DELHI PUBLIC SCHOOL, BHILAI

Name : .....

Roll No. : .....

Date : 23.09.2024

Class : XI

MIDTERM EXAMINATION 2024

SUBJECT : ENGLISH CORE

Time : 3 Hrs.

M.M. : 80

General Instructions:

1. The paper is divided into 3 sections: A, B and C. All the sections are compulsory.
2. Specific instructions, wherever necessary, are given along with the questions. Follow them strictly.

Section – A : Reading Skills (26 Marks)

Q1. Read the following passage carefully: **(10)**

I. As a form of expression, graffiti is famously characterized by outlaw values; the creation and display of graffiti countered societal rules and was considered by some as vandalism. Not only was it symbolic of rebel values but was also linked to destruction of property. These links between graffiti culture and rebellion were age-old and some say, were popularized by hip-hop culture.

II. Imagine waking up one morning, to see your walls smeared with black paint- names, symbols, messages. The most interesting bit is that these wall artists were never caught red-handed. It was all done stealthily. It was almost as though people were marking their territory using painted symbols and slogans. The change was creeping in. Mobile numbers and captivating phrases gradually became marketing tools for free advertising. Catchy phrases tickled the curiosity and calls were made to those numbers.

III. Over a period of time, there was a shift in perception. Blank walls beckoned invitingly and artists saw whitewashed walls as an opportunity to display their work in free and open settings. The city became one large canvas; the illegal 'gang activity' became an art form on display in walking galleries. Graffiti was gradually being replaced and the stigma of illegality was being dropped. There was a move to embrace rather than condemn.

IV. The colours, shapes, and subjects became cultural themes. What was once rebellious expression is artistic talent at its vibrant best, rich in images of plants, animals and unspoiled landscapes. The painted walls encouraged by residents and governments have created their own ecosystem – a reconciliation of nature with man-made forces.

V. The monotony and uniformity of urban life is today infused with human vitality and beauty. Cities speak proudly about the painted walls and clamour to be the first to preserve culture and history through these. Graphic displays of social awareness issues effectively and economically reach out to the common man. Silent art speaks volumes. Be it hygiene, conservation, education, or rights and duties - the message is conveyed in an animated, colourful manner without being an imposition.

Based on your understanding of the passage, answer the questions given below: **(10x1=10)**

(i) Complete the sentence by choosing an appropriate option.
Graffiti in the earlier years was _____
(A) considered a valuable legacy. (B) done by prominent artists.
(C) an expression of rebellion. (D) supported by society.

(ii) Comment on the writer's statement, 'It was all done stealthily'.

(iii) List two reasons why graffiti was not popular among people.

(iv) Select the word from para 2 of the passage that conveys the opposite of 'boring'.

(v) The writer would agree with all of the following EXCEPT:
(A) Graffiti art was a paid activity.
(B) Wall art was an age-old tradition.
(C) Graffiti became popular as a marketing tool.
(D) People were curious by what was scribbled on walls.

(vi) Which word from the following most nearly means 'reconciliation' with reference to the given context? (para 4)
(A) cease fire (B) standoff (C) alienation (D) reunion

(vii) Why does the writer say that the stigma of 'illegality' was dropped?

(viii) Complete the following sentence with reference to the passage:
The city became one large canvas because _____.

(ix) The passage states a shift in attitude. Identify the best option that indicates this shift.
(A) rejection to dismissal (B) confusion to clarity
(C) imposition to acceptance (D) dislike to acceptance

(x) List two ways in which wall art is beneficial to society.

Contd...2

Q2. Read the following passage carefully: **(8)**

I. A recent survey conducted by an independent research firm sought to measure levels of happiness among youth aged 16-24 years in seven countries. The findings revealed some intriguing insights into what makes today's youth happiest, as well as which factors influence their overall well-being. In India, an overwhelming majority of the youth reported feeling satisfied with their lives, with 87% rating of their overall happiness as 'high' or 'very high.' Financial security was identified as the primary source of happiness for 66%, followed by family support 89%, having a purpose in life 50%, and work or studies 40%. Unfortunately, 65% reported feeling stress related to academic performance or workload, while 25% reported feeling lonely. These figures point to a need for increased mental health support among India's youth.

II. These surveys also revealed that family support is an important source of contentment for young people across countries. In Europe, 59% of respondents said that their families were a major source of happiness; in France this figure was 67%, and 63% in Germany. In North America, 64% rated family as an important factor for well-being in Canada, while 61% did so in the United States. Similarly, 89% of survey respondents in India named family support as a major contributor to their overall contentment level.

III. It is clear that stress has a significant impact on the happiness of today's youth. The findings suggest that young people need better resources to manage their mental health and well-being. This may include access to counselling services, mindfulness activities and support groups to help them cope with challenging circumstances. It is also important to provide financial support so as to reduce some of the economic pressures.

IV. In India, 65% of youth surveyed reported feeling anxious about their academic performance or workload, while 25% felt lonely. These figures are especially significant given how important family support is for young people's overall contentment.

Answer the following questions, based on the above passage:

(i) What are the two findings that the survey mentioned in paragraph 1 reveals? Answer in about 40 words. (2)

(ii) Elaborate giving data, the statement, 'Stress has a significant impact on the happiness of today's youth'. (1)

(iii) Which of the following factors with reference to the given passage, does **not** play a substantial role in the wellbeing of Indian youth? (1)

(A) Family support and strong times. (B) Purposeful life and work
(C) Books and literature. (D) Economic stability

(iv) State whether True or False, with reference to the given passage:
It is not necessary to provide financial support to the youth as only academic performance plays on upper hand in deciding the stress level. (1)

(v) What are the top choices which are of maximum value to today's youth? (1)

I. Collectivism
II. Social media
III. Individualistic society
IV. Family ties

Options:
(A) I and II (B) II and III (C) I and IV (D) III and IV

(v) The mental health of today's youth can be managed by resources like _____and _____. (1)

(vi) Write the following sources that provide happiness to today's youth in descending order. (1)
(A) purposefulness (B) financial status (C) family support (D) stress

Q3. Read the following passage carefully: **(8)**

It's a headache having a headache. Almost all of us have suffered from headaches at some time or the other. The most important step to cope with headaches is to identify the type of headache one is suffering from.

A headache is usually caused due to spinal misalignment of the head, due to poor posture. Sleeping on the stomach with the head turned to one side and bending over positions for a long time makes it worse. Factors causing headaches are not fully understood but it is known that a shift in the level of body hormones and chemicals, certain food and drinks and environmental stress can trigger them.

Contd...3

In a headache, the pain originates not from the brain but from irritating nerves of muscles, blood vessels and bones. These send pain signals to the brain which then judges the degree of distress and relays it at appropriate sites. The pain may sometimes be referred to sites other than the problem areas. This is known as referred pain and occurs due to sensation overload. Thus, though most headaches start at the base of the skull, the referred pain is felt typically behind the eyes.

If headaches trouble you often, visit the doctor, who will take a full health history relating to diet, lifestyle stresses, the type of headache, triggering factors and relief measures. You may be asked to keep a 'headache diary' which tells you to list the time the headache started, when it ended, emotional, environmental and food and drink factors which may have contributed to it.

Immediate relief can be obtained by certain medications and a few simple self-care techniques. Using ice against the pain site, covering eyes with dark glasses, drinking plenty of fluids and lying down in a dark and quiet room, provide relief in a migraine attack. Pain killers should be taken with caution and under medical supervision, if used for long periods and large quantities they can cause many side effects.

(a) On the basis of your understanding of the above passage, make notes on it using headings and sub-headings. Use recognizable abbreviations (wherever necessary – minimum 4) and a format you consider suitable. Also supply an appropriate title to it. **(5)**

(b) Write a summary of the passage in about 50 words. **(3)**

Section – B : Grammar and Creative Writing Skills (23 Marks)

Q4. Attempt all the questions as per the instructions given: **(7)**

(A) Rearrange the following words and phrases into meaningful sentences. The first one has been done as an example. **(2)**

e.g. following discipline / the pinnacles / by / a person/ of glory / reach / can
Ans. A person can reach the pinnacles of glory by following discipline.

(i) and at the / self-confidence / it acts as / builds / same time / a restraint
(ii) balances the personality / and inculcates / good work ethics / moreover, it

(B) Which option displays the correct change of the following to reported speech? **(2)**

(i) Sameer said, "Ramesh, can you help me with my homework?

(A) Sameer asked Ramesh if he could help him with his homework.
(B) Sameer ordered Ramesh to help him with his homework.
(C) Sameer asked Ramesh if he can help him with her homework.
(D) Sameer asked Ramesh if he can help him with his homework?

(II) 'I'll do it tomorrow," he promised.

(A) He promised that I will do it tomorrow.
(B) He promised that he would do it the next day.
(C) He promised that he will do that the next day.
(D) He promised that he would do it tomorrow.

(C) Fill the blanks with the appropriate option from those in the brackets. **(3)**

Time travel (i)_____ (ought to /should/ could) become a reality in the near future, (ii) _____ (allows/ allowed/ allowing) human beings to experience the thrill of travelling back or forward in time. However, (iii) _____ (most/ many/ much) challenges must be overcome, such as ensuring safety and affordability for all potential time-travellers.

Q5. Attempt <u>any one</u> of the two advertisements, (A) and (B) in about 50 word: **(3)**

(A) You are Karan / Karuna, a leading lawyer practicing in Surat. You want to buy an independent house at City Light Road to be used as office-cum-residence. Draft a suitable advertisement for the same, to be published in the classified columns of a local daily.

(B) You are Sameera/Sameer, the owner of Pink Power, a café run only by women. You are looking for an interior designer to design the interiors of the café. Draft a suitable advertisement for the same, to be published in the classified columns of a national daily.

Q6. Attempt <u>any one</u> of the two posters, (A)and (B) in about 50 words: **(3)**

(A) Fast food counters are mushrooming in every town and city. Though fast food is fast to cook and fast to eat, it also is fast to kill. Make a poster on the topic 'Fast Food- A Great Health Hazard'. You are Romi/Ronit, the school nutritionist of Bloomsbury School, Raipur.

(B) The Drama Club of KMN International School is staging the popular Shakespearean tragedy, Julius Caesar, the proceeds of which will be used for a charitable cause. Design a visually appealing poster for the same. Include all relevant details. You are the Ronit/Ramya, the secretary of the Drama Club.

Contd...4

Q7. Attempt <u>any one</u> of the two speeches, (A)and (B) in about 120-150 words: **(5marks)**

(A) The sports field is said to be a minified of life. Whatever we experience or learn here serves as an invaluable experience to us for life. Using the cues given below, along with your own ideas,write a speech to be delivered in the morning assembly on **'More Lessons are Learnt in the Sports Field than in the Classroom'**. You are Sumanth/ Sumedha of Aryan Public School, Mathura.

- Discipline
- Cooperation, teamwork, leadership
- No caste or religious prejudice
- Tolerance and understanding
- Healthy life

(B) Failure and setbacks are a part of life. It helps us to become aware of our shortcomings and motivates us to improve upon them. Using the cues given below, along with your own ideas, write a speech to be delivered in the morning assembly on the topic **'Failure is the Stepping Stone to Success'**. You are Shagufta/Santosh of Vasant Vihar School, Gurugram.

- Success and failure – go hand in hand
- success brings joy – loss brings sadness, bitter lessons
- motivates hard work – perseverance
- many great men – failed first- successful later
- because of loss – appreciate winning more

Q8. Attempt <u>any one</u> of the two debates, (A)and (B) in about 120-150 words: **(5marks)**

(A) 'Space Exploration is much too expensive, and the money should be spent on more important things'.

Write a debate **'FOR'** or **'AGAINST'** the motion using the cues given, along with your own ideas. You are Naveen/Navya of class 11.

• International cooperation	• Too costly
• Biological research benefits entire human race	• Environmental waste (space junk)
• Human achievement	• Problems on Earth need to be fixed first
• Future colonization and tourism.	• Too dangerous

(B) 'Online Teaching Can Never Replace Classroom Teaching'

Write a debate **'FOR'** or **'AGAINST'** the motion using the cues given, along with your own ideas. You are Anil/Avani of class 11.

• social interaction	• flexibility and accessibility
• emotional support	• improved technical skills
• real world experiences	• reduced costs
• face to face interaction	• immediate feedback
• adaptability	• better time management

Section – C : 31 Marks (Literature)

Q9. Answer <u>any one</u> of the two extracts (A) and (B) given below: **(3)**

(A) The whole tree trembles and thrills.
It is the engine of her family.
She stokes it full, then flirts out to a branch-end
Showing her barred face identity mask.

(i) Which poetic device has been used in the second line of the extract?
(A) simile (B) metaphor (C) personification (D) alliteration

(ii) The phrase 'her barred face identity mask' means
(A) the bird's face becomes her identity and symbol of recognition
(B) the bird had a striped body
(C) the bird could hide her identity and face in the tree
(D) the bird's striped face makes its easily identifiable.

(iii) Explain the line 'the whole tree trembles and thrills'.

Contd...5

(B) All three stood still to smile through their hair
At the uncle with the camera. A sweet face,
My mother's, that was before I was born.
And the sea, which appears to have changed less,
Washed their terribly transient feet.

(i) Identify the poetic device used in 'transient feet'.
(A) pun (B) oxymoron (C) transferred epithet (D) metaphor

(ii) What do the words 'smile through their hair' suggest?
(A) The girls were having fun.
(B) The faces of the girls were covered with their hair.
(C) It was a windy day.
(D) All of the above.

(iii) Explain the contrast that has been drawn between the sea and human life.

Q10. Answer <u>any one</u> of the two extracts (A) and (B) given below: (3)

(A) In his defence, Carter really had little choice. If he hadn't cut the mummy free, thieves most certainly would have circumvented the guards and ripped it apart to remove the gold. In Tut's time, the royals were fabulously wealthy, and they thought, – or hoped – they could take their riches with them.

(i) Who was Carter?
(A) Secretary General of Egypt's Supreme Council of Antiquities
(B) A British archaeologist
(C) The author of the lesson 'Discovering Tut: the Saga Continues'
(D) A Pharoah

(ii) Which of the following is not a meaning of the word 'circumvented'?
(A) dodge (B) evade (C) bypass (D) follow

(iii) Why was King Tut's tomb buried with gold and treasure?

(B) "It's out there in front of us", they chorused, "as big as a battleship."
I rushed on the deck and gazed with relief at the stark outline of Ile Amsterdam. It was only a bleak piece of volcanic rock, with little vegetation - the most beautiful island in the world!

(i) The captain calls it 'the most beautiful island in the world' because
(A) it actually was the most beautiful island in the world.
(B) it was made of volcanic rocks.
(C) it symbolised hope, safety and survival for the crew.
(D) although its vegetation was sparse, it was beautiful.

(ii) Pick the word from the extract which means 'to say something together'.

(iii) Where was Ile Amsterdam?

Q11. Answer <u>any one</u> of the two extracts (A) and (B) given below: (4)

(A) "Won't you sit down?' asked the girl. She held open the door of the living room and I went inside past her. I stopped, horrified. I was in a room I knew and did not know. I found myself in the midst of things I did want to see again but which oppressed me in the strange atmosphere. Or because of the tasteless way everything was arranged, because of the ugly furniture or the muggy smell that hung there, I don't know; but I scarcely dared to look around me.

(i) What can you infer about the narrator's feelings upon entering the living room?
(A) She was impressed by the tasteful arrangement of furniture.
(B) She was familiar with the room and felt comfortable.
(C) She experienced a mix of recognition and discomfort.
(D) She found everything in the room to be highly attractive.

(ii) What is the meaning of the word 'muggy 'as used in the extract?
(A) comfortable and warm (B) damp and humid
(C) brightly lit (D) fragrant and pleasant

(iii) Whose house was the narrator at? And why?

Contd...6

(B) One day back there in the good old days when I was nine and the world was full of every imaginable kind of magnificence, and life was still a delightful and mysterious dream, my cousin Mourad, who was considered crazy by everybody who knew him except me, came to my house at four in the morning and woke me up tapping on the window of my room. I jumped out of bed and looked out of the window. I couldn't believe what I saw.

(i) The narrator describes the time 'when the world was full of every imaginable kind of magnificence' - What can you infer about how the narrator views their past ?
(A) The narrator felt that their childhood was dull and uneventful.
(B) The narrator romanticizes and idealizes their past.
(C) The narrator regrets the choices they made as a child.
(D) The narrator was often disappointed during their childhood.

(ii) What is the meaning of the word 'crazy' as used in the sentence: "Mourad, who was considered crazy by everybody who knew him except me."
(A) highly intelligent (B) socially popular
(C) unpredictable and unconventional (D) extremely serious

(iii) The speaker in the above extract is
(A) Arak (B) Uncle Khosrove (C) Aram (D) John Byro

(iv) Why do you think Mourad chose to visit the narrator's house at such an early hour and wake him up?

Q12. Answer the following questions, in about 40 -50 words. **(2x3=6)**

(A) Answer <u>any one</u> of the following two questions:

(i) In what state is the 'Laburnum Top' before the mother bird's visit? How is it transformed after her visit?

(ii) How does the poet Shirley Toulson contrast the two pasts: of her mother and her own in the poem 'A Photograph'?

(B) Answer <u>any one</u> of the following two questions:

(i) What changes did King Tut bring about during his reign?

(ii) What was the reaction of the children when the disaster struck their ship 'The Wavewalker'?

Q13. Answer <u>any one</u> of the following two questions in about 40-50 words. **(3)**

(i) What traits of the Garoghlanian family are highlighted in the story 'The Summer of the Beautiful White Horse'?

(ii) What was the address that Mrs. S had asked her daughter to remember? Why did the narrator of the story want to forget that address?

Q14. Answer <u>any one</u> of the following two questions in about 120-150 words. **(6marks)**

(A) In the words of the captain of the Wavewalker, the crew was cheerful and optimistic under direst stress and was able to bring the ship out of crisis. As Helen Keller, the American author said, 'Optimism is the faith that leads to achievement; nothing can be done without hope'. Imagine you have to deliver **a speech** in the morning assembly on how optimism is definitely preferable to pessimism.

You may begin like this :
Dear Friends
The lesson 'We're Not Afraid to Die ... if We Can All Be Together' has a message.....

(B) 'The Portrait of a Lady' partly dwells on the loneliness and insecurity of the old age and effort of the old to fit in. Driven by such thoughts, while reading the lesson, you think about the life of many old men and women in India who lead a lonesome existence at the end of their life. Write a speech to be delivered in the morning assembly on this issue.

You may begin like this :
Dear Friends
The lesson 'The Portrait of a Lady' highlights various aspects of old age .....

Q15. Answer <u>any one</u> of the following two questions in about 120-150 words. **(6)**

(A) The stories 'The Summer of the Beautiful White Horse' and 'The Address' are about taking possession of things which don't belong to the person. Would you say that the stories are similar? How have the authors dealt with the issue? Write **a paragraph** expressing your views.

You may begin like this-
The stories 'The Summer of the Beautiful White Horse' and 'The Address' have a similar theme.....

(B) The story 'The Address' is an autobiographical note at one level, while at another, it portrays how futile war is. As Ernest Hemmingway said, 'Never think that war, no matter how necessary, nor how justified, is not a crime'. Write **a paragraph** describing your views about war and whether you believe it is fruitful.

You may begin like this-
The lesson 'The Address' powerfully depicts the devasting impact war can have.....

DELHI PUBLIC SCHOOL, BHILAI

Name : .....
Roll No. : .....

Date : 17.09.2024
Class : XI

MIDTERM EXAMINATION 2024
SUBJECT : PHYSICS (SET – A)

Time : 3 Hrs.
M.M. : 70

General Instructions :

1. The question paper consists of 33 questions. All are compulsory.
2. In **Section A – Questions No. 1 to 16** are **MCQ's**, each carries 1 mark.
3. In **Section B – Questions No. 17 to 21** are **very short type** questions, each carries 2 marks.
4. In **Section C – Questions No. 22 to 28** are **short answer type** questions, each carries 3 marks.
5. In **Section D – Questions No. 29 and 30** are **case study based** questions, each carries 4 marks.
6. In **Section E – Questions No. 30 to 33** are **long answer type** questions, each carries 5 marks.
7. There is no overall choice. However, an internal choice has been provided in few questions in all sections except section 'A'.
8. Use of calculator is not allowed.

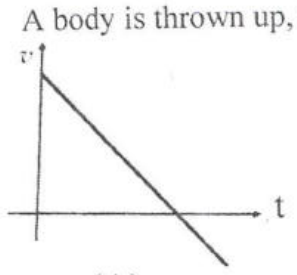
Section – A

01. The dimensions of Planck's constant and angular momentum respectively.
(A) $ML\,T^{-1}$ and ML^2T^{-2} (B) MLT^{-1} and ML^2T^{-1}
(C) ML^2T^{-1} and ML^2T^{-1} (D) ML^2T^{-1} and MLT^{-1} (1)

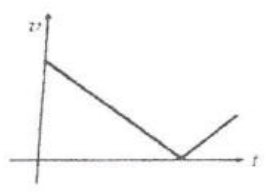
02. The number 0.004 has significant figures equal to
(A) 1 (B) 2 (C) 3 (D) 4 (1)

03. A ball is released from the top of a tower of height h metre. It takes T second to reach the ground. What is the position of the ball in T/3 second from the ground?
(A) $\frac{17h}{18}$ (B) $\frac{8h}{9}$ (C) $\frac{7h}{9}$ (D) $\frac{h}{9}$ (1)

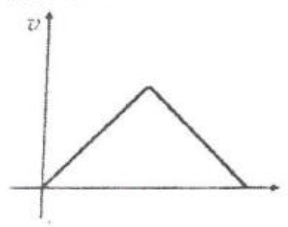
04. A body is thrown up, then the correct $v - t$ graph will be :



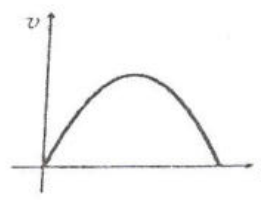
(A)



(B)



(C)



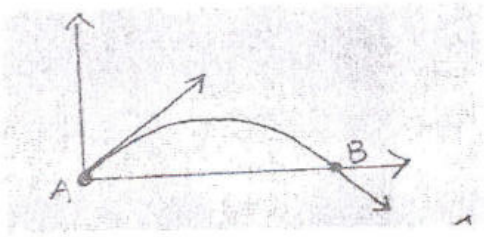
(D (1)

05. If two vectors $\vec{A} = 2\hat{\imath} + 3\hat{\jmath} + 4\hat{k}$ and $\vec{B} = \hat{\imath} + 2\hat{\jmath} - n\hat{k}$ are perpendicular, then the value of n is
(A) 1 (B) 2 (C) 3 (D) 4 (1)

06. The magnitude of resultant of two forces is equal to the magnitude of either force. The angle between the forces is
(A) 45° (B) 60° (C) 120° (D) 180° (1)

07. Two bodies are thrown at angle of 45° and 60° with the horizontal such that maximum height attained is same. The ratio of velocities at projection is
(A) $\frac{3}{2}$ (B) $\sqrt{\frac{3}{2}}$ (C) $\frac{2}{3}$ (D) $\sqrt{\frac{2}{3}}$ (1)

08. The velocity of a projectile at the initial point A is $(2\hat{\imath} + 3\hat{\jmath})\ m/s$. The velocity at the point B is



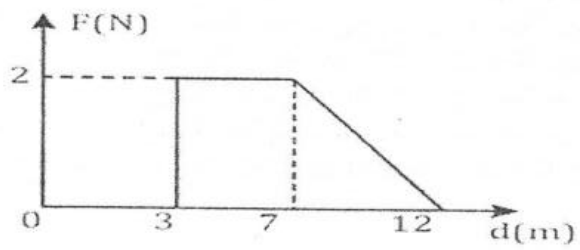
(A) $-2\hat{\imath} + 3\hat{\jmath}$ (B) $2\hat{\imath} - 3\hat{\jmath}$ (C) $2\hat{\imath} + 3\hat{\jmath}$ (D) $-2\hat{\imath} - 3\hat{\jmath}$ (1)

09. A bomb at rest explodes into three parts of equal masses. The momentum of the two parts are $-2p\hat{\imath}$ and $P\hat{\jmath}$. The momentum of the third part will have a magnitude of,
(A) $P\sqrt{5}$ (B) $\sqrt{3P}$ (C) P (D) zero (1)

Contd...2

10. During pedaling of a bicycle, the force of friction exerted by the ground on the two wheels is such that it acts.
(A) in the backward direction on both the wheels.
(B) in the forward direction on both the wheels.
(C) in the backward direction on the front wheel and in the forward direction on the rear wheel.
(D) in the forward direction on the front wheel and in the backward direction on the rear wheel. (1)

11. The Force 'F' acting on a particle displaces it from 3 m to 12 m as shown in the graph. The work done is :



(A) 18 J (B) 21 J (C) 26 J (D) 13 J (1)

12. A mass is attached to a thin wire and whirled in a vertical circle. The wire is most likely to break when,
(A) the mass is at the highest point (B) the wire is horizontal
(C) the mass is at the lowest point (D) inclined at angle of 60° from verticle (1)

For the 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 (A) and Reason (R) are true and Reason (R) is correct explanation for Assertion (A).
(B) If both Assertion (A) and Reason (R) are true and Reason (R) is not the correct explanation for Assertion (A).
(C) If Assertion (A) is true but Reason (R) is false.
(D) If both Assertion (A) and Reason (R) are false.

13. **Assertion (A) :** Mechanical energy of a body under the action of conservative force remains conserved.
Reason (R) : Force of friction is a non-conservative force. (1)

14. **Assertion (A) :** A body is momentarily at rest, still some force is acting on it at that time.
Reason (R) : When a force acts on a body, it may not have some acceleration. (1)

15. **Assertion (A) :** If a body moving in a circular path has a constant speed, then there is no force acting on it.
Reason (R) : Acceleration vector in a uniform circular motion is a constant vector. (1)

16. **Assertion (A) :** The magnitude of average velocity is equal to average speed, if velocity is constant.
Reason (R) : There is no change in the direction of motion if velocity is constant. (1)

Section – B

17. The displacement equation of a wave is represented by $Y = A\ sin\ (\omega t - kx)$. Where x is distance and 't' is time. 'A' represents the amplitude of the wave. Write the dimensional formula for
(i) $\omega\ and$ (ii) k. (2)

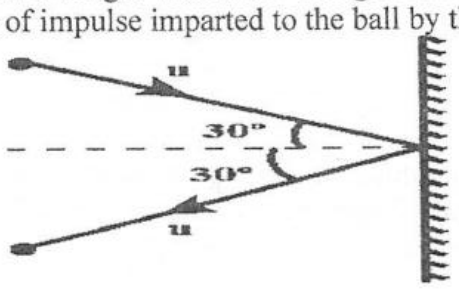
18. The position of an object moving along $x\ axis$ is given by $x = a + bt^2$, where $a = 8.5\ m$, $b = 2.5\ ms^{-2}$ and t is measured in second. What is the velocity at t=2 second ? What is the average velocity between $t = 2s$ and $t = 4s$?

OR

The displacement of a particle moving along $x\ axis$ is given by $x = 18t + 5t^2$, calculate
(i) the instantaneous velocity
(ii) average velocity between $t = 2s$ and $t = 3s$
(iii) instantaneous acceleration (2)

19. (a) State Triangle law of vector addition.
(b) Define zero vector. Give one example of it. (2)

20. A rigid ball of mass m strikes a rigid wall at 30° and get reflected without loss of speed as shown in the figure. Find the value of impulse imparted to the ball by the wall.



(2)

21. What do you mean by conservative forces? Give example. Write any two properties of conservative forces. (2)

Contd...3

Section – C

22. A Plant moves around the sun in nearly circular orbit. It's period of revolution T depends upon radius of the orbit 'r', mass of the sun 'M" and gravitational Constant 'G'. Show by the method of dimension that $T^2 \propto r^3$. (3)

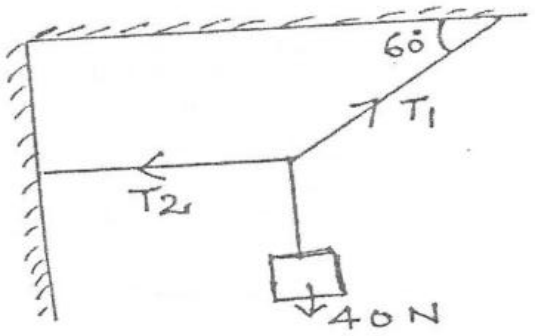
23. Using the method of dimensional analysis, find the value of 100 J on a system which has 20 cm, 250 g and half minute as fundamental units of length mass and time. (3)

24. Draw the velocity – time graph for uniformly accelerated motion. Using the graph, derive the following equation :
(i) $v = u + at$ (ii) $s = ut + {}^1/_2\, at^2$, where the symbols have their usual meaning. (3)

25. A player throws a ball upward with an initial speed of 29.4 m/s.
(i) What are the velocity and acceleration of the ball at the highest point?
(ii) To what height does the ball rise and after how long does the ball return to the player's hand ?
$(take\ g = 9.8m/s^2)$ (3)

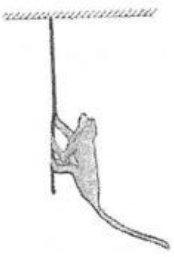
26. (a) Define unit vector.
(b) Find a unit vector perpendicular to the vectors $\vec{A} = 4\hat{\imath} - \hat{\jmath} + 3\hat{k}$ and $\vec{B} = -2\hat{\imath} + \hat{\jmath} - 2\hat{k}$ (3)

27. (a) What are concurrent forces ?
(b) A body of weight 40N is suspended with the help of strings as shown in the figure. Find the tensions T_1 and T_2.



OR

A monkey of mass 40 kg climbs on a rope which can withstand the maximum tension of 600 N. In which of the following cases will the rope break, if the monkey



(i) Climbs up with an acceleration of $6m/s^2$.
(ii) Climbs down with an acceleration of $4m/s^2$.
(iii) Climbs up with uniform speed of $5m/s$.
Explain your answer with the calculation in all the cases.
$(take\ g = 10\ ms^2. Ignore\ the\ mass\ of\ the\ rope)$. (3)

28. State and prove work. Energy theorem for variable force. (3)

Section – D

29. **CASE STUDY : I** (Read the paragraph and answer the following)

According to Newton's 2nd law of motion, the rate of change of linear momentum of a body is directly proportional to the external force applied on the body. The total linear momentum of an isolated system is conserved. The mutual forces of each pair of particles are equal in magnitude but opposite in direction and hence momentum changes cancel in pairs. When large force act on a short interval of time cause an impulse that can be measured by the change in the momentum of the body.

(i) A cricket ball of mass 150 g has its initial velocity $\vec{u} = (3\hat{\imath} + 4\hat{\jmath})m/s$ and final velocity $\vec{v} = -(3\,\hat{\imath} + 4\hat{\jmath})ms^{-1}$. After hit by a bat, the change in the momentum in $kg\ ms^{-1}$ is
(A) zero (B) $-(0.45\hat{\imath} + 0.6\hat{\jmath})$ (C) $-(0.9\hat{\imath} + 1.2\hat{\jmath})$ (D) $-5\,(\hat{\imath} + \hat{\jmath})$

(ii) The direction of the linear momentum of a body is
(A) perpendicular to the velocity of the body. (B) in the direction of velocity of the body.
(C) opposite to the direction of velocity of the body. (D) along any direction.

(iii) An average force of 2N acts on a body for 10 milliseconds. The change in the momentum is,
(A) $20kgms^{-1}$ (B) $2 \times 10^{-3}kgms^{-1}$ (C) $2 \times 10^{-2}kgms^{-1}$ (D) $0.2\ kgms^{-1}$

(iv) (a) Conservation of momentum in a collision between the bodies can be understood from :
(A) Conservation of Energy (B) Newton's first law only
(C) Newton's second law only (D) Both Newton's second and third laws.

OR

(b) When a ball is projected in the air at an angle θ to the ground, Neglecting air resistance, the momentum of the ball
(A) is conserved in vertical direction.
(B) is conserved in horizontal direction.
(C) is not conserved either in vertical or in horizontal direction.
(D) is conserved in both horizontal and vertical direction. (4)

Contd...4

30. **CASE STUDY : II**

Work is said to be done by a force, if it displaces the body from its position, in the direction of the force. When the speed of the body changes of the application of a force, then work done by the force is equal to the change in the kinetic energy of the body. Mechanical energy of a body is the sum of its kinetic energy and potential energy. This mechanical energy of a system is conserved when conservative force acts on it. The rate at which the work done is called power.

(i) The force of 2N acts on the stone and as a result, the stone moves in a circular path of radius 2 m. The work done is

(A) $4J$ (B) $-4J$ (C) $1J$ (D) $zero$

(ii) Work done by a force on a body is equal to

(A) area under force and velocity graph. (B) area under force and displacement graph.
(C) slope of force – velocity graph. (D) slope of force – displacement graph.

(iii) The speed of a body of mass 2 kg changes from 10 m/s to 5 m/s on the application of force on the body. The work done by the force is,

(A) $75\,J$ (B) $-75J$ (C) $100J$ (D) $-100J$

(iv) (a) A boy lifts 20 kg body to a height of 2 m in 2 s. The power of the boy is

(A) 786 W (B) 296 W (C) 196 W (D) 80 W

OR

(b) An engine of an aircraft develops a forward force of $2 \times 10^5 N$ and the aircraft flies at 200 m/s. The power of the engine is,

(A) 400 W (B) $4 \times 10^4 W$ (C) $4 \times 10^7 W$ (D) $4 \times 10^{10} W$ (4)

Section – E

31. (a) A projectile is fired with a velocity 'u' making an angle θ with the horizontal. Show that its trajectory is a parabola.

(b) A body is projected such that its kinetic energy at the top is $\frac{3}{4}th$ of its initial kinetic energy. What is the angle of projection with the horizontal.

OR

(a) Define centripetal acceleration. Derive on expression for the centripetal acceleration of a particle moving with uniform speed 'v' along a circular path of radius 'r'. Mention its direction.

(b) Find the magnitude of the centripetal acceleration of a particle on the tip of a fan blade, 0.15 metre radius rotating at 1200 rev/minute. (3+2=5)

32. (a) What is meant by Banking of roads? Derive an expression for optimum velocity with which a car can negotiate a curved road banked at an angle θ . The coefficient of friction between the wheels and the road is μ .

(b) A bend in a level road has a radius of 100 metre. Find the maximum speed, which a car turning this bend may have without skidding, if the coefficient of friction between the tyres and road is 0.8 $(g = 9.8\,m/s^2)$

OR

(a) Define angle of friction and angle of repose. Using proper diagram, establish the relation between them.

(b) A man of mass 65 kg is standing on a conveyor belt which is accelerating with $1\,ms^{-2}$. If the coefficient of friction between the man's shoes and the belt is 0.2, up to what acceleration of the belt can the man continue to be stationary relative to the belt ? $(g = 10\,m/s^2)$ (3+2=5)

33. (a) Show that in case of one dimensional elastic collision of two bodies, the relative velocity of separation after the collision is equal to the relative velocity of approach before collision.

(b) Write any two differences between elastic and inelastic collision.

OR

(a) Show that the elastic force of a spring is a conservative force. Hence obtain the expression for the potential energy of an elastic stretched string.

(b) Plot a displacement (x) Vs. Energy (E) graph for a block attached to a spring, which obeys Hooke's Law. Mention the total energy in the graph. (3+2=5)

SET – B

DELHI PUBLIC SCHOOL, BHILAI

Name : .....

Roll No. : .....

Date : 19.09.2024

MIDTERM EXAMINATION 2024

Time : 3 Hrs.

Class : XI

SUBJECT : CHEMISTRY

M.M. : 70

General instructions –

(i) This question paper contains 33 questions. All questions are compulsory.
(ii) This question paper is divided into five section – Section A, B, C, D and E.
(iii) Section – A : question number 1 to 16 are multiple choice type questions. Each questions carries 1 mark.
(iv) Section – B : question number 17 to 21 are very short answer type questions. Each question carries 2 marks.
(v) Section – C : question number 22 to 28 are short answer type questions. Each question carries 3 marks.
(vi) Section – D : question number 29 and 30 are Case based questions. Each question carries 4 marks.
(vii) Section – E : question number 31 to 33 are long answer type questions. Each question carries 5 marks.
(viii) There is no overall choice given in the question paper. However, an internal choice has been provided in few questions in all the sections except Section A.

SECTION – A (1x16=16)

01 In NO_3^- ion, the number of bond pairs and lone pairs of electrons on nitrogen atom are :
(A) 3, 1 (B) 1, 3 (C) 4, 0 (D) 3, 0 (1)

02 A vessel contains 4.4 g of CO_2 . It means that its contains
(A) 0.5 $mol\ of\ CO_2$ (B) $6.02 \times 10^{24}\ molecules\ of\ CO_2$
(C) $1.2 \times 10^{23}\ atoms\ of\ oxygen$ (D) $1120\ mL\ of\ CO_2\ at\ STP$ (1)

03. Which of the given reaction is not an example of disproportionation reaction ?
(A) $2H_2O_2 \rightarrow 2H_2O + O_2$ (B) $2KClO_3 \xrightarrow{\Delta} 2KCl + 3O_2$
(C) $2NO_2 + H_2O \rightarrow HNO_3 + HNO_2$ (D) $3ClO^- \rightarrow ClO_3^- + 2Cl^-$ (1)

04. Total number of lone pairs of electrons in BrF_3 is
(A) 3 (B) 1 (C) 4 (D) 2 (1)

05. Which among the following statements about the following reaction is **TRUE** ?

$$2Cu_2O + Cu_2S \rightarrow 6Cu + SO_2$$

(A) Only Cu_2S is reduced (B) Only Cu_2O is reduced
(C) Both Cu_2O and Cu_2S are reduced. (D) Both Cu_2O and Cu_2S are oxidised. (1)

06 The Octet rule is not valid for the molecule
(A) H_2O (B) O_2 (C) CO_2 (D) BF_3 (1)

07 Number of moles of hydrogen atoms in three moles of ethane (C_2H_6) are :
(A) 2 moles (B) 6 moles (C) 18 moles (D) 3 moles (1)

08 What is the change in oxidation number of carbon in the following reaction ?

$$CH_4 + 4Cl_2 \rightarrow CCl_4 + 4HCl$$

(A) $0\ to + 4$ (B) $+4\ to - 4$ (C) $-4\ to + 4$ (D) $0\ to - 4$ (1)

09 Which of the following series of transitions in the spectrum of hydrogen falls in visible region ?
(A) Lyman Series (B) Balmer Series (C) Paschen Series (D) Brackett Series (1)

10 How many electrons can fit in the orbital for which $n = 3$ and $l = 1$?
(A) 2 (B) 10 (C) 14 (D) 6 (1)

11. The correct order of nitrogen compounds in decreasing order of oxidation states of nitrogen is
(A) HNO_3 , NO , NH_4Cl , N_2 (B) HNO_3 , NO , N_2 , NH_4Cl
(C) NO, HNO_3 , HH_4Cl , N_2 (D) NO , N_2 , HNO_3 , NH_4Cl (1)

12 Boron has a smaller first ionization enthalpy than Beryllium. Consider the following statements:
(i) It is easier to remove 2p electron than 2s electron.
(ii) 2s electron has more penetration power than 2p electron.
(iii) Atomic radius of Boron is more than Beryllium.
(iv) 2p electron of Boron is more shielded from the nucleus by the inner core of electrons than the 2s electrons of Beryllium.
The correct statements are :
(A) (i), (ii), (iii) (B) (i), (ii), (iv) (C) (i), (iv), (iii) (D) (ii), (iii), (iv) (1)

For question number 13 to 16, two statements are given one labelled as Assertion (A) and the other labelled as Reason (R). Select the correct answer to the questions from the code (A), (B), (C) and (D) as given below :
(A) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of the Assertion (A).
(B) Both Assertion (A) and Reason (R) are true and Reason (R) is not the correct explanation of the Assertion (A).
(C) Assertion (A) is true, but Reason (R) is false.
(D) Assertion (A) is false, but Reason (R) is true.

13 **Assertion (A) :** The oxidation state if Chromium in Cr_2O_5 is +10.
Reason (R) : The oxidation state of Chromium cannot be more than 6. (1)

Contd...2

14 **Assertion (A) :** Lone pair – lone pair electronic repulsion is more than bond pair – bond pair e^- repulsion.
Reason (R) : Lone pair electrons occupy more space than bond pair electrons. (1)

15. **Assertion (A) :** Electronic configuration of Cr^{+3} (containing 21 electrons) is same as that of Sc (z=21) i.e., isoelectronic species have the same electronic configuration.
Reason (R) : Orbitals of atoms as well as ions are filled in order of increasing energy following Aufbau Principle. (1)

16. **Assertion (A) :** The amount of the product formed in any reaction depends upon the amount of the limiting reactant.
Reason (R) : Limiting reactant is consumed completely in the reaction. (1)

Section – B

17. (a) Calculate the concentration of nitric acid in moles per litre in a sample which has a density, $1.41\ g\ mL^{-1}$ and mass percent of nitric acid in it being 69%. (2)

OR

(b) Calculate the number of atoms in each of the following :
(i) 52 g of He (ii) 52 u of He

18. (a) How many subshells are associated with $n = 4$?
(b) How many electrons will be present in the subshells having m_s value of + ½ for $n = 4$? (2)

19. On the basis of quantum numbers, justify that the sixth period of the periodic table should have 32 elements. (2)

20. Define Octet rule. Write its two limitations. (2)

21. What are the oxidation numbers of the underlined elements in each of the following species ?
(i) $\underline{C}H_3\underline{C}OO\ H$ (ii) $K_2\ \underline{Mn}\ O_4$ (2)

Section – C

22. Balance the following redox reaction by ion – electron method.
$Cr_2O_7^{2-}(aq) + SO_2(g) \rightarrow Cr_{(aq)}^{+3} + SO_{4(aq)}^{2-}$ (in acidic solution) (3)

23. Write the shape of the following molecules using VSEPR theory and draw its geometry.
(i) SF_4 (ii) XeF_4 (iii) PCl_5 (3)

24. (a) Assign the group and period number of an element with atomic number 26.
(b) Give reason for the following :
(i) Although fluorine is more electronegative than Chlorine but Chlorine can be converted into Chloride ion more easily as compared to fluoride ion from fluorine.
(ii) The first ionization enthalpy of nitrogen is greater than that of oxygen. (3)

25. What is the energy in joules required to shift the electron of the hydrogen atom from the first Bohr orbit to the fifth Bohr orbit and what is the wavelength of the light emitted when the electron returns to the ground state ? (3)

26. Dinitrogen and dihydrogen react with each other to produce ammonia according to the chemical equation : $N_{2(g)} + 3H_{2(g)} \rightarrow 2NH_{3(g)}$

Calculate the mass of ammonia produced if $2.00 \times 10^3 g$ dinitrogen reacts with 1.00×10^3 g dihydrogen and also calculate the mass of the reactant that remain unreacted. (3)

27. In the following reactions identify the oxidant and the reductant.
(i) $2AgBr(s) + C_6H_6O_{2(aq)} \rightarrow 2Ag(s) + 2HBr_{(aq)} + C_6H_4O_{2(aq)}$
(ii) $N_2H_{4(l)} + 2H_2O_{2(l)} \rightarrow N_{2(g)} + 4H_2O_{(l)}$
(iii) $Fe_2O_{3(s)} + 3CO_{(g)} \rightarrow 2Fe_{(s)} + 3CO_{2(g)}$ (3)

28. (i) Define molality. Out of molarity and molality which is preferred for calculation and why?
(ii) State law of Definite proportion. (3)

Section – D

The following questions are Case based questions. Read the case carefully and answer the questions that follow :

29. Bohr's model failed with the advent of two new developments. These were 'de Broglie concept of dual nature of matter' and 'Heisenberg uncertainty Principle'. A new model of atom called 'quantum mechanical model of atom' has been put forward. As position and velocity of the electron cannot be measured with certainty, new model involves the concept of probability which leads to the concept of 'orbital' in place of orbit. The filling of these orbitals with electrons take place according to Aufbau principle, pauli exclusion principle and Hund's rule of maximum multiplicity. However, exception arise with some of the atoms as orbital of same subshell try to be exactly half filled or configuration of ions are derived from those of the atoms by adding or removing electrons equal to the units of positive or negative charge of the ions.

(i) Which among the following ions have maximum number of unpaired electrons ? (1)
(a) Cu^{+2} (b) Cr^{+3} (c) Fe^{+3}
(Atomic numbers : Cu = 29, Cr = 24, Fe = 26)

Contd...3

(ii) State Pauli's exclusion Principle. (1)

(iii) Two particles A and B are in motion. If the wavelength associated with Particle A is $5 \times 10^{-8}\ m$, Calculate the wavelength associated with particle B if its momentum is half of A. (2)

OR

A golf bass has a mass of 40 g and a speed of $45\ m\ s^{-1}$. If the speed can be measured within accuracy of 2%, calculate the uncertainty in position.

30. The modern periodic table consists of eighteen vertical columns and seven horizontal rows. The period number corresponds to the highest principal quantum number of the elements in the periodic table. Elements in the periodic table has been divided into four blocks i.e. s. p, d and f. Periodic properties show a regular gradation from left to right in a period and from top of bottom in a group. Down a group, atomic radii, metallic character increase while ionization enthalpy and electronegativity decrease. Along a period, atomic radii, metallic character decrease while ionization enthalpy, non-metallic character increase. However, electron gain enthalpy becomes less negative along a period. In contrast, inert gases have positive electron gain enthalpies which do not show any regular trend.

(i) Arrange the given elements according to their decreasing non metallic character C, N, B, F, Si. (1)

(ii) Why electron gain enthalpy of neon is highly positive ? (1)

(iii) Write two characteristics of d-block elements. (2)

OR

Write two characteristics of s-block elements. (2)

Section – D

31. Attempt **any five** of the following : (1x5=5)

(i) What is the maximum number of emission lines obtained when the excited electron of a H atom in n=5 drops to the ground state?

(ii) Write the value of all the quantum numbers for the 30^{th} electron of Zinc.

(iii) How many electrons are present in all subshells (fully-filled) with $n + l = 5$?

(iv) Which of the four quantum numbers determine the
(a) size of an orbital (b) the shape of an orbital?

(v) Calculate the radius of Bohr's fifth orbit for hydrogen atom.

(vi) Mention the factor on which the velocity of an electron and number of photoelectrons depends in photoelectric effect.

(vii) Show that the circumference of the Bohr orbit for hydrogen atom is an integral multiple of de Broglie wavelength associated with the electron moving around the orbit.

32. (a) State Modern Periodic Law. (1)

(b) Write the IUPAC name and symbol of an element with atomic number 114. (1)

(c) Consider the following species :

$$N^{3-},\ O^{2-},\ Mg^{2+},\ F^{-},\ Na^{+},\ Al^{3+}.$$

What is common in them ? Arrange them in order of increasing ionic radii. (2)

(d) Why anions are larger in radii than their parent atoms ? (1)

OR

32. (a) Define electronegativity. (1)

(b) Write the IUPAC name and the symbol of an element with atomic number 109. (1)

(c) Would you except the second electron gain enthalpy of oxygen as positive, more negative or less negative than the first ? Justify your answer. (2)

(d) Arrange the following elements in order of their increasing ionization enthalpy :

$$X = Is^2\ 2s^2\ 2p^6\ 3s^2\ ,\qquad Y = Is^2\ 2s^2\ 2p^3$$

$$Z = Is^2\ 2s^2\ 2p^2\ ,\qquad W = Is^2\ 2s^2\ 2p^6\ 3s^1$$ (1)

33. (a) A compound contains 4.07% hydrogen, 24.27% carbon and 71.65% chlorine. Its molar mass in 98.96 g. What are its empirical and molecular formula ? $[Atomic\ mass\ of\ C = 12, H = 1, Cl = 35.5]$

(b) Define mole fraction.

(c) Calculate the amount of CO_2 that could be produced when 1 mole of carbon is burnt in 16 g of dioxygen. (3+1+1)

OR

(a) Calcium carbonate reacts with aqueous HCl according to the reaction :

$$CaCO_3 + 2HCl \rightarrow CaCl_2 + CO_2 + H_2O$$

What mass of $CaCO_3$ is required to react completely with 25 mL of $0.75\ M\ HCl$?

(b) If 10 volumes of dihydrogen gas reacts with five volumes of dioxygen gas, how many volumes of water vapour could be produced ?

$$2H_{2(g)} + O_{2(g)} \rightarrow 2H_2O_{(g)}$$

(c) State Avogadro's Law. (3+1+1)

XI.

① Comp. Sci
② Eco
③ Bio
④ EG
⑤ G. IC
⑥ Eng
⑦ P. E
⑧ Acc
⑨ Phy
⑩ Maths
⑪ App. Maths
⑫ IT
⑬ Biotech
⑭ H. Sci
⑮ B. St
⑯ Chem
⑰ Geo X

SET A

DELHI PUBLIC SCHOOL, BHILAI
MIDTERM EXAMINATION, 2024
BIOLOGY

DATE : 25-09-2024
CLASS : XI

Time : 3 Hours
M.M : 70

General Instructions :

1) All questions are compulsory.
2) The question paper has 5 sections and 33 questions. All questions are compulsory.
3) 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.
4) 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.
5) Wherever necessary, neat and properly labelled diagram should be drawn.

SECTION A

1) Polymoniales is the order which includes plant families Solanaceae and (1)
   (a) Brassicaceae (b) Fabaceae (c) Convolvulaceae (d) Liliaceae
2) Protonema is (1)
   (a) haploid and is found in mosses (b) diploid and is found in liverworts
   (b) diploid and is found in pteridophytes (d) haploid and is found in pteridophytes
3) The class of fungi, which does not produce asexual spore is (1)
   (a) Phycomycetes (b) Deuteromycetes (c) Ascomycetes (d) Basidiomycetes
4) Pear shaped gametes with laterally inserted flagella are characteristics of (1)
   (a) Chlorophyceae (b) Phaeophyceae (c) Rhodophyceae (d) Ascomycetes
5) Ichthyophis, a chordate belongs to the class (1)
   (a) Osteichthyes (b) Reptilia (c) Cyclostomata (d) Amphibia
6) Cytoskelton in a cell is involved in (1)
   (a) mechanical support to the cells (b) motility of the cell
   (c) maintaining the cell shape (d) all of these
7) Galactans and mannans are the components of the cell wall of (1)
   (a) bacteria (b) algae (c) fungi (d) mesoglea
8) Three domain classification has (1)
   (a) six kingdoms (b) four kingdoms (c) five kingdoms (d) three kingdoms
9) Among the pteriodophytes, the sporophylls are arranged into strobili or cones in (1)
   (a) Lycopodium (b) Selaginella (c) Equisetum (d) both (b) and (c)
10) Turtles are (1)
   (a) Arthropods (b) Pisces (c) Reptiles (d) Molluscs
11) The membrane of human erythrocytes has been found to contain approximately. (1)
   (a) 52 percent lipids and 40 percent proteins
   (b) 40 percent oligosaccharides and 50 percent proteins
   (c) 52 percent proteins and 40 percent lipids
   (d) 40 percent lipids and 50 percent oligosaccharides
12) The animals that are triploblastic and show radial symmetry in adults is : (1)
   (a) Porifera (b) Echinodermata (c) Ctenophora (d) Coelenterata

Question No. 13 to 16 consists 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) Assertion A : Organisms belonging to a class have lesser similar characters as compared to the members of a family. (1)
   Reason R : The number of similar characters decreases as we go up the taxonomic hierarchy.

14) Assertion A : Members of Aschelminthes are pseudocoelomates. (1)
Reason R : In Aschelminthes, the mesoderm is present as scattered pouches in between the ectoderm and endoderm

15) Assertion A : In Funaria, the spores are produced inside the capsule. (1)
Reason R : In Funaria and other mosses, the spores are formed after mitosis.

16) Assertion A : The concentration of certain ions and molecules is higher in the sap of vacuoles in plant cells. (1)
Reason R : Certain ions and molecules diffuse freely into the vacuole from the cytoplasm in plant cells

SECTION B

17) Give two reasons why fungi have been removed from plant kingdom and placed as a separate kingdom. (2)

18) Some animals of phylum cnidaria show metagenesis. What is it? Give an example of animal that shows this phenomenon. (2)

19) a) Name the two classes of fungi, which members of Deuteromycetes are moved to, once their perfect stage is discovered. (2)
b) How do Deuteromycetes reproduce?

(OR)

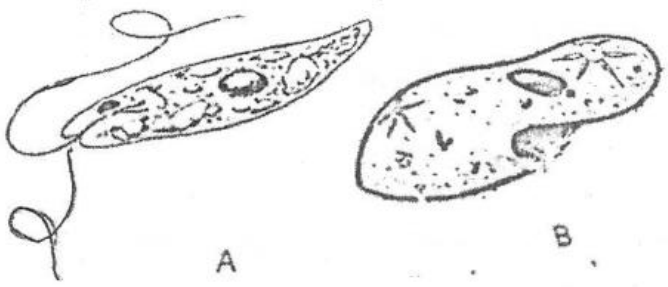
Why are virus called obligate intracellular parasites? Name a virus that has single stranded DNA as genetic material.

20) Plasma membrane is selectively permeable to molecules present on either side of it. Explain the movement of the given molecules through it. (2)
a) Neutral solutes b) Polar molecules

21) a) Mention two adaptations the conifers have, to check water loss from the plant. (2)
b) Which of them can fix atmospheric nitrogen – Mycorrhiza of Pinus or Coralloid roots of Cycas? Why?

SECTION C

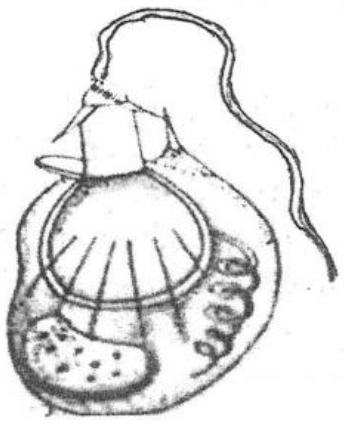
22) Observe the diagrams and answer the questions that follow : (3)



Two organisms of kingdom Protista are shown above.
a) Identify the organisms (A) and (B) and assign them to their respective group.
b) Write any two differences between them.

23) What is heterospory? Give one example. (3)
Mention the event, which is considered as the precursor of seed habit

24) (3)



a) Identify the structure given above and name the phylum, it is characteristically present in.

b) Where is it present in the body of the animals? Name the cell it contains.

c) Mention two of its functions.

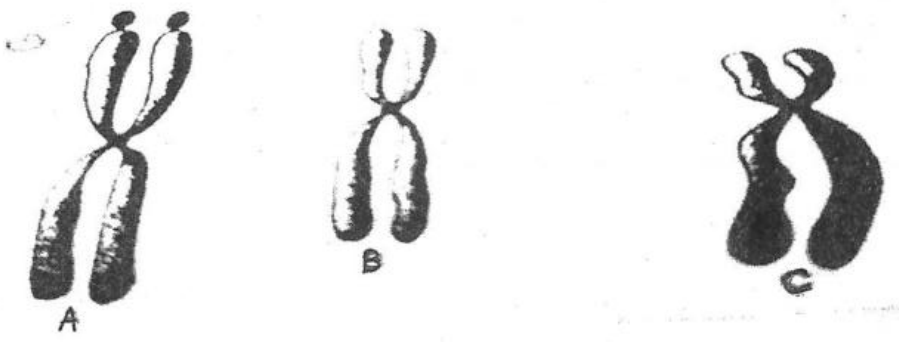
25) Eukaryotic cells have membranous organelles as part of an endomembrane system. (3)
   a) Which cell organelles are considered to be part of the endomembrane system and why?
   b) Explain in brief the structure of the organelle involved in the function of packaging materials in the cell.

26) In a coastal area, ocean water turned red thus raising concern among the local fishermen. (3)
   a) Name the causative organism and give the reason for the colour change of the ocean.
   b) How does it affect the marine animals especially the fishes?
   c) To which kingdom and group does the causative organism belong to?

(OR)

Describe the process of sexual reproduction in Basidiomycetes.

27) Three types of chromosomes are shown in the figure given below : (3)



Answer the following questions :

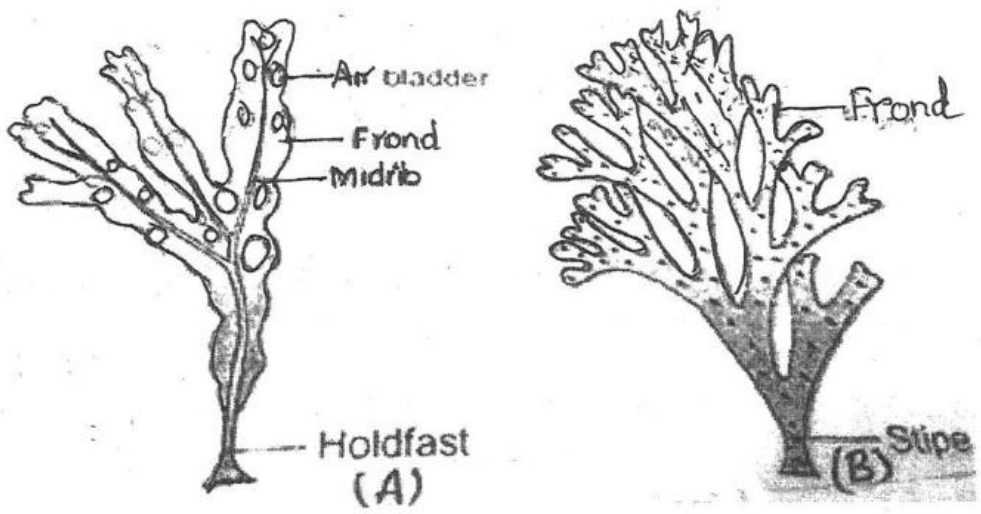
   a) Identify and name the types of chromosomes A,B and C.
   b) What forms the basis for such a classification of chromosomes?
   c) What are kinetochores?

28) Mention any four universal rules to be followed while giving a scientific name to an organism. Give the scientific name of wheat. (3)

SECTION D

Question no. 29 and 30 are case based questions. Each question has subparts with internal choice in one subpart.

29) Two members of a class of algae are shown below : (4)

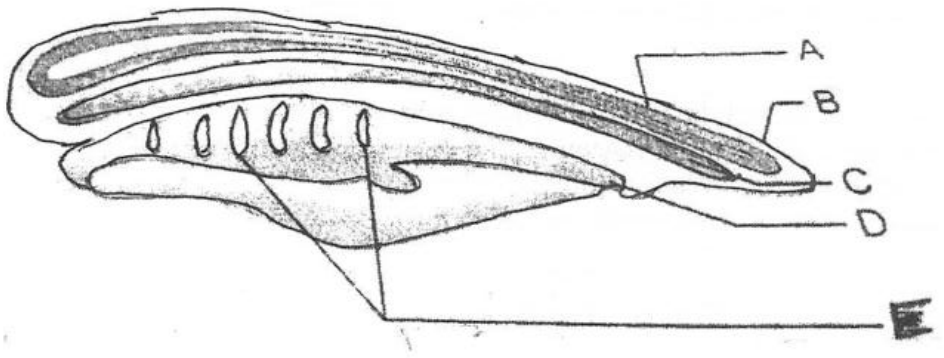


   (a) Identify the two algae A and B.
   (b) Mention the forms of their stored food.
   (c) Name the (i) Class, which both of them belong to
   and (ii) the pigment that gives them the characteristic colour.

(OR)

   (d) Mention the function of (i) hold fast (ii) frond

30) A diagrammatic sketch showing the chordate characteristics is shown below : (4)



Observe the diagram and answer the questions that follow :

a) Identify and name the part that makes the animal a chordate.
b) Name two classes of animal where E is functional in the adult life also.
c) Enumerate any four characteristics that are typical of chordates.

(OR)

d) How does A in chordates differ from those in non-chordates.

SECTION E

31) a) With reference to the given members of phylum/class of Animal kingdom, provide suitable technical term : (5)

i) Free floating form in Cnidaria
ii) Gill cover in Osteichthyes
iii) Hollow bones with air cavities in Aves
iv) Ciliated rows in Ctenophores.
v) Balancing organs in Arthropoda
vi) Collared cells lining the spongocoel in Porifera

b) "All vertebrates are chordates, but all chordates are not vertebrates". Justify the statement.

(OR)

Petromyzon, Scolidon and Labeo are all fishes, but they are placed in three different classes of chordata.

a) i) How does Petromyzon differ from the other two?
ii) Name the classes which each of them belongs to?
b) What is the function of parapodia? Name one animal that has parapodia and also the phylum.

32) A cell organelle is also considered as the power house of the cell. (5)

a) Identify the cell organelle
b) Describe the structure of this cell organelle with the help of a labeled diagram.

(OR)

a) Classify the plastids on the basis of pigments present in them and state the function of each.
b) Draw a well labeled diagram of a typical choloroplast.

33) Describe the female strobili or cone of Gymnosperms. Also explain the formation of female gametophyte. (5)

(OR)

a) Explain the prothallus of pteridophytes
b) Draw a neat labeled diagram of female thalli of Marchantia.

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SET B

DATE : 27-09-2024
CLASS : XI

DELHI PUBLIC SCHOOL, BHILAI
MID TERM EXAMINATION, 2024
BIOTECHNOLOGY

Time : 3 Hours
M.M : 70

General Instructions : Read the following instructions very carefully and strictly follow them :

1) This question paper consists of five sections. A,B,C,D and E.
2) Section A consists of 16 questions of 1 mark each.
3) In Section B consists of 5 questions of 2 marks each.
4) In Section C consists of 7 questions of 3 marks each.
5) In Section D consists of case based of 4 marks each..
6) In Section E consists of 3 questions of 5 marks each.

SECTION A

1) The part of chromatin which is lightly stained (1)
   (a) Euchromatin (b) Chromatids (c) Heterochromatin (d) None of these
2) A water soluble vitamin (1)
   (a) Vitamin A (b) Vit K (c) Vit E (d) Folic acid
3) Aldo sugars have an (1)
   (a) Aldehydic group (b) Keto group (c) Both aldehydic and keto group (d) Amino group
4) The type of microscope used in IVF (1)
   (a) Inverted microscope (b) Flourescent microscope
   (c) Simple microscope (d) None of these
5) The mammalian cell that produces somatostatin (1)
   (a) Yeast (b) E.Coli (c) CHO cell (d) Myeloma cells
6) The flattened membrane bound sacs present in ER is (1)
   (a) Cisternae (b) Cristae (c) Lumen (d) Stroma
7) The bacteria found in the rumen of cattles digest (1)
   (a) Cellulose (b) Protein (c) Lipids (d) Nucleic Acid
8) The ploidy of microsporangia (1)
   (a) n (b) 2n (c) 3n (d) 5n
9) A major signaling molecule in circulatory system (1)
   (a) Nitrogen (b) Nitric oxide (c) Nitrous oxide (d) Sulphur oxide
10) Lactose is a (1)
   (a) Protein (b) Lipid (c) Disaccharide (d) Enzyme
11) The enzyme used in detergent in cleaning industry (1)
   (a) Nucleases (b) Proteases (c) Lipases (d) Hydrolases
12) 70 S ribosome in eukaryote is present in (1)
   (a) Lysosome (b) Chloroplast (c) Nucleus (d) Peroxisome

Question No. 13 to 16 consists 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.

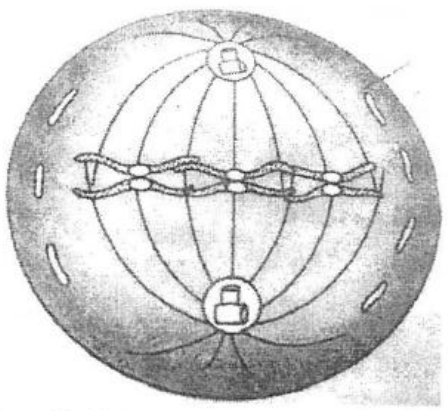
13) Assertion [A] – Bacteria are used in rDNA technology. (1)
   Reason [R] – Bacteria multiply very fast to express genes.

14) Assertion [A] – Sucrose is a non reducing sugar. (1)
   Reason [R] – Both anomeric carbon are bonded in sucrose.

15) Assertion [A] – Mitosis restores the nucleocytoplasmic ratio
Reason [R] – It is significantly important in the growth of multicellular organisms. (1)

16) Assertion [A] – Active transport occurs with the help of carrier proteins. (1)
Reason [R] – Energy required for active transport is obtained from ATP.

SECTION B

17)  (2)

a) Which phase of the cell division is given in the above figure.
b) State any three events of it.

18) What is nano biotechnology? State any three applications. (2)

19) Expand IVF. Explain the process of producing test tube babies. (2)

20) Write the Fischer structure of α-D glucose and β-D glucose. (2)

21) What are adult stem cells? How are they derived? State an application of it. (2)

(OR)

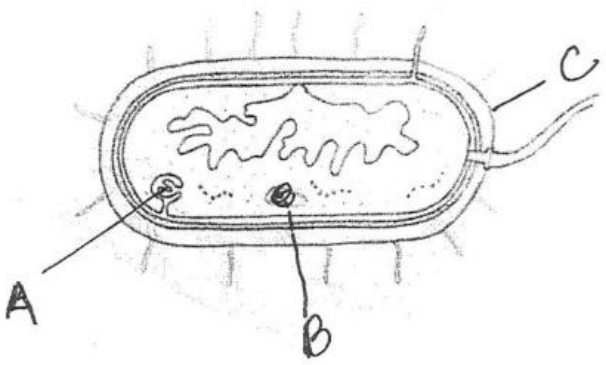
What are stem cells? Explain the functions of ES cells.

SECTION C

22) Draw a well labeled diagram of an ovule. (3)
Explain the process of triple fusion.

23) Write the Haworth structure of a) Sucrose b) Lactose (3)

24) How does genetic recombination take place in bacteria. Explain the types of it. (3)



Identify the given organism. Write the name and function of A,B and C.

25) Expand SCNT. Write the process and write an application of it. (3)

26) Write the Haworth structure of a) Sucrose b) Lactose (3)

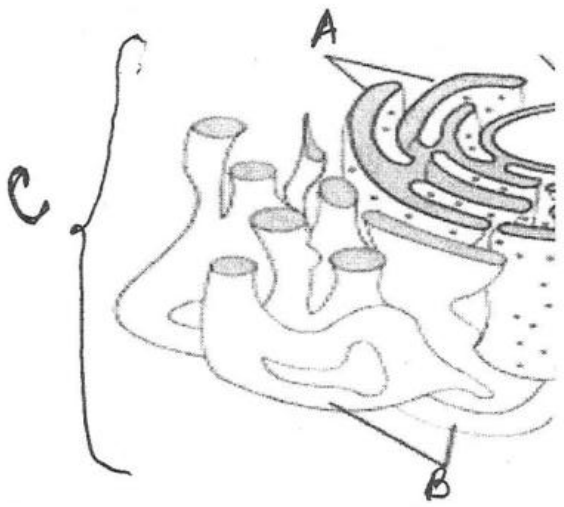
27) State the structure and function of the following (3)
a) Lysosomes (b) Centrosomes

28) Which technology couples the knowledge of biology with microelectronics? (3)
Explain the principle, components and applications of it.

(OR)

What is rDNA technology? State the principle and application of it. Write any two examples of biobased products.

SECTION D

29) 

(4)

a) Identify the cell organelle C. Label the part A and B.

b) Write the function of A and B.

c) What are microsomes? How are they formed?

(OR)

How are poly ribosomes formed?

30) All living beings require nutrients to provide energy and to maintain various body process such as growth metabolic activities and reproduction. (4)

a) What are the three elements that form the frame work of organic molecules like carbohydrate, protein and nucleic acid.

b) Name the vitamins produced by bacteria in human gut.

c) Deficiency of which vitamin causes

a) Anaemia (b) Bone deformities (c) Nervous tissues problem (d) Weak eye sight

(OR)

What are trace elements? Name the trace elements that play important function in nutrition.

SECTION E

31) What is programmed cell death? Explain with the help of diagram. (5)

(OR)

Human beings and higher animals have a highly developed immune system.

Explain the immune response in human beings with the help of flow sheet diagram.

32) The living cells must maintain their shape. Explain how do the living cells maintain their shape and the movements of organelles within the cell. (5)

(OR)

Explain the structure and function of

a) Peroxisomes (b) Membrane Proteins

33) 1) State the difference between reducing and non reducing sugars.
Explain the test to ascertain the presence of sugar in urine/blood.

2) Write the structure of maltose.

(OR)

Write the application of Biotechnology in the field of :

1) (a) Bioprocessing Technology (b) Protein Engineering.

2) What is cell culture? Explain the types of it.

(5)

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Name : .....

SET – B **DELHI PUBLIC SCHOOL, BHILAI**

Roll No. : .....

Date : 27.09.2024 **MIDTERM EXAMINATION 2024** **Time : 3 Hrs.**

Class – XI **SUBJECT : HOME SCIENCE** **M.M. : 70**

GENERAL INSTRUCTIONS

1. All questions are compulsory.
2. There are total 35 questions.
3. Question paper is divided into three sections-A, B and C.
4. **Section A** has question no.1 to 18 (Objective type questions) and are of 1 mark each.
5. **Section B** has question no. 19 to 25 of 2 marks each and question no.26 to 29 of 3 marks each.
6. **Section C** has question no.30 to 33 of 4 marks each and question no.34 and 35 are of 5 marks each.
7. Internal choices are given in some questions.
8. Support your answers with suitable examples wherever required.

SECTION – A (OBJECTIVE TYPE QUESTIONS)

01. Which of the following is an external factor that influence the eating behaviour? (1)

(A) Psychological development (B) Body image
(C) Parenting practice (D) Food preferences

OR

Match the following:

List I	List II
A. Cognitive development	**1.** Ability to think and reason
B. Emotional development	**2.** Changes in the body
C. Socio cultural development	**3.** Mood swings
D. Biological development	**4.** Different sections of society responding differently

Choose the correct option from the following:

(A) A – 1, B – 2, C – 3, D – 4 (B) A –1, B – 4, C – 2, D – 3
(C) A – 2, B – 1, C – 4, D – 3 (D) A –2, B – 3, C – 4, D – 1

02. **Match the following:** (1)

Characteristics of Resources	Meaning
A. Utility	**1.** Substitutes of all resources
B. Accessibility	**2.** Resources managed for effective utilisation
C. Interchangeability	**3.** Usefulness of resources to achieve goal
D. Manageable	**4.** Resources available easily to everyone

Choose the correct option from the following:

(A) A – 1, B – 2, C – 3, D – 4 (B) A – 3, B – 4, C – 1, D – 2
(C) A – 2, B – 1, C – 4, D – 3 (D) A – 4, B – 3, C – 2, D – 1

03. A lot of people always say that they don't have time to do what they want or need to do, when in fact: (1)
(A) They know how to organise their activities.
(B) They don't know how to calculate their activities.
(C) They don't know how to organise their activities.
(D) They don't know how to reduce their activities.

04. Which of the following are non-synthetic fibres? (1)
(A) Nylon (B) Azlon (C) Viscose (D) Spandex
Choose the correct option:
(A) I and II (B) II and III (C) III and IV (D) I and IV

05. Which of the following is not a determinant of health? (1)
(A) Employment status (B) Safety in workplace (C) Access to health service (D) Access to good housing

06. Tina plans her schedule everyday while Riya wastes her time in doing nothing all day. What is Riya supposed to do? (1)
(A) Implementation (B) Controlling of resources (C) Management of resources (D) Wastage of resources

07. To attain a better standard of living, what one must do? (1)
(A) Effectively plan (B) Closely evaluate (C) Manage resources well (D) Balance time

08. The process of thinking, observing, understanding, analysing, sharing and transmitting feelings to others is known as: (1)
(A) Interaction (B) Communication (C) Media (D) Feedback

09. A child tells his mother that he is taller than Aman. At what stage does a child starts comparison? (1)
(A) Infancy (B) Early childhood (C) Middle childhood (D) Middle childhood

OR

Milk and wheat products are the main source of:
(A) Vitamin B2 (B) Fibre (C) Protein (D) Fatty Acid

10. _____ is used for making fancy weaves. (1)
(A) Dobby (B) Warp yarn (C) Jacquard Loom (D) Weft Yarn

11. What is the medium of communication? (1)
(A) Receiver (B) Source (C) Message (D) Channel

12. About half of our diet should include which of the following? (1)
(A) Fruits and milk (B) Fats and sugar (C) Grains and vegetables (D) Milk and cheese

For Questions 13 and 14, 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 Both Assertion (A) and Reason (R) are true and Reason (R) is correct explanation for Assertion (A).
(B) Both Assertion (A) and Reason (R) are true but Reason (R) is not the correct explanation for Assertion (A).
(C) Assertion (A) is true but Reason (R) is false.
(D) Assertion (A) is false but Reason (R) is true.

13. **ASSERTION (A)** : In developing countries ,food borne illnesses such as diarrhoea and dysentery are major problems.
REASON (R) : Poor personal and food handling practices result in food borne illnesses. (1)

14. **ASSERTION (A) :** The vegan diet does not include diet that comes from animal, including dairy products and eggs.
REASON (R) : Vegan diet followers use 'soy milk' – a product made from soyabean that has been fortified with calcium, vitamin B 12 and vitamin D. (1)

CASE BASED QUESTIONS : Read the passage carefully and answer question no. 15 to18

When Preeti was studying in Class XI, she used to watch the episodes of the Mahabharata, the epic which were being shown on the TV every Sunday. She was much impressed with the production of the episodes because they revealed many facts about the epic which she had not known when she read the story as a comic book during her childhood. She learnt about moral values being illustrated in the episodes and was thoroughly entertained by the action sequences and dialogue delivery of the artists.

The case described above brings out three functions of media.

15. What are the three functions of Media? (1)
(A) Informing (B) Motivating (C) Entertaining (D) All of these

16. What kind of communication takes place while watching TV? (1)
(A) One – way communication (B) Two – way communication
(C) Inter – organisational (D) Mass communication

17. Television is classified under _____. (1)
(A) Traditional Media (B) Modern Media (C) Print Media (D) None of these

18. These generally requires minimum infrastructure, but can be more expensive to use. Which communication technology is the statement referring to? (1)
(A) Microcomputers (B) Cable (C) Wireless (D) Satellite

SECTION B (SHORT ANSWER QUESTIONS)

19. How poor nutritional status of a person is linked to their health? (2)

20. What are the common features of food groups? (2)

OR

Mention the two elements of identity.

21. Why do we feel cool in summer when we wear cotton? (2)

22. What are the two aspects of physical fitness? (2)

23. Why interpersonal communication is referred to as the most effective type of communication? (2)

24. Give the basic classification of nutrients. (2)

25. Write down two features of increased complexity during the period of Middle Childhood. (2)

OR

Which manufactured fibre resembles "wool – a natural fibre"? Mention that one property which differs in both the fibres.

26. What are the three levels of health care services? (3)

27. Give the classification of communication based on number of senses involved? (3)

28. Mention the characteristics of self during early childhood. (3)

OR

Enlist the aspects of a balanced diet.

29. Write down the properties of polyester. (3)

SECTION C (LONG ANSWER QUESTIONS)

30. How change in hand and body motions help in work simplification? (4)

31. Which factors create an impact on formation of identity during the period of adolescence? (4)

32. Why adolescents face identity crisis? (4)

OR

What are the factors that affect the nutritional well – being of an individual?

33. (a) What is malnutrition? (4)
(b) Explain the two forms of malnutrition.

34. What are resources? Mention the characteristics of resources. (5)

OR

What are manufactured fibres? Write down the steps for producing manufactured fibres.

35. Describe the five types of human resources and give an example of each of these resources. (5)

SET – A

DELHI PUBLIC SCHOOL, BHILAI

Name : .....

Roll No. : .....

Date : 27.09.2024

Class : XI

MIDTERM EXAMINATION 2024

SUBJECT : MATHEMATICS (041)

Time : 3 Hrs.

M.M. : 80

General Instruction :

01. This question paper contains **5 sections – A, B, C, D and E**. Each section is compulsory. However, there are internal choices in some questions.
02. Section A has 18 MCQ's and 2 Assertion – Reason based questions of 1 mark each.
03. Section B has 5 very short answer type questions of 2 marks each.
04. Section C has 6 short answer type questions of 3 marks each.
05. Section D has 4 long answer type questions of 5 marks each.
06. Section E has 3 source based/case based/passages based/integrated units of assessment of 4 makes each with sub parts.

Section – A
(Multiple Choice Questions)
(Each question carries 1 mark)

01. The number of diagonals that can be drawn by joining the vertices of the an octagon is
(A) 20 (B) 28 (C) 8 (D) 16

02. The symmetric difference of sets A and B is not equal to
(A) $(A-B)\cap(B-A)$ (B) $(A-B)\cup(B-A)$
(C) $(A\cup B)-(A\cap B)$ (D) $\{(A\cup B)-A\}\cup\{(A\cup B)-B\}$

03. The value of $\frac{1-tan^2 75°}{1+tan^2 75°}$
(A) $\frac{\sqrt{3}}{2}$ (B) $\frac{-1}{2}$ (C) $\frac{1}{2}$ (D) $-\frac{\sqrt{3}}{2}$

04. For three sets A, B and C $(A\cap B')'\cup(B\cap C)$ is equal to
(A) $A'\cup B\cap C$ (B) $A'\cup B$ (C) $A'\cup C'$ (D) $A'\cap B$

05. The solution set of the inequation $\frac{x+1}{x+2}>1$ is
(A) $(-2,\infty)$ (B) $(-\infty,-2]$ (C) $(-\infty,-2)$ (D) None of these

06. The range of the function $f(x)=\frac{x+2}{|x+2|}, x\neq -2$, is
(A) $\{-1,1\}$ (B) $\{-1,0,1\}$ (C) $\{1\}$ (D) $(0,\infty)$

07. In ${}^{43}C_{r-6} = {}^{43}C_{3r+1}$, then the value of r, is
(A) 12 (B) 8 (C) 6 (D) 10

08. If $z=\frac{1+i}{1-i}$, z^4 equals to
(A) 1 (B) -1 (C) 0 (D) none of these

09. The value of $\tan x\ sin\left(\frac{\pi}{2}+x\right)cos\left(\frac{\pi}{2}-x\right)$ is
(A) 1 (B) -1 (C) $\frac{1}{2}\ sin2x$ (D) none of these

10. If a, b are positive real numbers such that $a<b$, and if n is any positive rational number then which of the following is not true ?
(A) $a^n<b^n$ (B) $a^{-n}>b^{-n}$ (C) $a^{\frac{1}{n}}<b^{\frac{1}{n}}$ (D) $a^{\frac{-1}{n}}<b^{\frac{-1}{n}}$

11. The domain of the function $f(x)=\frac{1}{\sqrt{4-x^2}}$, is
(A) $(-4,4)$ (B) $[-2,2]$ (C) $(-2,2)$ (D) $R-(-2,2)$

12. If a, b and c are real numbers such that $a,b>0, a>b, c<0$, then which of the following is not true
(A) $ac<bc$ (B) $ac<-bc$ (C) $a+c>b+c$ (D) $\frac{a}{c}<\frac{b}{c}$

13. The conjugate of a complex number is $\frac{1}{i-1}$, then that complex number is
(A) $\frac{-1}{1+i}$ (B) $\frac{1}{i-1}$ (C) $\frac{-1}{i-1}$ (D) $\frac{1}{1+i}$

14. If $A=\{1,2,4\}, B=\{2,4,5\}, C=\{2,5\}$,then $(A-B)\times(B-C)$, is
(A) $\{(1,2),(1,5),(2,5)\}$ (B) $\{(1,4)\}$ (C) $\{(2,4)\}$ (D) none of these

Contd...2

15. The least positive integer n such that $\left(\frac{2i}{1+i}\right)^n$, is a positive integer, is
(A) 16 (B) 8 (C) 4 (D) 2

16. The total number of terms in the expansion of $(x+2)^{51}-(x-2)^{51}$ after simplification is
(a) 101 (B) 25 (C) 26 (D) none of these

17. The value of $\sin 50^0 - \sin 70^0 + \sin 10^0$ is
(A) 1 (B) $\frac{1}{2}$ (C) $-\sin 10^0$ (D) 0

18. The coefficient of x^4 in the expansion of $\left(\frac{x}{2}-\frac{3}{x^2}\right)^{10}$
(A) $\frac{405}{256}$ (B) $\frac{504}{259}$ (C) $\frac{450}{263}$ (D) none of these

Assertion – Reason Based Questions

In the following questions, a statement of Assertion (A) is followed by a statement of Reason (R). Choose the correct answer out of the following choices.

(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 (A) is true

19. **Assertion (A) :** The number of subsets of set A= {2,4,6,8 10} containing 4 and 6 is 8
Reason (R) : If A is a set consisting of n elements then the number of subsets of A consisting of two particular elements is 2^{n-2}

20. **Assertion (A) :** Three letters can be posted in 7 letter boxes in 7^3 ways
Reason (R) : Out of 7 distinct items 3 items can be chosen in ${}^7C_3$ ways

Section – B

(This section comprises very short answer type questions of 2 marks each)

21. Using properties of sets, for two sets A and B, prove that: $A=(A \cap B) \cup (A - B)$

22. Find the range of the function $f(x)=\frac{x^2}{1+x^2}, x \in R$

23. Find all pairs of consecutive odd positive integers both of which are smaller than 18 such that their sum is more than 20.

OR

Solve the following system of inequations:
$$\frac{2x-1}{3} \geq \frac{3x-2}{4} - \frac{(2-x)}{5}$$

24. If Find the values of x *and* y if $(3x-2iy)(2+i)^2 = 10(1+i)$

OR

Find the values of x *and* y if $\frac{(1+i)x-2i}{3+i}+\frac{(2-3i)}{3-i}=i$

25. Find the value of $\tan 22\frac{1}{2}^\circ$

Section : C

(This section comprises short answer type questions of 3 marks each)

26. Find the number of arrangements of the letters of the word INDEPENDENCE so that
(a) All vowels always occur together.
(b) Words begin with I and end with P.
(c) All the letters are taken

OR

A committee of 9 has to be formed from 10 boys and 5 girls. In how many ways can this be done when the committee consists of:
(i) exactly 4 girls? (ii) at least4 girls? (iii) at most4 girls?

27. Let A, B and X be any three sets such that $A \cup X = B \cup X$ and $\cap X = B \cap X = \emptyset$. Show that A = B

28. Let A = set of students of class XI in a school and R be the relation in the set A defined by R = {(a, b): a is brother of b, $a, b \in A$} Are the following true?
(1) (a, a) ∈ R for all a ∈ R
(2) (a, b) ∈ R ⇒ (b, a) ∈ R
(3) (a, b) ∈ R, (b,c) ∈ R ⇒ (a, c) ∈ R .

Contd...3

29. Find the domain of the real function $f(x) = \sqrt{9 - x^2} + \frac{1}{\sqrt{x^2-4}}$

OR

Let $f(x) = \frac{1}{\sqrt{x-[x]}}$., where $[x]$ greatest integer function Determine the domain and range of 'f'

30. If $A = \{1,3,5,7,9,11,13,15,17\}, B = \{2,4,6, \ldots ,18\}$ and N the set of natural numbers is the universal set, then find $A' \cup ((A \cup B) \cap B')$

OR

For any three sets A, B and C, prove by using properties of sets that
$A \cap (B - C) = (A \cap B) - (A \cap C)$

31. Using binomial theorem, $2^{3n} - 7n - 1$ is divisible by 49, where $n \in N$

Section : D

(This section comprises long answer type questions of 5 marks each)

32. If $\tan x = \frac{3}{4}, \pi < x < \frac{3\pi}{2}$, find the value $\sin\frac{x}{2}, \cos\frac{x}{2}$, and $\tan\frac{x}{2}$.

OR

Prove that : $\cos^2 x + \cos^2\left(x + \frac{\pi}{3}\right) + \cos^2\left(x - \frac{\pi}{3}\right) = \frac{3}{2}$

33. If $\alpha$and β are different complex numbers with $|\beta| = 1$, then find $\left|\frac{\beta-\alpha}{1-\bar{\alpha}\beta}\right|$

OR

If $x = -5 + 2\sqrt{-4}$ then find the value of $x^4 + 9x^3 + 35x^2 - x + 4$

34. If ${}^nC_r : {}^nC_{r+1} : {}^nC_{r+2} = 1:2:3$; find the value of n and r

35. Find the value of $\left(a^2 + \sqrt{a^2-1}\right)^4 + \left(a^2 - \sqrt{a^2-1}\right)^4$

Section : E

(This section comprises 3 Case Study/passage based questions of 4 marks each with sub part. The first two case study questions have three sub parts of 1, 1, and 2 marks respectively. The third case study question has two sub parts of 2 marks each.)

36. A class teacher of class XI give a task to the students ; There are three sets A, B and C and are such that A={a, c, e, g, i}
B={b, d, f, h}and C={b, c, e, g, k}. Answer the following which are based on above sets.

(a) Find number of the subsets of set B containing 3 elements only.
(b) Find $(A - B) \cup (B - C)$
(c) Verify $A - (B \cap C) = (A - B) \cup (A - C)$

OR

Verify $A - (B \cup C) = (A - B) \cap (A - C)$

37. Function as a relation : A relation f from a non empty set A to a non empty set B is said to be a function, if element of set A has one and only one image in set B. In other words, we can say that a function f is a relation from a non empty set A to a non empty set B such that the domain of f is A and no two distinct ordered pairs in f have the same first element or component.

If f is a function from set A to a set B, then we write $f: A \to B$ elements of A are called domain.
Let f and g are two real functions $f(x) = \sqrt{x-1}$ and $g(x) = 3 - 2x$ Based on the above topic, answer the following questions.

(a) Find the domain of $f + g$
(b) Find the domain of $f \div g$
(c) Write the range of $g(x)$ if $x > 0$

OR

Draw the graph of $f(x) = -1 + |x + 1|$.

38. A beaker contains liters of 9% solution of boric acid. This is to be diluted by adding a 3% boric acid solution to it. If x liters of 3% boric acid is added to the beaker. If there is 460 liters of the 9% solution then answer the following: questions:
What should be the value of x so that
(a) the resulting mixture is to be more than 5% boric acid.
(b) the resulting mixture is to be less than 7% boric acid.

DELHI PUBLIC SCHOOL, BHILAI

Date: 27.09.2024 | **Midterm Examination-2024** | **Time: 3 Hrs**

Class: XI | **Subject: Applied Mathematics** | **M:M: 80**

Name: _____ | **SET-B** | **Roll No.: _____**

General Instructions:

*(1) This question paper consists of **38** questions in **5** sections.*

(2) All questions are compulsory.

*(3) **Section-A** consists of **20** objective type questions carrying **1** mark each. Students have to write correct option and answer both.*

*(4) **Section-B** consists of **5** very short answer type questions carrying **2** marks each.*

*(5) **Section-C** consists of 6 short answer type questions carrying **3** marks each.*

*(6) **Section-D** consists of 4 long answer type questions carrying **5** marks each.*

*(7) **Section-E** consists of **3** source based units of assessments of **4** marks each with sub-parts.*

Section-A

(All questions are compulsory. No internal choice is provided in this section)

1. How many two-digit numbers are divisible by 4? **(1)**

   (a) 21 (b) 22 (c) 24 (d) 25

2. If for a sequence $S_n = 2[3^n - 1]$, then the third term is: **(1)**

   (a) 18 (b) 14 (c) 36 (d) 48

3. The range of the given data: 4, 6, 7, 8, 3, 9, 15, 8, 25, 2 is **(1)**

   (a) 23 (b) 25 (c) 2 (d) 15

4. The first term of a G.P is 5 and the common ratio is – 5, then which term of the G.P is 3125? **(1)**

   (a) 6^{th} (b) 8^{th} (c) 4^{th} (d) 5^{th}

5. Which of the following is not correct? **(1)**

   (a) $N \subset R$ (b) $N \subset Q$ (c) $Q \subset R$ (d) $N \subset T$

6. If each term of a given A.P is doubled then the new sequence obtained is an A.P with common difference: **(1)**

   (a) same as common difference of original A.P. (b) half of the common difference of original A.P.

   (c) double of the common difference of original A.P. (d) None of these.

7. On a real axis if A = [1,5] and B = [3, 9], then A – B is equal to: **(1)**

   (a) (5, 9) (b) (1,3) (c) [5,9) (d) [1,3)

8. The radii of two cylinders are in the ratio 2:3 and their heights are in the ratio 5:3. The ratio of their volumes is: **(1)**

   (a) 10:17 (b) 20:27 (c) 17:27 (d) 20:37

9. If nine times the ninth term of an A.P. is equal to 13 times the 13^{th} term of the same A.P., then the 22^{nd} term of the A.P. is: **(1)**

   (a) 0 (b) 22 (c) 220 (d) 198

10. Number of proper subsets of a set containing 4 elements is: **(1)**

    (a) 4^2 (b) $4^2 - 1$ (c) 2^4 (d) $2^4 - 1$

11. Which of the following is a null set? **(1)**

    (a) $\{x: x \in N, 2x - 1 = 3\}$ (b) $\{x: x \in N, x^2 < 20\}$

    (c) $\{x: x \text{ is an even prime} > 2\}$ (d) $\{x: x \in I, 3x + 7 = 1\}$

12. The variance of first 5 natural numbers is: **(1)**

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

13. The product of five terms of a G.P whose third term is 2 is: **(1)**

    (a) 3^5 (b) 3^2 (c) 5^2 (d) 2^5

14. Value of $(256)^{0.16} \times (256)^{0.09}$ is: **(1)**

    (a) 4 (b) 16 (c) 64 (d) 256.25

15. If the perimeter of one face of a cube is 40 cm, then the sum of the lengths of its edges is: **(1)**

    (a) 240 cm (b) 160 cm (c) 120 cm (d) 80 cm

16. The average of 100 numbers is 50. If one of the numbers which was 50 is replaced by 150, the new average will be: **(1)**

    (a) 50.5 (b) 51 (c) 51.5 (d) 52

17. If $\log 0.0009265 = \bar{4}.9668$, then $\log 9265$ is equal to: **(1)**

    (a) 3.9668 (b) $\bar{3}.9668$ (c) 4.9668 (d) $\bar{2}.9668$

18. The value of radix in binary number system is: **(1)**

(a) 1 (b) 2 (c) 8 (d) 10

ASSERTION REASON BASED QUESTIONS

In the following questions, a statement of Assertion (A) is followed by a statement of Reason (R).

Choose the correct answer out of the following choices:

(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.

19. Assertion (A): If n (A) = 4 and B = {3, 4, 5, 6, 8, 9} then number of relations from A to B is 2^{24}.

Reason (R): If A and B be two non-empty finite sets containing m and n elements respectively, then total number of relations from set A to set B is 2^{m+n}. **(1)**

20. Assertion (A): The arithmetic mean between two numbers is 34 and their G.M. is 16, then the numbers are 4 and 64. **(1)**

Reason (R): For two numbers a and b, A.M. = $\frac{a+b}{2}$ and G.M. = $\sqrt{ab}$

Section-B

21. Write the binary equivalent of 1018. **(2)**

22. Solve for x: $(\sqrt[3]{4})^{2x+½} = \frac{1}{32}$ **(2)**

OR

$\sqrt{(\frac{3}{5})^{1-2x}} = 4\frac{17}{27}$

23. The average of the runs scored by a cricket player in the last 10 innings of a match was 72. How many runs the player must make in the 11^{th} inning to increase the average by 3 runs? **(2)**

24. If $2^x = 3^y = 6^{-z}$ then prove that $\frac{1}{x} + \frac{1}{y} + \frac{1}{z} = 0$. **(2)**

25. Two finite sets A and B have m and k elements respectively. If the ratio of the cardinal number of the power set of A to the cardinal number of the power set of B is 64:1 and n(A) + n(B) = 12, then find the values of m and k. **(2)**

OR

Represent the complement of the set $\{x: x \in R, 2x + 1 > 10\}$ on the number line.

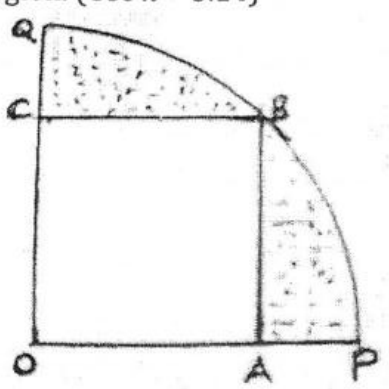
Section-C

26. Given $3(\log 5 - \log 3) - (\log 5 - 2 \log 6) = 2 - \log n$, find n. **(3)**

OR

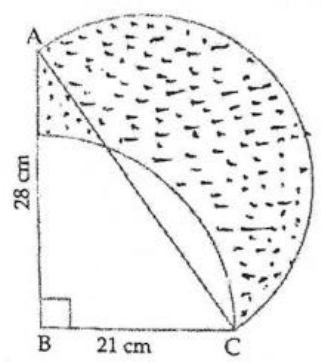
Solve for x: $\log_2 x + \log_4 x + \log_{16} x = \frac{21}{4}$

27. In the figure given below, a square OABC is inscribed in a quadrant OPBQ of a circle. If OA=20 cm, find the area of the shaded region. (Use $\pi = 3.14$) **(3)**



OR

In the figure given below, ABC is a right angled triangle, $\angle B = 90^0$, AB=28 cm and BC=21 cm. With AC as diameter a semi-circle is drawn and with BC as radius a quarter circle is drawn. Find the area of the shaded region.



28. A hollow sphere of internal and external radii 6 cm and 8 cm respectively is melted and recast into small cones of base radius 2 cm and height 8 cm. Find the number of cones formed. **(3)**

29. Let ε be the set of all digits in our number system, A=$\{x: x \text{ is an odd integer}\}$, B=$\{x: x \text{ is an even integer}\}$ and C = $\{x: x \leq 5\}$, then form the following sets: **(3)**

(i) $(A \cup B)'$ (ii) $A \cap C'$

30. Find the number of identical terms in the two sequences 1, 5, 9, 13, 17, _ _ _ _ _, 197 and 1, 4, 7, 10, 13, _ _ _, 196. **(3)**

OR

The sum of two numbers is six times their geometric mean. Show that the numbers are in the ratio $(3+2\sqrt{2}) : (3-2\sqrt{2})$.

31. A cone of maximum size is carved out from a cube of edge 14 cm. Find the surface area of the remaining solid. **(3)**

Section-D

32. Calculate the compound interest earned on ₹ 10000 for 10 years at the rate of 8 % p.a. compounded half yearly. **(5)**

OR

Evaluate $\sqrt{\frac{31.67 \times 42.36}{9.25}}$

33. (i) Find the symmetric difference of the sets A = $\{x: x \text{ is a positive prime less than } 10\}$ and B = $\{x: x \in N \text{ and } 0 < x - 2 \leq 6\}$. **(5)**

(ii) If a relation R = $\{(x, y): x \in I, -1 \leq x \leq 3, y = 2x\}$, then write R in roster form and also write the domain and range of R.

34. (i) If the sum of n terms of two A.P.'s are in the ratio (3n + 8) : (7n + 15), find the ratio of their 12^{th} terms. **(5)**

(ii) The sum of three consecutive terms of a G.P. is 26 and their product is 216. Find the terms of the G.P.

OR

i) If the sum of n terms of an A.P. is $3n^2 + 5n$ and it's m^{th} term is 164, find the value of m.

ii) The first term of an infinite G.P. is 1 and any term is equal to the sum of all the succeeding terms. Find the G.P.

35. Find the mean deviation about the median for the following data: **(5)**

Marks	0-10	10-20	20-30	30-40	40-50	50-60
No. of Girls	08	10	10	16	4	2

Section-E

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

36. CASE STUDY I

An auditorium has 20 seats in the first row, 24 seats in the second row and 28 seats in the 3^{rd} and so on.

i) How many seats are there in the 16^{th} row? **(1)**

ii) In the last row of the auditorium there are 116 seats. How many rows are there in the auditorium? **(1)**

iii) The hall was full on last Saturday for a show, how much was the total collection (in rupees) for the day, if a ticket was sold for ₹ 200? **(2)**

OR

If one seat is added in first row, two seats in second row, three seats in third row and so on, then find the total number of seats in the auditorium.

37. CASE STUDY II

In an university, out of 100 students 15 offered Mathematics only, 12 offered Statistics only, 8 offered only Physics, 40 offered Physics and Mathematics, 20 offered Physics & Statistics, 10 offered Mathematics & Statistics, 65 offered Physics.

i) How many students offered all the 3 subjects? (2)

OR

How many offered at least one of the 3 subjects?

ii) How many students offered Mathematics? (1)

iii) How many students did not offer any of the above three subjects? (1)

38. CASE STUDY III

Four cubes of equal volume are placed side by side so as to form a cuboid. The volume of each cube is 64 cm^3. Based on the above information, answer the following questions:

i) Find the length of the longest stick that can be kept inside the cuboid. (2)

ii) What is the ratio of total surface area of the cuboid to the total surface area of the four cubes? (2)

❁❁❁❁❁

SET – A

DELHI PUBLIC SCHOOL, BHILAI

Name : .....

Roll No. : .....

Date : 25.09.2024

Class : XI

MIDTERM EXAMINATION 2024

SUBJECT : ECONOMICS

Time : 3 Hrs.

M.M. : 80

General Instructions :

1. This question paper contains **two sections**: **Section – A : Statistics** and **Section – B : Microeconomics.**
2. This question paper contains 20 Objective questions, one mark each.
3. This paper contains four short questions three marks each to be answered in 60 – 80 words.
4. This paper contains 6 questions of 4 marks each to be answered in 80 100 words.
5. This paper contains 4 long questions of 6 marks each to be answered in 100 – 150 words.

SECTION – A (STATISTICS)

1. Which of the following is a method of collecting primary data ?
(A) Enumerator's Method (B) Telephonic Interview
(C) Indirect Oral Investigation (D) All of these **(1)**

2. Study the information given below and answer the following questions :

A	B	C	D
Ria's weight is 45 kg	Height of the book shelf is 5 feet	Cost of this book is Rs 500	Sohan's weekly average pocket allowance is Rs 500

Identify which of the above will come under the domain of statistics.
(A) A (B) B (C) C (D) **(1)**

3. Data collected from the 'Times of India' is an example of
(A) Primary data (B) Secondary data (C) Census (D) None of these **(1)**

4. What are the two main sources of data ? **(1)**

5. Enumerators are the persons who put up certain questions to the respondents and fill their answers in the questionnaire. (**True/False**) **(1)**

6. What do you mean by 'Random Sampling ? **(1)**

7. After every ten years, information regarding population of India is collected through _____. **(1)**

8. In a village of 500 farms, a study was conducted to find the cropping pattern. Out of the 100 farms surveyed, 50% grew only wheat. Identity the population and the sample here. **(1)**

9. The arithmetic mean of 1, 3, 5, 6, X, 10 is 6. Find the value of 'X' ? **(1)**

10. What do you mean by measure of central tendency ? **(1)**

11. What are the main limitations of Statistics ? **(3)**

12. Define the following terms :
(a) Welfare definition of economics
(b) Consumption
(c) Scarcity **(3)**

OR

Discuss the **three** main economic activities. **(1+1+2=4)**

13. What do you mean by classification of data ? Using imaginary figures, give examples of discrete series. Write **any two** objectives of classification of data.

OR

What are cumulative frequency series? Convert the following series into an exclusive series. **(1+3=4)**

More than	0	100	200	300	400	500
No. of Workers	100	80	68	43	38	20

14. Represent the following data into a percentage bar diagram. **(4)**

Year	**Production in ('000 forms)**	
	Wheat	**Rice**
2021	600	300
2022	1000	200
2023	900	500

Contd...2

15. If the arithmetic mean of the following series is 115.86, find the missing value. **(4)**

Wages in Rupees	110	112	113	117	?	125	128	130
No. of Workers	25	17	13	15	14	8	6	2

16. Define diagrammatic presentation of data. How is it different from tabulation? A college divides its students stream wise. Represent the following data using sub-divided bar diagram. **(1+1+4=6)**

Year	Art	Commerce	Science
2016	1400	1000	600
2017	600	500	900
2018	700	800	1000

OR

Define a pie-diagram. Elaborate the construction of pie-diagram with the help of suitable pie-diagram from the data given below : **(1+2+3=6)**

Estimated Cost

Raw material	Wages	Fixed Cost	Office expenses
150	140	160	50

17. Distinguish between census and sample survey. List **any four** important types of sampling method. **(4+2=6)**

SECTION – B (STATISTICS)

18. Define an economy. **(1)**

19. Opportunity cost arises
(A) When there is only one course factor.
(B) When there are two or more alternative courses
(C) Both (A) and (B)
(D) Neither (A) nor (B) **(1)**

20. **Read the following statements :**

Assertion (A) and reason (R). Choose one of the correct alternative given below :

Assertion (A) : Tools of Microeconomics and demand and supply.
Reason (R) : Microeconomics studies the behaviour of individual unit of economy. **(1)**

Alternative :

(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.

21. Marginal Utility concept is :
(A) Cardinal (B) Ordinal (C) Both (A) and (B) (D) None of these **(1)**

22. The slope of indifference curve is measured by :
(A) Marginal Rate of Substitution (B) Budget Line
(C) Marginal Rate of Transformation (D) None of these **(1)**

Read the following Case Study paragraph carefully and answer the questions from 23 to 26 on the basis of the same.

Year 2020 has witnessed many ups and downs, there were natural calamities around the globe, political tensions and what not. The out break of corona virus pandemic had led to worldwide lock down for several months.

The world almost stopped during April 2020. India was also not untouched with the impact of pandemic. Many people lost their jobs during this time, especially migrant workers. Government announced relief package but still it didn't boost enough demand.

Contd...3

23. What will be the impact on the consumption demand of necessity goods during the pandemic?
(A) Demand curve shifts to the right.
(B) Demand curve shifts to the left.
(C) No change in demand curve.
(D) Downward movement along the demand curve. **(1)**

24. People loose their jobs during nation wide lock down, how will this impact the demand curve for inferior goods ?
(A) Rightward shift of demand curve.
(B) Leftward shift of demand curve.
(C) Downward movement along the demand curve.
(D) Upward movement along the demand curve. **(1)**

25. How should the demand be affected due to the relief package announced by the government.?
(A) Increase in demand (B) Decrease in demand
(C) Expansion in demand (D) Contraction in quantity demanded. **(1)**

26. Demand for automobile industry decreased inspite decreasing price during pandemic. This is referred to as _____ (exception of law of demand/contraction in demand). **(1)**

27. Identify the positive economics out of the two images given below. **(1)**

(A) Image 1 (B) Image 2 (C) Image 1 and 2 (D) Neither Image 1 nor Image 2

28. Explain central problem of 'How to produce'? **(3)**

29. Define PPC with the help of a schedule and diagram. Why does a PPC slope downward from left to right? **(3)**

OR

What will the impact of recent launched 'Clean India Mission' on the PPC of the economy and why?

30. Define Budget Line. Explain with the help of a diagram, how does the budget line shift, when there is decrease in consumers income but price of two goods remain unchanged. **(4)**

OR

Explain the following terms:
(a) Monotonic preference
(b) Marginal Rate of Substitution

31. Explain the meaning of opportunity cost with the help of PPC. Calculate MOC in the following example. Plot the PPC by taking rice consumption on Y axis. **(4)**

Fuel Fund	0	1	2	3	4
Rice	100	90	70	40	0

32. Giving reason, state the impact of each of the following on demand curve of a normal good 'X' if
(a) Price of its complementary good falls.
(b) News report claim that consumption of product 'X' has harmful effect on human health.
(c) Income of consumer increases.
(d) Expectation of price rise in future. **(4)**

33. Explain any three degrees of price elasticity of demand with a schedule and diagram. **(6)**

OR

Define Price elasticity of demand. Give the formula to measure Ed by percentage method. The demand for a good at Rs 10.00 is 40 units. Price full by Rs 5.00, if price elasticity of demand is 3. Calculate elasticity of demand after price fall.

34. Explain the condition of consumer's equilibrium with the help of indifference curve analysis and explain the rationale behind it. **(6)**

DELHI PUBLIC SCHOOL, BHILAI

Name : .....

Roll No. : .....

Date : 17.09.2024

MIDTERM EXAMINATION 2024

Time : 3 Hrs.

Class : XI

SUBJECT : ACCOUNTANCY (Set – A)

M.M. : 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. Questions Nos. 21 to 26, 3 marks each.
4. Questions Nos. 27 to 29 carries 4 marks each
5. Questions Nos. 30 to 34 carries 6 marks each
6. There is no overall choice. However, an internal choice has been provided in 7 questions of one mark, 2 questions of three marks, 1 question of four marks and 2 questions of six marks.

Q. N0.		Marks
1	Which of the following is referred to as management accounting? (A) Focuses on estimating future revenues, costs and other measures to forecast activities and their results (B) Provides information about the company as a whole (C) Reports information that has occurred in the past that is verifiable and reliable (D) Provides information that is generally available only on a quarterly or annual basis	1
2	**Assertion (A):** NOP Ltd. purchased a machinery of 7 20,000 which is supposed to last for 20 years. The accountant decides to spread the cost of machinery for next 20 years for calculation of profit and loss. **Reason (R):** According to consistency concept, accounting principles and methods should remain consistent from one year to another. (A) Both Assertion (A) and Reason(R) are true and Reason(R) is correct explanation of Assertion (A). (B) Both Assertion (A) and Reason(R) are true and Reason(R) is not correct explanation of Assertion (A). (C) Assertion (A) is true, but Reason (R) is false. (D) Assertion (A) is false, but Reason (R) is true.	1
	Direction Read the following case study and answer the Q.No.3 to 4 on the basis of the same Amar and Samar started with cash ₹ 10,000 and machinery ₹ 1,00,000. They decided to set-up a production line for school uniforms. As their demand expanded, they decided to purchase one more machinery. For the same, they took bank overdraft and purchased the machinery. The quality of the company's product was very high and therefore, it could develop a reputation for itself in the market and business was flourishing. After 2 years, their old machinery turned obsolete so they decided to sell the same. They sold it and got some cash proceeds. To further increase the brand presence among the concerned stakeholders, they decided to run advertisements from the cash proceeds of machinery sold. As more and more customers demanded their product, they decided to launch a discount for bulk purchases. The discount was not to be recorded in the books of accounts. This campaign was successful and they earned lot of profits from the same.	
3	Which type of liability is discussed in the passage? (A) Non-current (B) Current (C) Both (a) and (b) (D) Can't be determined **OR** What was the capital initially invested? (A) ₹ 10,000 (B) ₹ 1,00,000 (C) ₹ 1,10,000 (D) Can't be determined	1
4	Which asset is discussed in the line, "The quality of the company's product was very high and therefore, it could develop a reputation for itself in the market and business was flourishing"? (A) Tangible (B) Intangible (C) Current (D) Both (A) and (C)	1
5.	Owner needs to know the financial performance and position of his business at frequent intervals normally 12 months. This is based on (A) Accounting period concept (B) Business entity concept (C) Matching concept (D) Going concern concept	1

Contd...2

6	Match the following **Column I** — **Column II** A. Quality of management is not recorded in the books — (i) Full disclosure principle B. Change in method of valuation of stock is shown in footnotes. — (ii) Consistency concept C. Making provision for likely bad debts should remain consistent with previous years — (iii) Money measurement principle D. Provision should be made for pending law suit against firm — (iv)Principle of conservation **Code** **(A)** (iii) (ii) (i) (iv) (B) (i) (ii) (iii) (iv) (C) (iii) (ii) (iv) (i) (D) (iii) (i) (ii) (iv)	1
7	For which of the following transactions, assets and capital will decrease by same amount? (A) Goods sold for cash (B) Fixed asset purchased on credit (C) Depreciation provided on fixed assets (D) Goods sold for cash at a profit **OR** When goods are returned to supplier, assets and ..... are ..... by same amount. (A) Liabilities, Increased (B) Liabilities, Decreased (C) Assets, Increased (D) assets, Decreased	1
8	Manya, a proprietor of a firm earned revenue ₹ 5,00,000 during the financial year 2023-24. Out of which he received ₹ 4,50,000. She incurred an expense of ₹ 1,80,000, out of which ₹ 50,000 are outstanding. She follows cash basis of accounting. Ascertain the amount of profit for the year. (A) ₹ 2,20,000 (B) ₹ 2,70,000 (C) ₹ 4,50,000 (D) ₹ 3,20,000	1
9	Creditor of ₹ 9,500 is settled by a final payment of ₹ 9,000. How will it affect the capital? (A) Increase by ₹ 9,500 (B) Decrease by ₹ 500 (C) Increase by ₹ 500 (D) Decrease by ₹ 9,500	1
10	Bank account is a (A) Personal Account. (B) Real Account. (C) None of these. (D) Nominal Account. **OR** Which of the following accounts has a credit balance? (A) Carriage Inward (B) Carriage Outward (C) Discount Received (D) Discount allowed	1
11	Amount due to owner is shown as. (A) Capital Account. (B) Revenue Account. (C) Liability Account (D) None of these.	1
12	Voucher is prepared from: (A) Documentary evidence (B) Journal entry (C) Ledger account (D) All of the above	1
13	Contra entries on the debt side of the Cash Book are posted to (A) Debit of Bank Account in the Ledger. (B) Debit of Cash Account in the Ledger. (C) Credit of Cash Account in the Ledger. (D) Not posted in the Ledger.	1
14	Balancing of account means (A) total of debit side (B) total of credit side (C) difference in total of debit and credit (D) None of the above	1
15	.....is an allowance given by the seller of the goods out of selling price (A) Credit (B) Bad debts (C) Trade Discount (D) Cash Discount **OR** ..... is the process of transferring the entries from the books of original entry to the Ledger (A) Recording (B) Drafting (C) Casting (D) Posting	1
16	The category of accounts that are balanced are: (A) Assets (B) Liabilities (C) Capital (D) All the above	1
17	Credit balance of bank account in cash book shows : (A) Overdraft (B) Cash deposited in our bank (C) Cash withdrawn from bank (D) Fixed deposit with bank **OR** Simple Petty Cash Book is like a – (A) Cash Book. (B) Journal. (C) Statement. (D) None of these.	1
18	On intra-state sale of goods, GST charged is : (A) CGST and IGST. (B) CGST and SGST. (C) SGST and IGST. (D) CGST, SGST and IGST.	1

Contd...3

19	Depreciation of business asset is recorded in: (A) Sales Book. (B) Journal Proper (C) Cash Book. (D) None of these. **OR** When there is return of goods in a journal, then a debit note is prepared and sent to supplier, what type of journal is used for this purpose? (A) Sale return journal (B) Cash purchase journal (C) Cash sale journal (D) Purchase return journal	1
20	Trial balance is considered as the connecting link between accounting records and preparation of financial statements. It provides a basis for (A) Auditing accounting reports (B) Accuracy of the ledger account (C) Further processing of accounting data (D) All of the above **OR** If the trial balance agrees, it implies that (A) There is no error in books (B) There may be two sided errors in the book (C) There may be one sided error in the books (D) There may be both two sided and one sided errors in the books	1
21	Accounting provides information about the profitability and financial soundness of a concern. In addition, it provides other valuable information also. However, accounting has certain limitations. Explain any three such limitations.	3
22	What is Source Documents? Explain any two Source Document.	3
23	Prove that the Accounting Equation is satisfied in all the following transactions of Daljeet (i) Started business with cash ₹ 10,000. (ii) Paid rent in advance ₹ 300. (iii) Purchased goods for cash ₹ 5,000 and credit ₹ 2,000. (iv) Sold goods for cash ₹ 8,000 costing ₹ 4,000. (v) Paid salary ₹ 450 and salary outstanding being ₹ 100. (vi) Bought motorcycle for personal use ₹ 3,000.	3
24	Describe how debits and credits are used to analyse transactions.	3

25	Pass journal entries for the following (i) Sold goods to Koa for ₹ 40,000 at 15% trade discount and 4% cash discount. (ii) Received 75% amount immediately through a cheque. (iii) Bought goods from Pia for ₹ 1,00,000 at terms 5% cash discount and 20% trade discount. Paid 3/4th of the amount in cash at the time of purchase. (iv) Bought goods for cash of the list price of ₹ 40,000 at 10% trade discount and 2% cash discount. **OR** Pass journal entries for the following transactions (i) Provide depreciation on machinery ₹ 2,000 (ii) 4,000 for salaries are outstanding. (iii) Charge interest on drawings ₹ 1,000	3
26	Explain three advantages of accrual basis of accounting ? **OR** Roshan, a Chartered Accountant earned ₹ 12,00,000 during the financial year 2023-24, out of which he received ₹ 10,50,000. He incurred expenses of ₹ 5,10,000, out of which ₹ 1,20,000 are outstanding. He also received his fees relating to previous year ₹ 1,35,000 and also paid ₹ 60,000 due on expenses of last year. Find out Roshan's income for 2023-2024 following the cash basis and accrual basis of accounting.	3
27	With the help of example, Explain Going concern concept and Full disclosure principle? **OR** Explain the concept based on the premise 'do not anticipate profits but provide for all losses' with two examples.	4
28	From the following particulars, prepare the proprietor's Capital Account: 2023 April. 1 Started business with ₹ 45,000 May. 10. Withdrew capital from business ₹ 10,000 July. 15 Further Capital introduced ₹ 55,000 Nov. 30 Income tax paid ₹ 5,000 2024 Mar. 31 Profit for the year ₹ 30,000	4

Contd...4

29 Prepare a Purchase Day book of Shiv Stationery from the following information. — 4

Date 2024	Particulars
June 1	Purchased from M/S Gagan Stationery Mart on credit
	(a) 70 dozen pencils @ ₹ 25 dozen
	(b) 10 dozen registers @ ₹ 15 per register
June 10	Purchased from Amrit Furniture 2 tables @ ₹ 1,500 per table.
June 15	Purchased 3 dozen ink pots @ ₹ 80 per dozen from Mehar paper Company and received cash discount of ₹ 50
June 18	Purchased from Rehman Bros. on credit
	(a) 5 reams of white paper @ ₹ 50 per ream
	(b) 120 pens @ ₹ 60 per dozen. Less Trade Discount of 10%

30 Explain the qualitative characteristics of accounting information. — 6

31 (I) Distinguish between Debtors and Creditors? (any three) — 6
(II) Distinguish between Trade Discount and Cash Discount? (any three)

32 Define Trial Balance? Give any three functions of Trial Balance. What are the two methods of preparation of Trial Balance? — 6

OR

From the following balances extracted from the Ledger of M/s Samar prepare Trial Balance as on 31st March, 2024:

List of Accounts	(₹)	List of Accounts	(₹)
Capital	70,00,000	Building	7,50,000
Plant	15,00,000	Stock on 1st April, 2023	12,50,000
Cash in Hand	10,82,500	Cash at Bank	5,00,000
Commission Received	1,12,500	Rates, Taxes and Insurance	30,000
Discount Allowed	55,000	Discount Received	45,000
Purchases Return	50,000	Sundry Creditors	2,50,000
Interest Received	30,000	Sales	62,50,000
Repairing Charges	1,00,000	Book Debts	12,00,000
Furniture	1,20,000	Purchases	48,00,000
Sales Return	50,000	Carriage and Freight	75,000
Loan Advanced	6,00,000	Delivery Van	5,00,000
Office Salaries	6,25,000	Drawings	6,00,000

33 Journalise the following transactions in the books of Pankaj. — 6

(i) Received a cheque of ₹ 12,900 from Sia and allowed discount ₹ 300 to him. The cheque was deposited into bank on the same day.
(ii) Purchased machinery for ₹ 1,00,000, from M/S Punjab Machinery Raipur. Installation charge of machinery 6,000 paid in cash.
(iii) Received an order to supply goods of ₹ 40,000 form Mia and received ₹ 10,000 as an advance together with the order.
(iv) Cash ₹ 10,000 and goods worth ₹ 40,000 were stolen.
(v) Ajay Singh was declared bankrupt. He owed ₹ 2,500 to us. Nothing could recovered from his estate.
(vi) Out of insurance paid this year, ₹ 2,000 is related to next year.

34 Prepare a double column cash book (Cash and Bank) from the following transactions. — 6

2024
Aug 1 Cash in hand ₹ 1,200; overdraft at bank ₹ 15,000.
Aug 3 Purchased goods from Vrijesh Traders amounting to ₹ 3,000 and they allowed trade discount ₹ 200 The amount was paid by cheque.
Aug 5 Received cheque from Siddhartha ₹ 2,450. Allowed him discount ₹ 50.
Aug 10 Cheque received from Siddhartha deposited into bank.
Aug 11 Settled the account of Superstar Printers ₹ 750 by paying cash ₹ 680.
Aug 12 An amount of ₹ 1,000 due from Kartik Brothers written off as bad debts in the previous year, now recovered.
Aug 17 Deposited with bank ₹ 5,00.
Aug 19 Received repayment of a loan ₹ 6,000 and deposited out of it ₹ 2,500 into the bank.
Aug 20 Cashed a Cheque for ₹ 3,000
Aug 25 Interest debited by bank ₹ 500
Aug. 30 Drew from bank for Household expenses ₹ 1,000 and for Income Tax ₹ 500

OR

Name and describe the various books of original entries?

SET – B

DELHI PUBLIC SCHOOL, BHILAI

Name : .....

Roll No. : .....

Date : 19.09.2024

MIDTERM EXAMINATION 2024

Time : 3 Hrs.

Class : XI

SUBJECT : BUSINESS STUDIES

M.M. : 80

General Instructions

1. This question paper contains 34 questions.
2. Marks are indicated against each question.
3. Answer should be brief and to the point.
4. Answers to the questions carrying 3 marks may be from 50 to 75 words.
5. Answers to the questions carrying 4 marks may be about 150 words.
6. Answers to the questions carrying 6 marks may be about 200 words.
7. Attempt all parts of the questions together.

1. Which of the following is not a type of general insurance? (1)
(A) Fire insurance (B) Marine insurance (C) Health insurance (D) Life insurance

2. An economic activity which requires minimum academic and other qualification is (1)
(A) Business (B) Profession (C) Employment (D) None of these

3. **Assertion (A) :** A major disadvantage of sole proprietorship is that the owner has unlimited liability. (1)
Reason (R) : If the business fails, the creditors can recover their dues from the business assets.

(A) Both Assertion (A) and Reason (R) are correct and Reason (R) is the correct explanation of Assertion (A) .
(B) Both Assertion (A) and Reason (R) are correct but Reason (R) is not the correct explanation of Assertion (A) .
(C) Assertion (A) is correct but Reason (R) is incorrect.
(D) Assertion (A) is incorrect but Reason (R) is correct.

4. Sharanya is a shareholder in a company holding 1000 shares of ₹ 10 each on which she has already paid ₹ 8 per share. In the event of losses or company's failure to pay debts, Sharanya is liable to pay an amount of (1)
(A) ₹ 1000 (B) ₹ 8000 (C) ₹ 2000 (D) ₹ 10000

5. Storage removes the hindrance of _____ in trading activities. (1)
(A) Place (B) Risk (C) Time (D) Finance

6. Which of the following is also known as the contract of Assurance? (1)
(A) Fire insurance (B) Marine insurance (C) Life insurance (D) Health insurance

7. There is no minimum transaction limit in (1)
(A) NEFT (B) RTGS (C) Both (A) and (B) (D) None of these

8. Which of the following have the power of the government and considerable amount of operating flexibility of private enterprises. (1)
(A) Government company (B) Joint stock company
(C) Departmental undertaking (D) Statutory corporation

9. Mail sent by purchase department to production department is an example of which of the following (1)
(A) B2B commerce (B) B2C commerce (C) C2C commerce (D) Intra B commerce

10. The persons who have an equal ownership right over the property of the ancestor are known as (1)
(A) Karta (B) Coparceners (C) Members (D) Shareholders

11. "Vishal established his handicraft business and started purchasing handicraft items from Jaipur and selling to England." Identify the type of external trade highlighted in the above statement. (1)
(A) Import (B) Export (C) Entrepot (D) None of the above

12. Which of the following contract is signed by the promoters with the third party on behalf of the proposed company? (1)
(A) Provisional contract (B) Prospectus
(C) Preliminary contract (D) Memorandum of Association

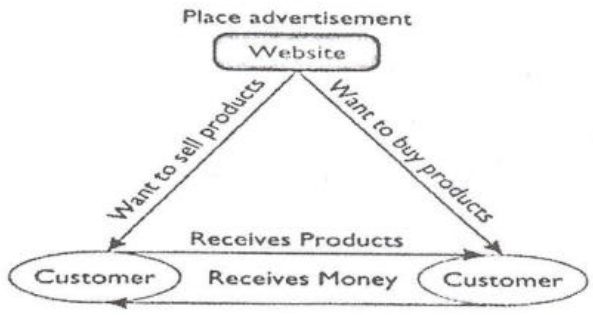
13. Which of the following statements is correct? (1)
(A) A secret partner cannot participate in the management of the firm.
(B) A partnership firm does not lack continuity.
(C) A minor can be a partner in a firm just like adults.
(D) A partner by holding out has unlimited liability towards the acts of the firm.

Contd...2

14. **Assertion (A) :** Insured can claim for loss or damage only if the loss arises due to reason beyond control of the insured.
Reason (R) : If an insurance company finds out that the loss is due to the careless attitude of insured, then company is not liable for any compensation. **(1)**

(A) Both Assertion (A) and Reason (R) are correct and Reason (R) is the correct explanation of Assertion (A) .
(B) Both Assertion (A) and Reason (R) are correct but Reason (R) is not the correct explanation of Assertion (A) .
(C) Assertion (A) is correct but Reason (R) is incorrect.
(D) Assertion (A) is incorrect but Reason (R) is correct.

15. Identify the scope of e-Business reflected in the given figure.



(A) B2B Commerce (B) B2C Commerce (C) C2C Commerce (D) Intra-B Commerce **(1)**

16. The control of Central Government on Departmental undertaking is very effective. This control on Departmental undertaking is subject to
(A) Government control (B) IAS officers control (C) Parliamentary control (D) Control by CAG **(1)**

17. Which document is an invitation to general public to subscribe shares?
(A) Memorandum of Association (B) Articles of Association
(C) Prospectus (D) Certificate of incorporation **(1)**

18. Government company is established by
(A) Parliament (B) State Assembly (C) Indian Companies Act (D) Banking Act **(1)**

19. _____ is a temporary arrangement under which a depositor is allowed to draw by cheque more than the amount to his credit up to a specified limit.
(A) Cash credit (B) Term loan (C) Bank overdraft (D) Consumer credit **(1)**

20. **Statement I:** Manufacturing of steel by way of further processing of raw iron is a tertiary industry.
Statement II: Seeds and nursery companies are typical examples of genetic industries. **(1)**
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true but Statement II is false.
(D) Statement I is false but Statement II is true.

21. Saksham takes a fire insurance policy for his new office. In a fire accident his office is totally damaged. Insurance company paid the full policy value to Saksham. Now Saksham can't sell the scrap to realise money from it, instead the insurance company will have a right over it. Identify and explain the principle of insurance which is applicable in the above mentioned case. **(3)**

22. Rikita had done a diploma in fashion designing. She is very creative. She saw a picture of a party gown in International fashion magazine having a price tag of ₹ 50000. She decided to make that gown herself with some customisation. She calculated that for making of gown, she has spent ₹ 4000. Her friend liked the gown very much, so Rikita sold that gown to her friend for ₹ 8500 and made a profit of ₹ 4500. She decided to open a boutique for selling readymade dresses for girls. **(3)**
(A) Will the transaction between Rikita and her friend be termed as business?
(B) Identify the underlying feature of business.
(C) Also, explain any other feature of business.

23. State the important privileges available to a private company.
OR **(3)**
State the consequences of non-registration of a partnership firm.

24. Discuss the various types of Marine insurance policies.
OR **(3)**
Discuss any three services offered by the banks.

Contd...3

25. "Everyday Amul collects milk from 2.12 million farmers and converts the milk into branded packaged products and delivers goods all over the country. The story of Amul started in Dec., 1946 with a group of farmers keen to free themselves from intermediaries, gain access to the market and thereby ensure maximum returns for their efforts." **(4)**
(a) Identify and state the form of business organisation used by Amul.
(b) Explain any two features of this form of business organisation.

26. Tanvi is running a general store. The store was insured against natural disaster like flood, earthquake and fire from Hindustan General Insurance Company for an amount of ₹ 50 lakh. Heavy raining in the city caused massive flood. This left the store without any security. The store was looted by people which was caught on CCTV. She claimed from the insurance company the amount of damage of ₹ 13 lakh for the material and furniture spoiled from flood and also ₹ 5 lakh for the loss of material by theft. She also claimed another ₹ 25 lakh for now converting the store into fully AC and for constructing additional floor for more storage space. Insurance company after assessing the damage to the property and stock due to flood and seeing the CCTV footage, accepted the claim of ₹ 13 lakh. Tanvi argued that as she has been paying premium for ₹ 50 lakh, she should be paid the full claim of ₹ 43 lakh.
(a) Identify and explain the fundamental principle of insurance that made Tanvi entitled to receive the claim of ₹ 13 lakh.
(b) Identify the principles of insurance applied by insurance company for not accepting the full claim amount of ₹ 43 lakh. **(4)**

27. Richa wants to start a retail business of cosmetics and jewellery items. Change in taste and preferences of customers may result in loss in such type of business. She is hesitating as she is aware of risks which are inherent in every business. She approaches her friend Sneha, who is the owner of a retail shop. Sneha advises her to go ahead with her idea as she will get profit as a return for undertaking risk. She also told her that some risk in business can be insured by taking an insurance policy. **(4)**
(a) What do mean by Business risk?
(b) Identify and explain the features of business risk discussed in the above case by quoting the lines.
(c) Is change in taste and preferences of customers, pure risk or speculative? Why?

28. The government planned to begin a Road project. The government needed management specialists and financial help to complete it. The government contacted the private sector to fulfil this requirement. Now, this project will be completed jointly by both the public sector and private sector. **(4)**
(a) Identify and explain the form of enterprise.
(b) State any two features of such enterprises.

29. Explain briefly any four clauses of Memorandum of Association. **(4)**

OR

Discuss the first four steps to be followed by a public limited company in raising funds from the public.

30. "E-business offers numerous benefits." Justify your answer by giving suitable reasons. **(4)**

OR

Differentiate between E-business and Traditional business on the basis of
(a) Ease of formation (b) Transaction risk (c) Government patronage (d) Cost of setting up

31. Rajat, Ajith and Sujith decide to start a business which is created by law and only law can bring it to an end. Rajat has four sons, so he wants that his business should be such in which he can easily shift the ownership to his sons whenever he wants. Ajith believes that its functions should be performed by elected representatives. Sujith suggests that the owners should be responsible for the losses of the business only to a limited extent. **(6)**
(a) Identify and explain the form of business organisation indicated above.
(b) Identify and explain any three features of this form of business organisation highlighted above by quoting lines from the paragraph.

32. Explain the following along with an example for each. **(6)**
(i) Principle of insurable interest
(ii) Principle of mitigation
(iii) Multiple Option Deposit Account

33. Explain the types of Primary and Secondary industries with the help of examples. **(6)**

OR

Discuss the various social objectives of business.

34. What do you mean by Global enterprises? Briefly discuss its various characteristics. **(6)**

OR

What do you mean by Statutory Corporation? Discuss its merits and limitations.

SET – A

DELHI PUBLIC SCHOOL, BHILAI

Name : .....

Roll No. : .....

Date : 25.09.2024

Class : XI

MIDTERM EXAMINATION 2024

SUBJECT : COMPUTER SCIENCE

Time : 3 Hrs.

M.M. : 70

NOTE:

1. This question paper contains five sections, Section A to E.
2. All questions are compulsory.
3. Section A have 18 questions carrying 01 mark each. Q17 and Q18 are assertion reasoning questions.
4. Section B has 07 Very Short Answer type questions carrying 02 marks each. One internal choice is given.
5. Section C has 05 Short Answer type questions carrying 03 marks each. One internal choice is given.
6. Section D has 02 questions carrying 04 marks each.
7. Section E has 03 Long Answer type questions carrying 05 marks each. One internal choice is given.
8. All programming questions are to be answered using Python Language only.

SECTION A

1. Which component of the Computer system connects the processor to the hardware–
   (A) System Bus (B) Memory (C) CPU (D) Input Unit

2. Select the correct hexadecimal value that represents the following binary number
   1111101011001110_2 –
   (A) $FADE_{16}$ (B) $FEED_{16}$ (C) $CAFE_{16}$ (D) $FACE_{16}$

3. Which of the following are tools to design algorithms?
   (A) Using variables and data (B) Using inputs and outputs
   (C) Using pseudo – code and flowcharts (D) Using functions and procedures

4. Which of the following is NOT a Python IDE?
   (A) IDLE (B) Spyder (C) Jupyter Notes (D) Sublime Text

5. To print the value of a variable, Python uses –
   (A) print statement (B) print() function (C) Print statement (D) Print() function

6. The input() returns the value as _____type.
   (A) integer (B) string (C) floating point (D) None of these

7. To print a line of text without ending it with a newline ____argument is used with print()
   (A) sep (B) newline (C) end (D) next

8. What will the following code produce?

```
>>>a,b=8.6,2
>>>print(a//b)
```

   (A) 4.3 (B) 4.0 (C) 4 (D) None of these

9. The result of the expression 'false' or False is –
   (A) false (B) False (C) 'false' (D) 'False'

10. Consider the loop given below:

```
for i  in range(10):
    break
```

What will be the final value of i after this loop?
   (A) 10 (B) 0 (C) Error (D) 9

11. The _____construct repeats a set of statements a specified number of times or as long as a condition is True.
   (A) selection (B) repetition (C) sequence (D) flow

12. How many times does the following code execute?

```
x=1
while(x<=5):
        x+=1
 print(x)
```

   (A) 6 (B) 1 (C) 4 (D) 5

Contd...2

13. Which of the following functions will return the first three characters of a string s
(A) s[3:] (B) s[:3] (C) s[–3:] (D) s[: –3]

14. Which of the following functions will return the string in all caps?
(A) upper() (B) toupper() (C) isupper() (D) to-upper()

15. What is value of $(10101110.010111)_2$ in Hexadecimal?
(A) AB.CD (B) AE.BC (C) AE.6C (D) AE.5C

16. Raised when an identifier name is not found is which type of error?
(A) NameError (B) EOF Error (C) IndexError (D) None of these

In the following questions a statement of assertion (A) is followed by a statement of reason (R)

17. **Assertion :** The CPU of a computer uses registers as memory.
Reason : Registers are small data holding areas within CPU that holds data, instructions etc. during the processing.
(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 (or partly true)
(D) A is false (or partly true) but R is true.

18. **Assertion :** An algorithm is the logical sequence of precise steps that solve a given problem.
Reason : An algorithm must have finite number of precise steps , which must be effective and end in a reasonable amount of time.
(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 (or partly true)
(D) A is false (or partly true) but R is true.

SECTION B

1. What is function of memory? What are its measuring units? (2)

2. What is Cache memory? Why is it considered crucial for a microprocessor's performance? (2)

3. Differentiate interactive mode and script mode. (2)

4. Convert $(B2D)_{16}$ to Octal. (2)

5. How can you create multi –line strings in Python. (2)

6.(a) Write a program to input a single digit(n) and print a 3 digit number created as (n(n+1)(n+2). Eg. If you input 5 , then it should print 567. Assume that input is in range 1-7 (2)

OR

(b) Differentiate between split() and partition() with respect to strings. (2)

7. Write a program to obtain the values of x,y and z from the user and calculate the expression :

$$4x^4 + 3y^3 + 9z + \pi$$

SECTION C

1. Predict the output for the following – (1+1+1=3)

a.
```
>>>x,y=12,13
>>>z,x=x*2,x/2
>>>print(x,y,z,sep='@')
```

b.
```
>>>a,b,c=10,20,30
>>>p,q,r=c – 5 , a+3, b – 4
>>>print("a,b,c:",a,b,c,end=' ')
>>>print("p,q,r:",p,q,r)
```

c.
```
>>>type(0)
>>>type("0")
```

Contd...3

2. Write a program to that checks whether the input number is a palindrome or not. (3)
(Use While loop)

3. (a) Write a program to accept the age of n employees and count the number of persons in the following group (i)26 – 35 (ii) 36 – 45 iii) 46 – 55 (3)

OR

(b) Write a complete python program to do the following: (3)

i. read an integer X.
ii. determine the number of digit n in X.
iii. from an integer Y that has the number of digit n at tens place and the most significant digit of X at ones place.
iv. output Y

4. Write a program that asks the user for a string and then prints a string that capitalizes every other letter in the string. Eg. computer becomes CoMpUtEr. (3)

OR

Describe the use of the following methods/functions with example. (3)
(a) lstrip() (b) find()

5. What do you mean by Syntax errors and Semantics errors? Give examples for both. (3)

SECTION D

1. (a) What is a statement? What is the significant of an empty statement? (2)

(b) Differentiate between break and continue statements using example. (3)

2. Write a program that should do the following : (5)

- Prompt the user for a string
- Extract all the digits from the string
- If there are digits
  - Sum the collected digits together
  - Print out
    - Original string
    - The digits
    - The sum of the digits
- If there are no digits
  - Print the original string and a message "has no digits"

(Example : Given input Hello123; prints Hello123 has the digits 123 which sums to 6)

3. (a) Write a program that should prompt the user to enter some sentences followed by enter. It should then print the sentences with the following statistics – (5)

- Number of words
- Number of characters (including white space and punctuation)
- Percentage of characters that are alphanumeric
- Assume any consecutive sequence of non – blank characters as words.

OR

(b) Differentiate split() and partition() with examples (5)

SECTION E

1. Convert the following – (4)

a. Binary to decimal	101011111
b. Hexadecimal to decimal	6C.34
c. Decimal to octal	122.75
d. Binary to Octal	100101.101

2. (a) Draw a flowchart to print numbers 1 to 10 and also print the sum of the numbers.

(b) Write pseudo code to print numbers 1 to 10 and also print the sum of the numbers. (2+2=4)

3. Write a program to find the sum of the following series.(Input value of x from the user) (4)

$$x - \frac{x^2}{2!} + \frac{x^3}{3!} - \frac{x^4}{4!} + \frac{x^5}{5!} - \frac{x^6}{6!}$$

SET – B

DELHI PUBLIC SCHOOL, BHILAI

Name : .....

Roll No. : .....

Date : 27.09.2024 | MIDTERM EXAMINATION 2024 | Time : 3 Hrs.

Class : XI | SUBJECT : INFORMATICS PRACTICES | M.M. : 70

General Instructions:

1. This question paper contains **five sections, Section A to E.**
2. All questions are compulsory.
3. Section A have 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 03 Long Answer type questions carrying 05 marks each.
7. Section E has 02 questions carrying 04 marks each.
8. All programming questions are to be answered using Python Language only.
9. Internal choice is given in Sections B – D.

Section – A

Q1. Expression ' 10 and 11' will evaluate as ..... . **(1)**
(A) True (B) False (C) Can't Predict (D) None

Q2. Which of the following string is not a valid string in Python ? **(1)**
(A) 'if ' (B) ''else'' (C) 'for '' (D) 'none'

Q3. math.ceil(125.2) will evaluate as ..... . **(1)**
(A) 125 (B) 126 (C) 124 (D) 128

Q4. Which of the following refers to 'access time' ? **(1)**
(A) Time taken to retrieve data (B) Time taken to store data
(C) None (D) Time for taking input

Q5. Which of the following is an example of Run Time error ? **(1)**
(A) a/b when b is zero (B) a*b when b is zero (C) a**2 when a is zero (D) All

Q6. 10%5 will return as ..... . **(1)**
(A) 0 (B) 1 (C) 5 (D) 2

Q7. Which of the following is(are) not valid identifier(s) ? **(1)**
(A) Admission_no (B) 2No (C) sales# (D) both (B) and (C)

Q8. Python code can run on a variety of platforms, it means Python is a _____ language . **(1)**
(A) Graphical (B) Cross-platform (C) Independent (D) All of these

Q9. _____ makes available its source code. **(1)**
(A) FLOSS (B) OSS (C) Freeware (D) Both (A) and (B)

Q10. The _____ component of a computer connects the processor to the other hardware. **(1)**
(A) BUS (B) Registers (C) Cache Memory (D) SSD

Q11. Interactive mode in Python is also known as ..... . **(1)**
(A) Immediate mode (B) Interpreter mode (C) Run time mode (D) None

Q12. Which of the following function is used to return data type of a variable ? **(1)**
(A) type ( ) (B) ord ( ) (C) id ( ) (D) none of these

Q13. print('NPS'*2) will give the following output: **(1)**
(A) NPS2 (B) NPSNPS (C) 2NPS (D) None

Q14. Which of the following is a mutable data type ? **(1)**
(A) list (B) tuple (C) dictionary (D) both (A) and (C)

Contd...2

Q15. Corel Draw is an example of ..... . **(1)**
(A) System software (B) Application Software (C) FLOSS (D) OSS

Q16. **is, is not** are known as ..... . **(1)**
(A) Logical operators (B) Identity operators (C) Assignment operators (D) None

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

Q17. **Assertion(A) :** A computer can deliver performance only through an efficient combination of hardware and software.
Reasoning (R) : While hardware refers to the physical component and software is the programs which govern the hardware. **(1)**

Q18. **Assertion(A) :** Python statement 'if' represents selection construct.
Reasoning (R) : The selection construct means the execution of a set of statements, depending upon the outcome of a condition. **(1)**

Section – B

Q19. What do you understand by explicit and implicit type casting? Give suitable example of each? **(2)**

OR

Give output of the given Python code snippet –

```
import  math as mt
x,y,z=100,10,50
print(y**2,  x+z//y)
print(x*y, mt.sqrt(x) )
```

Q20. What do you understand by 'Data Capturing' and 'Data Bus'. **(2)**

OR

Give any four Python characteristics/features/advantages of Python programming language.

Q21. Write a program to input three integers and swap them and print the swapped value. **(2)**

Q22. Give Python code that reads distance in kilometer and convert into miles.(1 km=0.621371 miles) **(2)**

Q23. Define the following terms: (**any 2**) **(2)**
(a) Debugging (b) Escape sequence (c) Logical operators

Q24. Predict the output of the given code snippets: **(2)**

```
for a in range(100,150,20):
    print(a*2, end=' ')
```

Q25. Write a program to print all natural numbers from 1 to 100. **(2)**

Section – C

Q26. Describe the following terms: **(1x3=3)**
(a) Antivirus Software (b) Proprietary Software (c) Open Source Software

Q27. Write a Python code to accept three integer numbers and print the largest one. **(3)**

OR

Predict the output of the given Python code:

```
st='Superlative'
print(len(st))
print(st[1:7:2])
print(type(st))
```

Contd...3

Q28. Write Python expressions for the following: **(1x3=3)**

(i) $z = x^2 + y^2$ (ii) $A = P\left(1 + \frac{r}{n}\right)$ (iii) $\frac{s=a+b+c}{3}$

Q29. Write a program to calculate area and circumference of a circular field when it's radius will be given by user. $Area = \pi r^2$ and circumference = $2\pi r$ where r is radius given by user and $\pi = 3.14$. **(3)**

Q30. Write a Python program to read a number of years. Convert and print it equivalent number of days, hours, minutes and seconds. Ex. if entered years is 10 then days : 3650, hours : 87600, minutes : 5256000, seconds : 315360000 should be displayed. **(3)**

Section – D

Q31. Write a program to calculate total amount raised in a charity camp where people can buy donated items or even can give monetary donations. The charity camp ran for 3 days. Take data of daily monetary collection and cost of donated items. Also calculate if they were able to raise target amount of ₹ 200000 or not. **(5)**

Q32. Write a program to accept any character from the user and check whether the given character is uppercase character, lowercase character, digit or any other special character. Print the appropriate message. **(5)**

OR

Write a program to enter two integers and an arithmetic operator (+, -, *, /) and display the computed result. (ex if two numbers given are 10, 3 and operator is * then result should be 30).

Q33. Expand the following terms: **(1x5=5)**

(i) SSD (ii) BRD (iii)FLOSS (iv) ALU (v) LSI

Section – E

Q34. Answer the following: **(1x4=4)**

(i) In Python single line comment begin with a # character. State **True/False**.
(ii) In Python tuple is an immutable data type. State **True/False**.
(iii) Sort-out the valid identifiers from the given ones: **ab, no1, if1, for, we@**.
(iv) Python programs are saved with a user given name and with _____ extension.

Q35. (i) Write a program to input two integers and check whether the first one is divisible by second or not. Display appropriate message also. **(2)**

(ii) Write a program to input cost price and profit earned of a product and calculate and print it's selling price. **(2)**

DELHI PUBLIC SCHOOL, BHILAI

Name : .....

Roll NO. : .....

Date : 25.09.2024

MIDTERM EXAMINATION 2024

Time : 3 Hrs.

Class : XI

SUBJECT : ENGINEERING GRAPHICS

M.M. : 70

General Instructions :

(i) Use both side of drawing sheet if necessary.
(ii) All dimensions are in mm.
(iii) Missing and mismatching dimension if any may be suitably assumed.
(iv) Follow the SP: 46-2003 revised codes with first angle method of projection.

1. Write any five types of lines with their application and symbolic representation. **(05)**

2. (a) Construct a triangle given the altitude = 55 mm and two base angles = 40° and 65°. **(05)**

   (b) Construct a quadrilateral with AB = 45 mm, BC = 55 mm, CD = 40 mm, AD = 60 mm, AC = 70mm **(05)**

3. (a) Construct a regular Octagon of side 25 mm. **(05)**

   (b) Draw a regular hexagon of side = 55 mm. Inscribe a circle in it. **(05)**

4. Draw an external common tangent to two non-intersecting and unequal circles, with their radii as R 25 mm and R 15 mm when their centres are 60 mm apart. **(05)**

5. Draw the projections of a point 20 mm from V.P and 30mm from H.P., assuming it to be located in all for quadrants by turn. **(06)**

6. Draw the projections of a line ST 70 mm long in following positions.
   (a) Parallel to and 20 mm below the H.P. and in the V.P. **(03)**

   (b) Parallel to and 35 mm behind of the V.P. and in the H.P. **(03)**

   (c) Perpendicular to the V.P., 25 mm above the H.P. and its one end in the V.P. **(03)**

   (d) Perpendicular to H.P., 15 mm infront of V.P. and its one end 10 mm above the H.P. **(03)**

   (e) Inclined at 60° to the V.P. and parallel to H.P. its one end 30 mm below the H.P., and 20 mm infront of V.P. **(03)**

   (f) Inclined at 35° to the H.P. and its one end 25 mm above it; parallel to and 20 mm infront of V.P. **(03)**

7.(i) A pentagonal plate of 30 mm long edges is resting on one of its edge on H.P. Draw its front view, top view and side view if its plane is perpendicular H.P. and V.P. **(06)**

7.(ii) Draw the front view and top view of a circular plate of diameter 60mm resting on H.P. such that the plate is perpendicular to V.P. and inclined at 45° to H.P., if the centre is 40 mm infront of V.P. **(10)**

DELHI PUBLIC SCHOOL, BHILAI

Date : 09.09.2024 | **MIDTERM EXAMINATION 2024** | **Time : 50 Minutes**

Class – XI | **SUBJECT : GENERAL KNOWLEDGE** | **Max. Marks : 50**

Name of the student: _____ Class/Sec._____ Roll No._____

Invigilator's Signature _____ Marks obtained : _____/50

General Instructions:

- **All questions are compulsory. Answer all the questions by writing the correct option number in the space provided in the capital letter only.**
- **The question paper consists of 2 pages.**
- **There are 50 questions. Each question carries 1 mark.**

1.	Who among the following is the author of the book, "The Guide"? (A) R.K.Narayan (B) Vikram Chandra (C) Shashi Tharoor (D) Rohinton Mistry	
2.	Who has authored the book, 'Straight from the Heart: An autobiography'? (A) Sunil Gavaskar (B) Sourav Ganguly (C) Sachin Tendulkar (D) Kapil Dev	
3.	Who has written the book 'Kerala: God's Own Country'? (A) Shashi Tharoor (B) Jeet Thayil C) Sudha Murthy (D) Thakazhi Sivasankara Pillai	
4.	Who among these science fiction writers wrote '2001: A Space Odyssey'? (A) Isaac Asimov (B) Arthur C Clarke (C) Jules Verne (D) H.G.Wells	
5.	Which epic depicts the wanderings of Odysseus after The Trojan War? (A) The Iliad (B) The Aeneid (C) The Odyssey (D) The Return of the King	
6.	The ever-famous children's book "Charlie and the Chocolate Factory" was written by this famous author. Who is the author? (A) J.K. Rowling (B) Maurice Sendak (C) Roald Dahl (D) William Shakespeare	
7.	Which is the first novel written by Ruskin Bond? (A) Angry River (B) Delhi is not Far (C) The Room on the Roof (D) The Blue Umbrella	
8.	Who wrote the book "The Chronicles of Narnia"? (A) Charles Dickens (B) C.S. Lewis (C) J.K. Rowling (D) Lewis Carroll	
9.	In the past, Chhattisgarh was known by which of the following names? (A) Punishment (B) Chedis Citadel (C) Dakshina Kosala (D) Magadha	
10.	In which district of Chhattisgarh is Kendai waterfall located? (A) Korba (B) Bilaspur (C) Kawardha (D) Surajpur	
11.	In which part of Chhattisgarh are rocks of the Gondwana formation found? (A) Bailadila (B) Mahanadhi river valley (C) Maikal Range (D) Baghelkhand Plateau	
12.	To which community Panthi dance of Chhattisgarh is related? (A) Gond (B) Uraoon (C) Raut (D) Satnami	
13.	Where is the first International hockey stadium of Chhattisgarh located? (A) Rajnandgaon (B) Raipur (C) Bilaspur (D) Korba	
14.	Who among the following was the first player from Chhattisgarh to participate in 2016 Olympics, after the formation of the state? (A) Saba Anjum (B) Renuka Yadav (C) Neha Bajaj (D) Nita Dumare	
15.	Why do plants need Nitrate ions? (A) To make proteins (B) To make fatty acids (C) To make starch (D) To make Chlorophyll	
16.	Which of the following is not a type of energy? (A) Thermal (B) Entropy (C) nuclear (D) kinetic	
17.	For which of the following capillarity is not the sole reason? (A) Soaking of ink (B) rising of ground water (C) spreading of water drops on the cotton cloth (D) Rising of water from the roots to the leaves	
18.	The first railway line was constructed during the rule of (A) Lord Dalhousie (B) James Cornwallis (C) Warren Hastings (D) Lord Bentinck	
19.	Black soil areas are limited to which of the following regions? (A) The plains of Ganga (B) Southern Region (C) Himalayan Region (D) Eastern Delta Region	
20.	Liquefied Petroleum Gas consists of mainly (A) Methane,Butane,Propane (B) Methane,Ethane,Hexane (C) Ethane,Hexane,Neon (D) None of these	

Contd...2

21.	Which of the following were used to decorate Harappan pottery? (A) Human figurines (B) Figures of animals and birds (C) Geometrical patterns (D) All the above	
22.	Which type of seals were most common in Indus valley civilization? (A) Oval (B) cylindrical (C) Quadrate (D) Rounded	
23.	What is INS Shalki? (A) Diesel electric submarine (B) Aircraft carrier (C) Stealth destroyer (D) Recovery vessel	
24.	Who has been conferred the highest civilian award 'Companion of the order of Fiji' recently? (A) Narendra Modi (B) Droupadi Murmu (C) S Jaishankar (D) Amit Shah	
25.	Vinesh Phogat, who was disqualified from Paris Olympics 2024 is associated with which sports? (A) Boxing (B) Badminton (C) Table Tennis (D) Wrestling	
26.	Atal Innovation Mission (AIM) recently collaborated with which company to establish Frontier Technology labs in schools? (A) Meta (B) Google (C) Microsoft (D) Amazon	
27.	Which of the following layers of earth's atmosphere is the coldest layer? (A) Troposphere (B) Stratosphere (C) Mesosphere (D) Exosphere	
28.	Which of the following factors affect the rate of chemical reaction? (A) Concentration of reactants (B) Temperature (C) Catalyst (D) All the above	
29.	Tomato is a natural source of which acid? (A) Tartaric acid (B) Oxalic acid (C) Citric acid (D) Acetic acid	
30.	Which of the following is not a characteristic of computer? (A) Versatility (B) Accuracy (C) Diligence (D) IQ	
31.	UNIVAC is (A) Universal Automatic Computer (B) Universal Array Computer (C) Unique Automatic Computer (D) Unvalued Automatic Computer	
32.	The main electronic component used in the first generation computers was (A) Transistors (B) Vacuum Tubes and Valves (C) Integrated Circuits (D)None of the above	
33.	What is the rate of flow of electric charges called? (A) Electric potential (B) electric conductance (C) Electric current (D) none of these	
34.	Which of the following Rigvedic deities represented storm? (A) Indra (B) Maruts (C) Varun (D) Apas	
35.	Which of the following is a colloid? (A) Gasoline (B) Chocolate (C) Blood (D) Brass	
36.	The rate of evaporation of a liquid does not depend upon (A) mass (B) surface area of the liquid (C) temperature (D) humidity of the surrounding	
37.	A substance added to food containing fats and oils is called: (A) Oxidant (B) Hydrant (C) Coolant (D) Antioxidant	
38.	The working of a jet aeroplane is based on Newton's (A) First law of motion (B) Second law of motion (C) Third law of motion (D) Law of gravitation	
39.	Complete the analogy. Extinguish: Fire :: ..... :Thirst (A) Drink (B) water (C) quench (D) eat	
40.	"The leaves danced in the win (D)" This is an example of which figure of speech? (A) Metaphor (B) simile (C) alliteration (D) Personification	
41.	Which planet in the solar system is known as the "Red Planet"? (A) Venus (B) Earth (C) Mars (D) Jupiter	
42.	Who wrote the novel "War and Peace"? (A) Anton Chekhov (B) Fyodor Dostoevsky (C) Leo Tolstoy (D) Ivan Turgenev	
43.	Which gas is used to extinguish fire? (A) Oxygen (B) Nitrogen (C) Carbon dioxide (D) Hydrogen	
44.	For which of these disciplines Nobel Prize is awarded? (A) Physics, Chemistry (B) Physiology (C) Medicine (D) All of the above	
45.	Which ocean is between Africa and Australia? (A) Pacific (B) Indian (C) Atlantic (D) Arctic	
46.	In which country did the Chernobyl nuclear disaster take place? (A) Russia (B) Ukraine (C) Belarus (D) Lithuania	
47.	What is the name of the science that studies the past of life on Earth? (A) Palaeontology (B) Astronomy (C) Anthropology (D) Geology	
48.	Which planet in the solar system is known as the "Blue Planet"? (A) Venus (B) Earth (C) Uranus (D) Neptune	
49.	Which vitamin is often referred to as the "sunshine vitamin"? (A) Vitamin A (B) Vitamin B (C) Vitamin C (D) Vitamin D	
50.	Which country is considered the birthplace of the Olympic Games? (A) Greece (B) Rome (C) Egypt (D) China	

DELHI PUBLIC SCHOOL, BHILAI
Midterm Examination-2024
Subject: Physical Education
SET-B

Date: 21.09.2024
Class: XI
Name: _____

Time: 3 Hrs
M:M: 70
Roll No.: _____

General Instructions:

(1) *This question paper consists of **5** sections and **37** questions.*

(2) ***Section-A** consists of questions **1-18** carrying **1** mark each and are 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. At tempt any five.*

(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 five.*

(5) ***Section-D** consists of questions **31-33** carrying **4** marks each and are short answer types and should not exceed **150-180** words. There is internal choice available.*

(6) ***Section-E** consist of questions **34-37** carrying **5** marks each and are long answer types and should not exceed **200-300** words. Attempt any three.*

Section-A

(1 × 18 = 18)

Q.1. Who is concerned with the gross motor skills and mobility of the children with special needs.
(a) Physical education teacher (b) Speech therapist
(c) Physiotherapist (d) Special educator

Q.2. What is the aim of Physical education?
(a) Physical development (b) Mental development
(c) Wholesome development (d) Social development

Q.3. What is meant by Dhauti?
(a) Dedication (b) Detachment (c) Purification (d) Satisfaction

Q.4. Who is known as the father of modern Olympics?
(a) Sir Dorabji Tata (b) Antonia Samaranch (c) Robert Bach (d) Baron de Coubertin

Q.5. Fit India movement was launched on:
(a) 29th July 2019 (b) 29th August 2019 (c) 29th September 2019 (d) 29th June 2019

Q.6. Which one of the following is especially trained to work with CWSN?
(a) Physical education teacher (b) Special educator
(c) Physiotherapist (d) Speech therapist

Q.7. Which is the fourth element of astanga yoga?
(a) Asana (b) Pratyahara (c) Dharana (d) Pranayama

Q.8. The ancient Olympic games were stopped in:
(a) 776 BC (b) 394 CE (c) 1896 (d) 1986

Q.9. Which is the component of wellness in the following?
(a) Nutritional wellness (b) Physical wellness (c) Social wellness (d) All of the above

Q.10. Which one of the following is the cause of disability?
(a) Infectious diseases (b) Malnutrition (c) Accidents (d) All of the above

Q.11. The word 'Altius' in Olympic motto means:
(a) Faster (b) Higher (c) Stronger (d) Heavier

Q.12. Match List I with List II and select the correct answer from the code given below:

S. No.	List I	List II	
	Term	Component	
(i)	Wellness	1.	Flexibility
(ii)	Health related fitness	2.	Mental well-being
(iii)	Physical fitness	3.	Reaction-ability
(iv)	Speed	4.	Body composition

Code				
	(i)	(ii)	(iii)	(iv)
(a)	2	4	1	3
(b)	4	1	2	3
(c)	3	2	4	1
(d)	2	4	3	1

Q.13. Which one of the following is not a niyama?
(a) Santosh (b) Tapa (c) Ishwara Pranidhana (d) None of these

Q.14. Given below are the two statements labelled Assertion (A) and Reason (R).
Assertion (A): Physical health is incomplete without mental health.
Reason (R): Mental health is related to mind's happiness, satisfaction and peace.
In the context of the above two statements, which one of the following is correct?
(a) Both (A) and (R) are true and (R) is the correct explanation of (A).
(b) Both (A) and (R) are true, but (R) is not the correct explanation of (A).
(c) (A) is true, but (R) is false.
(d) (A) is false, but (R) is true.

Q.15. What do you call the body's relative amount of fat to fat free mass?
(a) Body fitness (b) Physical fitness (c) Body Mass Index (d) Body Composition

Q.16. In which type of disability a person's mobility or dexterity is affected?
(a) Intellectual disability (b) Physical disability (c) Cognitive disability (d) None of these

Q.17. What are the colours of Olympic rings situated at the bottom of the Olympic symbol?
(a) yellow and green (b) Black and green
(c) Red and black (d) Yellow and black

Q.18. Out of the following which one is not the element of Astanga yoga?
(a) Yama (b) Niyama (c) Neti (d) Pranayama

Section-B

(2 × 5 = 10)

Q.19. How can physical education help in moral and character building?
Q.20. Briefly discuss about the awards of Ancient Olympic Games.
Q.21. Discuss the main functions of NOC.
Q.22. Discuss the benefits of Jal neti.
Q.23. Discuss the role of a Physical Education teacher in a school for students with special needs.
Q.24. Discuss any two components of wellness.

Section-C

(3 × 5 = 15)

Q.25. Discuss Fit India Movement in brief.
Q.26. Discuss about opening ceremony of Modern Olympic Games.
Q.27. Discuss the main functions of IOC.
Q.28. Briefly mention the importance of yoga.
Q.29. What is the role of School Counsellor for students with special needs? Discuss in brief.
Q.30. Define physical fitness and wellness in detail.

Section-D

(4 × 3 = 12)

Q.31. Elaborate the 'Khelo India' programme in detail.
OR
Write down the objectives of Khelo India programme in detail.
Q.32. Write down a detailed note on Ancient Olympic Games.
Q.33. What do you mean by disability? Discuss the types of diability.

Section-E

(5 × 3 = 15)

Q.34. What are the various career options in Physical Education? Discuss the teaching career in detail.
Q.35. Discuss the elements of astanga yoga in detail.
Q.36. What do you mean by physical fitness? Elucidate any two components of physical fitness.
Q.37. What do you mean by health? Explain the various dimensions of health in detail.

❁❁❁❁❁