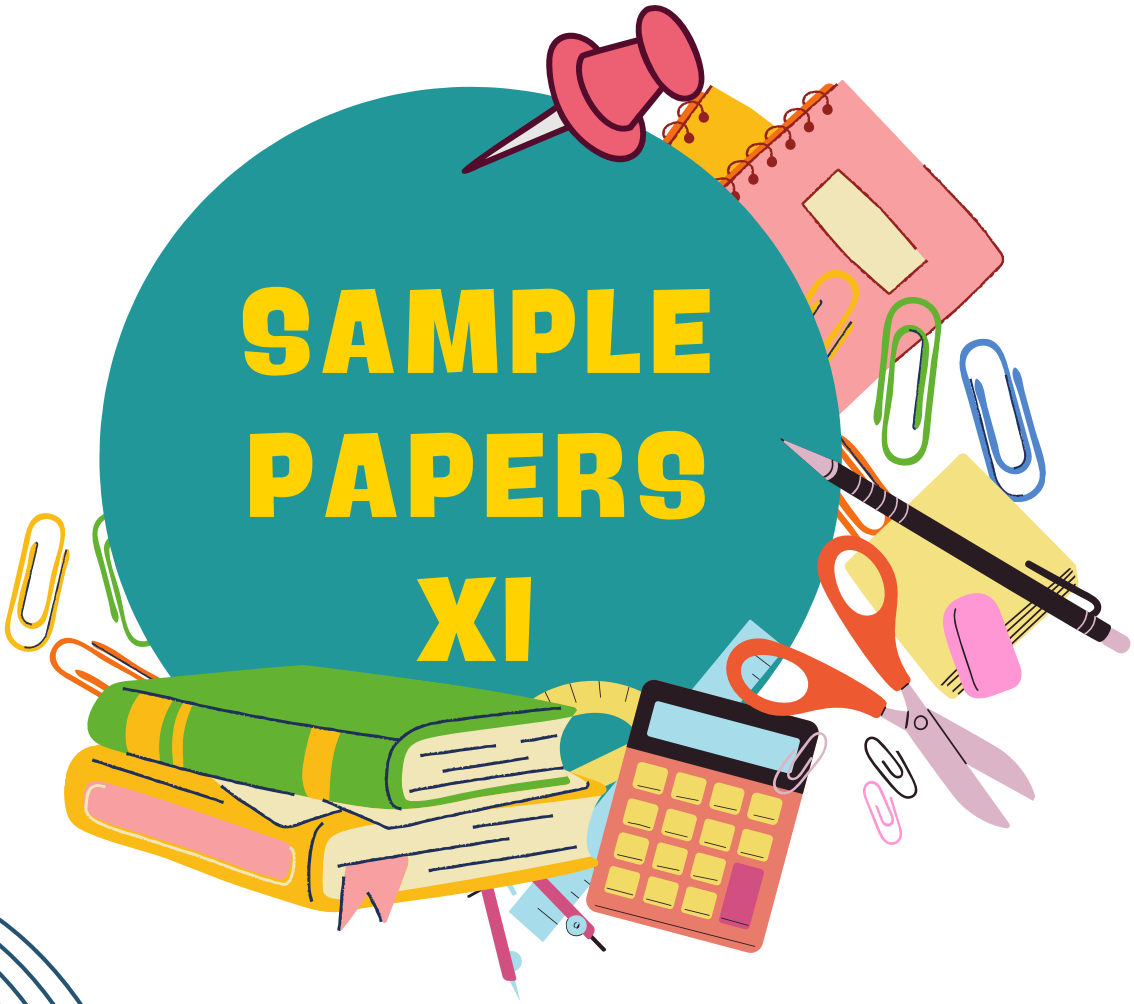




Bal Bharati
PUBLIC SCHOOL

**SAMPLE
PAPERS
XI**



MID TERM EXAMINATION

2024-2025

CLASS: XI

SUB.: ENGLISH

TIME: 3 HRS.

M.M.: 80

General Instructions:

- 1. The paper is divided into three sections - A, B and C. All the sections are compulsory.**
- 2. Separate instructions are given with each section and question, wherever necessary. Read these instructions very carefully and follow them faithfully.**
- 3. Do not exceed the prescribed word limit while answering the questions.**
- 4. Please write down the serial number of the question in the answer sheet before attempting it.**

SECTION - A (READING) (26 MARKS)

Q1. Read the passage given below:

(10 marks)

1. Delhi tried very hard but it wasn't enough. In the run-up to D-Day, the sound of firecrackers had not been heard. The Supreme Court ban on sales had made procuring them difficult, but many people, including school children, had resolved to buck tradition for clean air. And till 7 pm on Diwali this year (in 2017), most neighbourhoods were quiet. Around that time the first sound of firecrackers going off was heard, and gradually it rose to a crescendo. But it was nowhere near the blitzkrieg of the past, not even half of that. And well before midnight, it was all over.

2. The bad news broke at dawn. It was a visibly smoggy morning. Air pollution levels had peaked to "severe" on Diwali night and remained dangerously high till Friday afternoon as reflected in the real-time monitoring data of Central Pollution Control Board (CPCB) and Delhi Pollution Control Committee (DPCC).

3. The CPCB, however, pointed out a silver lining. It said the air quality index (AQI) this year was better than the ones on Diwali in the past two years in spite of hostile meteorological conditions. On Diwali last year (October 30, 2016), the average AQI for the city was in the "severe" category at 426 while the year before that (November 11, 2015), it had been in the "very poor" category at 327. This time, it was marginally lower at 326.

4. There are so many factors impacting air quality – from the speed and direction of the wind to burning of crop stubble in neighbouring states – that it is difficult to definitively identify the main culprit. What, however, has to be acknowledged is that at least a majority

of people have the will to stick to what may appear to be unpalatable decisions for better quality of life.

5 The data, however, is making informed observers worry-particularly the massive peaks in PM (Particulate Matter) 2.5 (fine, respirable pollution particles) and PM 10 (coarse pollution particles) levels on Thursday night after 10 pm. Delhi peaked to 656 micrograms per cubic metres around midnight.

6 However, the data also shows that in spite of unfavourable meteorological conditions, the air quality on Diwali this year was better than last year. It had not been so good in the two days preceding Diwali due to intrusion of humid air from the south-east coupled with prevailing calm wind conditions. The average mixing height (the height to which smoke or air will rise, mix and disperse) recorded on October 18 and 19 were 547 metres and 481 metres, respectively, according to CPCB. It should be at least 1000 metres for proper dispersal.

A.1 On the basis of your reading of the passage, answer ANY TEN out of twelve given questions- (10 marks)

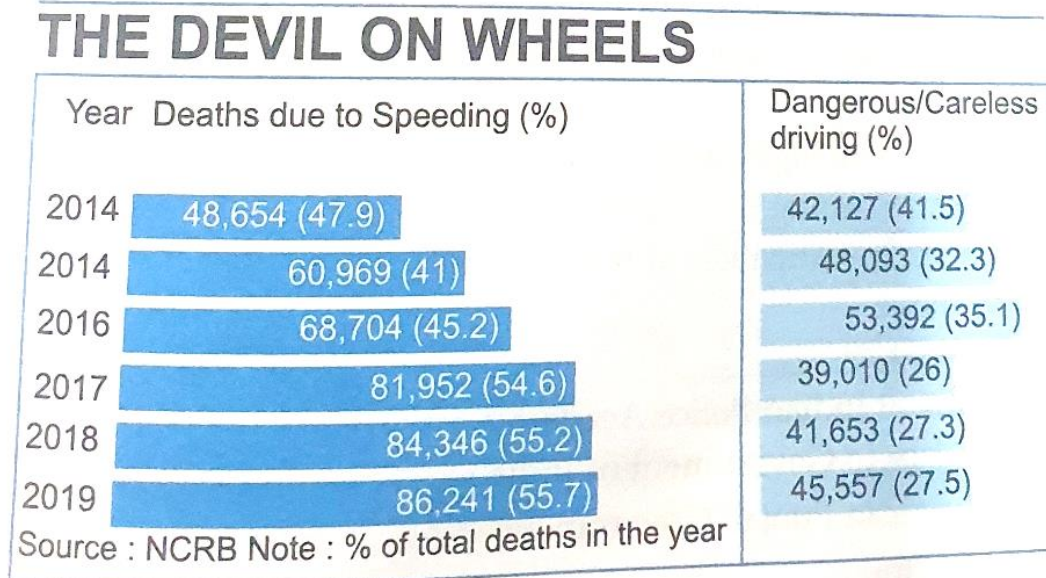
- (a) In the run-up to D-Day, why had the sound of firecrackers not been heard?
- (b) What was the 'bad news' that broke at dawn?
- (c) What were the AQI levels after Diwali this year?
- (d) In which year was the average Air Quality Index less 2015 or 2016?
- (e) List the factors impacting air quality.
- (f) What was the silver lining pointed out by the CPCB?
- (g) Delhi peaked to 656 per cubic metres around midnight.
- (h) The massive peaks in PM (Particulate Matter) 2.5 and PM 10 (coarse pollution particles) on the Diwali day made the observers worried. [True/False]
- (i) Which word in para 1 means 'an increase in loudness, excitement or danger'?
- (j) Find word in para 4 which means 'disagreeable'.
- (k) What was the Average mixing height on October 18?
- (l) Pick antonym of the word 'positive' from para 6

Q2. Read the passage given below: (8marks)

80% Road fatalities due to speeding, dangerous driving

New Delhi: Nearly 80% of fatalities in road accidents in India happened due to speeding and dangerous or careless driving, a comparative analysis of the National Crime Records Bureau (NCRB) data since 2014 shows. While this corroborates the popular perception of how people drive on the road in a country where getting a driving licence is often said to be too easy. Experts said most of the fatal accidents are recorded by police under speeding and dangerous driving categories in the FIR as there are no other provisions in the Indian Penal Code (IPC) for such offences.

According to the latest NCRB report on accidental deaths, 83.2% of road fatalities were on account of these two types of violations and the rest 17.8% of fatalities were due to reasons including drunk driving, bad weather conditions and mechanical defect. In 2014, when such causes of fatal crashes were first compiled 89.4% of the deaths were due to speeding and dangerous or careless driving as the police records and this was the highest ever.



"We face a host of challenges ranging from the poor system of issuing driving licences to almost zero scientific investigation of fatal crashes, which are provided in the law. Most of our national highways and state highways, which pass through villages, have no pedestrian crossings, On top of this, in all fatal cases, the police automatically register them under section 279 (negligent driving) and 304A (negligent driving resulting in death) of the IPC" said road safety expert Rohit Baluja who has been a regular guest faculty at Indian Police Academy, Hyderabad. Traffic adviser in Punjab government Navdeep Asija said in case of all fatal accidents, the provisions of IPC are slapped.

"In IPC, any crime or offence has to be lodged against a human being and hence there cannot be any charge against a road, vehicle or any other object. That's why police data may not indicate the exact reason for crashes. But it is also a fact that violation of traffic rules is rampant on roads and only electronic surveillance can put a check on them," Asija added. Baluja said there is a need to define what is dangerous driving and the norms for fixing speed limits.

On the basis of your understanding of the passage, answer ANY EIGHT out of the ten given questions. (1x8=8)

(a) According to NCRB in India

- (i) 80% fatalities are due to bad roads
- (ii) data since 2014, 80% fatalities occur due to speeding, careless or dangerous driving
- (iii) data till 2014, 80% fatalities on road are a result of speeding, careless or dangerous driving
- (iv) 80% injuries in India are due to careless driving

(b) Most fatal accidents are recorded

- (i) under speeding and dangerous driving category of IPC
- (ii) in the FIR
- (iii) no provision of IPC for such offences

- (iv) None of the above
- (c) Which statement is false?
 - (i) Fatal accidents are a result of speeding and careless driving.
 - (ii) It is difficult to get driving licences.
 - (iii) All fatal accidents are punished under the Indian Penal Code.
 - (iv) It is easy to get driving licences in India.
- (d) According to data drunk driving, bad weather conditions and mechanical defects resulted in
 - (i) 83.2 % of road fatalities
 - (ii) 89.4% of road fatalities
 - (iii) 17.8% of road fatalities
 - (iv) 80% of road fatalities
- (e) According to the data compiled by NCRB 86,342 deaths recorded were due to speeding in
 - (i) 2017
 - (ii) 2019
 - (iii) 2018
 - (iv) none of the above
- (f) In 2016 total deaths recorded due to careless/dangerous driving was
 - (i) 42,127
 - (ii) 39,010
 - (iii) 41,653
 - (iv) 53,392
- (g) Which is true for negligent driving?
 - (i) Section 304 A is slapped.
 - (ii) Section 279 of IPC is slapped.
 - (iii) Law takes a lenient view.
 - (iv) FIR is not lodged.
- (h) According to Navdeep Asija traffic violations can be checked by
 - (i) strict issuing of driving licences
 - (ii) making pedestrian crossings where National/State highways run through villages
 - (iii) registering FIR
 - (iv) only electronic surveillance
- (i) According to Baluja
 - (i) there is no fixed speed limit
 - (ii) there is no definition of dangerous driving
 - (iii) there is a need to define dangerous driving and norms for fixing speed limit
 - (iv) in case of all fatal accidents provisions of IPC are slapped
- (j) Navdeep Asija is
 - (i) Guest faculty at Indian Police Academy
 - (ii) Traffic Advisor to Government of India
 - (iii) Traffic Advisor in Punjab Government
 - (iv) Traffic Inspector

Q-3 Read the passage carefully and answer the question that follows: (8 marks)

'Thoda' is martial art form of Himachal Pradesh, India relies on one's talent with the bow and arrow. The name 'Thoda' is derived from the round piece of wood fixed to the head of the arrow. Its history is traced back to the days of Mahabharata when bows and arrows were used in the epic battles between the Pandavas and the Kauravas while residing in the beautiful valleys of Kulu and Manali. Thus, this martial art has its origins in Kulu. The equipment required for this game are bows and arrows.

In Himachal Pradesh, in the olden days, the game of Thoda was organized in a very interesting way. A handful of village folks would go to another village and throw tree leaves into the village well before sunrise. They would then hide in the bushes nearby, just outside the village. As soon as the villagers came to draw water the youths would shout and challenge them for a fight.

Held on Baisakhi Day, the competition is a mixture of martial art, cultural event and sport. Community prayers are organized to invoke the blessings of the Gods. The archers are divided into teams called Saathi and Pashi. The archers in this game need to aim at the leg region, below the knee.

On reaching the village fairground, both the teams dance on either side of the ground. Both the opponents face each other at a distance of about 10 meters and prepare to attack. Very quick and easy movements are the only methods of defense. The whole competition is conducted to the lively rhythm of war dance with one side furiously sidestepping, legs kicking in all directions, and other side doing its best to place an arrow on the target. There are minus points for a strike on the wrong parts of the leg.

Presently, the game is played in a marked court, which ensures that a certain degree of discipline is maintained in Thoda-a happy blend of culture and sport.

a) On the basis of your reading of the passage, make notes using headings and sub-headings. Use recognizable abbreviations wherever necessary. Supply a suitable title also. **(5 marks)**

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

SECTION - B (GRAMMAR & WRITING SKILLS) (23 MARKS)

Q4. Fill in the blanks using the correct form of verb given in brackets: (1X2=2 marks)

1. When I ----- (look) at the palace in the morning, I was amazed.

2. ----- you ever ----- (hear) of a paperless office?

Q5. Change the given sentences to comparative degree (1X2=2 marks)

1. No other metal is as precious as gold.
2. Very few cities in India are as big as Mumbai.

Q6. Rearrange the following words or phrases to make meaningful sentences: (1 × 2 = 2marks)

- (a) the / on / forests / the / industry / oil / depends
- (b) do / get / the / forests / from / what / we /products /?

Q7. Do as directed: (1/2x2=1 mark)

- (i) She was so tired that she could not keep her eyes open. (change into a simple sentence)
- (ii) The fire alarm has been sounded by him. (change the voice)

Q8. Design a poster for the Rakhi Mela to be organized by your school. Include all the necessary information. (50 words) (3 marks)

Or

Design a poster on behalf of the RWA of Golf Link Residency, Dwarka regarding the DO's and DON'Ts to prevent mosquito breeding in the rainy season. (50 words)

Q9. You are Meena/Mukesh of 79, Rajpura Road, Delhi. You want to sell your four wheeler vehicle because you are going to settle abroad. Draft a suitable advertisement for the same. (3 marks)

Or

You are Suyashi/Utkarsh, living at M-48, Cosy Apartments, Rohini Delhi. You want to sell your flat. Draft an advertisement to be published in a national daily giving its details and the price expected.

Q10. 'Brain drain is not a bane for a developing country like India.' Write a debate in 120-150 words either for or against the motion. (5 marks)

Or

Write a debate on 'How essential is a college education?' in 120-150 words either for or against the motion.

Q11. You are Astha/Akhil, studying in class XI. You have been asked by your Principal to speak in the morning assembly on 'The Hazards of Polythene Bags'. Draft the speech in 120-150 words. (5 marks)

Or

According to 2011 census, literacy rate of hundred per cent or around has been achieved by only a couple of states in India. Illiteracy is found mostly among the poor and the deprived sections of society. What can the youth do to spread literacy in society? Write a speech in 120-150 words on 'Role of students in eradicating illiteracy'. You are Karuna/Karan.

SECTION - C : LITERATURE (31 MARKS)

Q12. Read the extracts and answer ANY ONE out of the two given. (3 marks)

A) Then sleek as a lizard, and alert, and abrupt,
She enters the thickness, and a machine starts up
Of chittering's and a tremor of wings, and trilling
The whole tree trembles and thrills.

1. Who is 'she' in the second line? Where does she enter?
2. What does 'machine' refer to in the extract?
3. Find a word from the extract which is the synonym of 'entire'.

Or

B) "The cardboard shows me how it was When the two girl cousins went paddling, Each one holding one of my mother's hands, And she the big girl—some twelve years or so."

1. What does "the cardboard" refer to in this context?
2. Describe the scene depicted in these lines. What does it tell us about the relationship between the mother and her cousins?
3. How does the speaker feel about the photograph? Provide evidence from the text to support your answer.

Q13. Read the extracts and answer ANY ONE out of the two given. (3 marks)

A. When I went in to comfort the children, Jon asked, "Daddy, are we going to die?" I tried to assure him that we could make it. "But, Daddy," he went on, "we aren't afraid of dying if we can all be together — you and Mummy, Sue and I."

1. Name the chapter from which above extract is taken?
2. "Daddy, are we going to die?" Why did Jon say this?
3. Who tried to assure that they could make it and to whom?

Or

B. A CT machine scanned the mummy head to toe, creating 1700 digital X-ray images in cross section.

1. Whose mummy was scanned?
2. Name the author of this chapter?
3. What is the full form of CT?

Q14. Read the extracts and answer ANY ONE out of the two given. (4 marks)

A. 'Have you come back?' said the woman. 'I thought that no one had come back.'
'Only me.'

A door opened and closed in the passage behind her. A musty smell emerged.

'I regret I cannot do anything for you.'

'I've come here specially on the train. I wanted to talk to you for a moment.'

1. "Have you come back?" Who is the speaker of the line?
2. Why did the narrator go to that woman's house?
3. What does the word 'musty' mean?
4. Name the lesson and the author

Or

B. I got down and my cousin Mourad kicked his heels into the horse and shouted, Vazire, run. The horse stood on its hind legs, snorted, and burst into a fury of speed that was the loveliest thing I had ever seen. My cousin Mourad raced the horse across a field of dry grass to an irrigation ditch, crossed the ditch on the horse, and five minutes later returned, dripping wet.

1. Who is 'I' in the extract?
2. What did the horse do when Mourad kicked and shouted at?
3. where did Mourad race the horse?
4. From where has Mourad taken the horse?

Q15. Answer ANY TWO (one each from prose and poetry) of the following in 40- 50 words. (3x2=6 marks)

a) How does the poet describe the tree after the mother goldfinch arrives?

Or

In the poem, "A Photograph", what has not changed over the years and why?

b) How has Khushwant Singh described his grandmother?

Or

What is the relevance of the statement that Tut moves regally ahead of his countrymen in life and in death?

Q16. Answer ANY ONE of the following in 40- 50 words. (3x1=3 marks)

'The wars cause a lot of trauma.' How is this statement true with respect to the story 'The Address'?

Or

What truth dawned upon Aram after he saw his cousin with a beautiful white horse?

Q-17 Answer any one of the following in about 120-150 words- (1x6=6 marks)

Our optimistic attitude helps us to face extremely dangerous situations. Explain with reference to the lesson 'We're Not Afraid To Die.....'.

Or

Why and how did the relationship between the author and his grandmother change?

Q-18 Answer any one of the following in about 120-150 words- (1x6=6 marks)

Justify the title 'The Address'.

Or

Describe what happened between Khosrove and John Byro? What do you think had happened to Byro's horse?



BAL BHARATI PUBLIC SCHOOL
SAMPLE QUESTION PAPER 2024-25
CLASS- XI
SUBJECT - PHYSICS

Time: 3 Hrs

MM: 70

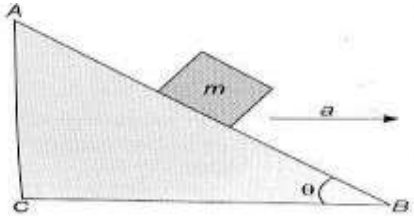
General Instructions:

1. There are 33 questions in total. All questions are compulsory.
 2. This question paper has five sections. All the sections are compulsory.
 3. Section A contains sixteen questions (12 MCQs and 4 of Assertion Reasoning) of one mark each. Section B contains five questions of two marks each. Section C contains seven questions of three marks each. Section D contains two case study based questions of 4 marks each and Section E contains three questions of five marks each.
 4. There is no overall choice. However, an internal choice has been provided in one question of Section B, C and E. You have to attempt only one of the given choices in such questions.
 5. Use of calculators is not allowed.
-

SECTION - A

- Q1. A weight W rests on a rough horizontal plane. If the angle of friction is θ , the least force (force of friction) that will move the body along the plane will be:
a) $W \cos\theta$ b) $W \tan\theta$ c) $W \cot\theta$ d) $W \sin\theta$
- Q2. A particle is projected at an angle of 45 degree with the horizontal. The relation between range and maximum height attained is,
a) $R = 4H$ b) $4R = H$ c) $2H = R$ d) none of these
- Q3. The dimensional formula, $M^0 L^0 T^{-1}$ is an example for
a) Angular displacement c) Angular velocity
b) Time d) Time period
- Q4. A batsman hits back a ball straight in the direction of the bowler without changing its initial speed of 12m/s. If the mass of the ball is 0.15kg, the impulse imparted to the ball will be: (assume linear motion of the ball).
a) -45 Ns b) -3.6 Ns c) 3.78 Ns d) 60 Ns
- Q5. Two bullets are fired simultaneously, horizontally and with different speeds from the same place. Which bullet will hit the ground first?
a. the faster one c. the slower one
b. depends on their mass d. both will reach simultaneously.
- Q6. Horizontal component of a bouncing ball is:
a) affected by gravity b) unaffected by gravity
b) affected by weight d) affected by contact force

- Q7. A body of mass 3kg is under a constant force which causes a displacement s (in meters) given by the relation $s = \frac{1}{3} t^2$, where t is in seconds. Work done by the force in 2 seconds is:
 a) $19/5$ J b) $5/19$ J c) $3/8$ J d) $8/3$ J
- Q8. A block of mass m is placed on smooth wedge of inclination θ . The whole system is accelerated horizontally so that the block does not slip on the wedge. The acceleration (a) to be given so the wedge so that m remains at rest is:



- a) $g \tan\theta$ b) $g \sin\theta$ c) $g \cos\theta$ d) $mg \tan\theta$
- Q9. A light and a heavy body have equal momentum. Which one has greater K.E?
 a) The lighter body c) Both have equal K.E.
 b) The heavier body d) Data given is incomplete
- Q10. A body is thrown upward and after some time the body reaches its maximum height. At maximum height:
 a) Its velocity and acceleration both are zero.
 b) Its velocity is zero and acceleration is maximum.
 c) Its velocity is maximum and acceleration is minimum.
 d) Its velocity is zero and acceleration is equal to acceleration due to gravity (g).
- Q11. If the acceleration (a) varies with time as $a = 2t + 5$. What is the velocity of the body after 5 seconds if it starts from rest?
 a) 50 m/s b) 25 m/s c) 100 m/s d) 75 m/s
- Q12. The angle between the direction of \hat{i} and $(\hat{i} + \hat{j})$ is:
 a) 45° b) 0 c) 90° d) 180°

For Questions 16 to 18, two statements are given- one labelled Assertion and the other labelled Reason. Select the correct answers to these questions from the options given below: (4)

- a. Both Assertion and Reason are true and reason is a correct explanation for assertion.
 b. Both Assertion and Reason are true but reason is not the correct explanation for assertion.
 c. Assertion is true, but Reason is false.
 d. Assertion is false and Reason is true.
- Q13. **Assertion:** On a rainy day, it is difficult to drive a car or a bus at high speed.

Reason: The value of co-efficient of friction depends on the nature of surface in contact.

Q14. **Assertion:** A cyclist bends inwards while negotiating a curve.

Reason: The purpose of bending is to acquire centripetal force required for circular motion.

Q15. **Assertion:** Horizontal range is same for angle of projection θ and $(90 - \theta)$.

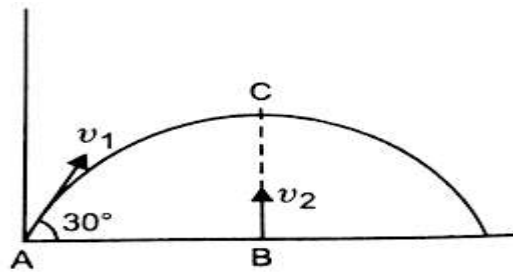
Reason : Horizontal range is independent of angle of projection.

Q16. **Assertion:** A physical quantity cannot be called as a vector if its magnitude is zero.

Reason: A vector has both magnitude and direction

SECTION B

Q17. In the figure shown below a body is projected with velocity V_1 from the point A at the same time another body is projected vertically upwards with the velocity V_2 from the point B. What should be the value of V_1 / V_2 for both the bodies to collide.



OR

Q17. If a vector $2\hat{i} + 3\hat{j} + 2\hat{k}$ is perpendicular to the vector $4\hat{j} - 4\hat{i} + \alpha\hat{k}$ then find the value of α .

Q18. Show that the total mechanical energy of a freely falling body remains constant throughout its fall.

Q19. State work energy theorem and prove it for a constant force.

Q20. Find the dimensions of (a / b) in the equation $P = (b - x^2) / at$, where P is power, x is distance and t is time.

Q21. Graphically represent variation of friction with applied force showing static, limiting and kinetic friction.

SECTION C

Q22. a) Check the dimensional consistency of the equation: $F = mv^2/r$, where F = centripetal force, m = mass, v= velocity and r = radius of circular track.

b) Give two disadvantages of using this method.

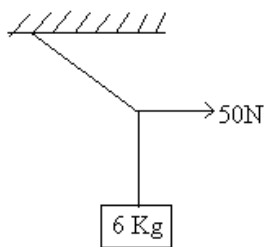
- Q23. a) Determine the maximum velocity with which a car can travel on a circular level road.
b) What is the advantage of banking of roads?

OR

- Q23 A man of mass m is standing on the floor of a lift. Find his apparent weight when the lift is
- moving with uniform velocity v
 - moving upwards with uniform acceleration a
 - falling freely.

- Q24. Give reason for the following:
- A person falling on a cemented floor gets more hurt as compared to a person falling on a heap of sand.
 - It is advisable to hold a gun tight to one's shoulders when it is being fired.
 - It is difficult to put a cycle in motion than to maintain its motion.

- Q25. A mass of 6 kg is suspended by a rope of length 2m from the ceiling. A force of 50N in the horizontal direction is applied at midpoint P of rope as shown in the diagram. What is the angle that rope makes with the vertical in equilibrium?



- Q26. A body trapped in a circular groove of radius 10 cm moves along the groove steadily and completes 5 revolutions per minute. (i) What is the angular speed and linear speed of the motion? (ii) What is the magnitude and direction of the acceleration vector? (iii) What is its linear displacement?
- Q27. a) What does negative sign in $F = -kx$ for a spring signify?
b) Determine an expression for the potential energy of an elastic stretched spring.
- Q28. a) State the work energy theorem.
b) A force $\vec{F} = \hat{i} + 5\hat{j} + 7\hat{k}$ acts on a particle and displaces it through $\vec{S} = 6\hat{i} + 9\hat{k}$. Calculate the work done if force and displacement are in SI units.

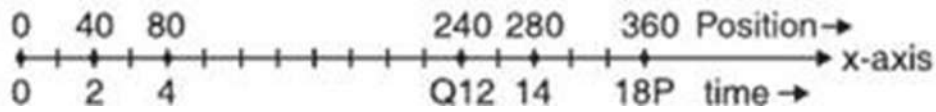
SECTION D

Case Study Based Questions

- Q29. Read the following paragraph and answer the questions that follow: (4)

Motion is common to everything in the universe. The rectilinear motion involves the study of motion of objects along straight line. For example, a car is moving along x-axis as shown in the figure. It moves from O to P and returns from P to Q. The displacement of the body between two points is a unique path from its initial to final position and is

independent of the actual path followed by the object in moving from one position to another.



Q29 (i) The distance travelled by a body is directly proportional to the time taken. Its speed

- a) increases
- b) decreases
- c) becomes zero
- d) remains constant

Q29 (ii) The slope of the tangent drawn on position-time graph at any instant is equal to the instantaneous

- a) acceleration
- b) force
- c) velocity
- d) momentum

Q29 (iii) A particle in one-dimension motion with zero speed at an instant may have non-zero acceleration at that instant, true or false?

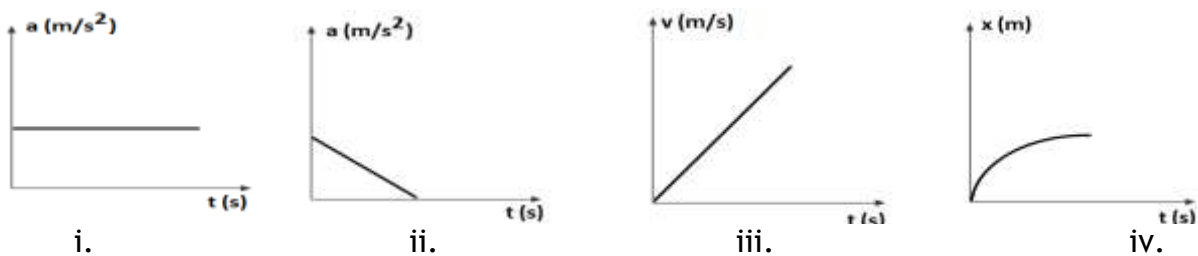
- a) True
- b) False

OR

(iii) If position of a particle is given by $x = (4t^2 - 8t)$, then which of the following is true?

- a) Acceleration is zero at $t = 0$
- b) Velocity is zero at $t = 0$
- c) Velocity is zero at $t = 1s$
- d) Velocity and acceleration will never be zero

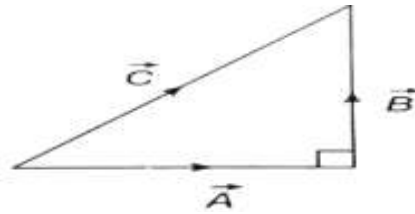
Q29 (iv) An object accelerates from rest at a constant rate. Which of the following graphs could be used to describe the motion of the object?



- a) i and iv
- b) i, iii, iv
- c) i and iii
- d) all the above.

Q30. Case Study 2 - Read the following passage and answer the following questions: (4)

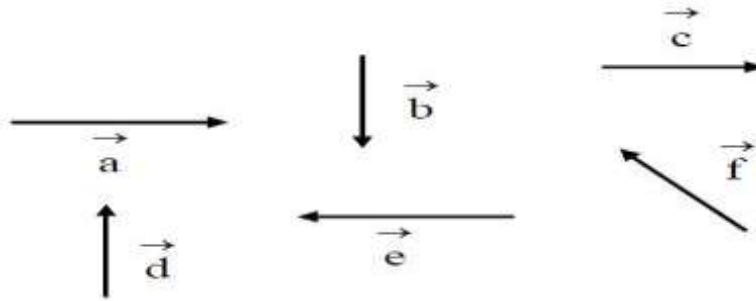
Unlike scalars, vectors cannot be added algebraically because vectors possess both direction and magnitude. Addition of vectors implies finding the resultant of vectors acting on a body. Vectors, whose resultant is to be calculated behave independently of each other. The vectors can be added geometrically and not algebraically.



Q30 (i) If the above two vectors \vec{A} and \vec{B} are equal in magnitude and $C = 141$ then what will be their magnitude?

- a) 1000
- b) 10
- c) 100
- d) 1

Q30 (ii) Six vectors have their magnitudes and directions indicated in the figure. Which of the following equations is correct?



- a) $\vec{f} + \vec{b} = \vec{c}$
- b) $\vec{d} + \vec{c} = \vec{f}$
- c) $\vec{d} + \vec{e} = \vec{f}$
- d) $\vec{b} + \vec{e} = \vec{f}$

Q30 (iii) Which of the following operations between the two vectors can yield a vector perpendicular to either of them:

- a) addition
- b) subtraction
- c) multiplication
- d) all the above

Q30 (iv) The process of spitting up a vector in into two or more vectors such that their combined effect is same as that of the given vector. What is this process known as?

- a. Combination of vectors
- b. Multiplication of vectors
- c. Resultant vectors
- d. Resolution of vectors

OR

The vector sum of two forces is perpendicular to their vector differences. The forces are:

- a) Equal to each other.
- b) Not equal to each other in magnitude.
- c) Equal to each other in magnitude
- d) cannot be predicted.

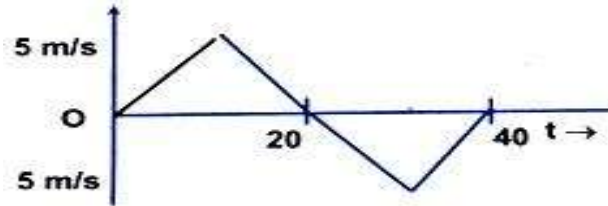
SECTION E

Q31. a) Deduce the following equation of motion for uniformly accelerated motion by using calculus method: $s = ut + \frac{1}{2} at^2$.

b) A particle starts from a point whose initial velocity is v_1 and it reaches with final velocity v_2 , at point B which is at a distance 'd' from point A. The path is a straight line. If acceleration is proportional to velocity, find the time taken by particle from A to B.

OR

Q31. The velocity-time graph for a given body is shown below, find

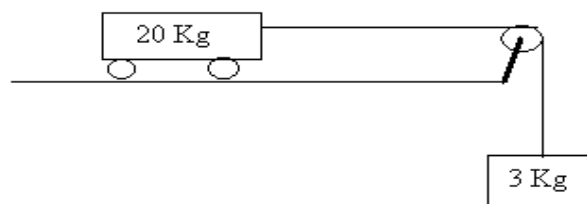


- distance travelled by the particle during the first 40 seconds.
- displacement of the particle during the first 40 seconds.
- the average velocity during the period.
- the average speed during the period.
- Under what condition is the average velocity of the particle equal to its instantaneous velocity?

- Q32. a) Obtain an expression for the equation of trajectory and time of flight for a projectile fired at an angle θ to the horizontal.
- b) The trajectory of a projectile launched from ground is given by the following equation, $y = -0.025x^2 + 1.732x$, where x and y are the coordinates of the projectile on a rectangular system of axes. Find the initial velocity and the angle at which the projectile is launched.

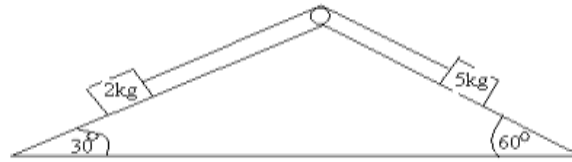
OR

- Q32. a) State and illustrate parallelogram law of vector addition.
- b) The sum of the magnitudes of two forces acting at a point is 18 N and the magnitude of their resultant is 12N. If the resultant makes an angle of 90° with the force of smaller magnitude, what are the magnitudes of the two forces?
- Q33. a) Obtain an expression for the acceleration of a body sliding down a rough inclined plane with angle of inclination θ .
- b) What is the acceleration of the block and trolley system shown in the following figure, if coefficient of kinetic friction between the trolley and surface is 0.04? What is the tension in the string? (take $g=10\text{m/s}^2$).



OR

- Q33. a) What is meant by angle of repose? Derive its relation with angle of friction.
b) Two blocks of masses 2 kg and 5kg slide over a light frictionless pulley placed on two smooth planes inclined at an angle of 30° and 60° as shown in the following figure. Determine the acceleration of the system. (5)





BAL BHARATI PUBLIC SCHOOL, DWARKA, NEW DELHI
MID TERM SAMPLE PAPER 2024-25
CLASS – XI
SUBJECT: PSYCHOLOGY

MM: 70

General Instructions:

- The question paper has 6 Sections A, B, C, D, E and F.
 - All questions are compulsory.
 - Section A has 18 questions, from Question No. 1 to 18 carrying 1 mark each. Answer to these questions in one word or one sentence.
 - Section B has 5 questions, from Question No. 19 to 23, carrying 2 marks each. Answer to these questions should not exceed 40 words.
 - Section C has 4 questions, Question No. 24 to 27, carrying 3 marks. Answer to this question should not exceed 80 words.
 - Section D has 4 questions, Question No. 28 to 31, carrying 4 marks. Answer to this question should not exceed 100 words.
 - Section E has 1 question, Question No. 32, carrying 6 marks. Answer to this question should not exceed 120 words.
 - Question No. 33-36 in Section F are based on two cases given. Each case has two questions carrying two marks each. Answer to each question should not exceed 3 words.
-

Section A (1*18)

- Q1.) Neeta is not sure which career option to choose after class XII. Whom should she reach out to?
- a. A clinical psychologist
 - b. Counselor
 - c. An organizational psychologist
 - d. educational psychologist
- Q2.) Forensic psychologists are most likely to be hired by:
- a. Businesses interested in maximizing worker productivity.
 - b. Elementary schools to create regarding programs to help struggling students.
 - c. Fast food chains to design an employee-training program.
 - d. Law-enforcement agencies to analyze crime scene
- Q3.) The experiments in which independent variable is selected rather than manipulated are called:
- a. Field Experiments
 - b. Quasi Experiments
 - c. Lab Experiments
 - d. Pseudo Experiments
- Q4.) Exposure to many conditions may result in experimental fatigue or practice effect e.g. A subject who underwent two experiments and then asked to participate in a third experiment. This may influence the results of the study due to _____ variable.
- a. Dependent variable
 - b. Sequential variable
 - c. Organismic variable

d. Situational variable.

Q5.) Assertion (A) - Psychologists from Asia, Africa have been critical of Euro-American approaches, which are propagated as universal.

Reasoning (R) - Human behavior is a function of attributes of persons and environment

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

Q6.) Identify the incorrect statement:

- a. A large number of hospitals now employ psychologists
- b. Doctors have felt the need for counseling in post-operative cases
- c. Medicine and Psychology are two independent fields which are completely unrelated
- d. A successful doctor looks for psychological and physical wellbeing of the patients.

Q7.) Growth is a holistic process and refers to both increase and decrement. **(True/False)**

Q8.) Who established the first experimental laboratory to study conscious experience?

- a. Wilhelm Wundt
- b. Carl Roger
- c. J.B Watson
- d. Skinner

Q9.) Assertion(A) Psychological testing is used for placement, training, personnel selection
Reasoning (R) Psychological testing is used to assess individual's intelligence aptitude, personality, interests etc.

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

Q10.) Non-verbal tests are good for satisfying which limitation of psychological enquiry?

- a. Lack of true zero point
- b. Relative nature of psychological tools
- c. Subjective interpretation of qualitative data
- d. Debriefing

Q11.) Case Study:

Rajeev is a student who is pursuing his masters and is conducting a research project. He started his scientific enquiry in which he starts collecting sample of data. The samples were taken considering the age, birth order, education of the subject. He asked few questions which were in a proper sequence and order from his subjects. He did the experiment on one of his subjects to find the effect of motivation on subject's performance and noted down the result for his interpretation. On one of his subjects, he did the non - verbal psychological test and on another he did the verbal test. In order to find the reliability of his test, Rajeev administered the test on group of subjects and re-administered it on same set of students after five days. If test is reliable there should not be significant variation in the scores obtained by the students on the two occasions. For checking the objectivity of the test Rajeev asked one other psychologist to administer the same test on same group of people.

Q11. A) To find the objectivity of the test:

- a. Re-administered it on same set of students after some time
- b. Ask the other Psychologists to administer the same test on same group of people.
- c. Re-administered it on different set of students after some time
- d. Do not test it again.

Q11.) B The interview in which the questions in the schedule are written clearly in a particular sequence is called as _____.

- a. Standardized interview.
- b. non-standardized interview.
- c. Personal interview.
- d. Group interview.

Q11.C) Motivation in the classroom act is _____ variable

- a. independent variable
- b. dependent variable
- c. Extraneous variable
- d. situational variable

Q11. D) Non -verbal test includes _____ and _____.

- a. Text, words
- b. symbols, words
- c. symbols, images
- d. graphs

Q12.) _____ layer includes components such government policies and parent workplace according to Bronfenbrenner's model.

Q13.) _____ is the process of knowing. It involves thinking, problem solving and a host of other mental processes by which our knowledge of the world develops.

- a. Hypothesis
- b. Reliability
- c. Cognition
- d. Mental processes

Q14.) Who is the founder and principal proponent of psychoanalysis _____?

- (a) Sigmund Freud
- (b) E.B Titchener
- (c) C.G. Jung
- (d) Alfred Adler

Q15.) _____ test assesses the underlying ability of the individuals by allowing them sufficient time, i.e., these tests do not have any time limit. In this the items are generally arranged in an increasing order of difficulty.

- (b) Speed test
- (c.) Individual test
- (d) Group test

Q16.) Historical conditions of a particular society have minimal impact on the current population growing up in that socio-cultural context. (True/False)

Q17.) Experiences are _____ in nature.

Q18.) _____ proposed the equation, $B = F(P, E)$.

Section B (2*5)

Q19.) With the help of a suitable example, explain how lack of true zero point is a drawback of psychological research?

Q20.) What makes case study a very useful method of research?

Q21.) Differentiate between educational and school psychology?

Or

- How is the field of Psychology related to Economics and Political Science?
Q22.) What are developmental milestones?
Q23.) Discuss the importance of norms for a psychological test.

Section C (3*4)

- Q24.) How can the impact of sequential variables be controlled? Explain with the help of examples.
Q25.) Discuss the importance of demographic and physical data in psychological research.
Q26.) What are the ethical guidelines that need to be followed while conducting psychological research?
Q27.) Explain what are experiences with the help of suitable examples?

Section D (4*4)

- Q28.) What is development? Explain any four features of life span perspective of development.
Q29.) Differentiate between naturalistic and controlled observation with the help of examples.

Or

- What are the features of scientific observation? Critically evaluate the observation method.
Q30.) Discuss the domains of biological psychology.
Q31.) Discuss the evolution of Psychology.

Section E (6*1)

- Q32.) What are the steps in conducting psychological research?

Or

What are the features of a good psychological test? What are the various ways in which we utilize psychological tests?

Section F (Case Studies)

Case study 1 (4 marks, each question carries 2 marks):

Ramya is a class VI student. Her parents work in an organization that requires them to work long and erratic hours. Many a family gatherings and picnics have been cancelled owing to this. Though, Ramya understands but still gets upset. However, she has a very good support system in form of her friends and neighborhood families. Her parents also share good relations with them.

- Q33.) With reference to Bronfenbrenner's model, Ramya's parent workplace and her parent's cordial relations with her friends will be considered a part of which two layers?
Q34.) Discuss the importance of mesosystem.**

Case study 2 (4 marks, each question carries 2 marks):

Nalini is participating in a debate competition along with her friends. She and her friends are in separate teams. While preparing for the competition, she and her friends prepared together, discussing the points. When the results were announced, her best friend won the first prize and Nalini did not win any prize. Nalini though dejected and sad, smiled, congratulated her friend while hugging her and gave her a high five. Her

teacher later tried to cheer her up and said, “You could have fooled others, but not me. I could make out you were upset as your smile did not reach your eyes”.

Q35.) Differentiate between the two types of behaviour.

Q36.) What kind of behaviour is being talked about in the statement, “I could make out you were upset as your smile did not reach your eyes”.

CLASS XI
BIOLOGY (044)
Revision Paper (2024-25)

Max. Marks: 70

Time allowed: 3 hours

General Instructions:

- i) All questions are compulsory.
- ii) The question paper has five sections and 33 questions. All questions are compulsory.
- iii) Section–A has 12 multiple choice questions and 4 assertion reason type questions of 1 mark each.
- iv) Section–B has 5 questions of 2 marks each.
- v) Section –C has 7 questions of 3 marks each.
- vi) Section–D has 2 case-based questions of 4 marks each.
- vii) Section –E has 3 questions of 5 marks each.
- viii) 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.
- ix) Wherever necessary, neat and properly labelled diagrams should be drawn.

SECTION –A

1. All the hormones are proteins, peptides and amino acid derivatives except:
 - a) insulin
 - b) estrogen
 - c) Parathormone
 - d) Thyroxine

2. Conjoint and closed vascular bundles are found in:
 - a) Monocot stem
 - b) Monocot root
 - c) Dicot stem
 - d) Dicot root

3. Energy required for body comes from:
 - a) carbohydrares
 - b) fats
 - c) proteins
 - d) all of the above

4. Which one of the following characteristics is common both in humans and adult frogs?
 - a) Internal fertilization
 - b) Nucleated RBCs
 - c) Four- chambered heart

d) Ureotelic mode of excretion

5. Frogs help human as they:

- a) Maintain ecological balance
- b) Eat insect and protect the crop
- c) In some countries the muscular legs of frog are used as food by man
- d) All of these

6. Apical meristems are found in :

- a) apical bud
- b) axillary buds
- c) both a and b
- d) none of the above

7. In a child of 15 years age, plasma calcium level is diagnosed below optimum level. Which food item should be included in diet in greater amount ?

- a) milk
- b) egg
- c) green leafy vegetables
- d) all of the above

8. Protonema is-

- a) Haploid and in mosses
- b) Diploid and in liverworts
- c) Haploid and in pteridophytes
- d) Diploid and in pteridophytes

9. IN fern prothallus develop from:

- a) Spore
- b) Oospores
- c) Elaters
- d) Antherozoid

10. The organs used for respiration by frog when it is on land include

- a) Lungs
- b) Buccal cavity
- c) Skin
- d) All of the above

11. In a bundle of green coriander leaves, Seema finds leaves of different shapes. What does this show?

- a) Plasticity
- b) Homophylly
- c) Heterophylly
- d) Ornamentation

12. Identify the haploid structures and select the correct option.

- A) Protonema of Moss
 - B) Sporophyll of Pinus
 - C) Gemmae of Marchantia
 - D) Zygote of Moss
 - E) Prothallus of Fern
- a) A, C and E
 - b) A, D and E
 - c) B, C and E
 - d) B, D and E

Question no. 13-16 consist of two statements –assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below:

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

13. **Assertion (A):** Organisms are made up of cells.

Reason (R): Cells are structural unit of living organisms. A cell keeps its chemical composition steady within its boundary.

14. **Assertion (A):** Hydrolysis of starch into glucose is an organic chemical reaction

Reason (R): Bonds are broken and new bonds are formed during transformation of starch into glucose.

15. **Assertion (A):** If there is no air in swim bladder of fish, it will not collapse.

Reason (R): Swim Bladder provides bouyancy

16. **Assertion (A):** A special membranous structure is a mesosome which is formed by the extensions of the plasma membrane into the cell.

Reason (R): In some prokaryotes like cyanobacteria, there are other membranous

extensions chromatophores present but mesosomes absent.

Section –B

17. Explain graphically how temp and pH affect enzyme action?
18. Define the term mycorrhiza. How these associations affect a plant? Explain with the help of an example.
19. What happens in case concentration of substrate is increased in enzyme action ?
20. What is pericarp? Name its different regions in fleshy fruits.
21. Name any four sites where ribosomes are present in plant cells.

Section –C

22. Succinic dehydrogenase is an enzyme that causes the substrate, succinate, to breakdown into fumarate. Malonate is a substance that resembles succinate and inhibits the activity of succinic dehydrogenase.
 - i. State the type of inhibition of succinic dehydrogenase by malonate
 - ii. Explain how this type of inhibition affects the activity of the enzyme.
23. Draw a labelled diagram of Funaria showing the sporophyte and gametophyte.
24. Name the enzymes responsible for oxidation - reduction and breakdown of large molecules to smaller ones ?
25. “All enzymes are proteins and all hormones are not enzymes ”. Justify the statement.
26. Explain 4 types of protein structures ?
27. What is phyllotaxy? Describe the phyllotaxy seen in Alstonia and Calotropis.
28. Draw a neat diagram of T.S.of dicot root and label the following parts in it Epidermis, Cortex, Pericycle, Xylem, Phloem and Endodermis.

Section-D

29. Explain the structure and function of following cell organelles

- a) Protein factory
- b) Suicidal bags
- c) Powerhouse
- d) Brain
- e) Cytoskeleton

30. Cell division is a very important process in all living organisms, during which DNA replication and cell growth take place, in a coordinated way.

- a) Write any one characteristic each of G1 and G2 phase of cell cycle.
- b) In which phase replication of DNA takes place?
- c) The amount of DNA in G1 phase is denoted by $2C$ and the chromosome number as $2N$. What will be the amount of DNA and chromosome number in prophase?

OR

Why mitosis is called equational division?

Section-E

31. a) Define isogamy, Anisogamy and Oogamy. Write an example of an alga for each.
b) Name and differentiate between the two types of circulatory systems and give one example for each of the types.

32. a) How can you differentiate between Coelomate and Pseudocoelomate animals? Write an example for each of the types. Draw diagrammatic sectional view of pseudocoelomate.
b) Differentiate between Homosporous and Heterosporous pteridophytes with an example for each.

33. Give reason:

- a) Cyclostomes are marine but migrate to fresh water.
- b) Spicules are present in sponges.
- c) Cnidoblasts are of significance in Cnidaria.
- d) Water vascular system is helpful to Asterias.
- e) Birds have pneumatic bones.

OR

- a) What is notochord?
- b) Write two differences between Chordates and Nonchordates.
- c) What are the peculiar features found in parasitic platyhelminthes? (1+2+2)



BAL BHARATI PUBLIC SCHOOL, DWARKA, NEW DELHI
SAMPLE QUESTION PAPER
CLASS – XI
SUBJECT: BUSINESS STUDIES

MM: 80

DATE:

TIME: 3 HOURS

General instructions:

1. This question paper contains 34 questions.
 2. Marks are indicated against each question.
 3. Answers 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. Beena decided to become financially independent after completing her education and discussed her future plans with her friend Ria. Ria told her that the amount of capital investment required and the degree of risk to be assumed by Beena will depend upon the scale of operation. Identify the type of economic activity that Beena wants to pursue. 1
 - a. Business
 - b. Profession
 - c. Employment
 - d. None of the above
2. Poor workmanship and carelessness may cause spoilage of the resources and bring losses to a business. In which of the following, it can be included. 1
 - a. Economic causes
 - b. Human causes
 - c. Political causes
 - d. Natural causes
3. A company has to apply for the listing of shares in stock exchange; if permission is not received the allotment will be void. Therefore, permission shall be received within: 1
 - a. 7 weeks
 - b. 10 weeks
 - c. 30days
 - d. 10days
4. Which of the following is not a characteristic of a cooperative society? 1
 - a. Membership is open to all, irrespective of their religion, caste, and gender.
 - b. The society can enter into contracts and hold property in its name, sue and be sued by others.
 - c. In a cooperative society, the power to take decisions lies in the hands of all the members of society.
 - d. The cooperative society through its purpose lays emphasis on the values of mutual help and welfare.
5. The person whose risk is insured is called _____ and the firm which insures the risk of loss is known as _____.
 - a. Insured, Insurer.
 - b. Insurer, assured.

- c. Insurer, Insured.
 - d. Assurance Underwriter, Insurer.
6. _____ includes all those enterprises which are managed and owned by individuals or groups of individuals.
- a. Public Sector
 - b. Private Sector
 - c. Company
 - d. Cooperative Society.
7. For the following statements choose the correct option. 1
Statement I: Only exchange of goods as service is called business.
Statement II: Exchange of goods & services is prominent feature of business
Choose the correct option from the options given below:
- a. Statement I is correct and II is wrong
 - b. Statement II is correct and I is wrong
 - c. Both the statements are correct
 - d. Both the statements are incorrect
8. Services are intangible in nature, which means that they _____ 1
- a. Involve simultaneous production and consumption
 - b. Are performed exclusively each time
 - c. Are experiential in nature
 - d. Cannot be stored for a future use
9. Yogesh's current account balance is 16,000 and he issues a cheque of ₹19,000 in favour of a client. However, the bank does not dishonour his cheque due to insufficient balance. This is because of a prior arrangement he had done with bank to overdraw his account. Identify the type of banking facility being described in the above lines. 1
- a. Cash credit
 - b. Overdraft
 - c. Draft
 - d. None of the above
10. Which of the following is not a characteristic of a profession? 1
- a. Transfer of interest is possible.
 - b. Rendering of personalised services.
 - c. Limited capital is needed for establishing a profession.
 - d. Professional code of conduct is followed.
11. The liability of all the coparceners except the _____ is limited to their share in the business and consequently their risk is well defined and precise. 1
- a. Karta
 - b. Partners
 - c. Shareholders
 - d. Members.
12. There is a full guarantee by the issuing bank branch about its payment to the payee. So, there is no risk of _____ getting dishonoured. 1
- a. Bank Draft
 - b. Cheque

- c. Both(a) & (b)
- d. None of these

13. 'It is a democratic large sized organisation having numerous shareholders; the owners having minimum influence in terms of controlling or running the business.' Which form of organisation and the corresponding demerit is highlighted here? 1

- (A) Cooperative Society — Government Control
- (B) Joint Stock Company — Impersonal Work Environment
- (C) Cooperative Society — Inefficiency in Management
- (D) Joint Stock Company — Oligarchic Management

14. Assertion(A)- If the business fails, the creditors can recover their dues from personal property of the owner in case of a sole proprietorship business.

Reason(R)- Sole proprietorship business ceases to exist in the event of sole proprietor's death.

- a. Both (A) and (R) are correct.
- b. (A) is correct and (R) is incorrect.
- c. Both (A) and (R) are correct and (R) is the correct explanation of A.
- d. Both (A) and (R) are correct and (R) is not the correct explanation of A.

15. _____ is ascertained by comparing the value of output with the value of inputs and is a measure of efficiency in an organization.

- a. Market standing
- b. Productivity
- c. Innovation
- d. Manager performance and development

16. Which of the following is not covered under general insurance? 1

- (A) Fire insurance
- (B) Theft insurance.
- (C) Life insurance
- (D) marine insurance

17. From the following picture, identify the hindrance of commerce highlighted: 1



- a. Hindrance of Risk
- b. Hindrance of Finance
- c. Hindrance of Place
- d. Hindrance of Time

18. Match the columns and choose the correct alternatives: 1

COLUMN I	COLUMN II
a. B2B Commerce	i. A firm's internal process
b. B2C Commerce	ii. A firm's interaction with other business
c. Intra B Commerce	iii. The business originates from the consumer and the ultimate destination is also consumers.
d. C2C Commerce	iv. A firm's interaction with its customers.

- a. A-iii , B -iv, C- i , D- ii
- b. A-ii , B -iv, C- i , D- iii
- c. A-ii , B -i, C- iv , D- iii
- d. A-i , B -iv, C- ii , D- iii

19. e-business includes : 1

- a. e-commerce
- b. production
- c. product development
- d. all of the above

20. 'Online Shopping' is an example of 1

- a. B2B Commerce
- b. B2C Commerce
- c. Intra B Commerce
- d. C2C Commerce

21. Manan and ketan decide to start a partnership business of manufacturing computer keyboards. Manan is of the view that they should have a written agreement and they should also register their partnership firm. However, Ketan wants to have a verbal agreement. Manan explained the consequences of non- registration to Ketan, after which Ketan agreed it. State the consequences of non- registration of a firm which were explained by Manan to Ketan. 3

OR

Climax India Private Limited was formed as a Private Company by a group of five friends. Their business has grown considerably over the years. Now, they want to expand their business and for this, they need more funds. They are planning to convert their company into a public company and raise more funds through issue of shares. Mention any three privileges that the company will have to forgo as a private company after conversion.

22. India is a largest milk producer of the world. Moreover, increasing demand of milk and milk product has made dairy farming a profitable business. Considering these facts Raghu an industrialist has decided to set up a dairy farm and cheese producing unit in Punjab. He plans to deal in the extensive range of fresh cheese in various combinations. 3

- a. By quoting lines from above case, explain the different kinds of industries that Raghu wants to set up.
- b. Also state diagrammatically the categories of types of industries as identified in (part a).

23. When a business person conceptualizes and starts a business; runs it, scale it up then why

- 'maximizing business profit' is not a sole objective of business? Give reasons 3
24. Explain following types of bank accounts:
- Savings deposit account
 - Current deposit account
25. Differentiate between Marketing cooperative society and Producer cooperative society. 4
26. Differentiate between MOA and AOA on the following basis: 4
- Meaning
 - Validity
 - Position
 - Relationship
27. Answer the following questions 4
- Principle of indemnity is not applicable to which insurance and why?
 - When should insurable interest be present in the fire insurance?
 - Name the type of insurance wherein insurable interest need not exist when the policy is taken.
 - What do you understand by the term Insurance?
28. "e-business and e-commerce can be used interchangeably." Do you agree with the statement? Give reason in support of your answer. 4

OR

Explain the benefits of e-business.

29. Business is a core activity in the society that contributes to social and economic development. Explain the importance of the auxiliaries to trade in supporting business activity in the economy with any four examples. 4
30. Differentiate between various types of economic activities on any four basis. 4
31. Sarika is running a organic store under the brand name, 'Earth' in a popular market in Dehradun. She acknowledges that risks in her business cannot be predicted with utmost accuracy as business environment is dynamic in nature. Therefore, it is not possible to predict future events with accuracy like, change in consumer preferences, increase in competition, natural calamities etc. Also, she feels that the risks in business can be minimised but cannot be eliminated all together. As her business is operated at a small scale, she feels her quantum of risk is relatively low. At the same time, she truly believes in the saying that no risk, no gain' is applicable to all the business organisations.
- Identify and explain the various characteristics of business risk being described in the above paragraph.
 - Also, Explain the various types of business risks. 6
32. Saurabh has taken fire insurance policy of Rs.9,00,000 for his factory. Due to fire, he suffered a loss of Rs.6,00,000. He claimed the loss from the insurance company and he gets the compensation within a month.
- Goods that were lost by fire were sold for Rs.70,000. Saurabh wants to keep this money with himself, while the insurance company claims that Rs.70,000 should be handed over to the company. 6
- Identify and state the principle of insurance which is applicable in the given case.
 - Also, explain the Principle of Insurable Interest and Indemnity with suitable example.

OR

Ankit's warehouse was covered by a Fire Insurance Policy of Rs.10,00,000. Two years back, his warehouse caught fire. Ankit immediately called up the nearest fire station and started removing the goods from the warehouse in order to save them from fire. He took all reasonable steps to minimize the loss or damage. As a result, the actual loss by

fire to him was Rs.3,00,000, which could have gone up to Rs.7,00,000, if he had not acted as a prudent person. After scrutiny of the loss, the insurance company handed over the cheque of Rs.3,00,000 to Ankit.

A. Identify and state the Principle of Insurance which was followed by Ankit in the given case.

B. Also, explain the Principle of Proximate Cause and Contribution

33. State, giving reasons, whether the following statements are true or false. 6

a. Every company must have Articles of Association

b. Acts against memorandum are ultra vires.

c. It is necessary to get every company incorporated whether private or public.

34. Explain the various steps in Capital subscription stage in the formation of company. 6

Or

Explain the various documents used by the company during incorporation stage.



BAL BHARATI PUBLIC SCHOOL DWARKA
SAMPLE QUESTION PAPER (MID TERM)
PHYSICAL EDUCATION XI
SESSION (2024-25)

TIME ALLOWED: 3 HOURS

MAX. MARKS: 70

GENERAL INSTRUCTION

- 1) The question paper consists of 4 sections and Questions
- 2) Section A consists of question 1-18 carrying 1 mark each and is multiple choice questions. All questions are compulsory.
- 3) Section B consist of question 19-24 carrying 2 marks each and are very short answer types and should not exceed 60-90 words
- 4) Sections C consist of Question 25 – 29 carrying 3 marks each and are short answer types and should not exceed 100 – 150 words.
- 5) Section D consist of question 30-34 carrying 5 marks each and not exceed 200-300 words

(SECTION A)

Q1. The Ministry of sports and Youth and affairs introduced Khelo India program in the year:

- (a) 2016 (b) 2017 (c) 2018 (d) 2015

Q2. How many components are included in Khelo India Program?

- (a) 10 (b) 12 (c) 8 (d) 15

Q3. In which of the sport is LED lights technology is used in stumps?

- (a) Tennis (b) Cricket (c) Badminton (d) Football

Q4. The term "Citius" is the Olympic motto denotes-

- (a) Higher (b) Stronger (c) Faster (d) All of these

Q5. The idea for reviving the Olympic Games came from

- (a) Eunice Kennedy Shriver (b) Baron Pierre de Coubertin (c) Dion Nash (d) Ludwig Guttman

Q6. The ancient Olympic Games were initially:

- (a) 3 days event (b) 2 days event (c) 1 day event (d) 5-day event

Q7. "Playing beyond the rules of the games" is a violation of which of the following educational values?

- (a) Pursuit of excellence (b) Balance between Body, Will and mind
c) Joy of Effort (d) Friendship

Q8. Which among the following is NOT an Olympic core value?

- (a) Excellence (b) Commitment (c) Respect (d) Friendship

Q9. Who gave the definition 'Checking the impulses of mind is yoga'?

- (a) Patanjali (b) Shankaracharya (c) Shri Krishna (d) Swami Sivananda

Q10. Out of the Following which one is not an element of Ashtanga Yoga?

- (a) Yama (b) Niyama (c) Dhauti (d) Pratyahara

Q11. Which term is used to describe alternate nostril breathing in yoga?

- (a) Kapalabhati (b) Anulom-Vilom (c) Bhramari Pranayama (d) sheetali Pranayama

Q12. The concentration of mind on an impulse without any divergence is known as :

- (a) Yoga (b) Pranayama (c) Vritti (d) Meditation

Q13. Which of the following are the main stages of Pranayama?

- (a) Puraka (b) Kumbhaka (c) Rechaka (d) All of these

Q14. Which one is Congenital disability?

- (a) Down Syndrome (b) Cerebral palsy (c) Polio (d) Both (a) and (b)

Q15. A genetic disorder is found in an intellectual disability which is known as:

- (a) Autism (b) Cerebral palsy (c) Down syndrome (d) None

Q16. World Disability Day is celebrated on:

- (a) 2nd April (b) 21st June (c) 29th August (d) 3rd December

Q17. Which of the following is not Disability etiquette?

- (a) Avoid asking personal questions (b) Use a normal tone of voice
c) Listen attentively (d) Pretending to understand

@18. You have a new classmate who has a disability and has an interpreter as he/she has just joined your school. He/she speak to you. You will:

- (a) Communicate with the interpreter (b) stare between the interpreter and your classmate
- c) speak directly to your classmate (d) look at neither your classmate nor the interpreter

(SECTION B)

Q19. Name any four objectives of Physical education.

Q20. Write down the Olympic Oath.

Q21. Write about the Olympic Flag.

Q22. List the principal of Yama.

Q23. What do you understand by 'Physical Disability'

Q24. Define Disorder.

(SECTION C)

Q25. How does physical fitness contribute to overall wellness?

Q26. Suggest three ways to maintain a healthy lifestyle.

Q27. Discuss the role of adapted physical education for children with special needs.

Q28. Outline the main objectives of the Olympic movement.

Q29. Describe three benefits of physical activities for children with special needs.

(SECTION D)

Q30. Explain the history and development of the Paralympic Games.

Q31. Describe the role of Olympic values in promoting global peace and harmony.

Q32. Provide a detailed explanation of the components of physical fitness.

Q33. Discuss the relationship between lifestyle choices and wellness.

Q34. Explain the various types of disabilities and their impact on physical activity.



BAL BHARATI PUBLIC SCHOOL, DWARKA

CLASS - XI

SAMPLE PAPER

SUBJECT - ECONOMICS

MM -80

Time- 3

hours

General instructions-

1.This paper contains 2 sections-

Section A. Statistics

Section B. Microeconomics

2.This paper contains 20 MQS of 1 mark each (1 to 10 and 18 to 27)

3.This paper contains 4 short answer questions of 3 marks each (11 ,12 & 28,29) To be answered in 60 to 80 words.

4.In this paper contains 6 short answer questions of 4 marks each (13 to 15 & 30 to 32) to be answered in 80 to 100 words.

5.This paper contains 4 long answer questions of 6 marks each (16,17 & 33,34) to be answered in 100 to 150 words.

Section A

Question 1. Read the following statements carefully-

Statement1. Publication of trade association is an example of published source of secondary data.

Statement 2. Enumerator method is a method used to collect primary data.

In the light of given statements. Choose the correct alternatives from the following.

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

Question 2. Which of the following factors are considered while comparing sampling and census method-

- (a) Area of survey
- (b) Accuracy of data.
- (c) Cost of collection.
- (d)All of these.

Question 3. Mid value of a series can never be greater than

(a) Upper limit.(b) Lower limit.(c) Frequency. (d) None of these

Question 4. Which of the following is the essential of a good sample-

(a) Representative (b) dependence of items (c) Heterogeneity (d) Biased

Question 5. Column heading of a table is called as-

(a) Stub (b) Caption (c) Headnote (d) Title

Question 6. Read the following statements carefully-

Statement1: Statistics is defined as science which deals with the analysis of statistical data.

Statement 2: Planning without statistics, like a ship without radar and compass.

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

(a)Statement 1 is true and statement 2 is false.

(b)Statement 1 is false and statement 2 is true.

(c)Both statements are true.

(d)Both statements are false.

Question 7. In case of inclusive series.

(a) Upper limit of class interval is excluded.

(b) Lower limit of class interval is excluded.

(c) Both upper limit and lower limit are included.

(d) Both upper limit and lower limit are excluded.

Question 8.

From the set of statements given in column I and column II, choose the correct pair of statements :	
Column I	Column II
A. Primary source of data	i) Collection of data from some agency
B. Secondary data	ii) First hand data
C. Direct Personal Investigation	iii) Collected data have a less degree of originality
D. Enumerator's method	iv) A questionnaire is prepared according to the purpose of enquiry

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

Question 9. Assertion(A) - The primary data are original.

Reason(R) - Primary data are the data collected from the source of origin.

Alternatives-

(a) Both assertion and reason are true and reason is the correct explanation of assertion.

- (b) Both assertion and reason are true and reason is not the correct explanation of assertion.
- (c) Assertion is true but reason is false.
- (d) Assertion is false, but reason is true.

Question 10. Assertion(A)- Sample method of investigation is economical.

Reason(R) - In sampling method only limited number of items are investigated.

Alternatives -

- (a) Both assertion and reason are true and reason is the correct explanation of assertion.
- (b) Both assertion and reason are true and reason is not the correct explanation of assertion.
- (c) Assertion is true but reason is false.
- (d) Assertion is false, but reason is true.

Question 11. Draw of frequency Polygon without preparing histogram from the following data-

Marks	0-10	10-20	20-30	30-40	40-50	50-60
No. Of students	5	12	15	22	14	4

Question 12. Which method of survey either census or sampling would you prefer if you were to study the income of people in your area? Give reason.

Question 13. Construct a 'less than' and 'more than' Ogive curves from the following data.

Marks	0-20	20-40	40-60	60-80	80-100
No.of students	40	51	64	38	7

Question 14. "The Government and policy makers use statistical data to formulate suitable policies of economic development." Comment by giving examples

Question 15. Suppose a person went to a school. He meets the class teachers of different classes and collects the information of the students of their respective classes.

Which method that person is using for collecting the data. Give its merits and demerits.

Question 16. . In a study about the coffee habits in 2 towns following data were observed -

Town A 60% persons were males

25% wore coffee drinkers

15% were male coffee drinkers

Town B 45% persons were females

20% wore coffee drinkers

15% were male coffee drinkers

Represent the above data in a tabular form

Question 17. Following are the information related to production.

Present them by using a suitable bar diagram.

Year	Wheat (in kg)	Rice (in kg)
1990	600	400
1991	350	450
1992	600	900

Section B.

Question 18. Read the following statements carefully.

Statement 1- Total utility diminishes only when marginal utility is negative.

Statement 2-Utility refers to want satisfying power of a commodity.

In the light of given statements choose the correct alternatives from the following-

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

Question 19. Read the following statements carefully-

Statement 1 - Shift in demand curve shows extension or contraction of demand.

Statement 2. - Movement along demand curve is indicated by upward or downward movement along the same demand curve.

In the light of given statements choose the correct alternatives from the following-

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

Question 20. Which of the following is related to the problem of For whom to produce?

- (a) Distribution of income. (b) Choice of technique.
- (c) Choice of product. (d) None of these.

Question 21. The opportunity cost of 100 kilogram of rice produced on a land which can also produce 80 kilogram of wheat is.

- (a) 100 kilogram of wheat. (b) 80 kilogram of wheat.(c) Both A and B. (d) None of these.

Question 22. When demand curve is parallel to Y axis, the elasticity of demand is.

(a) Unitary. (b) zero (c) Greater than unity. (d) Infinity.

Question 23. Which of the following pair represents substitute goods?

(a) Car and petrol. (b) Pepsi and Coca-Cola. (c) Bread and butter (d) All of these.

Question 24. From the set of statements given in column one and column two, choose the correct pair of statements.

Column 1	Column 2
A. Resources.	i) Limited only in poor countries.
B. What to produce?	ii) Related with distribution of income.
C. PPC	iii) Slopes upward.
D. How to produce?	iv) Related with choice of technique.

Alternatives.

(a) A- (I) (b) B -(ii) (c) C-(iii) (d) D- (iv)

Question 25. With the increase in consumption by one unit of commodity, TU increase from 100 to 150. Then marginal utility will be.

(a) 50 (b) 30 (c) 150 (d) 0

Question 26. Assertion(A)- When price of a good increases, demand for its substitute good rises.

Reason(R)- Substitute goods are those goods which can be interchanged for use.

Alternatives.

- (a) Both assertion and reason are true and reason is the correct explanation of assertion.
- (b) Both assertion and reason are true and reason is not the correct explanation of assertion.
- (c) Assertion is true but reason is false.
- (d) Assertion is false, but reason is true.

Question 27. Assertion(A)- Indifference curve slopes downward from left to right.

Reason.(R)- As consumer moves to higher IC, his satisfaction also increases.

Alternatives.

- (a) Both assertion and reason are true and reason is the correct explanation of assertion.
- (b) Both assertion and reason are true and reason is not the correct explanation of assertion.
- (c) Assertion is true but reason is false.
- (d) Assertion is false, but reason is true.

Question 28. Giving reason comment on the shape of PPC based on the following schedule.

Good X	0	1	2	3	4
Good Y	20	18	14	8	0

Question 29. Explain the relation between TU and MU with the help of schedule and diagram.

Question 30. Read the following article and answer questions on the basis of the same:

The law of demand introduces an inverse relationship between price and demand for a good. It simply states that as the price of a commodity increases, demand decreases, provided other factors remain constant. Also, as the price decreases, demand increases. This relationship can be illustrated graphically using a tool known as a demand curve.

The demand curve has a negative slope, i.e., a downward slope from left to right to reflect the inverse relationship between the price of an item and quantity demanded over a period of time. An expansion or contraction of demand occurs as a result of an income effect or a substitution effect. When the price of a commodity falls, an individual can get the same level of satisfaction for less expenditure, provided it's a normal good. In this case, the consumer can purchase more of the good on a given budget. This is the income effect. The substitution effect is observed when consumers switch from more costly goods to substitutes that have fallen in price. As more people buy the goods with the lower price, demand increases.

- (a) Why does the demand curve slope downward? (2)
(b) What is the substitution effect? (2)

Question 31. Using a diagram, explain what happens to the PPC of a country due to 'Sarva Shiksha Abhiyan' introduced by the Government?

Question 32. The price elasticity of demand of a good is -1 . When its price per unit falls by Rs. 2, its demand rises from 30 to 40 units. Calculate the price before the change.

Question 33. A consumer consumes only two goods, X and Y. The prices of these goods are rupees 2 and rupees 1 respectively. And the marginal utilities of these two goods are 4 respectively. Is the consumer in a condition of equilibrium? If not, what a rational consumer will do in this situation?

Question 34. There are three kinds of commodities—X, Y and Z. If due to an increase in the price of X, the demand for Y commodity increases but the demand for Z commodity decreases. Identify the relationship between commodity X and Y and commodity X and Z. Show graphically.



This question paper has 6 printed page(s)

BAL BHARATI PUBLIC SCHOOL, DWARKA, NEW DELHI
CLASS -XI
SAMPLE QUESTION PAPER
MID TERM EXAMINATION-(2024-25)
SUBJECT: MATHEMATICS

TIME: 3 hrs

MM: 80
DATE: 19: 07:24

General Instructions:

This question paper comprises five Sections A, B, C, D, and E. This question paper carries 38 questions. All questions are compulsory.

Section A: Questions no. 1 to 18 comprises 18 MCQ and 2 Assertion -Reason based questions of 1 mark each

Section B comprises 5 very short answer questions of 2 marks each

Section C comprises 6 Short Answer Type Questions of 3marks each.

Section D comprises 4 long Answer Type Questions of 5marks each.

Section E comprises 3 case studies of 4 marks each.

The use of calculators is not permitted.

SECTION A

- 1 If all the elements of a set possess a single common property then it can be represented by (a) roster form (b) set-builder form (c) both (a) and (b) (d) venn diagram 1
- 2 The set of odd prime numbers less than 10 is
(a) {1, 3, 5, 7, 9} 1
(b) {1, 3, 5, 7} (c) {3, 5, 7} (d) {3, 5}
- 3 The empty set or the null set or the void set is not denoted by the symbol (a) ϕ (b) $\{ \}$ (c) $\{\phi\}$ (d) ϕ or $\{ \}$ 1
- 4 Let set $A = \{2, 4, 6, 8\}$ and set $B = \{2, 2, 4, 6, 8, 6\}$ then sets A and B are (a) equal sets (b) unequal sets (c) (a) and (b) both (d) none of these 1
- 5 The number of subsets of a set containing n elements is
(a) 2^n (b) $2^n - 1$ 1
(c) $2^n - 1$ (d) n^n

6 For two sets A and B if A is a null set, then Cartesian product $A \times B$ will be (a) set B (b) A (c) ϕ (d) $A \cup B$ 1

7 Given set $A = \{1, 2, 3, \dots, 10\}$. Relation R is defined in set A as $R = \{(a, b) \in A \times A : a = 2b\}$. Then range of relation R is

(a) $\{2, 4, 6, 8, 10\}$

(b) $\{1, 3, 5, 7, 9\}$ 1

(c) $\{(2, 1), (4, 2), (6, 3), (8, 4), (10, 5)\}$

(d) $\{1, 2, 3, 4, 5\}$

8 Domain of $\sqrt{a^2 - x^2}$ ($a > 0$) is (a) $(-a, a)$ (b) $[-a, a]$ (c) $[0, a]$ (d) $(-a, 0]$ 1

9 The domain of the function f defined by $f(x) = \sqrt{4-x} + \frac{1}{\sqrt{x^2-1}}$ is equal to 1

(a) $(-\infty, -1) \cup (1, 4]$ (b) $(-\infty, -1] \cup (1, 4]$ (c) $(-\infty, -1) \cup [1, 4]$ (d) $(-\infty, -1) \cup [1, 4)$

10 If $\sin \theta + \operatorname{cosec} \theta = 2$, then $\sin^2 \theta + \operatorname{cosec}^2 \theta$ is equal to 1

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

11 If $f(x) = \cos^2 x + \sec^2 x$ then 1

(a) $f(x) < 1$ (b) $f(x) = 1$

(c) $2 < f(x) < 1$ (d) $f(x) \geq 2$

12 The value of $\tan 1^\circ \tan 2^\circ \tan 3^\circ \dots \tan 89^\circ$ is (a) 0 (b) 1 (c) $\frac{1}{2}$ (d) not defined 1

13 If $\tan \theta = 3$ and θ lies in the third quadrant, then the value of $\sin \theta$ is

- (a) $\frac{1}{\sqrt{10}}$ (b) $-\frac{1}{\sqrt{10}}$
(c) $\frac{-3}{\sqrt{10}}$ (d) $\frac{3}{\sqrt{10}}$

1

14 If $\tan \theta = \frac{1}{2}$ and $\tan \phi = \frac{1}{3}$, then the value of $\theta + \phi$ is

- (a) $\frac{\pi}{6}$ (b) π (c) 0 (d) $\frac{\pi}{4}$

1

15 The value of $\frac{1 - \tan^2 15^\circ}{1 + \tan^2 15^\circ}$ is

- (a) 1 (b) $\sqrt{3}$ (c) $\frac{\sqrt{3}}{2}$ (d) 2

1

16 $\lim_{x \rightarrow \pi} \frac{\sin x}{x - \pi}$ (a) 1 (b) 2

- (c) -1 (d) -2

1

17 $\lim_{x \rightarrow 0} \frac{(1+x)^n - 1}{x}$ is (a) n (b) 1 (c) -n (d) 0

1

18 $\lim_{\theta \rightarrow 0} \frac{1 - \cos 4\theta}{1 - \cos 6\theta}$ is

- (a) $\frac{4}{9}$ (b) $\frac{1}{2}$
(c) $-\frac{1}{2}$ (d) -1

1

19 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.

Assertion (A): For the relation $\{(1, 2), (2, 3), (1, 5), (3, 4)\}$ domain is $\{1, 2, 3\}$.

1

Reason (R): For a given relation R from set A to set B, given by $R = \{(a, b) \in A \times B : a \text{ is related to } b\}$ the set of elements $a \in A$ for $(a, b) \in R$ is known as its domain.

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

20 If $y = \sqrt{x} + \frac{1}{\sqrt{x}}$ then $\frac{dy}{dx}$ at $x = 1$ is (a) 1 (b) $\frac{1}{2}$ (c) $\frac{1}{\sqrt{2}}$ (d) 0 1

SECTION B

If $f(x) = \frac{1+x}{1-x}$, show that $\frac{f(x).f(x^2)}{1+[f(x)]^2} = \frac{1}{2}$.

21 OR 2

Find the range of the following functions given by : $f(x) = \frac{3}{2-x^2}$

22 Evaluate : $\lim_{x \rightarrow 5} \frac{x^2 - 9x + 20}{x^2 - 6x + 5}$ 2

23 Let $f: \mathbb{R} \rightarrow \mathbb{R}$ be given by $f(x) = x^2 + 3$ Find (i) $\{x : f(x) = 28\}$ (ii) The pre-images of 39 and 2 under 'f' 2

Find the value of $\tan \frac{19\pi}{3}$.

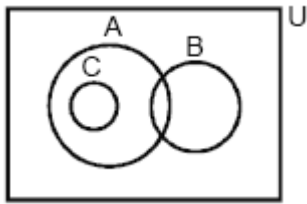
24 OR 2

Simplify $\frac{\sin(180^\circ + \theta) \cos(360^\circ - \theta) \tan(270^\circ - \theta)}{\sec^2(90^\circ + \theta) \tan(-\theta) \sin(270^\circ + \theta)}$.

25 If the angular diameter of the moon be 30', how far from the eye a coin of diameter 2.2 cm be kept to hide the moon ? 2

SECTION C

26 In the given Venn diagram, if $n(U) = 100$, $n(A) = 60$, $n(B) = 48$, $n(A \cap B) = 22$ and $n(A \cap C) = 30$.
 (i) Mark the number of elements in each region. 3
 (ii) Find the value of $n(A \cup B)$
 (iii) $n(B' \cap C')$



27

Find the domain and range of the following functions given by :

$$f(x) = \frac{1}{\sqrt{x+|x|}}$$

3

28

Prove that $\sqrt{2 + \sqrt{2 + 2 \cos 4x}} = 2 \cos x, 0 < x < \frac{\pi}{4}$.

3

OR

Prove the following identity : $\tan 80^\circ = \tan 10^\circ + 2 \tan 70^\circ$

29

Prove that, $\frac{\sin 5x - 2 \sin 3x + \sin x}{\cos 5x - \cos x} = \tan x$

3

30

Let $f(x)$ be a function defined by $f(x) = \begin{cases} 6x - 6, & \text{if } x \leq 3 \\ 2x - k, & \text{if } x > 3 \end{cases}$

3

Find k , if $\lim_{x \rightarrow 3} f(x)$ exists.

Evaluate : $\lim_{x \rightarrow 0} \frac{\tan x - \sin x}{x^3}$.

31

OR

3

If $y = \frac{\cos x}{1 + \sin x}$, find $\frac{dy}{dx}$

SECTION D

32

Redefine the given function and draw its Graph. Also find the range of the functions given by :

5

$$f(x) = 1 - |x - 2|$$

33

Find $\sin \frac{x}{2}$, $\cos \frac{x}{2}$ and $\tan \frac{x}{2}$, if $\tan x = -\frac{4}{3}$, where x lies in 2nd quadrant.

OR

5

Prove that : $\sin^3 x + \sin^3 \left(\frac{2\pi}{3} + x \right) + \sin^3 \left(\frac{4\pi}{3} + x \right) = -\frac{3}{4} \sin 3x$.

34

Find the derivative of $x^2 \cos x$.

5

- i. Using Product rule.
- ii. Using first Principle

35

- i. Evaluate the following limit : $\lim_{x \rightarrow 1} \frac{(2x-3)(\sqrt{x}-1)}{2x^2+x-3}$
- ii. For the function $f(x) = \begin{cases} a+bx, & x < 1 \\ 4, & x = 1 \\ b-ax, & x > 1 \end{cases}$
 $\lim_{x \rightarrow 1} f(x) = f(1)$. Find the possible values of a and b .

5

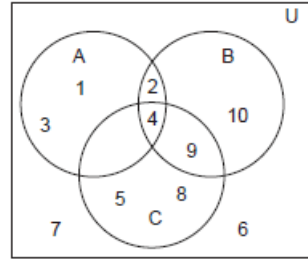
SECTION E

36 A railway train is travelling on a circular curve of 1500 metres radius at the rate of 66 km/h

- (i) The angle by which it turned in 10 seconds is
 - (a) $\frac{10}{90}$ radian (b) $\frac{44}{90}$ radian
 - (c) $\frac{2\pi}{3}$ radian (d) $\frac{7\pi}{180}$ radian
- (ii) The degree measure of the angle turned by railway train in 10 seconds
 - (a) 7° (b) 120°
 - (c) 28° (d) $\frac{7}{11}^\circ$
- (iii) How much degree will train turn in 20 seconds?
 - (a) 240° (b) 14°
 - (c) 56° (d) $\frac{14}{11}^\circ$
- (iv) If train changes its speed to 60 km/h then what angle will train turn in 10 seconds.
 - (a) $\frac{2\pi}{5}$ radian (b) $\frac{7\pi}{198}$ radian
 - (c) $\frac{2}{5}$ radian (d) $\frac{7\pi}{180}$ radian
- (v) If train is moving with the speed of 66 km/h. How much time will train take to turn an angle of 60° ?
 - (a) 1 min 26 sec (b) 2 min
 - (c) 1 h (d) 1 min

4

37

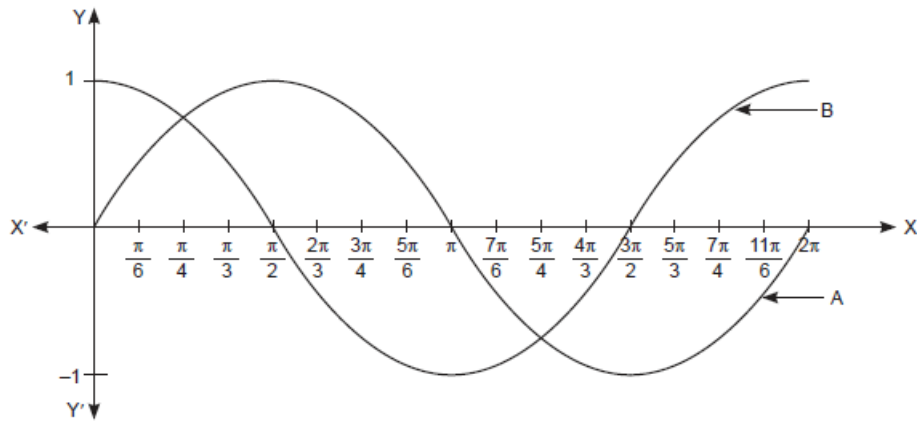


Observe the venn diagram and write the following sets

- (i) $(A \cup B) - C$
- (ii) $A' \cap B$
- (iii) $(A - B) \cup (C - B)$
- (iv) $(A \cap C)' - B$
- (v) $A' \cup B'$

4

38



Observe the above graph carefully answer the following

- (i) Graph A represent the graph of which trigonometric function.
- (ii) Graph B represent the graph of which trigonometric function.
- (iii) From the above graph write the principal value of x if $\sin x = 1$
- (iv) From the graph find the angle for which the value of $\sin x$ and $\cos x$ is same

4



This question paper has 9 printed page(s)
BAL BHARATI PUBLIC SCHOOL, DWARKA, NEW DELHI
SAMPLE PAPER (HALF YEARLY EXAM)
CLASS – XI (2024-25)
SUBJECT: ACCOUNTANCY

MM: 80

TIME: 3 hrs

DATE:

General Instructions:

This question paper contains 34 questions. All questions are compulsory

- 1. Q1 to Q20 are MCQ and very short answer type carrying 1 mark each.**
- 2. Q21 to Q26 are short answer carrying 3 marks each.**
- 3. Q27 to Q29 are short answer carrying 4 marks each.**
- 4. Q30 to Q 34 are long answer carrying 6 marks each.**

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.

- 1. Which of the following is a business transaction? (1)**
 - a) Goods purchased on credit.
 - b) An employee being dismissed.
 - c) Proprietor purchasing a car for own use from personal saving.
 - d) Sale of personal asset by the proprietor
- 2. Amount received or receivable against sale of goods is.... (1)**
 - a) Revenue receipt
 - b) Capital receipt
 - c) Sometimes revenue and sometimes capital receipt
 - d) None of these
- 3. A liability arises because of..... (1)**
 - a) Cash transactions
 - b) Credit transactions
 - c) Cash as well as Credit transactions.
 - d) None of these
- 4. According to the Convention of Consistency (1)**
 - a) Accounting policies and practices once adopted should be consistently followed.

- b) Accounting policies and practices adopted may be changed as per the management's decision
- c) Accounting policies and practices once adopted cannot be changed under any circumstances.
- d) None of the above.

OR

. Using 'lower of cost and net realisable value' for the purpose of inventory valuation is the implementation of which of the following concept

- (a) Cost
- (b) Money measurement
- (c) Objectivity
- (d) Prudence

5. During the life-time of an entity, accounting produces financial statements in accordance with which of the following accounting concept? (1)
- a) Matching
 - b) Conservatism
 - c) Accounting period
 - d) Cost
6. Name the external users directly concerned with accounting information. (1)

OR

Name the internal users directly concerned with accounting information.

7. Name two Long-term Liabilities. (1)

OR

Which of the following limitations of accounting states that accounts may be manipulated to conceal vital information?

- (a) Accounting leads to window dressing
- (b) Accounting is not fully exact
- (c) Accounting ignores price level changes
- (d) Accounting ignores qualitative concepts

8. Briefly explain the term 'Contra entry'. (1)

OR

Define the term 'Journal proper'.

9. Difference between current assets and current liability (1)
10. Name the sides on which increase and decrease in Capital Account is recorded. (1)

OR

Why are the rules of debit and credit same for liability and capital?

11. Give an example of Opening Entry? (1)

12 From the following, which accounting equation is not correct?

- (a) Assets – Liabilities = Capital (b) Asset - Capital = Liabilities
(c) Liabilities + Capital = Assets (d) None of these

OR

From the following calculate liabilities

Capital Rs 5,00,000 , cash in hand Rs 40,000 , building Rs 8,00,000, bank overdraft Rs 50,000

- (a) Rs 1,39,0000 (b) Rs 4,20,000
(c) Rs 3,90,000 (d) none of these

13. If the rent of one month is still to be paid, the adjustment entry will be: (1)

- (a) Debit Outstanding Rent A/c and Credit Rent A/c
(b) Debit Profit and Loss A/c and Credit Rent A/c
(c) Debit Rent A/c and Credit Profit and Loss A/c
(d) Debit Rent A/c and Credit Outstanding Rent A/c

14. Which is not qualitative characteristics of accounting information (1)

- (a) Relevance (b) Understandability
(c) Comparability (d) Materiality

15. Goods costing ₹ 8,000 destroyed by fire and insurance company admitted a claim for ₹

5,000 only. Give Journal entry to adjust in final accounts. (1)

(a) Loss by Fire A/c	Dr.	3,000	
Insurance Claim Receivable A/c	Dr.	5,000	
To sales A/c			8,000
(b) Loss by Fire A/c	Dr.	3,000	
Insurance Claim Receivable A/c	Dr.	5,000	
To Purchase A/c			8,000
(c) Loss by Fire A/c	Dr.	3,000	
Insurance Claim Receivable A/c	Dr.	5,000	
To trading A/c			8,000
(d) P & L a/c	Dr	8000	
To Loss by Fire A/c			3,000
To Insurance Claim Receivable A/c		5,000	

. 16. The revenue recognition principle dictates that all types of income should be (1)

recorded or recognized when

- (a) Cash is received
- (b) At the end of accounting period
- (c) When they are earned
- (d) When interest is paid

Direction : (Q No 17 to 19) There are two statements marked as Assertion (a) and reason (r).
Read the statement and choose the appropriate option from the 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

17. Assertion (A): Accounting is an art as it involve recording, classifying, summarising (1)
business transactions with a view to ascertain the profit.

Reason (R): Accounting is a science since it is based on certain specified principles and
accounting standard.

18.. Assertion (A): $\text{Capital} = \text{Liabilities} - \text{Assets}$ (1)

Reason (R): According to the dual aspect principle, every business transaction is record as
having aspect, one aspect is debit and the other aspect is credit.

19. Assertion (A): If goods are lost due to theft, loss by theft account is debited. (1)

Reason (R): As per the rule of accounting all gains are credited.

20. IFRS are (1)

- A) Rules based accounting standards
- B) Principle based accounting standards
- C) Partially rule based and partially principle based accounting standards
- D) None of the above

OR

IFRS are based on

- A) Historical cost
- B) Fair value
- C) Both historical cost and fair value
- D) None of the above

21. Write down any three differences on Cash Basis and Accrual Basis of Accounting. (3)

OR

Distinguish between Trade Discount and Cash Discount.(any three)

22. During the Financial Year 2017-18, Ashok had cash sales of ₹ 3,90,000 and credit sales of ₹ 1,60,000. His expenses for the year were ₹ 2,70,000, out of which ₹ 80,000 is still to be paid. Find out Ashok's income for 2017-18 following the Cash Basis of Accounting (3)

23. Journalise the following transactions in the books of Akhil, Delhi:

I. Goods destroyed by fire for ₹ 2,500. (3)

II. Paid wages ₹2,500 in cash for installation of machinery.

III. Sohan is declared insolvent, Received from his official receiver a first and final dividend of 30 paise in the rupee on a debt of ₹35000.

24. Define Accounting. Explain any two limitations of Accounting. (3)

25. Explain any two of the following :- (3)

- i) Consistency Concept
- ii) Going Concern Concept
- iii) Dual Aspect Concept

OR

You are working in a company as a Chief Accountant. While preparing the accounts of your company, you are faced with a number of problems. These are summarized as below:

(i) Production Manager of the company is interested to reflect the good industrial relations in the accounts.

(ii) One of the shareholders of the company has invested his saving in some shares of another company.

(iii) At the end of the accounting period, factory rent of the company is outstanding for ₹ 10,000.

You are required to (a) state which accounting concept you would follow in dealing with each of the above problems and (b) explain briefly what each concept means.(Any two)

26. Y started a business on 1st April,2017 with a Capital of ₹ 2,00,000 and a loan of ₹75,000 from the bank. During the year, he had introduced additional Capital of ₹ 60,000 and had withdrawn ₹36,000 for personal purposes. On 31st March,2018 his assets were ₹3,80,000. Find out his Capital as on 31st March,2018 and profit earned during the year 2017-18. (3)

27	Fill the general entries and amounts corresponding to narration given below (4)				
	S.No.	Particulars		Debit (₹)	Credit (₹)
	I	Dr. Dr.	

	To..... (Goods of the list price of Rs.5000 sold at 10% trade discount and 25% cash discount)		
II	Chaturvedi Dr. To Cash A/c To (Chaturvedi's account settled, cash discount three percent)		5000
III	Cash A/c Dr. Dr. To (70 paise per rupees received from the estate of Ashok on his insolvency)		8400

o

28. Following balances were extracted from the books of Shri S. Pal on 31st March,2018. You are required to prepare a Trial Balance. The amount required to balance should be entered as capital. (4)

	₹		₹
Purchases	1,70,000	Drawings	7,700
Stock	24,000	Returns Inward	3,500
Sales	1,05,000	Premises	5,28,000
Sundry Debtors	23,800	Sundry Creditors	16,100
Discount Received	3,500	Discount Allowed	2,800
Carriage Outwards	700	Carriage Inwards	1,400
Cash in Hand	3,500	Cash at Bank	17,500
Machinery	1,24,500	General Expenses	2,100
Provision for Depreciation on Machinery	24,200	Bad Debts Written off	2,450
		Provision for Doubtful Debts	2,380

OR

Prepare a Trial Balance from the following items:

Account	₹	Account	₹
Capital	24,000	Building	12,000
Opening stock	8,500	Returns inward	1,900
Furniture	2,600	Returns outward	350
Purchases	8,950	Trade expenses	1,000
Cash	7,300	Discount received	970
Carriage	300	salary	3,000
Sales	22,500	Office rent	2,270

29. Prepare Ram A/c & Sales A/c T shape account from the following transactions: (4)
Mar 4 Sold goods to Ram of the list price of Rs.50,000 at 15% trade discount.

- Mar 7 One fifth of above goods returned by Ram.
- Mar 10. Goods given as charity Rs.4000 and free samples Rs. 1800
- Mar 14. Sold goods for cash of the list price Rs. 80,000 at 10% trade discount and 5% cash discount
- Mar 19. Received a cheque from Ram Rs.32000 in full settlement of his account which was deposited in the bank same day.

- 30.** Record the following transactions of Kamal Book Depot in the proper books. Prepare Purchase Books & Sales Book. (6)

2012

April 03 Purchased from Mohan Lal on Credit 100 copies of 'Business Studies' by T.N. Chhabra @ Rs.50 each and 50 copies of Management by Poonam Gandhi @ Rs.30 each.

April 05 Sold to Shashi Book Depot on Credit 80 copies of Economic NCERT @Rs.40 each and 60 copies of Business studies by C.B.Gupta@ Rs.30 each.

Less: Trade Discount 20%

April 10 Bought from Neha Publishing house: 100 copies of Math's NCERT @ Rs.60 each and 120 copies of commerce by P.C.Tulsian @Rs.50 each.

Less: Trade Discount @10%

April 15 Bought 10 chairs from Rajesh Furniture center @ Rs.100 each on credit

April 20 Sold to Sinha Book Depot 125 copies of commerce by Mittal @ Rs.40 each

- 31.** Record the following transactions in double column cash book of Mr. Rakesh Verma and balance it.

Sept. 01: Balance of cash 22,000 and Bank overdraft 2,500.

Sept. 06: Received cheque on October 28th, for 4,000 from Gaurav sent into the bank.

Sept. 10: Bank has collected and deposited: Interest of 6,000; Dividend of ₹8,000.

Sept. 16: Bank has paid several payments on its due date: Insurance premium of ₹ 3,000 and School fees of the child of Rakesh Verma 5,000.

Sept. 24: Cash deposited into the bank 12,000.

Sept. 29: Sold goods (costing 25,000) at 20% profit for cash.

- 32** Prove that the accounting equation is satisfied in the following transactions

Brij Mohan commenced business with cash Rs.100, 000. (6)

- (a) 1/3 rd. of above goods sold at profit of 20% on cost ,half the payment received in cash.
- (b) Purchase Typewriter for office use.15,000
- (c) Goods costing Rs.48,000 sold at a profit of 33 1/3%
Three fourth payment received in cash.
- (e) Outstanding salary is Rs.20, 000
- (f) Rent is accrued but not yet received Rs.5, 000.
- (g) Depreciation @ 10% charged a typewriter.

OR

- a) Neeraj started business with cash Rs.75,000, Goods Rs.30,000 and machinery Rs.50,000
- b) 1/3 rd. of the above goods sold at a profit of 10% on cost and half of the payment is received in cash.
- c) Depreciation on Machinery is provided @ 25%.
- d) Cash withdrawn for personal use Rs.30, 000.
- e) Interest on Drawings charged @5%.
- f) Goods sold to Jacob for Rs.5,000 and received a Bill Receivable for the same amount for 3 months.
- g) Received Rs.5000 from Jacob against the Bill Receivable on its maturity.

33. Pass journal entries, post them in Ledger and prepare Trial Balance :-

(6)

Date	Transaction	Amount(₹)
2015		
Aug 1	Building Cash Machine Meeta [Dr. Bal] Nisha [Cr. Bal]	50,00,000 10,00,000 20,00,000 1,40,000 12,40,000
Aug 2	Purchased goods on credit from Nisha	2,00,000
Aug 4	Sold goods for Cash Sold goods to Meeta	1,50,000 50,000
Aug 6	Paid to Nisha in full settlement of her debt	14,00,000
Aug23	Depreciation on machine	1,20,000
Aug24	Paid salary (including ₹15,000 paid in advance)	65,000
Aug30	Sold a part of building for Cash	1,00,000
Aug31	Meeta paid on account	1,00,000

OR

Enter the following transactions in the journal of Mohan and prepare ledger account of Cash account, Bank account and Amar account.

2010		Rs.
Jan 1	Started business with cash	80,000
	And goods	40,000
Jan.3	Paid into bank for opening a bank current account.	50,000

Jan 6	Bought goods from Ram and paid by cheque	10,000
Jan 9	Sold goods to Amar and received cheque	12,000
Jan 11	Cheque received from Amar deposited in the bank.	
Jan 15	Withdrew cash by cheque for personal use	3,000
Jan 17	Took a bank loan	40,000
Jan 19	Paid Salary Rs. 2,000 rent Rs. 1,000 by cheque	
Jan 21	Interest allowed by bank.	300

- 34 .** Shubham started a business for buying and selling of stationery with Rs. 10, 00, 000 as an initial investment. Of which he paid Rs. 2, 00,000 for furniture, Rs 4, 00, 000 for buying stationery items. He employed a sales person and clerk. At the end of the month he paid Rs. 10,000 as their salaries. Out of the stationery bought he sold some stationery for Rs.3,00,000 for cash and some other stationery for 2, 00,000 on credit basis to Mr Arun.Subsequently, he bought stationery items of Rs. 1, 50,000 from Mr Prakash. In the first week of the next month there was a fire accident and he lost Rs. 30,000 worth of stationery. A part of the stationery, which cost Rs.70,000 was sold for Rs. 95,000 (6)

From the above, answer the following:

- What are the fixed assets he bought?
- What is the value of the goods purchased?
- Who is the creditor and state the amount payable to him?
- Who is the debtor and state the amount payable to him?
- What is the gain or loss he incurred?



Bal Bharati Public School, Dwarka

Mid-Term-2024

Painting (049)

Class XI

Max. Time Allowed: 2 Hrs.

Max. Marks: 30

S.No	SECTION A	Marks
1	Which of the following places is famous for prehistoric paintings? a. Sanchi b. Bhimbetka c. Amarawati d. Bagh	1
2.	The rock paintings were an important and distinct feature of the Mesolithic people through their beginning may be traced to the upper Paleolithic period. Which of the following are the characteristic of these paintings? 1. These paintings are made on the walls of rock shelters 2. Maximum of them have been found at Bimbetka in MP 3. They throw light on the social and economic life of Mesolithic people. Select the answer from the codes given below a. 1,2,3 b. 1 and 2 c. 1 and 2 d. 2 and 3	1
3	Assertion (A): The worship of Mother Goddess as a feature of Harappan religion was prevalent in all the main Harappan cities. Reason (R): The female terracotta figurines have been discovered in large numbers from Harappa and Mohenjodaro. Codes: a. Both A and R are true, but R is not the correct explanation of A. b. A is false, but R is true c. Both A and R are true and R is the correct explanation of A. d. A is true, but R is false	1
4	What colours were used for Pre-historic Wall Painting a. Oil Colours b. Mineral Colours c. Acrylic Colours d. Wax colours	1
5	Which of the following technique used for making Bronze Sculptures during Harappan Civilization a. Wood Carving b. Lost Wax Casting c. Ivory Carving d. Stone Carving	1

6	Which asana is related with Buddha from Katra Mound a. Shavasana b. Tadasana c. Padmasana d. Shirshasana	1
7	The life-size standing image of a Yakshi holding a chauri (flywhisk) from Didarganj near Patna is another good example of the sculpture tradition of..... a. Gupta period b. Shunga period c. Mauryan period d. Kushana period	1
8	What is the meaning of bodhisattva Padmapani? a. one who holds the lotus b. one who holds the lily c. Buddha d. one who holds the Vajra	1
SECTION B 100-250 words		
1	Explain the rock paintings “Wizard Dance”	2
2	What is the theme /subject matter of Ajanta paintings?	2
3	Differentiate between the art of Gandhara and Mathura school of arts	2
4	Where was the lion capital of Ashoka discovered and when?	2
5	How is Yakshini from Didarganj a masterpiece? Explain.	2
SECTION C - Attempt Any two 200-250 words		
1	Discuss the different classification of Bhimbetka Rock Paintings in details	6
2	Discuss the compositional aspects as well as main feature of Mara Vijay relief Sculpture	6
3	Explain the significant characteristic of “Dancing Girl” from Mohenjo-Daro?	6



THIS PAPER CONTAINS 8 PRINTED PAPERS

BAL BHARATI PUBLIC SCHOOL, DWARKA

CLASS -XI

SAMPLE QUESTION PAPER

CHEMISTRY THEORY

MM: 70

TIME: 3 hrs

General instructions:

Read the following instructions carefully.

- (a) There are 33 questions in this question paper with internal choice.
 - (b) SECTION A consists of 16 multiple-choice questions carrying 1 mark each.
 - (c) SECTION B consists of 5 short answer questions carrying 2 marks each.
 - (d) SECTION C consists of 7 short answer questions carrying 3 marks each.
 - (e) SECTION D consists of 2 case-based questions carrying 4 marks each.
 - (f) SECTION E consists of 3 long answer questions carrying 5 marks each.
 - (g) All questions are compulsory.
 - (h) Use of log tables and calculators is not allowed.
-

SECTION A

The following questions are multiple choice questions with one correct answer. Each question carries 1 mark. There is no internal choice in this section.

1. What mass of aluminium oxide is formed when 10.0 g of Al reacts with 20.0 g of O₂?
a. 42.5 g b. 18.9 g c. 27.5 g d. 36.2 g
2. The molality of 0.8 M solution of H₂SO₄ with density of 1.06 g/cm³ is:
a. 0.1 m b. 0.8 m c. 1 m d. 1.6 m
3. The ratio of molar volumes of SO₂ and SO₃ is:
a. 1:3 b. 2:3 c. 1:1 d. 1:2

4. The radius of which of the following orbit is same as that of the first Bohr's orbit of hydrogen atom?
- a. He^+ ($n=2$) b. Li^{2+} ($n=2$) c. Li^{2+} ($n=3$) d. Be^{3+} ($n=2$)
5. Four elements A, B, C and D have the following electronic configurations:
 A : $1s^2 2s^2 2p^1$ B : $1s^2 2s^2 2p^6 3s^2 3p^1$ C : $1s^2 2s^2 2p^6 3s^2 3p^3$ D : $1s^2 2s^2 2p^6 3s^2 3p^5$
 The elements belonging to the same group in periodic table are:
- a. A and D b. C and D c. A and B d. A and D
6. The correct order of electronegativity of N, O, F and P is:
- a. $\text{P} > \text{N} > \text{F} > \text{O}$ b. $\text{F} > \text{O} > \text{P} > \text{N}$ c. $\text{F} > \text{O} > \text{N} > \text{P}$ d. $\text{N} > \text{O} > \text{F} > \text{P}$
7. The Bond angle in NH_4^+ is:
- a. 107° b. 109.5° c. 104° d. 90°
8. In which of the following molecule/ion all bonds are not equal:
- a. XeF_4 b. BF_4^- c. C_2H_4 d. SiF_4
9. Which of the following molecules does not contain a lone pair of electrons?
- a. NH_3 b. H_2O c. SF_4 d. PF_5
10. Which of the following statement is incorrect:
- a. A sigma bond is formed by end to end overlap of bonding orbitals along the internuclear axis.
- b. In the formation of multiple bonds between two atoms of a molecule, pi bond(s) is formed in addition to a sigma bond.
- c. Sigma bond is a weak bond where as pi bond is a strong bond.
- d. The orbitals formed due to sidewise overlapping consists of two saucer type charged clouds above and below the plane of the participating atoms.
11. Which pair of atomic number represents s-block elements?
- a. 7, 15 b. 6, 12 c. 9, 17 d. 3, 12
12. Given below are two statements labeled as Assertion (A) and Reason (R):
 ASSERTION (A): Covalent bonds are called non directional bonds.
 REASON (R) : A covalent bond is formed by the partial overlap of half filled atomic orbitals which have definite direction.

Select the most appropriate answer from the options given below:

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

13. Given below are two statements labeled as Assertion (A) and Reason (R) :

ASSERTION (A): Both 32g of SO_2 and 8g of CH_4 contain same number of molecules.

REASON (R): Equal moles of two compounds contain same number of molecules.

Select the most appropriate answer from the options given below:

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

14. Given below are two statements labeled as Assertion (A) and Reason (R)

ASSERTION (A): Though the central atom of both NH_3 and H_2O molecules are sp^3 hybridised yet the bond angle in H_2O is lesser than NH_3 .

REASON (R) : Nitrogen atom has one lone pair in NH_3 and oxygen atom has two lone pairs in H_2O

Select the most appropriate answer from the options given below:

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

15. Given below are two statements labeled as Assertion (A) and Reason (R) :

ASSERTION (A) : Both BF_3 and PF_5 molecules do not obey octet rule.

REASON (R): Both are electron deficient molecules.

Select the most appropriate answer from the options given below:

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

d. A is false but R is true.

16. Given below are two statements labeled as Assertion (A) and Reason (R) :

ASSERTION (A): Generally ionization enthalpy increases from left to right in a period.

REASON (R): When successive electrons are added to the orbitals in the same principal quantum number level, the shielding effect of inner core of electrons does not increase much to compensate for the increased attraction of the electron to the nucleus.

Select the most appropriate answer from the options given below:

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

SECTION B

This section contains 5 questions with internal choice in one question. The following questions are very short answer type and carry 2 marks each.

17. How would you explain the fact that the first ionization enthalpy of sodium is lower than that of magnesium but its second ionization enthalpy is higher than that of magnesium?
18. Carbon and oxygen are known to form two compounds. The carbon content in one of these is 42.9% while in the other is 27.3%. Show that this data is in agreement with the law of multiple proportions.

OR

What mass of zinc would be required to produce enough hydrogen to reduce completely 8.5 g of copper oxide to copper? (Atomic mass : Zn =65u ; Cu= 63.5)

19. a) Due to which important developments concept of movement of an electron in an orbit was replaced by the concept of probability of finding an electron in an orbital?
b) The 4f subshell of an atom contains 12 electrons. What is the maximum number of electrons having same spin in it?
c) Find the number of unpaired electrons in Fe^{3+} .
20. What is the decreasing order of repulsion of various electron pairs. How does this distort the geometry of a molecule?

21. 3.0 g of H_2 react with 29.0 g of O_2 to yield H_2O . Calculate the maximum amount of water that can be formed and the amount of one of the reactants which remains unreacted.

SECTION C

This section contains 7 questions with internal choice in one question. The following questions are short answer type and carry 3 marks each.

22. a) How many electrons in an atom may have the following quantum numbers? i) $n = 4$, $m_s = -1/2$ ii) $n = 3$, $m_s = 0$
- b) Two particles A and B are in motion. The momentum of particle 'B' is half of 'A'. If the wavelength associated with the particle 'A' is 5×10^{-8} m, calculate the wavelength associated with the particle 'B'.
23. a) Which of the following molecules will have same shape and why?
 SO_2 , CO_2 , BeH_2 .
- b) How many sigma and pi bonds are there in a molecule of $\text{CH}_3\text{CH}_2\text{COOH}$?
24. a) Give one example each of molecules which have following geometries: i) Trigonal planar
ii) Trigonal bipyramidal.
- b) How does the hybridisation of carbon atoms in $\text{CH}_2=\text{CH}_2$ change when it is hydrogenated to CH_3-CH_3 ?
- c) In PCl_5 molecule why are axial bonds longer than equatorial bonds?

OR

- a) In which position are the lone pair placed in a ClF_3 molecule and why?
- b) Promotion of electron is not a necessary condition prior to hybridisation. Justify this statement by giving an example.
- c) How is the structure of PCl_5 responsible for its high reactivity?
25. a) What would be the IUPAC name and symbol for the element with atomic number 104?
- b) How does metallic and non metallic character vary on moving from left to right in the Periodic table? Give reason for your answer.
- c) The increasing order of reactivity among group I elements is $\text{Li} < \text{Na} < \text{K} < \text{Rb} < \text{Cs}$. Explain
26. a) A 25 watt bulb emits monochromatic yellow light of wavelength of 0.57×10^{-6} m. Calculate the rate of emission of quanta per second.
- b) State Aufbau Principle for writing electronic configuration of atoms.

27. Commercially available concentrated hydrochloric acid contains 38% HCl by mass.
- Calculate the molarity of this solution. The density is 1.19 g mL^{-1} .
 - What volume of concentrated HCl is required to make 1.00 L of an 0.10 M HCl?
28. a) What do you mean by the term limiting reagent? What role does it play in a chemical reaction?
- Four gram of copper chloride on analysis was found to contain 1.890 g of copper and 2.110 g of chlorine. What is the empirical formula of copper chloride?

SECTION D

The following questions are case-based questions. Each question carries 4 (1+1+2) marks. Read the passage carefully and answer the questions that follow.

29. Many chemical reactions take place in solutions. Quantitative study of a solution requires knowing its concentration i.e the amount of solute present in a given amount of solution. It is important in administering medicines to patients because serious problems or even death can occur from incorrect dosages. It is also very important in chemistry to know the correct concentration of solution before performing an experiment.

The simplest way is to express concentration by mass percentage or volume percentage. There is another method which is more convenient when we perform chemical reactions. This is in terms of molarity which gives the amount in moles of solute present in 1 litre of solution. Concentration can also be expressed in terms of molality and mole fraction.

Answer the following questions:

- Molality is preferred to molarity to express the concentration of solution as it does not depend on temperature. Why?

OR

- What do you mean by 3 molal NaOH solution?
- A solution has three components A, B and C. The mole fraction of A is 0.45 and that of B is 0.23. How much is the mole fraction of C?
- What mass of CaCO_3 is required to react completely with 25 ml of 0.75 M HCl?

30. There are many observable patterns in the physical and chemical properties of elements as we descend in a group or move across a period in the Periodic Table. Atomic Radius the determination of the atomic size cannot be precise. In other words, there is no practical way

by which the size of an individual atom can be measured. However, an estimate of the atomic size can be made by knowing the distance between the atoms in the combined state. One practical approach to estimate the size of an atom of a non-metallic element is to measure the distance between two atoms when they are bound together by a single bond in a covalent molecule. Atomic Radius to refer to both covalent or metallic radius depending on whether the element is a non-metal or a metal. Atomic radii can be measured by X-ray or other spectroscopic methods. The atomic radii of the second period elements is given below:

Element	Li	Be	B	C	N	O	F
Atomic radius (pm)	152	111	88	77	74	66	64

Answer the following questions:

- Write the general outer shell electronic configuration of halogens.
- Out of oxygen and sulphur, which has smaller electron gain enthalpy and why?

OR

- Why does atomic radius increase down the group?
- Out of Van der Waals radius and covalent radius, which one is bigger and why?

SECTION E

The following questions are long answer type and carry 5 marks each. All questions have an internal choice.

31. Attempt any five of the following:

- Which of the following orbitals are not possible and why? $3d$, $4p$, $2d$, $3s$, $5d$
- Why does Heisenberg's uncertainty principle rule out the existence of definite paths or trajectory of electrons?
- Give the expression for the wavelength associated with electromagnetic wave and matter wave.
- Yellow light emitted from a sodium lamp has frequency of 4×10^{14} Hz. Calculate the wave number of the yellow light.
- How many subshells are associated with $n = 4$?

- (f) If the energy of an electron in the second Bohr orbit of H atom is $-E$, what is the energy of the electron in the Bohr's first orbit?
- (g) Write the electronic configuration of i. Ti ii. Mn^{2+}
32. (a) How would you justify the presence of 18 elements in the 5th period of the Modern Periodic Table?
- (b) Nitrogen has positive electron gain enthalpy whereas oxygen has negative. However, oxygen has lower ionization enthalpy than nitrogen. Explain.
- (c) What do you understand by the term isoelectronic species? Name the species that will be isoelectronic with each of the following atoms or ions: i. F^- ii. Mg^{2+}

OR

- (a) Which of the following elements belong to d-block of the periodic table and why? Na, V, Al, Cr
- (b) Would you expect the second electron gain enthalpy of O as positive, more negative or less negative than the first? Justify your answer.
- (c) Atomic radius of sodium is 186 pm compared to the ionic radius of 95 pm for Na^+ . Explain why?
33. (a) Although both CO_2 and H_2O are triatomic molecules, the shape of H_2O molecule is bent while that of CO_2 is linear. Explain this on the basis of VSEPR theory.
- (b) Draw the shapes of the following hybrid orbitals : i) sp ii) sp^3
- (c) In case of polyatomic molecules the term mean bond enthalpy is used instead of bond enthalpy. Why?

OR

- (a) Apart from tetrahedral geometry, another possible geometry for CH_4 is square planar with the four H atoms at the corners of the square and the C atom at its centre. Explain why CH_4 is not square planar but tetrahedral?
- (b) SF_6 molecule has octahedral geometry. Justify on the basis of the concept of hybridisation.
- (c) How is bond order of a molecule related to its bond length?



BAL BHARATI PUBLIC SCHOOL
HALF-YEARLY EXAMINATION (2024-25)

CLASS - XI

SUBJECT- Artificial Intelligence

Sample Paper

TIME: 2 Hrs

Maximum Marks: 50

DATE:

General Instructions:

1. Please read the instructions carefully.
2. This Question Paper consists of 21 questions in two sections: Section A & Section B.
3. Section A has Objective type questions whereas Section B contains Subjective type questions.
4. Out of the given (5 + 16 =) 21 questions, a candidate has to answer (5 + 10 =) 15 questions in the allotted (maximum) time of 2 hours.
5. All questions of a particular section must be attempted in the correct order.
6. **SECTION A - OBJECTIVE TYPE QUESTIONS (24 MARKS):**
 - i. This section has 05 questions.
 - ii. Marks allotted are mentioned against each question/part.
 - iii. There is no negative marking.
 - iv. Do as per the instructions given.
7. **SECTION B - SUBJECTIVE TYPE QUESTIONS (26 MARKS):**
 - i. This section has 16 questions.
 - ii. A candidate has to do 10 questions.
 - iii. Do as per the instructions given.
 - iv. Marks allotted are mentioned against each question/part.

	Section A: Objective Type Questions	
Q -1	Answer any 4 out of given 6 questions on Employability skills.	(1 x 4=4 marks)
i)	_____ means understanding a situation or problem by asking questions like why, what, when, how and investigating the situation or the reason for the problem. a) Critical thinking b) Creative thinking	1

	<p>c) Decision making d) Logical Thinking</p>	
ii)	<p>If an idea is innovative and the way it is implemented is also innovative, the growth opportunities of the business will _____.</p> <p>a) Decrease b) Increase c) Neither a nor b d) Both a and b</p>	1
iii)	<p>Which needs are met through different products or services, but customers are not completely satisfied and still have problem using them?</p> <p>a) Fulfilled needs b) Unfulfilled & unknown needs c) Unknown needs d) Partially fulfilled needs</p>	1
iv)	<p>In _____ surveys, you go directly to your customers and talk to them.</p>	1
v)	<p>Independence means the ability to _____ and the self-confidence to make decision.</p> <p>a) Work alone b) Work in team c) Not work at all d) Work with a partner</p>	1
vi)	<p>A business activity that you can't see, but that benefits the buyer, is called a _____.</p>	1
Q2	<p>Answer any 5 out of the given 6 questions</p>	(1 x 5 = 5 marks)
i)	<p>What does the term "Data is the new oil" imply?</p> <p>a. Data is as valuable as oil. b. Data is used as fuel for machines. c. Data is a non-renewable resource. d. Data and oil are unrelated.</p>	1
ii)	<p>Divya was learning neural networks. She understood that there were three layers in a neural network. Help her identify the layer that does processing in the neural network.</p>	1

	<p>a. Output layer b. Hidden layer</p> <p>c. Input layer d. Data layer</p>	
iii)	<p>Which category of machine learning occurs in the presence of a supervisor or teacher?</p> <p>a. Unsupervised Learning b. Reinforcement Learning</p> <p>c. Supervised Learning d. Deep Learning</p>	1
iv)	<p>What is the role of reinforcement learning in machine learning?</p> <p>a. Creating rules automatically</p> <p>b. Recognizing patterns in untagged data</p> <p>c. Rewarding desired behaviors and/or penalizing undesirable ones</p> <p>d. Mimicking human conversation through voice or text</p>	1
v)	<p>Unstructured data can be easily analyzed using traditional relational database techniques. True/False</p>	1
vi)	<p>_____ is a subset of artificial intelligence that is entirely based on artificial neural networks.</p>	1
Q3	<p>Answer any 5 out of the given 6 questions</p>	(1 x 5 = 5marks)
i)	<p>Identify the important soft skill required for AI professionals.</p> <p>A. Expertise in neural networks</p> <p>B. Effective communication</p> <p>C. Proficiency in Python</p> <p>D. Knowledge of big data technologies</p>	1
ii)	<p>Which industry uses AI for personalized travel recommendations?</p> <p>A. Tourism B. Banking</p> <p>C. Healthcare D. Geospatial</p>	1
iii)	<p>What is the purpose of the website “Data Science Central”?</p> <p>A. Providing a community experience for data practitioners</p>	1

	<p>B. Offering free video-based courses on AI</p> <p>C. Analyzing market trends using AI algorithms</p> <p>D. Providing insight into emerging trends in big data</p>	
iv)	<p>Which of the following is a job role in AI related to the automobile industry?</p> <p>A. Robotics Engineer</p> <p>B. Virtual Nurse Assistant</p> <p>C. Sales Forecasting Analyst</p> <p>D. Autonomous Vehicle Engineer</p>	1
v)	<p>Name two popular AI tools and programming languages used by AI professionals.</p>	1
vi)	<p>Name the role of AI professionals in healthcare industry?</p>	1
Q4	<p>Answer any 5 out of the given 6 questions</p>	(1 x 5 = 5marks)
i)	<p>Identify the datatype L = "45"</p> <p>a. String b. int c. float d. tuple</p>	1
ii)	<p>Which of the following variable is valid?</p> <p>a. Str name b. 1str c. _str d. #Str</p>	1
iii)	<p>Elements in the list are enclosed in _____ brackets</p> <p>a. () b. { } c. [] d. /* */</p>	1
iv)	<p>What will be the output of the following code?</p> <pre>a = [10,20,30,40,50] print(a[0])</pre> <p>a.20 b.50 c. 10 d.40</p>	1
v)	<p>Which special symbol is used to add comments in python?</p> <p>a. \$ b. // c. /*.... */ d. #</p>	1
vi)	<p>Index value of last element in list is _____</p> <p>a. 0 b. -10 c. -1 d.10</p>	1
Q5	<p>Answer any 5 out of the given 6 questions</p>	(1 x 5 = 5marks)
i)	<p>What is the primary focus of AI ethics?</p> <p>a. Ensuring AI systems are efficient and error-free</p> <p>b. Guiding the development and use of AI technologies according to ethical principles</p> <p>c. Maximizing the profitability of AI technologies</p>	1

	d. Focusing solely on the technological advancements in AI	
ii)	Which ethical principle is concerned with fairness and justice in AI systems? a. Transparency b. Accountability c. Bias and fairness d. Privacy	1
iii)	How can bias in AI systems impact society? a. By making AI systems more efficient b. By perpetuating and exacerbating existing inequalities c. By improving fairness and justice automatically d. None of the above	1
iv)	What is an example of AI assisting humanity as mentioned in the unit? a. Reducing energy efficiency in buildings b. Enhancing mental health care through AI-powered chatbots c. Increasing bias in hiring processes d. Decreasing crop yield predictions accuracy	1
v)	The ability to critically analyze the ethical implications of AI technologies does not require considering their impact on society. True/False	1
vi)	Who is responsible for ensuring the ethical use of AI systems? a. AI developers only b. Government bodies only c. Users only d. All stakeholders, including developers, governments, and users	1
	Section B: Subjective Type Questions	
	Answer any 3 out of the given 5 questions on Employability skills. Answer each question in 20-30 words.	2X3=6
Q6)	Define entrepreneur and entrepreneurship.	2
Q 7)	Write any two differences between the attitude of entrepreneurs and employees	2
Q8)	What values does a successful entrepreneur have? Write any two values, with examples.	2
Q9	Why is business planning important?	2
Q10	Explain any four different aspects of understanding customer needs and preferences?	2
	Answer any 4 out of the given 6 questions in 20 - 30 words each	(2 x 4 = 8 Marks)
Q11	Rahul is an architect. He has designed and built a beautiful home for his client in Pune. He has installed these systems/appliances/gadgets at the newly constructed home.	2

	<p>Identify which of these are AI systems and which of these are not AI systems.</p> <p>Solar water heater, Smart TV, Security cameras, rainwater harvesting system, cleaning robots, smart lighting, automatic door, Siri, automatic washing machine.</p> <p>After separating the AI systems, mention some parameters on which you choose these appliances/systems as AI systems.</p>	
Q12	Why is continuous learning crucial in AI, and how do professionals stay updated with the latest advancements?	2
Q13	Name some common job roles in the field of artificial intelligence (AI).	2
Q14	Name any four features of python language.	2
Q15	How can AI impact privacy and data protection?	2
Q16	Why is transparency important in AI systems?	2
	Answer any 3 out of given 5 questions in 50-80 words each:	(4 x 3 = 12 marks)
Q17	<p>Saloni, a career counselor, is visiting a Class XII assembly to talk about exciting career opportunities in Artificial Intelligence (AI). After explaining various AI fields, a student named Aditya raises his hand and asks, "This all sounds fascinating, but how is AI being used in healthcare and beauty & wellness industry specifically?"</p> <p>Help Saloni address Aditya's query?</p>	4
Q18	What is deep learning, and how does it differ from traditional machine learning? Also give one example of deep learning.	4
Q19	<p>Write a program to accept the Basic salary from the user and calculate the Net Salary.</p> <p>Net Salary= Basic Salary + HRA + DA -PF</p> <p>HRA=30% of Basic</p> <p>DA=20% of Basic</p> <p>PF=12% of Basic</p>	4
Q20	<p>Help Priya to differentiate the given information into various datatypes of Python.</p> <p>1. Name of the student,</p>	4

	<ul style="list-style-type: none"> 2. email id, 3. marks in 5 subjects which can be changed at any point, 4. 3 extra subjects chosen which cannot be changed later. 	
Q21	<p>Case Study:</p> <p>In a complex urban environment, an autonomous vehicle faces an imminent collision dilemma. The vehicle's path is obstructed by a pedestrian who has unexpectedly entered the roadway, violating traffic signals. Simultaneously, to the vehicle's side, a group of cyclists legally occupies the bike lane. The vehicle's AI must make an instantaneous decision: continue on its trajectory, risking harm to the pedestrian, or alter its course, endangering the cyclists. This decision-making process involves critical ethical considerations, including the valuation of human life, the assessment of potential harm, and the prioritization of legal and moral obligations in split-second scenarios.</p> <p>Consider the ethical dilemmas presented by AI technologies and explain how law makers, business leaders, and the public can work together to tackle these issues and encourage the ethical creation and implementation of AI.</p>	4



BAL BHARATI PUBLIC SCHOOL
SAMPLE PAPER FOR
HALF-YEARLY EXAMINATION (2024-25)
CLASS - XI
SUBJECT- COMPUTER SC

TIME: 3 HOURS

Maximum Marks: 70

General Instructions:

- Please check this question paper contains 35 questions.
- The paper is divided into 4 Sections- A, B, C, D and E.
- Section A, consists of 18 questions (1 to 18). Each question carries 1 Mark.
- Section B, consists of 7 questions (19 to 25). Each question carries 2 Marks.
- Section C, consists of 5 questions (26 to 30). Each question carries 3 Marks.
- Section D, consists of 2 questions (31 to 32). Each question carries 4 Marks.
- Section E, consists of 3 questions (33 to 35). Each question carries 5 Marks.
- All programming questions are to be answered using Python Language only.

SECTION A (18 Marks)		
1	The central Processing Unit is located in the _____ a) Hard Disk b) System Unit c) Memory Unit d) Monitor	1
2	A student of class XII required to submit the soft copy of his Computer Science project for his board practical exam and he bought a device which is reasonable storage? a) Blue Ray Disk b) Compact Disk c) Pen Drive d)Magnetic Tape	1
3	Write base value for (any of the number system)Decimal, Binary, Octal and Hexadecimal number system. a) 10 b) 8 c) 16 d) 2	1
4	Which of the following statement is correct, according to Indempotence Law? a) $(XY)' = X' + Y'$ b) $X+Y = Y+X$ c) $X+X=X$ d) None of the mentioned	1
5	Which of the following statement is False about for loop? a. for loop is a conditional loop b. The first parameter is optional in for loop c. The default value of last parameter of range() is -1 d. for loop is a counter loop	1
6	The given program is suppose to check whether the number entered is even or odd. sample inputs are given for the variable num is 6, 11, 0 and -8. But, the program is not producing the correct output. Identify the correct if statement so that the program can run from the given sample inputs. <pre>num=int(input("Enter number")) if num / 2 !=0: print("even") else: print("odd")</pre>	1

	a) num%2==0: c) num%0==0:	b) num%2 !=0 d) None of the above	
7	Which of the following identifier name(s) are invalid? a)first.last b) avg_marks c) None d) marks2024		1
8	Find the size of the following string “”xy ↵ Yz”” a) 4 b) 5 c) 7 d) Error		1
9	Identify the datatype of the variable named stud stud={1:[10,20,30], 2:[4,5,6]} a) List b) dictionary c) tuple d) string		1
10	Evaluate the following expression 10>20 and “a” + 10<5		1
11	Consider the loop given below for i in range(3): break print(i) Evaluate and find the final value of I after the loop? a) 3 b) 2 c) 1 d) 0		1
12	_____ Statement unconditionally transfers program control within a function a)Loop statement b) Jump statement c) Empty statement d) block		1
13	Consider the code given below, evaluate and find the output total = 0 for i in range(1, 5): total += i * (i % 2) print(total) a) 6 b) 4 c) 10 d) 0		1
14	What will be the output of the following code i = 0 while i < 3: i += 1 else: print(i, end=' ') a) 0 1 2 b) 1 2 3 c) 3 d) 0 1 2 3		1
15	Find the output of the following statement. print((4>5) and (2!=1) or (4<9))		1
16	What will be the value of i ? i=100 while i<300: i=i*2 print(i) a) 100 b)200 c)no output d)400		1
	Q17, Q18 are ASSERTION AND REASONING based questions. Mark the correct choice as (a) Both A and R are true and R is the correct explanation for A (b) Both A and R are true and R is not the correct explanation for A (c) A is True but R is False (d) A is false but R is True		
17	Assertion: Python supports dynamic typing of variables. Reason:- A variable can hold values of different types of different times, in a program.		1

18	Assertion:- Type conversion can be implicit or explicit Reason:- Only python interpreter can force the type conversion and not the programmer.	1
SECTION B (2 Marks x 7 questions=14 Marks)		
19	Write the difference between RAM and ROM.	2
20	Write the difference between the following (any one) a) for loop and while loop b) break and continue statement c) selection construct or iterative construct Also write the code with output to explain the concept.	2
21	Find the output of the following code <pre>for i in range(4): print(i, end="\$ ") if i==1: print("H") continue else: print("X")</pre>	2
22	Write a program to input year from the user and check whether it is leap year or not. Using nested if statement.	2
23	Find the output of the following <pre>>>> x,y=20,60 >>> y,x,y=x,y-10, x+10 >>> print(x,y)</pre>	2
24	What are the situations in which is operator and == operator returns the different result?	2
25	Write the python statements for the following a) To check whether the marks have been entered between 91 to 100 or not. b) Write a loop that will display even numbers from 10 to 2. E.g. 10, 8, 6, 4, 2	2
SECTION C (3 marks x 5 questions= 15 marks)		
26	Do the following conversions: (i) $45_{10} = \underline{\hspace{2cm}}_2$ (ii) $342_8 = \underline{\hspace{2cm}}_{10}$ (iii) $11000111_2 = \underline{\hspace{2cm}}_{16}$	1+1 +1
27	Do as directed (i) Prove Demorgan Law with the help of truth table (ii) Draw the logic circuit for the following expression $AB'+B'C'$	1 2
28	Answer the following questions (i) Python programming language name was given after the famous BBPS comedy show named _____ (ii) Write the difference between Interactive mode and Script mode in python. (iii) Explain any two advantages of Python.	1 1 1
29	(i) What do mean by comments in python? (ii) What are the different types of tokens in python? Explain any two tokens.	1 2
30	Find the output of the following code and which concept is depicted in the given program, explain in 1-2 lines. <pre>x = 10 y = "5" z = 2.5 result = x + int(y) * z</pre>	3

	<pre>print(result) print(type(result))</pre>	
	SECTION D (4 marks x 2 questions = 8 marks)	
31	<p>Case study :- Employee Bonus Calculation A company wants to determine employee bonuses based on their years of service and performance rating. Consider the code given below</p> <pre>years_of_service = int(input("Enter the years of service: ")) performance_rating = float(input("Enter the performance rating (1 to 5): ")) bonus = 0</pre> <p>You need to write a Python statements to address the following requirements:</p> <p>(i) Determine the base bonus based on years of service using if statements. Criteria:</p> <ul style="list-style-type: none"> • Less than 1 year: No bonus • 1 to 5 years: Rs. 1000 • More than 5 years: Rs. 2000 <p>(ii) Adjust the bonus based on the performance rating. Criteria:</p> <ul style="list-style-type: none"> • Rating 4 or 5: Increase bonus by 20% • Rating 3: No change • Rating below 3: Decrease bonus by 10% <p>(iii) Check if the employee qualifies for a special recognition award based on years of service and performance rating. Criteria: Special Recognition: More than 5 years of service and a performance rating of 4 or higher</p> <p>(iv) Modify the program to also check if the employee qualifies for a performance review based on their rating. Criteria: Performance Review: Rating below 3</p>	<p>1</p> <p>1</p> <p>1</p> <p>1</p>
32	<p>Case study Sarah is a team leader and needs to teach her team about different types of operators in Python. Help her by writing the appropriate Python statement for each case and identifying the category of the operator used, based on the following code snippet.</p> <p>CODE:</p> <pre>number = 25 marks = 55 string1 = "hello" string2 = "world" condition1 = True condition2 = False</pre> <p>a) Identify the operator used to check whether number is divisible by 5 or not.</p> <p>b) Identify the operator used to check whether marks are greater than 50 or not.</p> <p>c) Identify the operator used to compare string1 and string2 for equality of contents as well as for their memory address</p> <p>d) The operator to check that both the conditions are true</p>	<p>1</p> <p>1</p> <p>1</p> <p>1</p>

SECTION E (5 marks x 3 questions= 15 marks)		
33	(i) Write a program to input two numbers X and Y and find X^Y using for loop.	2
	(ii) Write a program to input a number and check whether it is palindrome or not.	3
34	(i) Write a program to input a character and check whether it is upper case , lower case or special character	2
	(ii) Write a program to input a number and check whether it is prime number or not.	3
35	(i) Write a program to input a positive integer and print all the divisors of that number using a for loop.	2
	(ii) Write a program to input lower and upper limit from the user and find the sum of even numbers and odd numbers within that range.	3