOOL, BURNPUR
HALF – YEARLY EXAMINATION : [2023 – 2024]
PHYSICAL EDUCATION
CLASS : XII

Time: 3 Hours

Maximum Marks: 70

GENERAL INSTRUCTIONS:

1. *The question paper consists of 5 sections and 37 questions.*
2. ***Section A** consists of question 1 -18 carrying 1 mark each and is multiple choice questions. All questions are compulsory.*
3. ***Section B** consists of questions 19 -24 carrying 2 marks each and are very short answer types and should not exceed 60 -90 words. Attempt any 5*
4. ***Section C** consists of questions 25 -30 carrying 3 marks each and are short answer types and should not exceed 100 -150 words. Attempt any 5.*
5. ***Section D** consists of questions 31 -33 carrying 4 marks each and are case studies. There is internal choice available.*
6. ***Section E** consists of questions 34 -37 carrying 5 marks each and are short answer types and should not exceed 200 -300 words. Attempt any 3*

SECTION-A

1. What is the meaning of staffing? 1
 - a. Interviewing staff
 - b. Selecting and recruiting staff
 - c. Promoting staff
 - d. All of these

2. Which of the following are salient aspects of a tournament? 1
 - a. Nurturing social skills
 - b. Means of recreation
 - c. Promoting national and international integration
 - d. All of these

3. The total number of matches in a knock out tournament of 34 teams are 1
 (a) 31 (b) 32
 (c) 33 (d) 35
4. Running on an uneven terrain can cause 1
 (a) lordosis. (b) kyphosis (c) scoliosis. (d) none of these.
5. The motto of the Paralympic Games is 1
 (a) Spirit in Motion. (b) Spirit of Motion.
 (c) Motion of Spirit. (d) Spirit and Motion
6. Scoliosis is a postural deformity related with 1
 (a) Foot. (b) Leg.
 (c) Vertebral column (d) Hand.
7. Identify the asana: 1



- (a) Paschimottanasana (b) Halasana
 (c) Vajrasana (d) Dhanurasana
8. Which of the following asanas are beneficial for diabetes? 1
 (a) Hastasana, Vajrasana, Vrikshasana
 (b) Bhujangasana, Paschimottanasana, Ardha Matsyendrasana
 (c) Vajrasana, Trikonasana, Matsyasana
 (d) Parvatasana, Shavasana, Chakrasana
9. Vajrasana should not be performed if an individual is suffering from 1
 (a) Hernia
 (b) Peptic ulcer.
 (c) Asthma.
 (d) Chronic knee pain.

10. Special Olympics has more than _____ Olympic-type individual and team sports. 1
(a) 40 (b) 30
(c) 50 (d) 70
11. Glucose, Fructose, Lactose are----- 1
(a) Simple Carbohydrate (b) Complex Carbohydrate
(c) Minerals (d) Fats
12. Goiter and the enlarged thyroid gland are mainly diagnosed in patients with deficiencies of which of the following minerals? 1
(a) Iron (b) Iodine (c) Calcium (d) Phosphorus
13. Which of the following diseases is caused by protein deficiency? 1
(a) Anemia (b) Kwashiorkor
(c) Hypothyroidism (d) All of the above
14. Assertion: Differently abled students should be treated equally 1
Reason: Differently abled students should not be looked sympathetically they should be recognized for their talent and capabilities.
(a) Both A and R are correct and R is the correct explanation for A
(b) Both A and R is correct but R is not correct explanation for A
(c) A is false but R is true
(d) A is true but R false

15. Match the following: 1

LIST-I	LIST-II
A. 	1. Let me win, But if I cannot win, let me be brave in the attempt.
B. 	2. Ok , good and great
C. 	3. Impaired passive range of movement
D. 	4. Ataxia

CODES:

- | | | | | |
|----|---|---|---|---|
| | A | B | C | D |
| a. | 1 | 3 | 2 | 4 |
| b. | 4 | 1 | 3 | 2 |
| c. | 3 | 4 | 2 | 1 |
| d. | 2 | 1 | 4 | 3 |

16. Plate Tapping Test is done to measure 1

- (a) Speed (b) Coordination.
(c) Flexibility. (d) Strength

17. What is the test duration for the Arm curl test? 1

- (a) 1 min (b) 2 min (c) 30 sec (d) Number of repetitions

18. Pushups for boys measures 1

- (a) Leg muscle endurance and strength.
(b) Arm muscle endurance and strength.
(c) Lower body endurance and strength.
(d) Upper body endurance and strength

SECTION - B

19. Write any two advantages of league tournament. 2

20. What is scoliosis? 2

21. Identify the asana: 2



1.



2.



3.



4.

22. Who participate in the Paralympic games? 2

23. What are the different types of carbohydrates? 2

24. Write down the objectives and administration of the Flamingo Test. 2

SECTION: C

25. Draw a fixture of 8 teams using staircase method. 3

26. Write a short note about effect of menstrual dysfunction on sports participating female athletes. 3

27. Write any two benefits of Katichakrasana. 3

28. How many non-nutritive component of diet? Write any one. 3

29. Write any four advantages of physical activities for CWSN. 3

30. Write about any three test that are conducted under Rikli and Jones test. 3

SECTION: D

31.

VALUE BASED:

1*4

Irfan suggested to his sister Shumaila not to slouch (lazy and drooping way) in the chair rather always sit with your back straight. He also explained the advantages and disadvantages of sitting in correct posture. Shumaila immediately followed his instructions and thanked him for telling her the benefits of sitting in a correct posture

Answer the following questions based on the above passage:

1. What is correct sitting posture?
2. Which deformity can be developed by slouching?
3. What are the values shown by Irfan and his sister?
4. Write to exercise to correct sitting posture.

1*4

32.

Value-Based Question

Rohit joined Class 9 of a reputed school. He is little different from his other classmates as he is a CWSN. Other students notice this. He cannot play games and sports like his other classmates. So, they ignore him and play amongst themselves. The PT teacher notices this. He gathers all the students of the class including Rohit and devises a game that even Rohit can play. All the students enjoy this sports session. This becomes a norm everyday during sports period. Slowly, Rohit becomes one among the students.

Answer the following questions based on the above paragraph.

1. What was the attitude of students towards Rohit?
2. How would you reflect upon PT teacher's action?
3. What happens when CWSN are included in sports and games?
4. What happens when CWSN are excluded from sports and games?

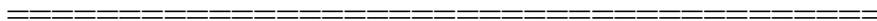
33. On the basis of picture given below, answer the following questions. 1*4



- (a) Identify the test shown in the picture above?
- (b) What are the required equipments for this test?
- (c) What is the purpose of this test?
- (d) The time period for this test is

SECTION – E

- 34. Mention all calculations and steps involved to draw a knockout fixture of 19 teams, where 4 teams are to be seeded. 5
- 35. Explain any five postural deformities. 5
- 36. What is obesity? Draw stick diagrams of any two asanas recommended to control obesity and explain their procedure. 5
- 37. How is BMI measured? Explain with examples. 5



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

BURNPUR RIVERSIDE SCHOOL, BURNPUR
HALF-YEARLY EXAMINATION : [2023-2024]
PHYSICAL EDUCATION
CLASS-XII

Time : 3 Hrs.

Maximum Marks : 70

GENERAL INSTRUCTIONS:

1. *The question paper consists of five sections and 37 questions.*
 2. *Section – A consists of questions 1-18 carrying 1 mark each and is multiple choice questions. All are Compulsory.*
 3. *Section – B consists of questions 19-24 carrying 2 marks each and are very short answer types and should not be exceed 30-50 words. Attempt any 5.*
 4. *Section – C consists of questions 25-30 carrying 3 marks each and are short answer types and should not exceed 80-100 words. Attempt any 5.*
 5. *Section – D consists of questions 31-33 carrying 4 marks each and are case studies.*
- Section – E consists of questions 34-37 carrying 5 marks each and are long answer types and should not exceed 100-150 words. Attempt any 3.*
-
-

SECTION- A

1. What is the most important prerequisite for a successful competitive event to happen? 1
 - a) Publicising the event
 - b) Appropriate planning
 - c) Coordinating the event
 - d) None of the above
2. The third bye will go to _____ position in knock-out tournament. 1
 - a) Bottom most lower half
 - b) Top of lower half
 - c) Top of upper half
 - d) Bottom most of upper half

3. If $n=29$, than how many byes will be there in knock-out tournament? 1
- a) 2
 - b) 3
 - c) 4
 - d) 5
4. **Assertion-Reason Type Questions:-** 1
- Given below are the two statements labelled Assertion and Reason.**
- Assertion:** - Scoliosis is much tougher to treat with corrective exercises.
- Reason:** - One must perform abdominal strengthening exercises.
- In the context of the two statements given above, which one of the following is correct?**
- a) Both Assertion and Reason are true and Reason is the correct explanation of Assertion.
 - b) Both Assertion and Reason are true, but Reason is not the correct explanation of Assertion.
 - c) Assertion is true, but Reason is false.
 - d) Assertion is false, but Reason is true.
5. **Assertion-Reason Type Questions:-** 1
- Given below are the two statements labelled Assertion and Reason.**
- Assertion:-** Wrong sitting posture creates postural disabilities.
- Reason:-** Correct body posture reflects good personality.
- In the context of the two statements given above, which one of the following is correct?**
- a) Both Assertion and Reason are true and Reason is the correct explanation of Assertion.
 - b) Both Assertion and Reason are true, but Reason is not the correct explanation of Assertion.
 - c) Assertion is true, but Reason is false.
 - d) Assertion is false, but Reason is true.
6. Horse riding and oil messaging of knees towards outer side are required 1
to cure _____.
- a) Bow legs
 - b) Knock-knees
 - c) Scoliosis
 - d) Flat foot

7. What are the symptoms of Asthma? 1
 a) Extra production of mucus
 b) Excessive coughing
 c) Wheezing and shortness of breath
 d) All of these
8. _____ asana resembles the face of a cow. 1
 a) Bhujangasana
 b) Halasana
 c) Padmasana
 d) Gomukhasana
9. Identify the asana..... 1

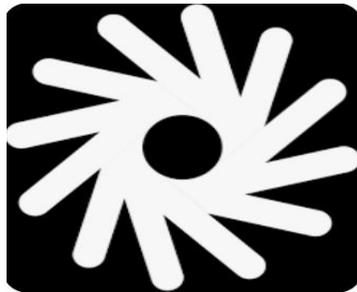


- a) Vakrasana
 b) Tadasana
 c) Vajrasana
 d) Ardha Matsyendrasana
10. **Match the following:-** 1

	Column-I		Column- II
a.	World's largest sports organisation for children and adults with intellectual and physical disabilities.	(i)	Eunice Kennedy Shriver
b.	Camp Shriver for children with disabilities	(ii)	Special Olympic
c.	First Special Olympics competitions	(iii)	1988
d.	Special Olympic came to India	(iv)	Chicago

Select the correct set of options:	
A.	(a)-(ii); (b)-(i); (c)-(iv); (d)-(iii).
B.	(a)-(iii); (b)-(iv); (c)-(i); (d)-(ii).
C.	(a)-(i); (b)-(ii); (c)-(iii); (d)-(iv)
D.	(a)-(iv); (b)-(iii); (c)-(ii); (d)-(i)

11. Identify the picture shown below and choose the correct alternative:- 1
- a) Special Olympic Games.



- b) Deaflympics Games.
c) Paralympics Games.
d) Summer Olympics Games.
12. The Oath of Special Olympics is..... 1
- a) Let me run
b) Let me play but I can't win, let me be brave in the attempt.
c) Let me win but if I can't win, let me be brave in the attempt.
d) None of the above.
13. Which of the following is a macro mineral? 1
- a) Iodine
b) Iron
c) Copper
d) None of these
14. "A diet which consists of all the essential food elements " is 1
called.....
- a) Nutrition
b) Balance diet
c) Growth
d) Maintenance of body.

15. _____ contain carbon, oxygen and hydrogen in the percentage of 76, 12 and 12 respectively. 1
- Carbohydrate
 - Fats
 - Vitamins
 - Proteins
16. After how many falls of leg in Flamingo balance test is terminated? 1
- 10
 - 12
 - 18
 - 15
17. How much distance should be there between the feet and buttock while performing partial curl-up test battery? 1
- 3 inch
 - 6 inch
 - 9 inch
 - 12 inch
18. In 50 mt Standing start of the motor fitness test, time is taken nearest to..... 1
- 5th seconds
 - 9th seconds
 - 10th seconds
 - 20th seconds

SECTION -B

19. Round-Robin Tournament is of two types. Name them and give one major difference between them. 2
20. Write in brief about amenorrhea. 2
21. Enlist the obesity related asana. 2
22. What does the word 'Paralympics' mean? 2
23. What do you mean by roughage? 2
24. What do you mean by test and measurement? 2

SECTION -C

25. What do you mean by Combination Tournament? What are the types of Combination Tournament? 3
26. Write about the deformities of spinal curvature. 3
27. "Asanas can be used as a preventive measures." Give your comments. 3
28. Write the history of Deaflympics Games. 3

29. Write a note on water along with its functions. 3
30. What is Rikli and Jones Arm Curl Test for senior citizens? 3

SECTION-D

31. **Read the given case study carefully and answer the questions that follow:-** 4

Harry met with a major accident. Later on he suffered from shoulder and thoracic deformity problem. After few months he started practicing Chakrasana and Dhanurasana to rectify his deformities.

a) Harry's accident lead his body to.....

- i) Good posture
- ii) Bad posture
- iii) Curvature body
- iv) Bent body

b) What may be the thoracic deformity Harry suffered from?

- i) Flat foot
- ii) Round shoulder
- iii) Kyphosis
- iv) Bow legs

c) Harry practiced Chakrasana and Dhanurasana to rectify which deformity?

- i) Round shoulder
- ii) Bow legs
- iii) Flat feet
- iv) Lordosis

d) Kyphosis is commonly known as.....

- i) Hollow back
- ii) Hunch back
- iii) Sideways bending
- iv) Lordosis

32. **Read the given case study carefully and answer the questions that follow:-** 4

The International Paralympic Committee is the global governing body of the Paralympics movements. Its purpose is to organise the summer and winter Paralympics Games and act as the International Federation for the sports, supervising and coordinating World Championship and other competitions.

- a) IPC in sports stands for.....
- i) International Paralympic Committee
 - ii) Indian Paralympics Committee
 - iii) Indian Peoples Committee
 - iv) None of the above.
- b) The reason Paralympics Games got their name was because.....
- i) They were meant for athletes suffering from paraplegia
 - ii) They run alongside or parallel to the Olympic Games
 - iii) The athletes are paragon of their sports
 - iv) They are attended by a large number of paramedics.
- c) Which body governs the Paralympics Movement?
- i) Special Olympic International
 - ii) Sports Authority of India
 - iii) Indian Paralympics Committee
 - iv) International Paralympic Committee.
- d) When and where the first Paralympics Games did took place?
- i) Rome, 1960
 - ii) Mandeville, 1976
 - iii) Albertville, 1992
 - iv) Holland, 1968

33. **Read the given case study carefully and answer the questions that follow:-** 4

Rajesh went to an old age home on the occasion of his birthday. At that time all the inmates in the home were assembled at one place. When he enquired, they replied that they have a physical fitness test.

- a) For upper back flexibility, Rajesh advised _____ to his grandfather.
 - i) Chair Sit and Reach Test
 - ii) Arm Curl Test
 - iii) 6 minutes Walk Test
 - iv) None of the above
- b) The weight of women and men for Arm Curl Test of senior citizens is.....
 - i) 3 pounds and 4 pounds
 - ii) 5 kg and 8 kg
 - iii) 5 gm and 8 gm
 - iv) None of these
- c) Chair Stand Test is used for measuring the.....
 - i) Lower Body Strength
 - ii) Lower Body Flexibility
 - iii) Both (i) and (ii)
 - iv) None of these
- d) How many tests are there in senior citizens fitness test?
 - i) Three
 - ii) Five
 - iii) Six
 - iv) Seven

SECTION-E

- 34. What is League or Round-Robin Tournament Draw a fixture for 9 teams using by Cyclic method. 5
- 35. What is Anorexia nervosa? Write the symptoms and treatment involved in it. 5
- 36. What do you mean by Matsyasana in Sanskrit? Explain its procedure, benefits and contraindications. 5
- 37. How can you administer 'Chair sit and reach test' for lower body flexibility of senior citizen? 5

=====

Name: _____ Sec: _____ Roll No.: _____

CODE - A

BURNPUR RIVERSIDE SCHOOL, BURNPUR
HALF-YEARLY EXAMINATION : (2023-2024)
ACCOUNTANCY
CLASS – XII

Time: 3 Hours

Maximum Marks : 80

General Instructions :

- 1. This question paper contains 34 questions.
All questions are compulsory.**
- 2. Question Nos. 1 to 20 carries 1 mark each.**
- 3. Question no. 21 to 26 carries 3 marks each.**
- 3. Question no. 27 to 29 carries 4 marks each.**
- 4. Question no. 30 to 34 carries 6 marks each.**
- 5. There is no overall choice. However, an internal choice has been provided in 7 questions of one mark and 2 question of three marks, and 1 question of four marks, and 2 questions of six marks.**
- 5. Attempt all parts of the questions together.**

- =====
- 1 A and B were partners sharing profits in the ratio 3:2. C was admitted as a new partner for $\frac{1}{5}^{\text{th}}$ share. A sacrificed $\frac{3}{20}$ from his share and B sacrificed $\frac{1}{20}^{\text{th}}$ from his share in favour of C. The new profit sharing ratio would be (a) 9:7:4 (b) 8:8:4 (c) 6:10:4 (d) 10:6:4
- 2 Assertion(A): Interest on loan to partners is charged @6%p.a. If 1 partnership deed does not provide for charging of interest.
Reason (R) : In absence of partnership deed, provisions of the Partnership Act,1932 apply. The interest on loan to partner should be charged @6%pa. otherwise, interest is allowed at the agreed rate of interest.

- (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 J Ltd. forfeited 800 shares of ₹ 10 each for non-payment of final call ₹3 1
per share. The forfeited shares were reissued at ₹ 12 per share. Calculate
the amount of capital reserve
(a) ₹ 4,600 (b) ₹ 5,600 (c) ₹2,600 (d) ₹ 3,600

OR

If 10,000 shares of ₹ 10 each were forfeited for non-payment of final call money of ₹ 3 per share and only 7,000 of these shares were reissued @ ₹ 11 per share as fully paid up, then what is the minimum amount that company must collect at the time of reissue of the remaining 3,000 shares.
(a) ₹ 21,000 (b) ₹ 9,000 (c) ₹ 16,000 (d) 30,000

- 4 Value of stock given in Balance Sheet is ₹ 50,000. If value of stock is 1
found undervalued by 20% then
(a) Revaluation A/c will be credited by ₹ 12,500
(b) Revaluation A/c will be debited by ₹ 12,500
(c) Revaluation A/c will be debited by ₹ 10,000
(d) None of these.

OR

A, B and C are having profits in the ratio 2:2:1. They have decided to share future profits in the ratio 3:2:1. Find out the gaining partner.
(a) Both A and C are the gaining partners (b) C is the gaining partner
(c) B is the gaining partner (d) A is the gaining partner

- 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 Which of the following statements is incorrect about debentures? 1
(a) Interest on debentures is an appropriation of profit
(b) Debenture holders are the creditors of a company
(c) Debentures can be issued to vendors at discount
(d) Interest is not paid on debentures issued as collateral security
- 7 On 1st April, 2022 G Ltd had a balance of 800,000 Securities Premium A/c. During the year company issued 20,000 shares of ₹ 10 each as bonus shares and used the balance amount to write off Loss on issue of Debenture on account of issue of 200,000, 9% Debentures of ₹ 100 each at a discount of 10%, redeemable @ 5% premium. The amount to be charged to Statement of P & L for the year for loss on Issue of Debentures would be:
(a) ₹ 30,00,000 (b) ₹ 22,00,000 (c) ₹ 24,00,000 (d) ₹ 20,00,000
- 8 G, S and T were partners sharing profits in the ratio 3:2:1. G retired and his dues towards the firm including Capital balance, Accumulated profits and losses share, Revaluation gain amounted to ₹ 5,80,000. G was being paid ₹ 7,00,000 in full settlement. For giving that additional amount of ₹ 1,20,000, S was debited for ₹ 40,000. Determine goodwill of the firm.
(a) ₹ 120,000 (b) ₹ 80,000 (c) ₹ 240,000 (d) ₹ 360,000

OR

A, B and C are partners. C has been given a guarantee of minimum profit ₹ 8000 by the firm. Firm suffered a loss ₹ 5,000 during the year. Capital A/c of B will be _____ by ₹ _____.

- (a) Credited, ₹6,500
(b) Debited, ₹6,500
(c) Credited, ₹1,500
(d) Debited, ₹1,500

Read the following hypothetical situation, answer question no. 9 and 10. 1

K is a partner in a firm. During the year ending March,31,2022 K withdrew ₹ 30,000 quarterly. If interest is to be charged on drawings @ 3%pa, calculate amount of interest to be charged at the end of the year

- 9 When money is withdrawn at the end of each quarter, interest on drawings will be charged
(a) ₹ 2,250 (b) ₹ 3,600 (c) ₹ 1,800 (d) none of these
- 10 When money is withdrawn at the beginning of each quarter, interest on drawings will be charged
(a) ₹ 2,700 (b) ₹ 1,350 (c) ₹ 1,800 (d) none of these
- 11 In absence of agreement , partners are entitled to: 1
i) Profit share in capital ratio
ii) Commission for making additional sale
iii) Interest on loan and advance by them to the firm
iv) Salary for working extra hours
v) Interest on capital.

Choose the correct option.

- a) Only i), iv), v) b) Only ii), iii)
c) Only iii) d) Only i), iii)
- 12 A company forfeited 3,000 shares of ₹ 10 each on which only ₹ 5 per share (including premium ₹ 1 per share) has been paid. Out of these few shares were reissued at a discount of ₹ 1 per share and ₹ 6,000 were transferred to Capital Reserve. How many shares were reissued?
(a) 3,000 shares
(b) 1,000 shares
(c) 2,000 shares
(d) 1,500 shares

- 13 V Ltd. purchased the running business of X Ltd. consisting of total assets ₹ 10,00,000 and liabilities ₹ 2,00,000. V Ltd. paid ₹ 2,00,000 immediately in cash and balance by issuing 7,000 shares of ₹ 100 each at a premium of ₹ 20 per share. The goodwill account will be debited by
(a) ₹ 240,000 (b) ₹ 200,000 (c) ₹ 800,000 (d) nil
- 14 X and Y are partners sharing profits in the ratio 5:3. They admitted Z for $\frac{1}{5}$ th profits, for which he paid ₹ 60,000 against capital and ₹ 30,000 against goodwill. Find the capital balance for each partner taking Z's capital as the base capital.
(a) ₹ 1,50,000; ₹60,000 and ₹60,000 (b) ₹ 1,50,000; ₹60,000 and ₹90,000
(c) ₹ 1,50,000; ₹90,000 and ₹60,000 (d) ₹ 1,50,000; ₹90,000 and ₹90,000

OR

- P and Q were partners in a firm sharing profits in the ratio of 2:1. R was admitted as a new partner in the firm. New profit sharing ratio was 3:3:2. R bought the following assets towards his share of goodwill and capital: Machinery ₹ 200,000, Furniture ₹ 120,000 Stock ₹ 80,000 Cash ₹50,000. If his capital is considered as ₹ 380,000 the goodwill of the firm will be
(a) ₹ 70,000 (b) ₹ 28,000 (c) ₹ 450,000 (d) ₹ 140,000
- 15 A, B and C are partners with ratio of 2:2:1. C was guaranteed for 1 minimum profit of ₹ 10,000. A and B bears the deficiency as ₹ 500 and ₹ 500 respectively. How much profit was earned by firm?
(a) ₹ 50,000 (b) ₹ 45,000 (c) ₹ 40,000 (d) none of these

OR

- Profit after rent of ₹ 10,000 is ₹ 90,000. A and B are partners. How much amount of profit will be credited to their capital A/c?
(a) ₹ 50,000 and ₹ 50,000 (b) ₹ 45,000 and ₹ 45,000
(c) ₹ 50,000 and ₹ 45,000 (d) none of these

- 16 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 ₹ 1,50,000. Gain/Loss in the realisation A/c will be 1
 (a) ₹30,000(gain) (b) ₹40,000 (Gain)
 (c) ₹ 40,000 (Loss) (d) ₹ 30,000(Loss)
- 17 If existing goodwill is appeared in balance sheet, then it is written off 1
 among partners
 (a) in new ratio (b) in old ratio
 (c) in gaining/sacrificing ratio (d) none of these
- 18 On 2nd March,2022, K.Ltd. issued 635, 9% Debenture of ₹ 500 each. 1
 Debentures were issued at 5% discount, redeemable at 10% premium.
 How much amount is credited in Premium on Redemption of Debenture
 A/c?
 (a) ₹ 19,000 (b) ₹ 17,000 (c) ₹ 31,750 (d) ₹ 15,000
- 19 A, B and C are partners sharing profits and loss in the ratio 3:2:1. B retires 1
 and his share is purchased by A and C in the ratio 2:1. Calculate new profit
 sharing ratio of A and C. (a) 11:5 (b) 12:5 (c) 13:5 (d) none of these
- 20 A, B and C are partners in firm sharing profits and loss in the ratio 2:2:1. 1
 On 31st March,2022 C died. Accounts are closed on 31st December every
 year. The sale for the year 2021 was ₹ 600,000 and profits were ₹ 60,000
 The sale for the period from Jan.1,2022 to March 31,2022 were ₹ 200,000.
 The share of the deceased partner in the current year's profits on the basis
 of sales is
 (a) ₹ 20,000 (b) ₹ 8,000 (c) ₹ 3,000 (d) ₹ 4,000

OR

Given below are two statements

Statement I:

General Reserve appearing in the Balance Sheet at the time of reconstitution of the firm will always be distributed among the old partners in the old profit sharing ratio.

Statement II

If the partners decide to retain the general reserve, they may adjust it in the Capital, Current Accounts of the partners in their sacrificing/gaining ratio by passing the following entry.

Gaining Partner's Capital/Current A/c	Dr.	XXXX
To Sacrificing Partner's Capital/Current A/c		XXXX

In the light of the above statements, choose the appropriate answer from the options given below:

- (a) Both Statement I and Statement II are correct
- (b) Both Statement I and Statement II are incorrect
- (c) Statement I is correct but Statement II is incorrect
- (d) Statement I is incorrect but Statement II is correct

21 X and Y started business on 1.4.2021 with capitals of ₹ 5,00,000 each. As per the Partnership Deed, both X and Y are to get monthly salary of ₹ 10,000 each and interest on capital is 50,000 each. Interest on drawings are X ₹ 3,000 and Y ₹ 5,000. During the year, the firm incurred a loss of ₹ 2,00,000. 3

Pass necessary journal entries for the above. The firm closes its accounts on 31st March every year.

22 X, Y and Z are partners sharing profits in the ratio 2:3:5. Goodwill exists in the books at ₹ 50,000. X retires and on the day of X's retirement, goodwill is valued at ₹ 45,000. Y and Z decided to share future profits equally. 3

Pass necessary journal entries.

OR

X, Y and Z are partners in a firm sharing profits and losses in the ratio 5:3:2. Their fixed capitals were ₹ 3,00,000; ₹ 2,00,000 and ₹ 1,00,000 respectively. For the year ended 31st March 2022, interest on capital was credited to them @ 10% pa instead of 8% pa. Showing your working notes clearly, pass necessary adjustment entry.

- 23 R, S and T were partners sharing profits in the ratio of 5:3:2 with the fixed 3
capitals of ₹ 20,000; ₹ 12,000 and ₹ 8,000 respectively. Partners were
entitled for the interest on capital @5%pa. However T was guaranteed by
R and S that he will not be getting profit less than ₹ 4,000 at any cost in
any year. During the year the firm had earned a profit of ₹ 10,000. R and S
withdrew ₹ 1,500 and ₹ 1,200 respectively for personal use. Profit earned
by the firm was calculated before charging interest on capital. Prepare
Profit and Loss Appropriation A/c.
- 24 A and B were partners in a firm sharing profits in the ratio 4:3. They 3
admitted C as a new partner for $\frac{3}{7}$ th share in the profits of the firm. New
profit sharing ratio will be 2:2:3. C brought ₹ 200,000 as his capital and ₹
60,000 for his share of premium for goodwill, half of which was
withdrawn by A and B from the firm.
Pass necessary journal entries in the books of the firm for the above
transactions.
- 25 Pass journal entries for following transactions on dissolution of firm of 3
partners M and S after various assets (other than cash) and outside
liabilities have been transferred to Realisation A/c.
(a) Debtors ₹ 2,64,000 and Provision for Doubtful debts ₹ 24,000. On
dissolution of firm ₹ 48,000 of the book debts proved bad.
(b) Machinery (book value ₹600,000) was given to a creditor at a discount
of 20% in settlement.
(c) Investments (book value ₹ 40,000) realised at 150%
- 26 B Ltd. purchased assets of ₹ 9,90,000 from Bhagat. Payment was made by 3
issuing 11% Debentures of ₹ 100 each. Pass journal entries when
debentures were issued at a discount of 10%, including writing off
Discount on Issue of Debentures.

OR

E Ltd. took over assets of ₹ 7,00,000 and liabilities of ₹ 60,000 of W.Ltd.
for the purchase consideration of ₹ 6,60,000. E.Ltd. paid the purchase

consideration by issuing 9% Debentures of ₹ 100 each at 10% premium. Pass journal entries in the books of E.Ltd.

- 27 A, B and C are partners sharing profits in the ratio of 4:3:1. B retired , 4
giving his share of profits to A and C for ₹ 8,100; ₹ 3600 being paid by A
and ₹ 4500 by C. Profit of the year after B's retirement was ₹ 10,500.
You are required (a) to give necessary journal entries to record the transfer
of B's share to A and C. (b) to distribute the profits between A and C. The
necessary amount is brought in by A and C.
- 28 J.Ltd invited applications for 50,000 Equity Shares of ₹ 10 each issued at 4
par. The whole amount was payable on application. The issue was fully
subscribed. Pass necessary journal entries and also show how "Share
Capital" will appear in the Balance Sheet of the company. Also prepare
'Notes to Accounts' for the same.
- 29 X, Y and Z who were sharing profits in the ratio of 3:2:1 decided to 4
dissolve the firm on 31st March 2022 when their Balance Sheet was as
follows.

Liabilities	₹	Assets	₹
Creditors	34,000	Cash	25,000
Capital A/cs		Debtors	62,000
X 120,000		Stock	37,000
		Tools	8,000
Y 90,000		Car	12,000
		Machinery	60,000
Z <u>60,000</u>	<u>270,000</u>	Building	<u>100,000</u>
	<u>304,000</u>		<u>304,000</u>

Following transactions took place at the time of dissolution.

Assets realised are: Tools ₹ 5,000; Machinery ₹82,000; Building ₹ 84,000
Car ₹ 25,000; Goodwill ₹60,000; Debtors ₹59,000.

Creditors accepted Stock in settlement of their dues. There was an
unrecorded asset valued at ₹ 3,000 which was taken by X for ₹ 2,000.

There was an old furniture which had been written off from the books. Y agreed to take it at ₹ 8,000.

Firm had to pay ₹ 8,000 for outstanding salary which was not provided earlier.

Prepare Realisation A/c.

OR

X and Y were partners sharing profits and losses in the ratio 3:2. On 31st December 2022, their balance sheet was as follows:

Balance Sheet as on 31st December 2022

Liabilities	₹	Assets	₹
Creditors	90,000	Stock	50,000
Bank loan	40,000	Land and Building	1,80,000
Workmen Compensation Fund	10,000	Plant and Machinery	40,000
General Reserve	30,000	Debtors 50,000	
Capital Accounts:		Less Provision for bad debts <u>5,000</u>	45,000
X 70,000		Bank	
Y <u>1,20,000</u>	<u>1,90,000</u>		<u>45,000</u>
	<u>3,60,000</u>		<u>3,60,000</u>

The firm was dissolved and the assets and liabilities were settled as follows: (a) Land and building was sold for ₹1,50,000 and plant and machinery was sold for ₹35,000

(b) 60% of the creditors were paid ₹5,000 less in full settlement and the remaining creditors were paid full amount

(c) Y took over some of the stock at ₹36,000 (being 10% less than book value). Balance stock realized 40%.

(d) Debtors were realized at 90%.

(e) A liability in respect of Workmen Compensation is ascertained at ₹7,000.

(f) Realization expenses were ₹3,000.

Prepare Realization Account.

30 A, B and C are partners in a firm sharing profits and losses in the ratio 2:2:1. Their balance sheet as at 31st March, 2023 was as follows:

6

Balance Sheet as at 31st March, 2023

Liabilities	₹	Assets	₹
General Reserve	20,000	Machinery	2,00,000
Bills Payable	40,000		
Creditors	1,30,000	Land and Building	2,00,000
Capital A/c			
A 1,80,000		Debtors	60,000
B 1,20,000			
C <u>50,000</u>	<u>3,50,000</u>	Cash in hand	<u>80,000</u>
	<u>5,40,000</u>		<u>5,40,000</u>

Partners decided to share profits equally from April 1, 2023 and also agreed at :

- Goodwill of the firm is to be valued at ₹60,000
- Land and building to be revalued to ₹2,60,000
- Machinery is to be depreciated by ₹10,000
- A provision for bad debt is to be maintained at 10% of debtors
- Creditors amounting to ₹2,000 are not likely to arise.

Pass necessary journal entries and prepare Revaluation account.

31 Pass journal entries for issue of debentures in each of the following cases, application money being receivable in lump sum:

6

- 10% Debenture of ₹ 100 each issued at ₹105, repayable at ₹ 100.
- 10% Debenture of ₹ 100 each issued at ₹95, repayable at ₹ 105.
- 10% Debenture of ₹ 100 each issued at ₹105, repayable at ₹ 110.

- 32 A, B and S are partners in a firm sharing profits in the proportion of 3:2:1. 6
Their balance sheet as at 31st March, 2023, stood at follows:

Liabilities	₹	Assets	₹
Creditors	14,000	Buildings	21,000
General Reserve	12,000	Cash in hand	12,000
Bills Payable	12,000	Cash at bank	13,700
Capital Accounts:		Debtors	12,000
A 20,000		Bills Receivable	4,300
B 12,000		Stock	1,750
S <u>8,000</u>	<u>40,000</u>	Investments	<u>13,250</u>
	<u>78,000</u>		<u>78,000</u>

B died on 30th June, 2023 and according to the deed of the said partnership, his executors are entitled to be paid as under:

- The capital of his credit at the time of his death and interest thereon @10% p.a.
- His proportionate share of general reserve
- His share of profit for the intervening period will be based on the sales during that period. Sales was calculated as ₹1,20,000. The rate of profit during past 3 years had been 10% on sales.
- Firm's goodwill according to his share of profit to be calculated by taking twice the amount of the average profit of last 3 years less 20%. The profits of the previous 3years were :
2021 : ₹8,200, 2022: ₹9,000, 2023 : ₹9,800
- The investments were sold at par and his executor were paid out

Prepare B's capital account and his executor's account.

- 33 Y.Ltd. invited applications for issuing 10,000 shares of ₹ 100 each. The 6
amount was payable as follows.
- On Application : ₹ 20
On Allotment : ₹ 50
On First and Final call : Balance

Applications for 13,000 shares were received. Applications for 500 shares were ejected and prorata allotment was made to the remaining applicants. Over payments received on application were adjusted towards sums due on allotment. All calls were made and were duly received except K who had applied for 250 shares failed to pay allotment and call money. His shares were forfeited. The forfeited shares were reissued at ₹ 22,000 fully paid-up. Pass necessary journal entries in the books of the company.

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 in the books of the company.

34 Following is the Balance Sheet as at 31st March,2022 of M and S, who share profits and losses in the ratio 3:2.

6

Balance Sheet as at 31st March, 2022

Liabilities				
Capital A/cs			Plant and Machinery	100,000
M	100,000		Land and Building	80,000
S	<u>100,000</u>			
		200,000	Debtors	120,000
General Reserve	150,000		Less Provision	
Workmen Compensation Reserve	50,000		for Bad Debt	<u>10,000</u>
				110,000
			Stock	120,000
Creditors	<u>100,000</u>		Cash	<u>90,000</u>
	<u>500,000</u>			<u>500,000</u>

On 1st April, 2022 they admit R into partnership on the following terms.

- Provision for bad debt would be increased by ₹ 20,000
- Value of Land and Building would be increased to ₹ 180,000.
- The value of stock would be increased by ₹ 40,000.
- The liability against the Workmen Compensation Reserve is determined at ₹ 20,000.
- R brought ₹ 100,000 in cash as his share of goodwill.
- R would bring in further cash as would make his capital equal to 20% of the total capital of the new firm after the above revaluation and adjustments are carried out.

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	
Investment Fluctuation		40,000	for Bad Debt	<u>10,000</u>
Fund				140,000
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.

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Name: _____ Sec: _____ Roll No.: _____

CODE - B

BURNPUR RIVERSIDE SCHOOL, BURNPUR
HALF-YEARLY EXAMINATION : (2023-2024)
ACCOUNTANCY
CLASS – XII

Time: 3 Hours

Maximum Marks : 80

General Instructions :

- 1. This question paper contains 34 questions. All questions are compulsory.**
- 2. Question Nos. 1 to 20 carries 1 mark each.**
- 3. Question no. 21 to 26 carries 3 marks each.**
- 3. Question no. 27 to 29 carries 4 marks each.**
- 4. Question no. 30 to 34 carries 6 marks each.**
- 5. There is no overall choice. However, an internal choice has been provided in 7 questions of one mark and 2 question of three marks, and 1 question of four marks, and 2 questions of six marks**
- 5. Attempt all parts of the questions together.**

- 1 A and S were partners in a firm sharing profits and losses in the ratio of 3:1. They admitted B as a new partner. A sacrificed $\frac{1}{4}^{\text{th}}$ of his share and S sacrificed $\frac{1}{4}^{\text{th}}$ of his share in favour of B. B's share in the profits of the firm will be
(a) $\frac{5}{8}$ (b) $\frac{1}{8}$ (c) $\frac{1}{4}$ (d) none of these.
- 2 On 2nd March, 2022, K.Ltd. issued 635, 9% Debenture of ₹ 500 each. 1 Debentures were issued at 5% discount, redeemable at 10% premium. How much amount is credited in Premium on Redemption of Debenture A/c?
(a) ₹ 19,000 (b) ₹ 17,000 (c) ₹ 31,750 (d) ₹ 15,000

- 3 A, B and C are partners in firm sharing profits and loss in the ratio 2:2:1. 1
On 31st March, 2022 C died. Accounts are closed on 31st December every
year. The sale for the year 2021 was ₹ 600,000 and profits were ₹ 60,000
The sale for the period from Jan.1, 2022 to March 31,2022 were ₹
200,000. The share of the deceased partner in the current year's profits on
the basis of sales is
(a) ₹ 20,000 (b) ₹ 8,000 (c) ₹ 3,000 (d) ₹ 4,000

OR

Given below are two statements

Statement I:

General Reserve appearing in the Balance Sheet at the time of
reconstitution of the firm will always be distributed among the old partners
in the old profit sharing ratio.

Statement II

If the partners decide to retain the general reserve, they may adjust it in the
Capital, Current Accounts of the partners in their sacrificing/gaining ratio
by passing the following entry.

Gaining Partner's Capital/Current A/c	Dr.	XXXX	
To Sacrificing Partner's Capital/Current A/c			XXXX

In the light of the above statements, choose the appropriate answer from
the options given below:

- (a) Both Statement I and Statement II are correct
(b) Both Statement I and Statement II are incorrect
(c) Statement I is correct but Statement II is incorrect
(d) Statement I is incorrect but Statement II is correct
- 4 A, B and C are partners sharing profits and loss in the ratio 3:2:1. B retires 1
and his share is purchased by A and C in the ratio 2:1. Calculate new profit
sharing ratio of A and C.
(a) 11:5 (b) 12:5 (c) 13:5 (d) none of these

5 Assertion(A): Interest on loan to partners is charged @6%p.a. If 1
partnership

deed does not provide for charging of interest.

Reason (R) : In absence of partnership deed, provisions of the Partnership Act,1932 apply. The interest on loan to partner should be charged @6%pa. otherwise, interest is allowed at the agreed rate of interest.

(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

6 J Ltd. forfeited 800 shares of ₹ 10 each for non-payment of final call ₹3 1
per share. The forfeited shares were reissued at ₹ 12 per share. Calculate
the amount of capital reserve

(a) ₹ 4,600 (b) ₹ 5,600 (c) ₹2,600 (d) ₹ 3,600

OR

If 10,000 shares of ₹ 10 each were forfeited for non-payment of final call money of ₹ 3 per share and only 7,000 of these shares were reissued @ ₹ 11 per share as fully paid up, then what is the minimum amount that company must collect at the time of reissue of the remaining 3,000 shares.

(a) ₹ 21,000 (b) ₹ 9,000 (c) ₹ 16,000 (d) 30,000

7 Which of the following statements is incorrect about debentures? 1

(a) Interest on debentures is an appropriation of profit

(b) Debenture holders are the creditors of a company

(c) Debentures can be issued to vendors at discount

(d) Interest is not paid on debentures issued as collateral security

8 On 1st April,2022 G Ltd had a balance of 800,000 I Securities Premium 1
A/c. During the year company issued 20,000 shares of ₹ 10 each as bonus
shares and used the balance amount to write off Loss on issue of
Debenture on account of issue of 200,000, 9% Debentures of ₹ 100 each at
a discount of 10%, redeemable @ 5% premium. The amount to be charged

to Statement of P & L for the year for loss on Issue of Debentures would be:

(a) ₹ 30,00,000 (b) ₹ 22,00,000 (c) ₹ 24,00,000 (d) ₹ 20,00,000

Read the following hypothetical situation, answer question no. 9 and 10. 1

K is a partner in a firm. During the year ending March.31,2022 K withdrew ₹ 30,000 quarterly. If interest is to be charged on drawings @ 3%pa, calculate amount of interest to be charged at the end of the year

- 9 When money is withdrawn at the end of each quarter, interest on drawings will be charged
(a) ₹ 2,250 (b) ₹ 3,600 (c) ₹ 1,800 (d) none of these
- 10 When money is withdrawn at the beginning of each quarter, interest on drawings will be charged
(a) ₹ 2,700 (b) ₹ 1,350 (c) ₹ 1,800 (d) none of these 1
- 11 Value of stock given in Balance Sheet is ₹ 50,000. If value of stock is found undervalued by 20% then 1
(a) Revaluation A/c will be credited by ₹ 12,500
(b) Revaluation A/c will be debited by ₹ 12,500
(c) Revaluation A/c will be debited by ₹ 10,000
(d) None of these.

OR

A, B and C are sharing profits in the ratio 2:2:1. They have decided to share future profits in the ratio 3:2:1. Find out the gaining partner.

- (a) Both A and C are the gaining partners (b) C is the gaining partner
(c) B is the gaining partner (d) A is the gaining partner

- 12 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.
- 13 G, S and T were partners sharing profits in the ratio 3:2:1. G retired and his 1
 dues towards the firm including Capital balance, Accumulated profits and
 losses share, Revaluation gain amounted to ₹ 5,80,000. G was being paid ₹
 7,00,000 in full settlement. For giving that additional amount of ₹ 1,20,000,
 S was debited for ₹ 40,000. Determine goodwill of the firm.
 (a) ₹ 120,000 (b) ₹ 80,000 (c) ₹ 240,000 (d) ₹ 360,000

OR

A, B and C are partners. C has been given a guarantee of minimum profit
 ₹ 8000 by the firm. Firm suffered a loss ₹ 5,000 during the year. Capital
 A/c of B will be _____ by ₹ _____.

- (a) Credited, ₹6,500 (b) Debited, ₹6,500
 (c) Credited, ₹1,500 (d) Debited, ₹1,500

- 14 V Ltd. purchased the running business of X Ltd. consisting of total assets 1
 ₹ 10,00,000 and liabilities ₹ 2,00,000. V Ltd. paid ₹ 2,00,000 immediately
 in cash and balance by issuing 7,000 shares of ₹ 100 each at a premium of
 ₹ 20 per share. The goodwill account will be debited by
 (a) ₹ 240,000 (b) ₹ 200,000 (c) ₹ 800,000 (d) nil
- 15 X and Y are partners sharing profits in the ratio 5:3. They admitted Z for 1
 1/5th profits, for which he paid ₹ 60,000 against capital and ₹ 30,000
 against goodwill. Find the capital balance for each partner taking Z's
 capital as the base capital.
 (a) ₹ 1,50,000; ₹60,000 and ₹60,000 (b) ₹ 1,50,000; ₹60,000 and ₹90,000
 (c) ₹ 1,50,000; ₹90,000 and ₹60,000 (d) ₹ 1,50,000; ₹90,000 and ₹90,000

OR

P and Q were partners in a firm sharing profits in the ratio of 2:1. R was
 admitted as a new partner in the firm. New profit sharing ratio was 3:3:2.

R bought the following assets towards his share of goodwill and capital: Machinery ₹ 2,00,000, Furniture ₹ 1,20,000 Stock ₹ 80,000 Cash ₹50,000. If his capital is considered as ₹ 3,80,000 the goodwill of the firm will be
(a) ₹ 70,000 (b) ₹ 28,000 (c) ₹ 4,50,000 (d) ₹ 1,40,000

16 If existing goodwill is appeared in balance sheet, then it is written off among partners 1

- (a) in new ratio (b) in old ratio
(c) in gaining/sacrificing ratio (d) none of these

17 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 firm? 1

- (a) ₹ 50,000 (b) ₹ 45,000 (c) ₹ 40,000 (d) none of these

OR

Profit after rent of ₹ 10,000 is ₹ 90,000. A and B are partners. How much amount of profit will be credited to their capital A/c?

- (a) ₹ 50,000 and ₹ 50,000 (b) ₹ 45,000 and ₹ 45,000
(c) ₹ 50,000 and ₹ 45,000 (d) none of these

18 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 ₹ 1,50,000. Gain/Loss in the realisation A/c will be 1

- (a) ₹30,000(gain) (b) ₹40,000 (Gain)
(c) ₹ 40,000 (Loss) (d) ₹ 30,000(Loss)

19 In absence of agreement , partners are entitled to: 1

- i) Profit share in capital ratio
ii) Commission for making additional sale
iii) Interest on loan and advance by them to the firm
iv) Salary for working extra hours
v) Interest on capital.

Choose the correct option.

- a) Only i), iv), v) b) Only ii), iii)
c) Only iii) d) Only i), iii)

- 20 A company forfeited 3,000 shares of ₹ 10 each on which only ₹ 5 per 1
share (including premium ₹ 1 per share) has been paid. Out of these few
shares were reissued at a discount of ₹ 1 per share and ₹ 6,000 were
transferred to Capital Reserve. How many shares were reissued?
(a) 3,000 shares (b) 1,000 shares (c) 2,000 shares (d) 1,500 shares
- 21 X, Y and Z are partners sharing profits in the ratio 2:3:5. Goodwill exists 3
in the books at ₹ 50,000. X retires and on the day of X's retirement,
goodwill is valued at ₹ 45,000. Y and Z decided to share future profits
equally.
Pass necessary journal entries.

OR

X, Y and Z are partners in a firm sharing profits and losses in the ratio
5:3:2. Their fixed capitals were ₹ 3,00,000; ₹2,00,000 and ₹ 1,00,000
respectively. For the year ended 31st March 2022, interest on capital was
credited to them @ 10% pa instead of 8% pa. Showing your working notes
clearly, pass necessary adjustment entry.

- 22 R, S and T were partners sharing profits in the ratio of 5:3:2 with the fixed 3
capitals of ₹ 20,000; ₹ 12,000 and ₹ 8,000 respectively. Partners were
entitled for the interest on capital @ 5% pa. However T was guaranteed by
R and S that he will not be getting profit less than ₹ 4,000 at any cost in
any year. During the year the firm had earned a profit of ₹ 10,000. R and S
withdrew ₹ 1,500 and ₹ 1,200 respectively for personal use. Profit earned
by the firm was calculated before charging interest on capital. Prepare
Profit and Loss Appropriation A/c.

23 T and C are partners in a firm sharing profits and losses in the ratio 3:2. 3
Their capitals were ₹ 60,000 and ₹ 40,000 as on January 1, 2022. During
the year they earned a profit of ₹ 30,000. According to the partnership
deed both the partners are entitled to ₹ 1,000 per month as salary and 5%
interest on their capitals. They are also to be charged an interest of 5% on
their drawings, irrespective of the period which is ₹ 12,000 for T and ₹
8,000 for C. Pass necessary journal entries for interest on capital, interest
on drawings and salary to partners when capitals are fixed.

24 B Ltd. purchased assets of ₹ 9,90,000 from Bhagat. Payment was made by 3
issuing 11% Debentures of ₹ 100 each. Pass journal entries when
debentures were issued at a discount of 10%, including writing off
Discount on Issue of Debentures.

OR

E Ltd. took over assets of ₹ 7,00,000 and liabilities of ₹ 60,000 of W.Ltd.
for the purchase consideration of ₹ 6,60,000. E.Ltd. paid the purchase
consideration by issuing 9% Debentures of ₹ 100 each at 10% premium.
Pass journal entries in the books of E.Ltd.

25 A and B were partners in a firm sharing profits in the ratio 4:3. They 3
admitted C as a new partner for $\frac{3}{7}$ th share in the profits of the firm. New
profit sharing ratio will be 2:2:3. C brought ₹ 200,000 as his capital and ₹
60,000 for his share of premium for goodwill, half of which was
withdrawn by A and B from the firm.
Pass necessary journal entries in the books of the firm for the above
transactions.

26 Pass journal entries for following transactions on dissolution of firm of 3
partners M and S after various assets (other than cash) and outside
liabilities have been transferred to Realisation A/c.
(a) Debtors ₹ 2,64,000 and Provision for Doubtful debts ₹ 24,000. On
dissolution of firm ₹ 48,000 of the book debts proved bad.
(b) Machinery (book value ₹600,000) was given to a creditor at a discount
of 20% in settlement.
(c) Investments (book value ₹ 40,000) realised at 150%

27 X, Y and Z who were sharing profits in the ratio of 3:2:1 decided to 4 dissolve the firm on 31st March 2022 when their Balance Sheet was as follows.

Liabilities	₹	Assets	₹
Creditors	34,000	Cash	25,000
Capital A/cs		Debtors	62,000
X 120,000		Stock	37,000
Y 90,000		Tools	8,000
Z <u>60,000</u>	<u>270,000</u>	Car	12,000
	<u>304,000</u>	Machinery	60,000
		Building	<u>100,000</u>
			<u>304,000</u>

Following transactions took place at the time of dissolution.

Assets realised are: Tools ₹ 5,000; Machinery ₹ 82,000; Building ₹ 84,000
Car ₹ 25,000; Goodwill ₹60,000; Debtors ₹59,000.

Creditors accepted Stock in settlement of their dues. There was an unrecorded asset valued at ₹ 3,000 which was taken by X for ₹ 2,000.

There was an old furniture which had been written off from the books. Y agreed to take it at ₹ 8,000.

Firm had to pay ₹ 8,000 for outstanding salary which was not provided earlier.

Prepare Realisation A/c.

OR

X and Y were partners sharing profits and losses in the ratio 3:2. On 31st December 2022, their balance sheet was as follows:

Balance Sheet as on 31st December 2022

Liabilities	₹	Assets	₹
Creditors	90,000	Stock	50,000
Bank loan	40,000	Land and Building	1,80,000
Workmen Compensation Fund	10,000	Plant and Machinery	40,000
General Reserve	30,000	Debtors	50,000
Capital Accounts:		Less Provision	
X	70,000	for bad debts	5,000
Y	<u>1,20,000</u>	Bank	45,000
	<u>1,90,000</u>		<u>45,000</u>
	<u>3,60,000</u>		<u>3,60,000</u>

The firm was dissolved and the assets and liabilities were settled as follows: (a) Land and building was sold for ₹1,50,000 and plant and machinery was sold for ₹35,000

(b) 60% of the creditors were paid ₹5,000 less in full settlement and the remaining creditors were paid full amount

(c) Y took over some of the stock at ₹36,000 (being 10% less than book value). Balance stock realized 40%.

(d) Debtors were realized at 90%.

(e) A liability in respect of Workmen Compensation is ascertained at ₹7,000.

(f) Realization expenses were ₹3,000.

Prepare Realization Account.

- 28 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 ₹ 10 per share. The amount was payable as follows. 4
- On Application : ₹ 50 per share
- On Allotment : ₹ 40 per share (including premium)
- On First call : ₹ 30 per share

On Final call : Balance

Public applied for 14,000 shares. All the money were 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 ton Accounts' for the same.

- 29 A, B and C are partners sharing profits in the ratio of 4:3:1. B retired , 4 giving his share of profits to A and C for ₹ 8,100; ₹ 3600 being paid by A and ₹ 4500 by C. Profit of the year after B's retirement was ₹ 10,500. You are required (a) to give necessary journal entries to record the transfer of B's share to A and C. (b) to distribute the profits between A and C. The necessary amount is brought in by A and C.
- 30 A, B and S are partners in a firm sharing profits in the proportion of 3:2:1. 6 Their balance sheet as at 31st March, 2023, stood at follows:

Liabilities	₹	Assets	₹
Creditors	14,000	Buildings	21,000
General Reserve	12,000	Cash in hand	12,000
Bills Payable	12,000	Cash at bank	13,700
Capital Accounts:		Debtors	12,000
A 20,000		Bills Receivable	4,300
B 12,000		Stock	1,750
S <u>8,000</u>	<u>40,000</u>	Investments	<u>13,250</u>
	<u>78,000</u>		<u>78,000</u>

B died on 30th June, 2023 and according to the deed of the said partnership, his executors are entitled to be paid as under:

- (a) The capital of his credit at the time of his death and interest thereon @10% p.a.
- (b) His proportionate share of general reserve
- (c) His share of profit for the intervening period will be based on the sales during that period. Sales was calculated as ₹1,20,000. The rate of profit during past 3 years had been 10% on sales.

(d) Firm's goodwill according to his share of profit to be calculated by taking twice the amount of the average profit of last 3 years less 20%. The profits of the previous 3 years were :

2021 : ₹8,200, 2022: ₹9,000, 2023 : ₹9,800

(e) The investments were sold at par and his executor were paid out

Prepare B's capital account and his executor's account.

31 Pass journal entries for issue of debentures in each of the following cases, 6 application money being receivable in lump sum:

(a) 40,000, 15% Debentures of ₹ 100 each issued at par, repayable at 10% premium.

(b) 90,000, 15% Debentures of ₹ 100 each issued at a discount 5%, redeemable at premium of 10%.

(c) 70,000, 12% Debenture of ₹ 100 each issued at premium of 5%, redeemable at ₹ 110.

32 A, B and C are partners in a firm sharing profits and losses in the ratio 6 2:2:1. Their balance sheet as at 31st March, 2023 was as follows:

Balance Sheet as at 31st March, 2023

Liabilities	₹	Assets	₹
General Reserve	20,000	Machinery	2,00,000
Bills Payable	40,000		
Creditors	1,30,000	Land and Building	2,00,000
Capital A/c			
A	1,80,000	Debtors	60,000
B	1,20,000		
C	<u>50,000</u>	Cash in hand	<u>80,000</u>
	<u>3,50,000</u>		
	<u>5,40,000</u>		<u>5,40,000</u>

Partners decided to share profits equally from April 1, 2023 and also agreed at :

(a) Goodwill of the firm is to be valued at ₹ 60,000

(b) Land and building to be revalued to ₹ 2,60,000

- (c) Machinery is to be depreciated by ₹ 10,000
- (d) A provision for bad debt is to be maintained at 10% of debtors
- (e) Creditors amounting to ₹2,000 are not likely to arise.

Pass necessary journal entries and prepare Revaluation account.

- 33 Following is the Balance Sheet as at 31st March, 2022 of M and S, who share profits and losses in the ratio 3:2. 6

Balance Sheet as at 31st March, 2022

Liabilities				
Capital A/cs			Plant and Machinery	100,000
M	100,000		Land and Building	80,000
S	<u>100,000</u>			
		200,000	Debtors	120,000
General Reserve	150,000		Less Provision	
Workmen Compensation Reserve	50,000		for Bad Debt	<u>10,000</u>
				110,000
			Stock	120,000
Creditors	<u>100,000</u>		Cash	<u>90,000</u>
	<u>500,000</u>			<u>500,000</u>

On 1st April,2022 they admit R into partnership on the following terms.

- (a) Provision for bad debt would be increased by ₹ 20,000
- (b) Value of Land and Building would be increased to ₹ 180,000.
- (c) The value of stock would be increased by ₹ 40,000.
- (d) The liability against the Workmen Compensation Reserve is determined at ₹ 20,000.
- (e) R brought ₹ 100,000 in cash as his share of goodwill.

(f) R would bring in further cash as would make his capital equal to 20% of the total capital of the new firm after the above revaluation and adjustments are carried out.

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	
Investment Fluctuation		40,000	for Bad Debt	<u>10,000</u>
Fund				140,000
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.

34 Y.Ltd. invited applications for issuing 10,000 shares of ₹ 100 each. The amount was payable as follows. 6

On Application : ₹ 20
On Allotment : ₹ 50
On First and Final call : Balance

Applications for 13,000 shares were received. Applications for 500 shares were ejected and prorata allotment was made to the remaining applicants. Over payments received on application were adjusted towards sums due on allotment. All calls were made and were duly received except K who had applied for 250 shares failed to pay allotment and call money. His shares were forfeited. The forfeited shares were reissued at ₹ 22,000 fully paid-up. Pass necessary journal entries in the books of the company.

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 in the books of the company.

=====

Name: _____ Sec: _____ Roll No.: _____

CODE - A

BURNPUR RIVERSIDE SCHOOL, BURNPUR
HALF-YEARLY EXAMINATION : (2023-2024)
BUSINESS STUDIES
CLASS – XII

Time: 3 Hours

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 'AB Food' began its business by offering the classic combo of hamburgers and fries. But over time, their customers wanted healthier foods, so 'AB Food' responded and began offering healthy alternatives such as salads, fruits. If 'AB Food' hadn't responded, they may have lost customers that wanted to eat healthier foods. 1
- The above case highlights one of the points related to the importance of business environment and its understanding by managers. Identify it.
- (a) It helps in coping with rapid changes.
 - (b) It helps in improving performance
 - (c) It helps the firms to identify threats and early warning signals
 - (d) None of these

- 2 G Ltd. is a company dealing in health care products. The company is 1
earning high profits but is short in cash, so it has decided to declare less
dividends in the current financial year. Identify the factor related to
dividend decision being described in the above lines.
- (a) preference of shareholders (b) earnings
(c) cash flow position (d) contractual constraints
- 3 The process of introducing the selected employee to other employees and 1
making him familiar with rules and policies of the organisation is known
as
- (a) Orientation (b) compensation (c) promotion (d) career planning
- 4 H is working as a leading employee at the low level management in C.Ltd. 1
According to one plan, he has to prepare 100 units of high quality of one
item in a day and every unit should not cost more than ₹ 500. When the
work is actually started, it was learnt that the desired goods could be
prepared within a day but due to the sudden inflation in the raw material,
every unit was to costs ₹ 550. Now H is in a fix what to do and what not to
do.
Identify the limitation of planning in the event given above.
- (a) Planning leads to rigidity (b) Planning reduces creativity (c) Planning
may not work in dynamic environment (d) Planning involves huge costs
- 5 Name the process that enables the management to foresee the funds 1
requirements, both the quantum as well as the timing:
- (a) financial management (b) capital budgeting decision
(c) dividend decision (d) financial planning
- 6 X, who was working in a big company resigned on the ground of “ lack of 1
recognition and attention” in the organisation towards his work and
performance. Identify the hierarchy need according to Maslow which was
not satisfied for X.
- (a) Physiological needs (b) Psychological needs
(c) Esteem needs (d) Affiliation needs

- 7 The topper group is looking to make a foray into manufacturing of semiconductors and it has set up a business to seize the business opportunity and to its prospects in the long run. The company has already pivoted into a number of new projects like electronics, 5G network equipment, as well as semiconductors. Which economic objective of management does the business seek to fulfil?
(a) Survival (b) Growth (c) Profit (d) none of these
- 8 D. Ltd. is a chemical manufacturing company producing dyes and pigments both for domestic and international market. It has enjoyed a considerable market share but lately, it has been facing problems in terms of target sales and customer satisfaction. This is due to the reason that new entrants have emerged with better technology and competitive pricing. The Chairman of the company addressed the issue in the departmental meeting. The production head, Mr.Kamble, advised the chairman to revamp the system and take immediate necessary actions to rectify the problem so that sales re achieved as per the plans.
Identify the relevant function of management being discussed here.
(a) Organising (b) Staffing (c) Controlling (d) Planning
- 9 Statement I : Method study means finding the one best way of doing a task.
Statement II : Fatigue study means eliminating the unnecessary movements.
Alternatives
(a) Statement I is correct Statement II is incorrect
(b) Statement II is correct Statement I is incorrect
(c) Both the statements are correct
(d) Both the statements are incorrect
- 10 To conserve tigers, airtel started an earnest awareness campaign ‘Save our Tigers’. Which objective of management is highlighted here?
(a) Organisational (b) Social (c) Personal (d) Both (b) and (c)

11 AR Ltd. is engaged in manufacturing machine components. The target production is 300 units per day. The company had been successfully attaining the target until four months ago. Over the last four months, it has been observed that daily production varies between 250-270 units. Identify the management function to rectify the above situation
 (a) Co-ordination (b) Controlling (c) Directing (d) Planning

12 Which of the following is incorrect about assumption of Maslow's need hierarchy theory?
 (a) Satisfaction of such needs influences their behaviour.
 (b) People's behaviour is not based on their needs.
 (c) A person moves to the next higher level of hierarchy only when the lower need is satisfied.
 (d) A satisfied need can no longer motivate a person, only the next higher level need can motivate him.

13 Identify the concept which will help the Human Resource Manager in deciding the actual number of persons required in each department.
 (a) Job Description (b) Workload Analysis
 (c) Workforce analysis (d) none of the above

14 Match the following:

Column I	Column II
A. Plans are drawn up with heavy expenses	(i) Rigidity
B. Plans decided by top level may not be changed by managers	(ii) Huge cost
C. Planning leads to delay in action	(iii) Time consuming

Codes

A	B	C	A	B	C
(a) (i)	(ii)	(iii)	(b) (ii)	(iii)	(i)
(c) (ii)	(i)	(iii)	(d) (iii)	(ii)	(iii)

- 15 'T.Stars' is a well-known resort for organising parties, especially for children. However, in past 6 months its popularity has reduced considerably as a new resort with better ambience and facilities has opened within its vicinity. Name the related feature of business environment which has influenced the business of 'T.Stars' adversely. 1
- (a) Totality of external forces (b) dynamic nature
(c) Interrelatedness (d) Uncertainty.
- 16 Read the following statements: Assertion (A) and Reason (R). Choose the correct alternative from those given below 1
- ASSERTION (A): When a superior assigns some work to a subordinate, he is answerable to his superior for its success or failure.
- REASON (R): Authority can be delegated but responsibility/accountability cannot be delegated by a manager.
- Alternatives:
- (a) Both Assertion and Reason are true and Reason (R) is the correct explanation of Assertion(A)
(b) Both Assertion and Reason are true and 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
- 17 Principles of management can be modified by the manager when the situations demand. This statement implies that the principle of management are 1
- (a) Rigid (b) Contingent (c) Flexible (d) none of these
- 18 'ET Ltd.' is a travel agency which books air tickets on commission basis. It takes two days for Express Tours to get the tickets from airport reservation counter and deliver the same to customers. During the last one year, there has been drastic decrease in its business as most of the consumers have shifted to another travel agency, 'ST Travels', which provides tickets within half an hour through internet. Name the dimension of business environment that is being overlooked by 'ET Ltd'. 1
- (a) Technological Environment (b) Political Environment
(c) Legal Environment (d) All of the above

- 19 Now-a-days 'Division of work' and 'Specialisation' are being followed at a large scale. This is the very reason that these days' companies have started outsourcing their non-core activities. Not only this, some of the companies have started outsourcing even their core processes. Identify the significance of the principles of management referred to above
- (a) Providing managers with useful insights into reality
 - (b) management training, education and research
 - (c) Meeting changing environment requirements
 - (d) Optimum utilization of resources and effective administration.
- 20 Unlike professions such as medicine or law which require a practicing doctor or lawyer to possess valid degrees, nowhere in the world is it mandatory for a manager to possess any such professional degree. Identify the characteristic of the profession being discussed above which is not being strictly met by management.
- (a) Well defined body of knowledge
 - (b) Restricted Entry
 - (c) Professional Association
 - (d) Ethical Code of Conduct
- 21 A recent rate cut in the interest on loans announced by the banks encouraged Asim, a science student of Pro School to take a loan from State Bank of India to experiment and develop cars to be powered by fuel produced from garbage. He developed such a car and exhibited it in science fair organised by Directorate of Education. He was awarded first prize for his innovation. Identify and explain two dimensions of business environment discussed in the above case.

OR

Describe the following points which highlight importance of business environment.

- a. Enabling the firm to identify opportunity and getting first mover advantage.
- b. Helpful in tapping and assembling resources and
- c. Assisting in planning and policy making.

22 'Internal sources of recruitment are better than external sources of recruitment'. Do you agree with this statement? Give any three reasons in support of your answer. 3

23 ABC Ltd. is manufacturing auto spare parts on large scale. The company policy is that 3% of the daily production could be defective. Over last two months it is observed that about 10-12% of production is defective. 3

(a) Which function of management is required to correct the above case?

(b) Explain last two steps of that function of management.

OR

Discuss any three points to establish the relationship between planning and controlling.

24 Explain any three functions of middle level management. 3

25 The production manager asked the foreman to achieve a target production of 200 units per day, but he doesn't give him the authority to requisition tools and materials from the stores department. Can the production manager blame the foreman if he is not able to achieve the desired target? Justify your answer mentioning concerned principle. 4

26 The workers of V Ltd. are unable to work on new and hi-tech machines imported by the company to fulfill the increased demand. Therefore the workers are seeking extra guidance from the supervisor. The supervisor is overburdened with the frequent calls of workers. 4

(a) Suggest how the supervisor, by increasing the skills and knowledge of workers, can make them handle their work independently?

(b) Explain any three benefits that the workers will derive by the decision of the supervisor.

OR

Explain the following methods of training.

(a) Vestibule training (b) Apprenticeship training

27 R.Ltd. has been earning handsome profits since last 15 years. Company 4
enjoys fair goodwill in the market, so company can easily arrange debt as
well as equity from the market, whenever needed. Therefore company
decided to declare dividend with a hike of 15% from last year. Explain any
four factors that may affect financing decision of a company.

28 Explain any four financial incentives used to motivate employees of a 4
company.

OR

The barriers to effective communication exist in all organisations. Explain
any four measures to overcome these barriers.

29 Explain any four reasons as to why controlling is regarded as an 4
indispensable function of management.

30 Explain any four factors that should be considered for estimating working 4
capital requirements of a company.

31 Explain first six steps involve in the process of planning. 6

OR

Explain any six points highlighting importance of planning

32 It helps a manager to extend his area of operations as without it, his 6
activities would be restricted to only what he himself can do.

(a) Identify the activity referred to in the above statement.

(b) Explain any five points in respect of importance of that activity.

33 Explain the following techniques of scientific management. 6

(a) Fatigue study (b) Motion Study (c) Method Study

OR

Explain the following principles.

(a) Unity of Command (b) Order (c) Subordination of Individual Interest
to General Interest

34 'Leadership indicates the ability of an individual to maintain good 6 interpersonal relations with followers and motivate them to contribute towards achieving organisational objectives.'

In the light of this statement, explain different styles of leadership.

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Name: _____ Sec: _____ Roll No.: _____

CODE - B

BURNPUR RIVERSIDE SCHOOL, BURNPUR
HALF-YEARLY EXAMINATION : (2023-2024)
BUSINESS STUDIES
CLASS – XII

Time: 3 Hours

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.**
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- =====
- 1 Name the process that enables the management to foresee the funds requirements, both the quantum as well as the timing: 1
(a) financial management (b) capital budgeting decision
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 - 2 The process of introducing the selected employee to other employees and making him familiar with rules and policies of the organisation is known as 1
(a) Orientation (b) compensation (c) promotion (d) career planning
 - 3 ‘AB Food’ began its business by offering the classic combo of hamburgers and fries. But over time, their customers wanted healthier foods, so ‘AB Food’ responded and began offering healthy alternatives such as salads, fruits. If ‘AB Food’ hadn’t responded, they may have lost customers that 1

wanted to eat healthier foods.

The above case highlights one of the points related to the importance of business environment and its understanding by managers. Identify it.

- (a) It helps in coping with rapid changes.
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- (c) It helps the firms to identify threats and early warning signals
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- 4 'Premature evaluation' is a _____ barrier to effective communication. 1
(a) Semantic (b) Psychological (c) Personal (d) Organisational
- 5 H is working as a leading employee at the low level management in C.Ltd. 1
According to one plan, he has to prepare 100 units of high quality of one item in a day and every unit should not cost more than ₹ 500. When the work is actually started, it was learnt that the desired goods could be prepared within a day but due to the sudden inflation in the raw material, every unit was to costs ₹ 550. Now H is in a fix what to do and what not to do.
Identify the limitation of planning in the event given above.
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(a) Co-ordination (b) Controlling (c) Directing (d) Planning
- 9 The process by which skills and abilities of employees to perform specific jobs are increased is known as
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- 10 The topper group is looking to make a foray into manufacturing of semiconductors and it has set up a business to seize the business opportunity and to its prospects in the long run. The company has already pivoted into a number of new projects like electronics, 5G network equipment, as well as semiconductors. Which economic objective of management does the business seek to fulfil?
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It takes two days for Express Tours to get the tickets from airport reservation counter and deliver the same to customers. During the last one year, there has been drastic decrease in its business as most of the consumers have shifted to another travel agency, 'ST Travels', which provides tickets within half an hour through internet. Name the dimension of business environment that is being overlooked by 'ET Ltd'.

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(a) Well defined body of knowledge (b) Restricted Entry
 (c) Professional Association (d) Ethical Code of Conduct

20 Match the following: 1

<u>Column I</u>	<u>Column II</u>
A. Plans are drawn up with heavy expenses	(i) Rigidity
B. Plans decided by top level may not be changed by managers	(ii) Huge cost
C. Planning leads to delay in action	(iii) Time consuming

Codes

	A	B	C		A	B	C
(a)	(i)	(ii)	(iii)	(b)	(ii)	(iii)	(i)
(c)	(ii)	(i)	(iii)	(d)	(iii)	(ii)	(iii)

21 “Management is skilful and personal application of existing knowledge to achieve desired results”. Explain 3

22 ABC Ltd. is manufacturing auto spare parts on large scale. The company policy is that 3% of the daily production could be defective. Over last two months it is observed that about 10-12% of production is defective. 3

(a) Which function of management is required to correct the above case?
 (b) Explain last two steps of that function of management.

OR

Discuss any three points to establish the relationship between planning and controlling.

23 'Internal sources of recruitment are better than external sources of recruitment'. Do you agree with this statement? Give any three reasons in support of your answer. 3

24 A recent rate cut in the interest on loans announced by the banks encouraged Asim, a science student of Pro School to take a loan from State Bank of India to experiment and develop cars to be powered by fuel produced from garbage. He developed such a car and exhibited it in science fair organised by Directorate of Education. He was awarded first prize for his innovation. 3
Identify and explain two dimensions of business environment discussed in the above case.

OR

Describe the followings which highlight importance of business environment.

- a. Helpful in tapping and assembling resources.
- b. Assisting in planning and policy making and
- c. Enabling the firm to identify opportunity and getting first mover advantage.

25 The barriers to effective communication exist in all organisations. Explain any four measures to overcome these barriers. 4

OR

Explain any four non-financial incentives used to motivate employees of a company.

26 The workers of V Ltd. are unable to work on new and hi-tech machines imported by the company to fulfill the increased demand. Therefore the workers are seeking extra guidance from the supervisor. The supervisor is overburdened with the frequent calls of workers. 4
(a) Suggest how the supervisor, by increasing the skills and knowledge of workers, can make them handle their work independently?
(b) Explain any three benefits that the workers will derive by the decision of the supervisor.

OR

- 34 It helps a manager to extend his area of operations as without it, his 6 activities would be restricted to only what he himself can do.
- (a) Identify the activity referred to in the above statement.
 - (b) Explain any five points in respect of importance of that activity.



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

BURNPUR RIVERSIDE SCHOOL, BURNPUR
HALF – YEARLY EXAMINATION : [2023 – 2024]
ECONOMICS(030)
CLASS : XII

Time: 3 Hours

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 1 mark each.

3) This paper contains 4 Short Answer Questions type questions of 3 marks each to be answered in 60 to 80 words.

4) This paper contains 6 Short Answer Questions type questions of 4 marks is to be answered in 80 to 100 words.

5) This paper contains 4 Long Answer Questions type questions of 6 marks each to be answered in 100 to 150 words.

SECTION A- MACRO ECONOMICS

1. Read the following statements carefully.

1

Statement 1: Consumption function assumes that, consumption changes at a constant rate as income changes

Statement 2: Autonomous consumption is the ratio of total consumption (C) to total income (Y)

In light of the given statements, choose the correct alternative from the following:

- a. Statement 1 is true and Statement 2 is false
- b. Statement 2 is true and Statement 1 is false
- c. Both statements are true
- d. Both statements are false

2. Name the 'economic assistance' given by the government to the firms and households with a motive of general welfare 1
- Taxes
 - Rent
 - Subsidies
 - Remittance

3. If in an economy the value of investment multiplier is 4 and autonomous consumption is rupees 30 crore the relevant consumption function would be:- 1
- $C=30+0.75Y$
 - $C=-30+0.25Y$
 - $C=30-0.75Y$
 - $30-0.25Y$

4. Which of the following is not the function of the Reserve Bank of India 1
- Banking facilities to government
 - Banking facilities to public
 - Lending to government
 - Lending to commercial banks

5. e-money functions as a medium of exchange by way of: 1
- transfer of value from one account to the other
 - Cash payments
 - Payments through cheques
 - All of these

6. Find the missing figures and choose the correct alternatives:- 1

Round	Deposits	Loans	Reserve Ratio(20%)
I	1000	800	200
II	800	(i)	160

Total	(ii)	(iii)	(iv)

- 640, 1000, 4000, 5000
- 960, 5000, 4000, 1000
- 640, 4000, 1000, 5000
- 640, 5000, 4000, 1000

7. If increase in National Income is equal to increase in consumption identify the value of Marginal Propensity to Save: 1

- Equal to unity
- Greater than 1
- Less than 1
- Equal to zero

8. By increasing the tax burden on the producers, the government intends to _____ 1

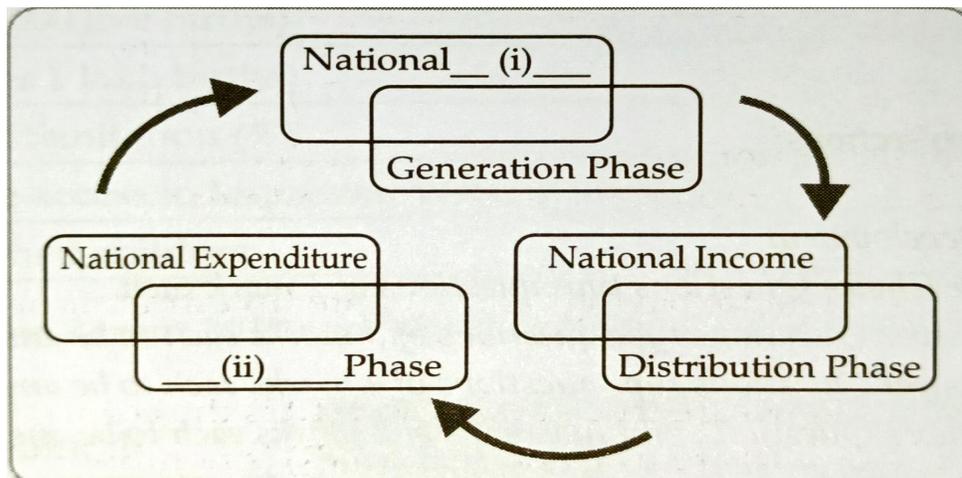
- Correct the situation of deficient demand
- Correct the situation of inflationary gap
- Correct the situation of excess demand
- Both (a) and (c)

9. Suppose for a given economy 1

$S = -60 + 0.1Y$
 $I = \text{Rs. } 4000 \text{ crores}$
 (Where S=Saving functions, Y=National Income and I=Investment expenditure)
 Equilibrium level of income would be rupees _____ crores
 .(choose the correct alternative to fill up the blank)

- 4000
- 40,000
- 40600
- 60400

10. On the basis of the above diagram answer the following question 1



Choose the correct alternative to be filled in given blank and complete the three phases of circular flow given in the diagram above.

- a. Generation of income
- b. Disposition of income
- c. Expenditure of income
- d. Both (b) and (c)

11. 'India's GDP contracted 23.9% in the April to June quarter of 2020 to 21 as compared to same period of 2019 to 20, suggesting that the lockdown has hit the economy hard'. 3

-----The Hindustan Times, 1st September 2020

State and discuss any two fiscal measures that may be taken by the government of India to correct the situation indicated in the above news report.

12. Gross National product at market price of an economy is Rs. 65000 crores. The capital stock of the economy is valued at Rs. 120000 crores which depreciates at the rate of 10% per annum. Indirect taxes amount to Rs. 6000 crores and subsidies amount to rupees 1000 crores. Estimate national income of the economy 3

OR

“Final goods include only those goods which are consumed by the households”. Defend or refute the given statement with valid reason.

13. The equilibrium level of income in an economy is Rs 5000 crores, the autonomous consumption expenditure is equal to Rs. 250 crores and investment expenditure rupees 1000 crores. Calculate. 4

- i. Consumption expenditure at equilibrium level of National Income.
- ii. Marginal propensity to save
- iii. Investment multiplier
- iv. Break even level of income.

14. “In an economy, ex-ante aggregate demand is more than ex- ante aggregates supply.” Elaborate the possible impact of the same, on the level of output, income and employment. 4

OR

“With an objective to reduce inflation Reserve Bank of India may promote the commercial banks to park their surplus funds with it”. Discuss the rationale behind the step taken by the Reserve Bank of India.

15. Explain the functions performed by the Reserve Bank of India. 4
- i. Banker’s bank and supervisor
 - ii. Lender of the Last resort

16. From the following data calculate National Income. 6

Particulars	Rs. In crores
a. Net exports	-70
b. Compensation of employees	800
c. Mixed income	900
d. Net factor income from abroad	-50
e. Net retained earnings of private enterprises	600
f. Rent	350
g. Profit	600
h. Depreciation	200
i. Interest	450
j. Corporation tax	350
k. Net indirect tax	250

OR

From the following data calculate National Income by

- i. Income method
- ii. Expenditure method

Particulars	Rs. In crores
a. Private final consumption expenditure	2000
b. Net capital formation	400
c. Change in stock	50
d. Compensation of employees	1900
e. Rent	200
f. Interest	150
g. Operating surplus	720
h. Net indirect tax	400
i. Employer's contribution to social security schemes	100
j. Net exports	20
h. Net factor income from abroad	-20
k. Government final consumption expenditure	600
l. Consumption of fixed capital	100

- 17(A)** “Household and firms depend on each other in the circular flow of income”. Justify the statement in case of a two sector model. **3**
- (B)** “Machine purchased by a firm is always capital good”. Do you agree with the given statement? Give valid reasons for your answer. **3**

SECTION B- INDIAN ECONOMIC DEVELOPMENT

- 18.** What is an economic plan? **1**
- a. A plan is how the Nations resources can be used having some general goals and achieving specific objectives within a specified period.
 - b. A is a blueprint for infrastructure development
 - c. A plan is the government budget
 - d. A plan is the allocation of resources
- 19.** Occupational structure refers to the distribution of _____ population into various sectors of economic activity. **1**
- a. Working
 - b. Non working
 - c. Both (a) and (b)
 - d. Neither (a) nor (b)

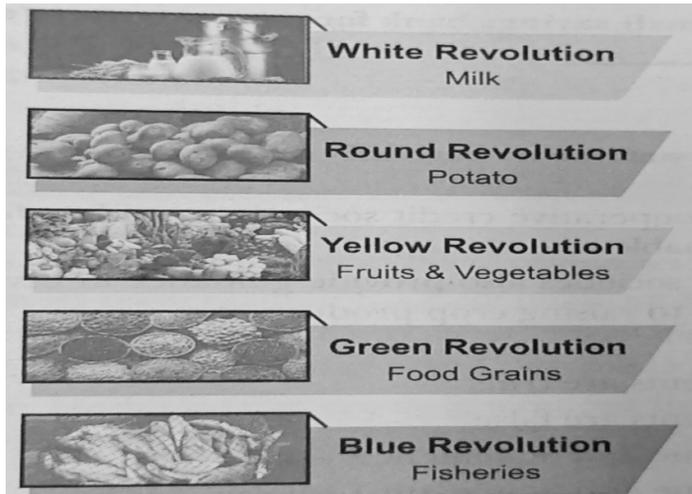
20. The shackles of agriculture during the colonial rule were permanently broken by the Green Revolution that resulted from the application of _____. (Choose the correct alternative to fill up the blank). 1

- A. High yielding varieties (HYV)
- B. Mechanization of agriculture
- C. Chemical fertilizers and pesticides
- D. Organic fertilizers and pesticides.

Alternatives

- a. A,B,D
- b. A,B,C
- c. B,C,D
- d. A,C,D

21. On the basis of the above image answer the following question 1



Which of the following revolutions have been wrongly marked?

- a. Round revolution
- b. Yellow revolution
- c. Blue revolution
- d. Both (a) and (b)

22. Read the following statements-Assertion(A) and Reason(R). 1

Choose one of the correct alternatives given below:-

Assertion(A)- Economic crisis occurs when carrying capacity of the environment is challenged.

Reason(R)- This happens when waste generation is below the absorptive capacity of the environment.

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 Reason (R) is false.
- d. Assertion (A) is false but Reason(R) is true.

- 23.** Who amongst the following has received the greatest investment in human capital formation? **1**
- a. A nurse in a clinic who is frequently absent because of her ill health.
 - b. A 12 year old who helps her mother with construction work.
 - c. A 10th pass girl who works as a store manager in a mall.
 - d. A computer science graduate who works at a call centre.
- 24.** Micro credit programs play a vital role in ensuring and overall development of the rural economy as they _____. (choose the correct alternative to fill up the blank) **1**
- A. Provide financial support
 - B. Lead to women empowerment
 - C. Enhance the reach of formal credit system
- Alternatives:
- a. A and B
 - b. B and C
 - c. A and C
 - d. A, B and C
- 25.** How can globalisation increase the standard of living of the people in a country? **1**
- a. By offering more products to buy.
 - b. By increasing rural to urban migration.
 - c. By improving working conditions for factory workers.
 - d. By making cheaper products available due to increase competition.

26. Read the following statements carefully:- 1
 Statement 1: Regular workers are entitled to all social security benefits.
 Statement 2: Casual workers are hired by their employers on regular basis
 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. Identify the correct pair of items from the following column I and II: 1

Column I	Column II
A. Human Capital	1. Facilities fuller or better utilisation of the skills
B. Human development	2. A stock concept
C. Migration	3. Expands mental horizon of the people
D. Education	4. An index of human welfare

- a. A-4, B-2, C-1, D-3
 b. A-3, B-1, C-4, D-2
 c. A-3, B-4, C-1, D-2
 d. A-2, B-4, C-1, D-3
28. “During the colonial period Indian agriculture was stagnant”. In the light of this statement explain why was the situation so. 3
OR
 Discuss briefly any two salient features of India's pre independence occupational structure.
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. “Promoting privatization is the objective of New Economic Policy”. State the measures taken to promote privatization in India. 4

31.

4

A. State and elaborate whether the following statements are true or false with valid arguments:-

- i. Agriculture marketing is a process that ensures the transportation of various agricultural commodities only.
- ii. Jan Dhan Yojana has been a crucial step for financial resource mobilization in the Indian economy.

Or

B. “Since independence, the government has been playing an important role in generating employment directly or indirectly”. Discuss.

32. Identify the situation depicted in the given image. Suggest suitable measures to solve the problem of unemployment. 4



33.

3

A. State the meaning of import substitution. Explain how input substitution can protect the domestic industries.

B. “Modernisation as a planning objective shows a dichotomy with employment generation.” justify the statement. 3

OR

- C. Liberalization of the economy heralded a Paradigm shift in the approach towards management of the economy. Discuss. 3
- D. “Agriculture sector appears to be adversely affected by the economic reform process”. Explain the given statement. 3

34. Read the following text carefully.

Air pollution is responsible for many health problems in the urban areas. Of late, the air pollution status in Delhi has undergone many changes in terms of the levels of pollutants and the control measures taken to reduce them. This paper provides an evidence based insight into the status of Air pollution in Delhi and its effects on health and control measures instituted. The urban year database released by the World Health Organisation in September 2011 reported that Delhi has exceeded the maximum PM 10 limit. Vehicular emissions and industrial activities were found to be associated with indoor as well as outdoor air pollution in Delhi. Studies on air pollution and mortality from Delhi found that all natural cause mortality and morbidity increased with increased air pollution. Delhi has taken several steps to reduce the level of air pollution in the city during the last 10 years. However, more still needs to be done to further reduce the levels of air pollution.
-RIZWAN,2013

- A. What is meant by air pollution? Why is it harmful? 3
- B. State the principal factors contributing to air pollution in India. 3

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

BURNPUR RIVERSIDE SCHOOL, BURNPUR
HALF – YEARLY EXAMINATION : [2023 – 2024]
ECONOMICS(030)
CLASS : XII

Time: 3 Hours

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 1 mark each.

3) This paper contains 4 Short Answer Questions type questions of 3 marks each to be answered in 60 to 80 words.

4) This paper contains 6 Short Answer Questions type questions of 4 marks is to be answered in 80 to 100 words.

5) This paper contains 4 Long Answer Questions type questions of 6 marks each to be answered in 100 to 150 words.

SECTION A- MACRO ECONOMICS

- 1.** Read the following statements carefully. **1**
- Statement 1: If marginal propensity to consume is 0.8, then average propensity to consume will also be 0.8.
- Statement 2: Average propensity to consume is the ratio of change in consumption and change in income.
- In light of the given statements, choose the correct alternative from the following:
- a. Statement 1 is true and Statement 2 is false
 - b. Statement 2 is true and Statement 1 is false
 - c. Both statements are true
 - d. Both statements are false

2. For 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. In an open economy, aggregate demand is estimated: 1
a. Private consumption expenditure + net exports
b. Private consumption expenditure + government expenditure
c. Private investment expenditure + government expenditure + net exports
d. Private consumption expenditure + private investment expenditure + government expenditure + net exports
4. If the reserve ratio is 20%, what will be the amount of total reserves after an initial deposit of Rupees 200? 1
a. 4000
b. 2000
c. 1000
d. 400
5. “The value of all goods and services can be expressed in monetary units”. 1
On the basis of the given statement identify the functions performed by money.
a. Medium of exchange
b. Store of value
c. Unit of account
d. Means of standard of deferred payment.

6. Find the missing figures and choose the correct alternatives:- 1

Round	Deposits	Loans	Reserve Ratio(20%)
Initial	100	80	20
I	80	(i)	16
II	64	51.20	12.80

Total	(ii)	(iii)	(iv)

- a. 64, 500, 400, 100
 b. 64, 540, 500, 100
 c. 64, 500, 450, 100
 d. 64, 500, 400, 50

7. Graphically aggregate demand function can be obtained by vertically adding the _____ and _____ functions.(choose the correct alternative to fill up the blanks). 1

- a. Consumption, saving
 b. Consumption, Investment
 c. Investment, saving
 d. Aggregate Supply, consumption

8. If an economy is to control deflationary gap, which of the following is an appropriate policy instrument? 1

- a. A cut in repo rate
 b. A cut in CRR
 c. A cut in SLR
 d. All of these

9. In an economy investment is increased by rupees 300 crore. If marginal propensity to consume is $\frac{2}{3}$, calculate increase in National Income. 1

- a. 1000
 b. 900
 c. 800
 d. 950

10. Identify the type of goods shown in the below image.

1



- a. Consumer good
- b. Capital good
- c. Intermediate good
- d. None of these

11. 'Monetary measures offer a valid solution to the problem of inflationary gap in an economy'. State and discuss any two monetary measures to justify the given statement.

3

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

OR

State the meaning of the following:

- a. Externalities
- b. Operating surplus
- c. Consumption goods

- 13.** An increase of Rupees 250 crores in investment in an economy result in total increase in income of Rupees 1000 crores. **4**

Calculate the following:

- i. Marginal propensity to consume
- ii. Change in saving
- iii. Change in consumption expenditure
- iv. Value of multiplier

- 14.** Using the 'saving and investment approach' explain how is the equilibrium level of national income determined? Also explain what will happen if the equilibrium condition is not fully filled. **4**

OR

A. Define money multiplier.

B. 'Credit creation is inversely related to the Reserve deposit ratio'. Justify the given statement using a hypothetical example.

- 15.** Aditya Bank had some extra reserve with it. Which they can't give as loan. With respect to this statement answer the questions that follow: **4**

- i. What option does Aditya Bank have with it? Why?
- ii. What if Aditya Bank faces a debt crisis, what can it do? Why?

16. Calculate :
- National Income
 - Depreciation

Particulars	Rs. In crores
a. Private final consumption expenditure	210
b. Gross domestic product at market price	320
c. Wages and salaries	170
d. Employer's contribution to provident fund	10
e. Net retained earnings of private enterprises	20
f. Rent	30
g. Profit	5
h. Depreciation	10
i. Interest	45
j. Corporation tax	15
k. Net indirect tax	3

OR

From the following data, calculate

- Closing stock
- National Income
- Government final consumption expenditure

Particulars	Rs. In crores
a. Private final consumption expenditure	900
b. Net domestic fixed capital formation	2100
c. Net factor income to abroad	40
d. Net National product at market price	5230
e. Net indirect tax	150
f. Opening stock	100
g. Gross domestic capital formation	2800
h. Depreciation	550
i. Net exports	700

17(A) “Circular flow of income in a two sector economy is based on the axiom that one’s expenditure is other’s income” Support your answer with valid reasons. 3

(B) Distinguish between ‘value of output’ and ‘value added’. 3

Or

Which among the following are final goods and which are intermediate goods? Give reasons. 6

- i. Apple purchased by a juice factory.
- ii. Bus purchased by a tour and travel company.
- iii. Potatoes purchased by a restaurant from the market.
- iv. Cloth purchased by a household to make curtains.
- v. Pencil purchased by a student.
- vi. Dal purchased by a housewife to cook for lunch.

SECTION B- INDIAN ECONOMIC DEVELOPMENT

18. Identify the correct combinations of the ‘Goals of India Five years plan’. 1

- a. Growth, equality, modernisation, self Reliance
- b. Development, equality, modernisation, sustainability
- c. Good health, education, modernisation, sustainability
- d. Growth, equity, modernisation, self Reliance

19. 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

20. _____ committee was set up for the development and promotion of small scale industries in India. (Choose the correct alternative to fill up the blank). 1

Alternatives

- a. Karve
- b. Tapas Majumdar
- c. Mahalanobis
- d. TRYSEM

21.

1



Study the following picture and answer the given statement:-

Women in rural households take up bee-keeping as an entrepreneurial activities. Such kind of activities may be envisaged under ____ as diversification activities. (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)- Appiko movement was launched in Uttarakhand.

Reason(R)- It was inspired by the Chipko movement.

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 Reason (R) is false.
- d. Assertion (A) is false but Reason(R) is true.

23. Why do we need to invest in human capital? 1

- a. Skill development
- b. Increase efficiency
- c. Increase productivity
- d. All of the above

24. Identify which of the following is a source of non institutional credit in the rural areas of India 1
Alternatives:
a. NABARD
b. Regional rural banks
c. Money lenders
d. Commercial banks
25. Which of the following statements correctly represents actions taken by the government towards liberalisation? 1
P. Levying high tariffs to discourage import and promoting the consumption of domestic goods and services.
Q. Devaluation of the rupees to encourage inflow foreign exchange.
R. Allowing for private banks to make decisions independent of the RBI restrictions.
S. Fixing prices of certain industrial goods in order to support increased consumption of these goods to boost the manufacturing industry.
a. P and Q only.
b. P and R only.
c. Q and R only.
d. Q and S only.
26. Read the following statements carefully:- 1
Statement 1: The nature of unemployment problem in India is uni-faceted.
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. Identify the correct pair of items from the following column I and II: 1

Column I	Column II
A. Physical Capital	1. The process of adding to the stock of human capital.
B. Human Capital Formation	2. A flow concept.
C. Brain Drain	3. A source of human capital.
D. ICMR	4. Enforces rules and regulations regarding technical education in the country.

- a. A-1
b. B-2
c. C-3
d. D-4

28. “During the colonial period, a number of social- economic indicators where in a dilapidated state”. List any three such indicators that led to the worsening of India's demographic profile. 3

Or

“The pre independent India’s occupational structure experienced growing regional variation”. Justify the above statement with valid explanation.

29. “Ravya was initially working as an office clerk in a firm. In the pursuit to attain, a higher position and income, she attended a few on- the- job- training sessions. This sessions contributed positively to her skills and expertise”. Explain the impact of Ravya decision on Human Capital Formation 3

30. “Foreign exchange crisis was the basis of economic policies of liberalisation, privatisation and globalisation”. justify 4

31. A. State any two challenges facing rural development in India. 2

- B. Why is agricultural diversification essential for sustainable livelihoods? 2

Or

“Lately the country has witnessed increased instances of farm loan waivers(farmers' loans being written off).” 4

Do you think it is economically viable? What should be the consideration for such write-offs?

32. As per the given image, identify the type of employment shown. 4
Suggest the impact of the indicated situation, on the Indian economy.



33. 3
A. Why was there a need for state led industrial development in the country on the eve of independence? Discuss.

- B. State any four components of technical reforms carried out after independence. 3

OR

- C. Discuss briefly any two major steps taken by the government of India on 'financial sector' from under the economic reforms of 1991. 3

- D. Give a brief description of the structure of GST. 3

34. Read the following text carefully.

TRYSEM was launched in 1979 as a separate National scheme for training rural youth for self employment. The compelling reasons for launching the program being the huge backlog of unemployment and under employment among the rural youth. 40

youth, both men and women wet to be selected in each block and trained in both skill development and entrepreneurship to enable them to become self employed.

It was generating activities in the rural areas, the influx of rural youth to urban areas could curbed. Moreover, local needs could also meet with local resources, there by giving a fillip to rural development.

Objectives of TRYSEM

- i. To provide rural youth (18-35yrs) from families below the poverty line with training and technical skills to enable them to take up self employment in agriculture, industry, services and business activities.
- ii. Training is perceived not only in terms of provision of physical skills. But also change in attitude, enhancement of motivation and skills in human relations etc, are also ought to be imported.
- iii. Self employment is defined as gain full employment on a full time basis which results in income which is sufficient for the family of the youth cross the poverty line. Situation of employment in which the means of production are owned, hired or taken on lease are taken to be self employment situations.

- A.** As per the article given above, what was the mean objective of the policy/ scheme launched? **3**
- B.** How will the scheme launched in the ever article help Indian economy? As per the article what is the mean reason to launch the scheme? **3**

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Name: _____ Sec: _____ Roll No.: _____

CODE-A

BURNPUR RIVERSIDE SCHOOL, BURNPUR

HALF YEARLY EXAMINATION: (2023-2024)

GEOGRAPHY

CLASS: XII

Time : 3 Hours

Maximum Marks : 70

General Instructions:

- 1. This question paper content 30 questions. All questions are compulsory*
- 2. This question paper divided into five sections. Section- A, B, C, D and E*
- 3. Section-A Question no 1 to 17 are multiple choice type question carrying 1 mark each.*
- 4. Section -B Question no 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 200 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

1 Match the Column I and Column II and choose the correct option: 1

Column I (Subfields of Human Geography)	Column II (Interface with sister discipline of social science)
A) Behavioural geography	i) Sociology
B) Cultural geography	ii) Epidemiology
C) Gender geography	iii) Psychology
D) Medical geography	iv) Anthropology

Options

- a) A- i, B-ii, C-iii, D-iv
- b) A-iii, B-iv, C-i, D-ii
- c) A-iv, B-iii, C-ii, D-i
- d) A-ii, B-i, C-iv, D-iii

2 Which one of the following pairs is correctly matched? 1

- a) Automobile industry : Los Angeles

- b) Shipbuilding industry : Lusaka

- c) Aircraft industry : Florence

- d) Iron and steel industry: Pittsburgh

- 3 Which of the following geographer introduced the concept of Neo determinism? 1
- a) Ratzel
 - b) Paul Vidal de la Blache
 - c) Griffith Taylor
 - d) Ellen C. Semple
- 4 Natural growth of population is calculated by 1
- a) Birth- Death
 - b) Death- Birth
 - c) In migration + out migration
 - d) Birth - Death + In migration - Out migration
- 5 Which of the following is not an approach in human geography? 1
- a) Aerial differentiation
 - b) Spatial organisation
 - c) Quantitative revolution
 - d) Exploration and description
- 6 Which approach was initially proposed by the International Labour Organization (ILO)? 1
- a) Income Approach
 - b) Welfare Approach
 - c) Basic needs Approach
 - d) Capability Approach

- 7 Arrange the states of India with highest to lowest population density: 1
- i) West Bengal
 - ii) Bihar
 - iii) Uttar Pradesh
 - iv) Maharashtra

OPTIONS

- a) i, ii, iii, iv
 - b) ii, i, iii, iv
 - c) iv, iii, ii, i
 - d) ii, iv, i, iii
- 8 Which central organisation has been monitoring water quality of natural aquatic resources at 507 stations? 1
- a) Namami Ganga Project
 - b) Central Pollution Control Board (CPCB)
 - c) National River Pollution Control (NRPC)
 - d) River Pollution Control (RPC)
- 9 The period from 1901-1921 is referred to as a period of 1
- a) Stagnant growth of population
 - b) Steady growth of population
 - c) Population explosion
 - d) Declining growth of population
- 10 Which of the following statement is incorrect? 1
- a) Haryali is a watershed development project sponsored by the Central Government
 - b) Karnataka has made water harvesting structure in the house compulsory

- c) Neeru Meeru and Arvary Pani Sansad have taken up construction so various water harvesting structures
- d) The Water Cess Act,1977 meant to reduce population

11 Which of the following is the largest linguistic group of India? 1

- a) Sino-Tibetan
- b) Austric
- c) Indo-Aryan
- d) Dravidian

12 Identify the correct order of location from west to east, for the given natural gas reserves of India 1

- a) Ankaleshwar, Tripura, Jaisalmer, Krishna, Godavari basin
- b) Jaisalmer, Ankaleshwar, Krishna, Godavari basin, Tripura
- c) Tripura, Jaisalmer, Krishna, Godavari basin, Ankaleshwar
- d) Krishna, Godavari basin, Ankaleshwar, Tripura, Jaisalmer

13 Consider the following statements and choose the correct answer with the help of given options 1

Statement I In clustered settlements the general living area is distinct and separated from the surrounding farms, barns and pastures.

Statement II This segmentation is often motivated by social and ethnic factors

- a) Only statement I is correct
- b) Only statement II is correct
- c) Both the statements are correct and statement II correctly explains statement I
- d) Both the statements are true but not related with each other

14 **Arrange the following in correct sequence.**

Following in the sequence of generating geothermal energy 1

- i) It is so hot that when it rises to the Earth's surface, it turns into steam.
- ii) Groundwater in such areas (where the geothermal gradient is high) absorbs heat from the rocks and becomes hot.
- iii) This steam is used to drive turbine and generate electricity.
- iv) Geothermal energy exists, because the earth grows progressively hotter with increasing depth.

OPTIONS

- a) iv-ii-i-iii
- b) ii-i-iv-iii
- c) i-iv-iii-ii
- d) iii-ii-iv-i

- 15 Which of the following is the feature of Urban Settlements in India? 1
- a. Complex way of life, manufacturing of finished goods, nodes of economic growth
 - b. Intimate social relations, mainly primary economic activities, people are less mobile.
 - c. Economy mainly based on primary activities, providing food and raw materials and social relations are formal
 - d. Provide variety of services, poor transport networks, social relations are intimate.

- 16 **There are two statements marked as Assertion(A) and Reason (R). Mark your answer as per the codes provided below.** 1

Assertion (A) : Indian agricultural economy was largely subsistence before independence.

Reason (R) : Agriculture is purely land based activity unlike secondary and tertiary activities.

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) Both (A) and (R) are incorrect
- d) (A) is correct but (R) is incorrect

- 17 In which of the following group of countries of the world, HYVs wheat and rice developed? 1
- a) Japan and Australia
 - b) U.S.A and Japan
 - c) Mexico and Philippines
 - d) Mexico and Singapore

SECTION -B

- 18 **Read the given passage carefully and answer the questions that follows:** 3

The human development index measures attainments in human development. It reflects what has been achieved in the key areas of human development. Yet it is not the most reliable measure. This is because it does not say anything about the distribution. The human poverty index is related to the human development index. This index measures the shortfall in human development. Since 1990, the United Nations Development Programme (UNDP) has been publishing the Human Development Report every year. This report provides a rank-wise list of all member countries according to the level of human development. The Human Development index and the Human Poverty index are two important indices to measure human development used by the UNDP

- a) What are the key areas of Human Development?
- b) When was the first human development report published?
- c) Which organisation publishes the human development report?

19 **Read the given passage carefully and answer the questions that follows:** 3

Land, according to its ownership can broadly be classified under two broad heads – private land and common property resources (CPRs). While the former is owned by an individual or a group of individuals, the latter is owned by the state meant for the use of the community. CPRs provide fodder for the livestock and fuel for the households along with other minor forest products like fruits, nuts, fibre, medicinal plants, etc. In rural areas, such land is of particular relevance for the livelihood of the landless and marginal farmers and other weaker sections since many of them depend on income from their livestock due to the fact that they have limited access to land. CPRs also are important for women as most of the fodder and fuel collection is done by them in rural areas. They have to devote long hours in collecting fuel and fodder from a degraded area of CPR.

- a) Who are dependent on the CPRs?
- b) How lands are classified on the basis of ownership?
- c) What are the forest products obtained from CPRs?

SECTION-C

20 Explain how population density is closely related to physical and socio-economic factors. 3

OR

Distinguish between push factors and pull factors of migration.

21 Why are the cottage industry mainly confined to rural areas? 3

22 “The decades 1951-81 are referred to as the period of population 3

explosion in India”. Explain the statement by giving any three reasons.

OR

Define the term ‘growth of population’. Describe the second (II) phase of growth of population in India.

23 Explain any three methods of conservation of water resources in India. 3

SECTION-D

24 What is commercial livestock rearing? Write four characteristics of it. 5

OR

What is mean by truck farming? Explain its chief characteristics.

25 “Employment opportunities are increasing steadily in the service sector in the developed countries despite how population and job losses in the industrial sector”. Support this statement with any four suitable examples. 5

OR

Explain in detail the significance of transport and communication services.

26 What are the modes by which cyber space will expand the contemporary economic and social space of humans. 5

27 Classify towns on the basis of its functions. Gives two examples of each type. 5

28 Describe the production and distribution of coal in India. 5

OR

Describe the production and distribution of iron ore in India.

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) Area of subsistence gathering
- b) Area of commercial livestock rearing
- c) A seaport
- d) A seaport
- e) An airport
- f) Area of nomadic herding
- g) Area of extensive commercial grain farming

30 Locate and label any five of the following geographical features on the political outline map of India with appropriate symbols.

- i) Leading producing state of Jute
- ii) Bokaro- coal mine
- iii) State with highest population density
- iv) Balaghat- manganese mine
- v) Hazaribagh- copper mine
- vi) Leading producing state of Tea
- vii) Katni-bauxite mine

5

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QUESTION NO.30



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

BURNPUR RIVERSIDE SCHOOL, BURNPUR
HALF – YEARLY EXAMINATION : [2023 – 2024]
CLASS – XII
GEOGRAPHY

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

- Which one of the following is not correctly matched? 1

<u>SCHOLAR</u>	<u>APPROACH</u>
a)Friedrich Ratzel	i)Determinism
b)Ellen C Semple	ii)Welfare Approach
c)Griffith Taylor	iii)Neo Determinism
d)Vidal de la Blache	iv)Possibilism

- Which one of the following types of industries produces raw material for other industries? 1
a)cottage industries b) small scale industries
c)basic industries d) footloose industries

3. Match the Column I with Column II and choose the correct option? 1

COLUMN I

Sub Fields of Human Geography

- a) Behavioural Geography
- b) Cultural Geography
- c) Gender Geography
- d) Medical Geography

COLUMN II

Interface with sister Discipline

- I) Sociology
- II) Epidemiology
- III) Psychology
- IV) Anthropology

OPTIONS:

- a) A (i) B (ii) C (iii) D (iv)
- b) A (iii) B (iv) C (i) D (ii)
- c) A (iv) B (iii) C (ii) D (i)
- d) A (ii) B (i) C (iv) D (iii)

4. There are two statements marked as Assertion (A) and Reason (R) , 1
mark your answer as per the codes provided below:

ASSERTION(A): Asia has a low sex ratio countries like China, India, Saudi Arabia, Pakistan and Afghanistan have a lower sex ratio.

REASON(R): This is attributed to better status of women and an exclusively male dominated out migration to different parts of the world.

- 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.

5. There are two statements marked as Assertion (A) and Reason (R) , 1
mark your answer as per the codes provided below:

ASSERTION(A): Human beings interact with their physical environment with the help of technology.

REASON(R): It is extremely important with the help of what tools and techniques do they produce and create.

- 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.

6. _____ is the only country in the world to officially proclaim the gross national happiness (GNH) as the measure of the country's progress. 1

- a) Bangladesh b) Bolivia c) Belgium d) Bhutan.

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. The highest proportion of the total water used in the country is in which of the following sectors: 1

- a) irrigation b) industries
c) domestic use d) none of the above.

9. There are two statements marked as Assertion (A) and Reason (R) , mark your answer as per the codes provided below: 1

ASSERTION(A): Rajasthan, Jharkhand and peninsula states have shown better concentration of population .

REASON(R): This is because of the development of irrigation, availability of mineral and energy resources and development of transport network.

- 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.

10. Consider the following statements: 1
- (i) The major rivers of the country generally retain better water quality in less densely populated upper stretches in hilly areas.
- (ii) In plains river water is used extensively for irrigation, drinking, domestic and industrial purposes.
- Choose the incorrect option:
- a) (i) is correct
- b) (ii) is correct
- c) Both (i) and (ii) are correct
- d) Neither (i) nor (ii) are correct
11. The period from 1901-1921 is referred to as a period of _____. 1
- (a) Stagnant growth of population
- (b) Steady growth of population
- (c) Population explosion
- (d) Declining growth of population
12. Consider the following statement- 1
- I. Coal occurs in rock segments mainly of two geological ages, namely Gondwana and tertiary deposits
- II. The most important Gondwana coal fields of India are located in Damodar Valley
- III. Tertiary coals occur in Assam, Arunachal Pradesh, Meghalaya and Nagaland.
- Choose the correct option:
- a) I & III
- b) II & III
- c) I & II
- d) I, II & III.
13. Which type of settlement is found in fertile alluvial plains and in the northeastern states of India ? 1
- (a) clustered settlements (b) semi clustered (c) hamleted settlements
- (d) dispersed settlements
14. _____ was set up as a public sector undertaking 1
- to transport and market natural gas.
- (a) GAIL (b) GSI (c) ONCE (d) OIL

Study the given table carefully and answer Q. 15, 16 & 17.

Agricultural Land Use categories	As a percentage of Reporting Area		As a percentage of total Cultivable land	
	1950-51	2014-15	1950-51	2014-15
Culturable Wasteland	8.0	4.0	13.4	6.8
Fallow other than Current Fallow	6.1	3.6	10.2	6.2
Current Fallow	3.7	4.9	6.2	8.4
Net Sown Area	41.7	45.5	70.0	78.4
Total Cultivable Land	59.5	58.0	100.00	100.00

COMPOSITION OF TOTAL CULTIVABLE LAND

15. The table above indicates that the scope for bringing in additional land under net sown area in India is : 1
 (a)unlimited (b)limited
 (c)increasing (d)both (a) &(b)
16. For a land scarce but labour abundant country like India, 1
 (i) an urgent need to evolve and adopt land saving technologies.
 (ii) increase in the yield of any particular crop per unit area of land is desirable.
 (iii) a high cropping intensity is desirable.
 (iv)increase in land use intensity is desirable.
17. Lack of access to land is directly correlated with 1
 (i)incidents of unemployment in urban areas.
 (ii)agricultural productivity.
 (iii)decline in quality of land.
 (iv)incidence of poverty in rural areas.

SECTION – B (SOURCE BASED QUESTIONS)

18. Read the passage below and answer the questions that follow: 3

“The human development index measures attainments in human development. It reflects what has been achieved in the key areas of human development . Yet it is not the most reliable measure. This is because it does not say anything about the distribution. The human poverty index is related to the human development index . This index measures the shortfall in human development . Since 1990 , the United Nations Development Program (UNDP) has been publishing the human development Report every year . This report provides a rank wise list of all member countries according to the level of human development. The human development index and the human poverty index are two important indices to measure human development used by the UNDP .”

(a) The key areas of human development do not include :

- (i) access to Resource (ii) access to Health (iii) access to Education
(iv) access to Food

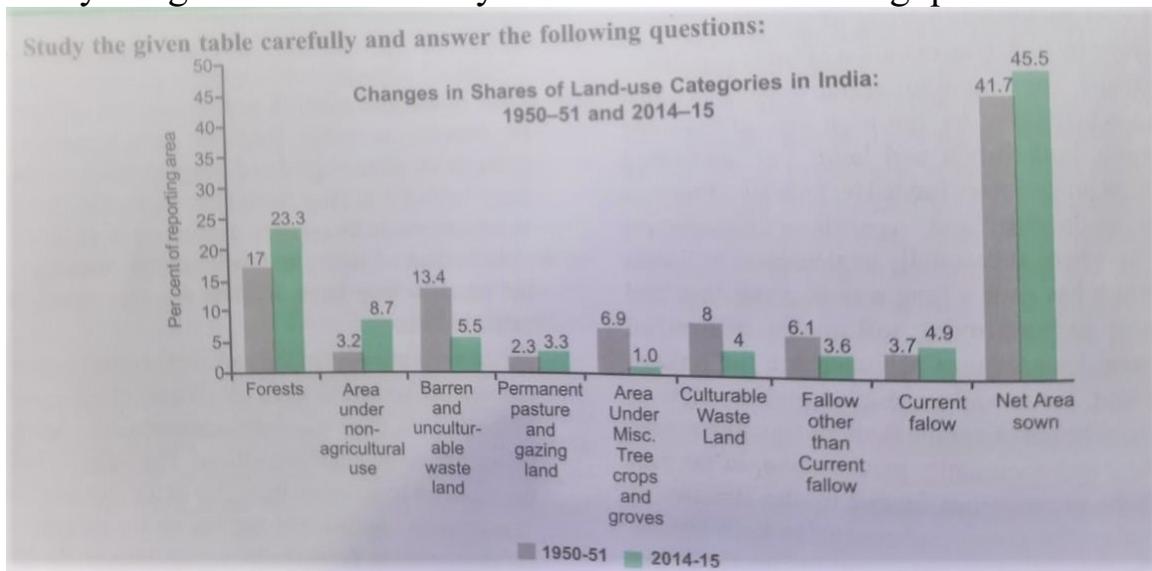
(b) The shortfalls of human development include:

- (i) Adult literacy (ii) access to clean water (iii) underweight children
(iv) high life expectancy.

(c) The first human development report was published in :

- (i) 1989 (ii) 1990 (iii) 1991 (iv) 1992 .

19. Study the given table carefully and answer the following questions: 3



- (a) The above bar graph shows that the area under non agricultural uses is increasing at the expense of :
- (i) area under forest
 - (ii) current fallow lands
 - (iii) wastelands and agricultural land
 - (iv) net sown area
- (b) The trend of current fallow land fluctuates a great deal over years ,depending on the
- (i) increase in forest cover in the country
 - (ii) decline in barren and wasteland
 - (iii)expense of wasteland
 - (iv)variability of rainfall and cropping cycles
- (c) The decline in land under pastures and grazing lands is greatly due to
- (i) illegal encroachment due to expansion of cultivation on common pasture lands.
 - (ii) increase in pressure on land both from the agricultural and non agricultural sector.
 - (iii) increase in area under non agricultural use.
 - (iv) increase in the forest cover.

SECTION – C (SHORT ANSWER TYPE QUESTIONS)

20. Enlist and describe three components of population change . 3

OR

Discuss the three stages of demographic transition?

21. Describe the organizational characteristics of modern manufacturing. 3
22. Give an account of the occupational structure of India's population 3

OR

Very hot and dry and very cold and wet regions of India have low density of population in this light, explain the role of climate on the distribution of population.

23. It is said that the water resources in India have been depleting very fast. 3
Discuss the factors responsible for depletion of water resources

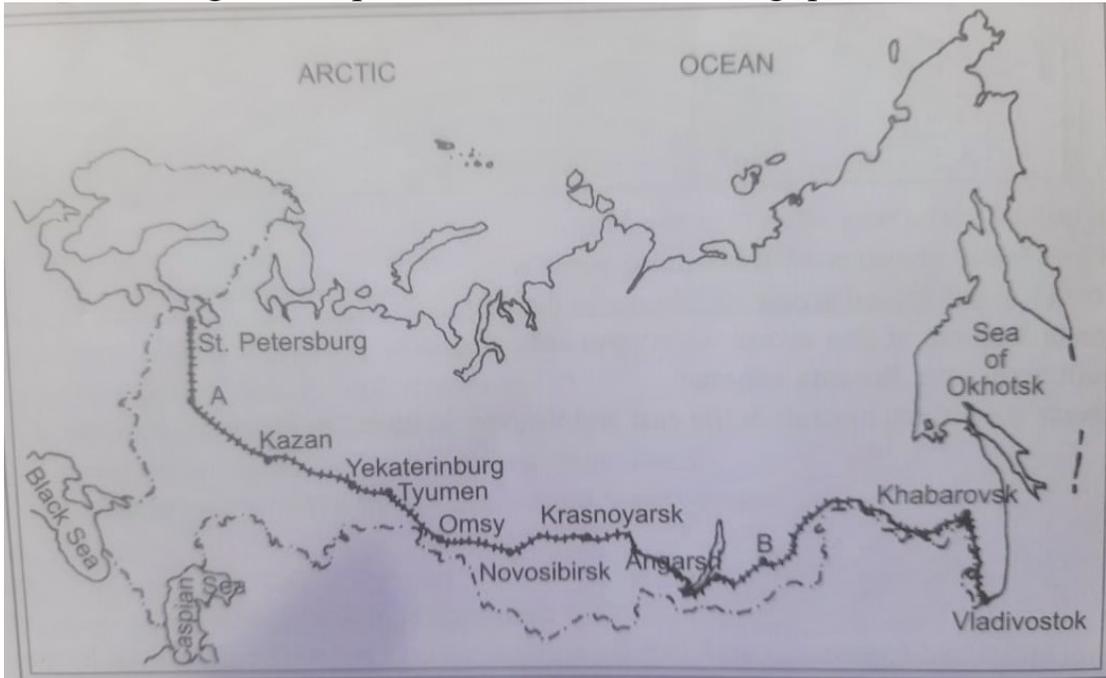
SECTION – D(LONG ANSWER TYPE QUESTIONS)

24. Differentiate between primitive subsistence farming and intensive subsistence farming? 5
25. Which is the largest electronic network in the field of communication in the world.State any four merits of it. 5

26. Explain any four points of importance of pipelines in transporting fluid material for long distances with suitable examples from the three different parts of the world. Which is the famous pipeline of the USA? 5

OR

Observe the given map and answer the following questions :



- (a) Name the railway line and the country where it lies?
(b) Name the stations marked as A and B.
(c) State two reasons why it is the most important route in Asia?
27. What are urban settlements? Classify Indian towns into three categories according to urban historians and write the main characteristics of each category. 1+4=5

OR

Define the word settlement? Explain the four types of rural settlements found in India.

28. Write a detailed note on the Petroleum Resources of India. 5

OR

Mineral distribution in India is mainly confined in the three major belts of peninsular plateau. Support this statement with suitable examples of minerals from each belt.

SECTION – E (MAP BASED QUESTIONS)

29. On the given political map of the world the following seven geographical features are shown ,identify any five of these features and write the correct names on the lines marked near each feature: 5
- (a) Name the Area of nomadic herding.
 - (b) Name the Area of extensive commercial grain farming.
 - (c) Name the Area of mixed farming.
 - (d) An airport.
 - (e) A sea port.
 - (f) An inland waterway.
 - (g) A sea port.
30. On the given political map of India locate and label any five of the following with appropriate symbols : 5
- (a) Leading producing state of rice.
 - (b) State with lowest population density.
 - (c) Oil – refinery –Barauni
 - (d) Leading producing state of cotton.
 - (e) Copper mine – Singhbhum.
 - (f) Manganese mine – Balaghat.
 - (g) Iron – ore mine Ratnagiri.

=====

Name: _____ Sec: _____ Roll No.: _____

CODE: A

BURNPUR RIVERSIDE SCHOOL, BURNPUR
HALF YEARLY 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 **21 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 + 15 =) 21 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 15 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 5 questions on Employability Skills (1 x 4 = 4 marks)

- i. What do you understand by 'Filtering Data'? 1
- ii. What is the shortcut key to print a presentation? 1
- iii. _____ means Entrepreneurs monitor that everything is carried out in their organisations as per their decisions but at the same time gives flexibility to the employees. 1
 - a. Effective Monitoring
 - b. Adaptability
 - c. Assertiveness
 - d. Perseverance
- iv. Which of the sentences is capitalized correctly? 1
 - a. I am Hungry.
 - b. Divya and sunil are reading.
 - c. The bucket is Full of water.
 - d. She lives in Delhi.
- v. State whether the following statement is **True** or **False**: 1
'Personality is a way to describe the various human characteristics that make us all different from one another.'

2. Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)

- i. Which of the following is a server-side scripts? 1
 - a. PHP
 - b. ASP
 - c. Both (a) & (b)
 - d. none
- ii. An application that can be accessed over a computer network or internet through a web browser is called a _____. 1
 - a. web-based application
 - b. report application
 - c. server-based application
 - d. none
- iii. Name the domain where database applications may be used for storing information regarding hotel staff, menu items and infrastructure. 1
 - a. Hotels
 - b. Hospitals
 - c. E-commerce
 - d. none
- iv. DBA stands for _____. 1
 - a. Database Broadband Administrator

- b. Database Administrator
- c. Database Anchor
- d. Data Broadband Administrator
- v. What do you understand by Cardinality of a relation? 1
- vi. What is the full form of DML? 1

3.

Answer any 6 out of the given 7 questions
(1 x 6 = 6 marks)

- i. What do you understand by Tuple in a Database System? 1
- ii. Which command is used to create a new table or relation? 1
- iii. Shalini 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
- iv. Name the domain where database applications may be used for storing information regarding communication networks, customers, call records, and their bills. 1
 - a. E-Commerce
 - b. Government Sector
 - c. Telecommunications
 - d. none
- v. If you are using the latest version of your browser, the address bar or the name of the site will appear in _____. 1
 - a. blue
 - b. green
 - c. red
 - d. none
- vi. _____ is the website for IRCTC site. 1
- vii. Name any two railway booking site. 1

4.

Answer any 5 out of the given 6 questions
(1 x 5 = 5 marks)

- i. Name the domain where database applications may be used for storing information such as student details, marks and result. 1
 - a. Education
 - b. Hospitals
 - c. E-commerce
 - d. none
- ii. Expand DISNIC. 1
- iii. “We can use ‘LIKE’ keyword along with two more reserved characters”. Name the two reserved characters. 1
- iv. Which command is used to create a new database? 1
- v. Which of the following are examples of online reservation systems? 1
 - a. Airline ticket
 - b. Bus ticket
 - c. both (a) & (b)
 - d. none
- vi. What do you understand by Alternate key? 1

5. **Answer any 5 out of the given 6 questions**
(1 x 5 = 5 marks)

- i. Expand NSP. 1
- ii. Name the domain where database applications may be used for storing information about customers' information regarding daily transactions. 1
- iii. Which command is used to delete a table from a database? 1
- iv. What is the function of Null Value Constraint? 1
- v. Which key is used to represent the relationship between two tables? 1
- vi. Mention any two payment options that are used while shopping online. 1

6. **Answer any 5 out of the given 6 questions**
(1 x 5 = 5 marks)

- i. What is online reservation? 1
- ii. In which year NICNET was launched? 1
- iii. 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
a. Airlines b. Companies c. Hotels d. none
- iv. In order to restrict the values of an attribute within a range, which constraint may be used? 1
- v. Which command is used to modify the structure of the table after making the table? 1
- vi. What is the use of WHERE clause in SELECT statement? 1

SECTION-B: SUBJECTIVE TYPE QUESTIONS

**Answer any 3 out of the given 4 questions on
Employability Skills (2 x 3 = 6 marks)
Answer each question in 20 – 30 words.**

- 7. Who are Technical Entrepreneurs? 2
Technical Entrepreneurs are also known as what?
- 8. What do you understand by Active and Passive voice sentences? 2
- 9. What is the use of Sum() function? Give its syntax. 2
- 10. Mention any four techniques that can help you to maintain positive attitude. 2

Answer any 3 out of the given 4 questions (2 x 3 = 6 marks)

11. Write any four commands that are a part of DDL commands. 2
12. What are the two main disadvantages of using a DBMS. 2
13. Write the full forms of the following: 2
a. DEITY b. DISNIC
14. Why database management systems are used in various domains? 2

Answer any 2 out of the given 3 questions (3 x 2 = 6 marks)

15. Write SQL commands for the following on the basis of given table PURCHASE from (a) to (c) 3

TABLE : PURCHASE

CNO	CNAME	CITY	QUANTITY	DOP
C01	Gurpreet	New Delhi	150	2022-06-11
C02	Malika	Hyderabad	10	2022-02-19
C03	Sehar	Dalhousie	100	2021-12-04
C04	Sahib	Chandigarh	50	2021-10-10
C05	Mehak	Chandigarh	15	2021-10-20

- a. Display the customer name in ascending order where the quantity purchased is more than 100.
- b. Display the customer name with city where the name starts from letter 'M'.
- c. Display the records where city is not Chandigarh.
16. Mention the advantages of online reservation / booking system for providers. 3
17. Expand and define WIL. What is the aim of WIL? 3

Answer any 3 out of the given 4 questions (4 x 3 = 12 marks)

18. 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 displays all the tables created in the current database.
- (d) To delete table DEPARTMENT along with the information in it.

19. What are constraints? Give three differences between Primary key and unique key constraints. 4

20. What is the use of the following aggregate functions? 4

- i. COUNT (*)
- ii. SUM (column)
- iii. MIN (column)
- iv. AVG (column)

21. Write any four benefits of online shopping. 4

=====

Name: _____ Sec: _____ Roll No.: _____

CODE: B

BURNPUR RIVERSIDE SCHOOL, BURNPUR
HALF YEARLY EXAMINATION: [2023-2024]
INFORMATION TECHNOLOGY (802)
CLASS – XII

Time: 3 Hrs.

Maximum Marks: 60

General Instructions:

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 - iv. *Marks allotted are mentioned against each question/part.*
7. **SECTION-B: SUBJECTIVE TYPE QUESTIONS(30 MARKS):**
 - i. *This section contains 15 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 5 questions on Employability Skills (1 x 4 = 4 marks)
- i. From which tab, using the Paragraph option, we can align the text of a presentation? 1
- ii. What is a Cell in Calc? 1
- iii. When women take initiative and do business they are called as _____. 1
- a. Ladies Entrepreneurs b. Women Entrepreneurs
c. Girl Power Entrepreneurs d. none
- iv. Identify the type of sentence: 1
- ‘Please don’t give the sweet to the dog’
- a. Declarative Sentences b. Interrogative sentences
c. Imperative Sentences d. none
- v. State whether the following statement is **True** or **False**: 1
- ‘Emotions are the most powerful factor as forms the basis of how we interact with others.’*
2. Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)
- i. In ‘https://’, what does ‘s’ stands for? 1
- a. standard b. standalone c. secure d. none
- ii. Which of the following is a client-side scripts? 1
- a. JavaScript b. HTML c. Both (a) & (b) d. none
- 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
- a. E-Commerce b. Government Sector
c. Private Sector d. none
- iv. The ____ command is used to retrieve information from a database. 1
- a. INSERT b. CREATE c. ALTER d. SELECT
- v. What do you understand by Degree of a relation? 1
- vi. What is the full form of DDL? 1

3.

Answer any 6 out of the given 7 questions
(1 x 6 = 6 marks)

- i. In the table **product**, Sita doesn't want repeated values in column **profit**. 1
Rewrite the correct command.
select profit from product;
- ii. Which function finds the sum of all the values for a selected attribute which has numeric data type? 1
- iii. Which SQL keyword is used to sort the result? 1
- iv. Name the domain where database applications may be used for storing information such as student details, marks and result. 1
a. Education b. Hospitals c. E-commerce d. none
- v. Never share _____ with anyone while doing any online transaction. 1
a. OTP b. PIN c. Both (a) & (b) d. none
- vi. CET stands for _____. 1
- vii. E-governance services include many projects. Name any two. 1

4.

Answer any 5 out of the given 6 questions
(1 x 5 = 5 marks)

- i. Name the domain where database applications may be used for storing information regarding communication networks, customers, call records, and their bills. 1
a. E-Commerce b. Government Sector
c. Telecommunications d. none
- ii. Expand NeGP. 1
- iii. What is the full form of SQL? 1
- iv. What do you understand by Attribute in a Database System? 1
- v. NeGP was formulated in _____. 1
a. 2004 b. 2005 c. 2006 d. none
- vi. What is the full form of RDBMS? 1

5. **Answer any 5 out of the given 6 questions**
(1 x 5 = 5 marks)

- i. Expand NeGD. 1
- ii. Name the domain where database applications may be used for maintaining information regarding patients such as their personal details, health records, hospitalization date. 1
- iii. Which command is used to delete records from a table? 1
- iv. Which constraint specifies that primary key of a relation cannot have null value. 1
- v. Differentiate between Primary key constraint and Unique constraint. 1
- vi. Write down the Indian e-governance portal. 1

6. **Answer any 5 out of the given 6 questions**
(1 x 5 = 5 marks)

- i. What is the function of the site *udacity.org*? 1
- ii. What does MOOCs stands for? 1
- iii. Name the domain where database applications may be used for storing details of electoral roll, all types of taxes, criminal records. 1
 - a. E-Commerce
 - b. Government Sector
 - c. Private Sector
 - d. none
- iv. If a user has not entered a value for an attribute, then which value that is specified while creating the table is used? 1
- v. Which command is used to see a list of tables present in the current database? 1
- vi. What is the use of the Modulo operator? 1

SECTION-B: SUBJECTIVE TYPE QUESTIONS

**Answer any 3 out of the given 4 questions on
Employability Skills (2 x 3 = 6 marks)**

Answer each question in 20 – 30 words.

-
- 7. Mention four qualities that motivate an entrepreneur. 2
 - 8. Convert the following sentences written in active voice into passive voice: 2

- a. I bought a Hyundai car.
 - b. Reema can do skydiving.
9. What are arguments in Calc? Also, write down the syntax of a function. 2
10. What is the use of SMART model? Expand SMART. 2

Answer any 3 out of the given 4 questions (2 x 3 = 6 marks)

11. Write the four commands that are a part of DML commands. 2
12. Name the various types of users of DBMS. 2
13. Give any two examples of web-based applications. 2
14. Why database management systems are used in various domains? 2

Answer any 2 out of the given 3 questions (3 x 2 = 6 marks)

15. Write outputs for SQL queries (a) to (c) which are based on the given table PURCHASE. 3

TABLE : PURCHASE

CNO	CNAME	CITY	QUANTITY	DOP
C01	Gurpreet	New Delhi	150	2022-06-11
C02	Malika	Hyderabad	10	2022-02-19
C03	Sehar	Dalhousie	100	2021-12-04
C04	Sahib	Chandigarh	50	2021-10-10
C05	Mehak	Chandigarh	15	2021-10-20

- a. SELECT CNAME FROM PURCHASE
WHERE CNAME LIKE “%eh%”;
 - b. SELECT CNAME, CITY FROM PURCHASE
WHERE NOT (CITY = “Hyderabad”)
AND QUANTITY < 20;
 - c. SELECT CNAME FROM PURCHASE
ORDER BY CNAME DESC;
16. For making a web application operational, what are the three things needed? Also, mention their functions. 3
17. Expand and define WIL. What is the aim of WIL? 3

Answer any 3 out of the given 4 questions (4 x 3 = 12 marks)

18. Write the Mysql commands for the following queries :- 4

STUDENT

SROLLNO	SUBJECT
34	MATHS
22	IT
12	IT
15	MATHS

TEACHER

TID	TADDRESS	TSUB	FEES
102	ASN	MATHS	2500
104	DGP	IT	2300

- (a) To find all the roll numbers, fees for teacher id as 102.
- (b) To find the total fees amount collected from each subject.
- (c) To displays all the tables created in the current database.
- (d) To delete table TEACHER along with the information in it.

19. Define the following terms: 4

- a) Foreign Key
- b) Domain
- c) Record
- d) Field

20. What is the use of the following aggregate functions? 4

- i. COUNT (column)
- ii. SUM (column)
- iii. MAX (column)
- iv. AVG (column)

21. Write four characteristics of a project. 4

=====