

Atomic Energy Education Society
Model Exam for Half yearly/Term-1 Examination -2021-22
 For Offline purpose

Class : X
Subject : MATHEMATICS

Time: 90 minutes
Marks : 40

General Instructions:


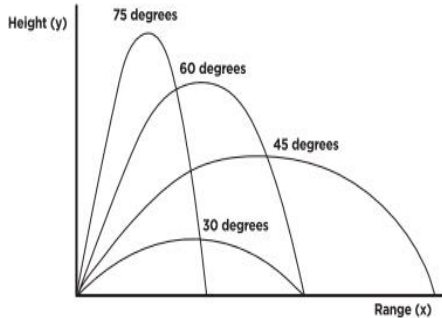
1. The question paper contains three parts A, B and C.
2. Section A consists of 20 questions of 1 mark each. Attempt any 16 questions.
3. Section B consists of 20 questions of 1 mark each. Attempt any 16 questions.
4. Section C consists of 10 questions based on two Case Studies. Attempt any 8 questions.
5. There is no negative marking.
6. The marks obtained by students will be computed / appropriated keeping 40 marks as maximum.

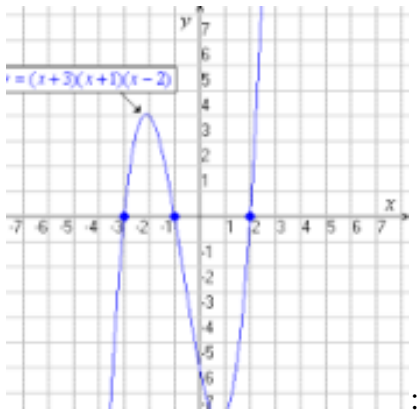
	SECTION A	
	Section A consists of 20 questions. Any 16 questions are to be attempted	
Q.No.		Marks
1.	For some integer q, every odd integer is of the form: a) q b) q + 1 c) 2q d) 2q + 1	1
2.	Two numbers are in the ratio 21 : 17 . If their HCF is 5, then the two numbers are a) 105 , 85 b) 26 , 22 c) 15 , 12 d) 21, 17	1
3.	If the least prime factor of a is 5, and the least prime factor of b is 13. then the least prime factor of a + b is: a) 2 b) 18 c) 1 d) 65	1
4.	If $\frac{278}{2^3 \times m}$ has a terminating decimal expansion and m is a positive integer such that $2 < m < 9$. then the value of m is: a) 3 b) 5 c) 4 d) 7	1
5.	If the pair of linear equations is consistent, then the lines are : a) parallel b) coincident c) intersecting d) intersecting or coincident	1
6.	The pair of equations x = a and y = b graphically represents the lines which are : a) parallel b) intersecting at (a, b) c) coincident d) intersecting at (b, a)	1

7.	The value of k for which equations $3x - y + 8 = 0$ and $6x - ky = -16$ represents coincident lines: a) 1 b) 2 c) 3 d) 4	1
8.	In triangle PQR, if PQ = 6 cm, PR = 8 cm, QS = 3 cm, and PS is the bisector of angle QPR, what is the length of SR? a) 2 b) 4 c) 6 d) 8	1
9.	If $\triangle ABC \sim \triangle DEF$, AB = 4 cm, DE = 6 cm, EF = 9 cm and FD = 12 cm, find the perimeter of ABC. a) 18 cm b) 20 cm c) 22 cm d) 24 cm	1
10.	Area of a right angled isosceles triangle whose hypotenuse is equal to 100 cm is a) 2525 sq.cm b) 2000 sq. cm c) 2200 sq.cm d) 2500 sq. cm	1
11.	Two poles of height 6 m and 11 m stand vertically upright on a plane ground. If the distance between their foot is 12 m, then distance between their tops is: a) 12 m b) 13 m c) 11 m d) 14 m	1
12.	Length of the altitude of an equilateral triangle with a side $3\sqrt{3}$ cm is: a) 3 cm b) 4 cm c) 4.5 cm d) 5.5 cm	1
13.	The same ratio of the corresponding sides of any two similar polygons is referred as: a) Representative fraction b) Suppressive fraction c) Similar fraction d) Scale fraction	1
14.	If the distance between the points (4, p) and (1,0) is 5 units , then the value of p is : a) 4 only b) -4 only c) ± 4 d) 0	1
15.	In $\triangle ABC$, right angled at B, if AC= 13 cm and AB = 5 cm, then $\sin A =$ a) $\frac{5}{13}$ b) $\frac{12}{13}$ c) $\frac{5}{12}$ d) $\frac{12}{5}$	1
16.	If $\angle A$ & $\angle B$ are acute angles such that $\cos A = \cos B$, then $\triangle ABC$ is a/an: a) equilateral triangle b) scalene triangle c) isosceles triangle d) obtuse angled triangle	1
17.	In a right angled triangle, the hypotenuse is two times as long as one of its sides, then one of its acute angles is : a) 0° b) 90° c) 45° d) 60°	1
18.	The ratio of the areas of the in-circle and the circum-circle of a square is : a) 1 : 2 b) 2 : 1 c) 1 : 4 d) 1 : 3	1

19.	The probability that a non-leap year has 53 Mondays is : a) $\frac{1}{7}$ b) $\frac{2}{7}$ c) $\frac{53}{366}$ d) $\frac{7}{53}$	1
20.	Two different dice are thrown together. The probability that the number obtained is a doublet: a) $\frac{1}{6}$ b) $\frac{2}{36}$ c) $\frac{5}{36}$ d) $\frac{2}{3}$	1
	SECTION B	
	Section B consists of 20 questions. Any 16 questions are to be attempted	
21.	The smallest number which when increased by 6 becomes divisible by 30 , 63 and 108 is: a) 750 b) 752 c) 754 d) 756	1
22.	The HCF and LCM of two numbers are 33 & 264 respectively. When the first number is completely divided by 2 and the quotient is 33, then the other number is : a) 64 b) 132 c) 264 d) 297	1
23.	If the prime factorization of a natural number N is $2^4 \times 3^3 \times 5^3 \times 7$, then the number of consecutive zeroes in N are: a) 11 b) 7 c) 4 d) 3	1
24.	.If graph of a polynomial P(x) does not intersect the x-axis but intersects y-axis in one point , then the number of zeros of the polynomial is equal to: a) 0 b) 1 c) 2 d) 3	1
25.	If the pair of equations $4x + ay + 8 = 0$ and $2x + 2y + 2 = 0$ has unique solution then the value of a is: a) $a \neq 2$ b) $a = 2$ c) $a = 4$ d) $a \neq 4$	1
26.	The number of solutions of $3^{x+y} = 243$ and $243^{x-y} = 3$ is : a) 0 b) 1 c) 2 d) infinite	1
27.	The ratio of the corresponding sides of two similar triangles is 4:5, then the ratio of their medians is : a) 4 : 5 b) 16 : 25 c) 5 : 4 d) $2 : \sqrt{5}$	1
28.	A ladder 10 m long reaches a window 8 m above the ground. The distance of the foot of the ladder from the base of the wall is m. a) 8 b) 2 c) 6 d) 4	1
29.	The point P on x -axis equidistant from the points A(- 1, 0) and B(5, 0) is: a) (2,0) b) (0 , 2) c) (3,5) d) (5 , 0)	1

30.	The line $3x + y - 9 = 0$ divides the line joining the points (1, 3) and (2, 7) internally in the ratio: a) 4 : 5 b) 3 : 2 c) 5 : 6 d) 3 : 4	1
31.	If the centre of a circle is (3, 5) and end points of a diameter are (4, 7) and (2, y), then the value of y is: a) 3 b) -3 c) 7 d) -7	1
32.	If $\operatorname{cosec}\theta + \cot\theta = m$, then $\frac{m^2 - 1}{m^2 + 1}$ is: a) $\cos\theta$ b) $\sin\theta$ c) $\tan\theta$ d) $\cot\theta$	1
33.	Value of x if $\cos 2x = \sin 60^\circ \cos 30^\circ - \cos 60^\circ \sin 30^\circ$ is: a) 0° b) 30° c) 45° d) 60°	1
34.	If $\sin\theta + \sin^2\theta = 1$, then $\cos^2\theta + \cos^4\theta$ is: a) 0 b) 1 c) $\sin\theta$ d) $\cos\theta$	1
35.	If the circumference of a circle is increased by 50 %, then its area will be increased by : a) 50 % b) 100% c) 125 % d) 150 %	1
36.	Length of an arc (l) of a circle of radius (r) is _____ units where θ is the central angle formed by the arc. a) $\frac{\theta}{180} \times \pi r$ b) $\frac{\theta}{360} \times \pi r$ c) $\frac{\theta}{180} \times 2\pi r$ d) $\frac{\theta}{180} \times \pi r^2$	1
37.	A circular wire of radius 70 cm is cut and bent into the form of a rectangle whose sides are in the ratio 2 : 3. The length of the smaller side of the rectangle is : a) 44 cm b) 88 cm c) 132 cm d) 264 cm	1
38.	A bag contains 5 red balls and some blue balls. If the probability of drawing a blue ball is double that of red ball, the number of blue balls in the bag are : a) 5 b) 10 c) 2 d) 4	1
39.	Three different coins are tossed together. The probability of getting at least two heads is: a) $\frac{1}{2}$ b) $\frac{3}{8}$ c) $\frac{1}{8}$ d) 1	1
40.	Solution for the pair of linear equations : $99x + 101y = 499$ and $101x + 99y = 501$ is: a) $x = 2, y = 3$ b) $x = 2, y = 6$ c) $x = 3, y = 2$ d) $x = 4, y = 5$	1

	SECTION C Case study based questions	
	Section C consists of 10 questions of 1 mark each. Any 8 questions are to be attempted.	
	<p style="text-align: center;">Case Study – 1</p> <p style="text-align: center;">Gold Winning throw in Tokyo Olympics-2020</p> <p>Neeraj Chopra on Saturday created history by becoming the second Indian to win an individual gold medal in Olympics after shooter Abhinav Bindra. Neeraj is the first Indian in over 120 years, and the first athlete from independent India, to win an Olympic medal in a track-and-field discipline. Neeraj won the gold medal in the men's javelin throw event with a throw of 87.58m in his second attempt.</p> <div style="display: flex; align-items: center;">   </div> <p>Based on the given information , answer the questions No. 41-45</p>	
41.	<p>The trajectory of the javelin thrown by Neeraj Chopra was in the shape of a:</p> <p>a) linear b) parabola c) hyperbola d) helix.</p>	1
42.	<p>In the quadratic equation $ax^2 + bx + c = 0$, if $a < 0$, then the graph of the equation :</p> <p>a) open upwards b) open downwards c) the shape is independent of 'a' d) all the above</p>	1
43.	<p>If one of the zeros of the quadratic polynomial $ax^2 + bx + c$ is a negative of the other, then it :</p> <p>a) has no linear term and the constant term is negative. b) has linear term and the constant term is positive c) has linear term and the constant term is negative d) has no linear term and the constant term is positive</p>	1
44.	<p>The graph of $x^2 - x - 12 = 0$:</p> <p>a) does not intersect x-axis b) intersects x- axis at a unique point c) intersects x-axis at two distinct points d) data insufficient</p>	1

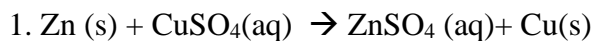
45.	<p>Graph given below is the graphical representation of the polynomial. Zeroes of the polynomial are</p>  <p>a) 3,2,2 b) -3,-1,-5 c) -3,-1, 2 d) -3,3,-1, 2</p>	1
	<p style="text-align: center;">Case Study -2</p> <p>In a class room 4 students Mahati, Mouktika , Meenakshi and Yamini are sitting at A(3 , 4), B(6 , 7), C(9 , 4) and D(6 ,1) respectively. A new student Sahana joined the class.</p> <p>Based on the given information , answer the questions No. 46-50</p>	
46.	<p>Teacher asks Sahana to sit equidistant to all these 4 students. The co-ordinates of the position of Sahana is:</p> <p>a) (2,5) b) (4,6) c) (6, 4) d) (5,2)</p>	1
47.	<p>Distance between Mahati and Yamini is:</p> <p>a) $\sqrt{18}$ units b) 6 units c) $\sqrt{10}$ units d) $\sqrt{20}$ units</p>	1
48.	<p>Which two students are equidistant to Mouktika?</p> <p>a) Mahati & Meenakshi b) Meenakshi & Yamini c) Mahati & Meenakshi d) none of these</p>	1
49.	<p>Geometrical figure formed after joining the points ABCD is:</p> <p>a) trapezium b) rectangle c) square d) kite</p>	1
50.	<p>The point which divides the line segment joining the points (8 , -9) and (2, 3) in ratio 1 : 2 internally lies in the----- quadrant.</p> <p>a) I b) II c) III d) IV</p>	1

Atomic Energy Education Society**Model Examination for Term-1 (2021-22)**

For offline purpose

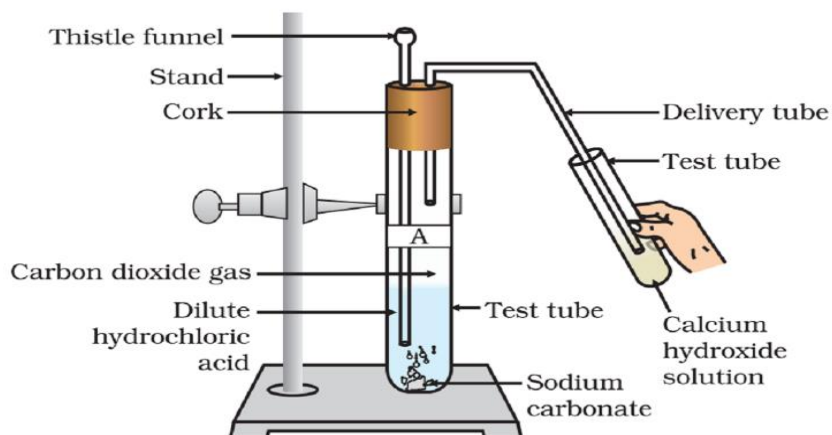
Class : X**Time : 90 Minutes****Subject : Science****Marks : 40****General Instructions :**

1. The Question Paper contains three sections.
2. Section A has 24 questions. Attempt any 20 questions.
3. Section B has 24 questions. Attempt any 20 questions.
4. Section C has 12 questions. Attempt any 10 questions.
5. All questions carry equal marks.
6. There is no negative marking.
7. The marks obtained by students will be computed / appropriated keeping 40 as maximum.

SECTION - A**Section – A consists of 24 questions. Attempt any 20 questions from this section.****The first attempted 20 questions would be evaluated.**

This reaction is an example for

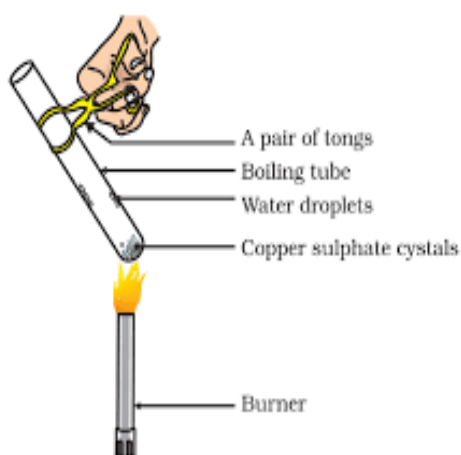
- A. Double displacement reaction
 - B. Decomposition reaction
 - C. Displacement reaction
 - D. Combination reaction
2. Observe the given diagram.



In this experiment calcium hydroxide solution becomes milky while passing carbon dioxide gas through it. The white precipitate formed in this reaction is _____.

- A. CaCO_3
- B. CO_2
- C. $\text{Ca}(\text{OH})_2$
- D. $\text{Ca}(\text{HCO}_3)_2$

3. Menka heated copper sulphate crystals in the test tube as shown in the picture.



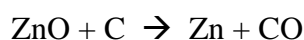
She observed that there is a change in the colour of the copper sulphate. What would be the colour change?

- A. Blue to red
 - B. White to blue
 - C. Blue to white
 - D. Blue to yellow
4. Which of the following correctly represents a balanced chemical equation?
- A. $\text{CH}_4(\text{g}) + \text{O}_2(\text{g}) \rightarrow \text{CO}_2(\text{g}) + 2\text{H}_2\text{O}(\text{g})$
 - B. $\text{CH}_4(\text{g}) + 2\text{O}_2(\text{g}) \rightarrow \text{CO}_2(\text{g}) + 2\text{H}_2\text{O}(\text{g})$
 - C. $\text{CH}_4(\text{g}) + 2\text{O}_2(\text{g}) \rightarrow \text{CO}_2(\text{g}) + \text{H}_2\text{O}(\text{g})$
 - D. $\text{CH}_4(\text{g}) + \text{O}_2(\text{g}) \rightarrow \text{CO}_2(\text{g}) + \text{H}_2\text{O}(\text{g})$
5. Identify the neutral salts from the following salts.

- i) NaCl ii) Na_2SO_4 iii) Na_2CO_3 iv) NH_4Cl

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

6. Which of the statements about the reaction given below are correct?



Statements: i) Zn is getting oxidised. ii) CO is getting oxidised iii) ZnO is getting reduced
iv) C is getting oxidised

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

7. The chemical reaction between sodium sulphate and barium chloride can be categorized as: ____.

- A. Displacement reaction
- B. Decomposition reaction
- C. Combination reaction
- D. Double displacement reaction

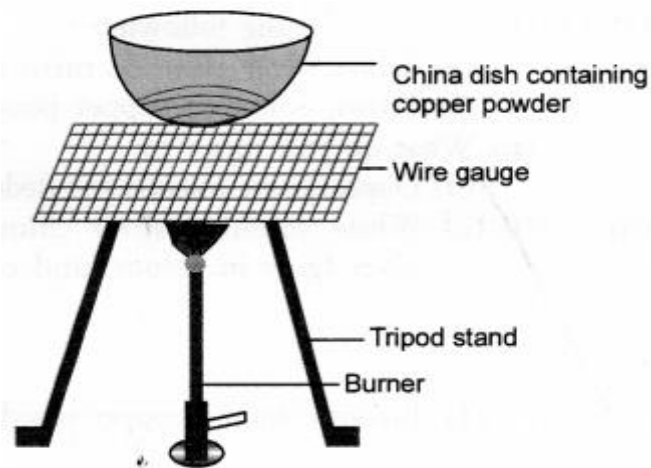
8. Stinging hairs of Nettle contains _____.

- A. Methanoic acid
- B. Ethanoic acid
- C. Propanoic acid
- D. Hydrochloric acid

9. Which of the following options correctly represents the Parent acid and base of Sodium sulphate?

- A. HCl and NaOH
- B. H_2SO_4 and NaOH
- C. HNO_3 and NaOH
- D. H_2SO_4 and KOH

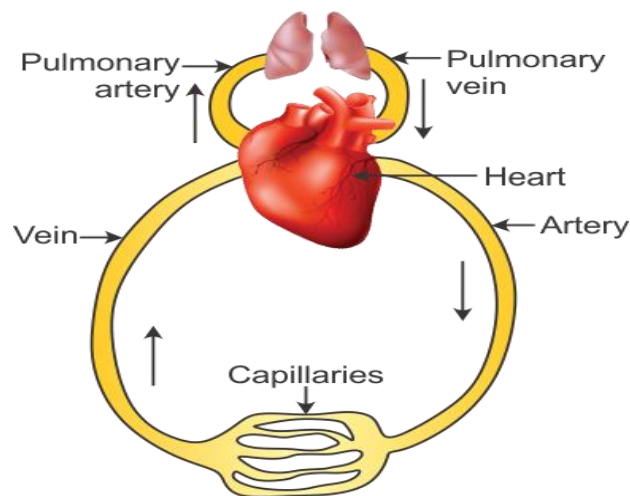
10. Uma took 5 g of copper powder in a china dish and heated it over the flame as shown in the diagram.



What did she observe?

- A. Copper powder turns blue in colour
- B. Copper powder turns violet in colour
- C. Copper powder turns black in colour
- D. Copper powder turns yellow in colour

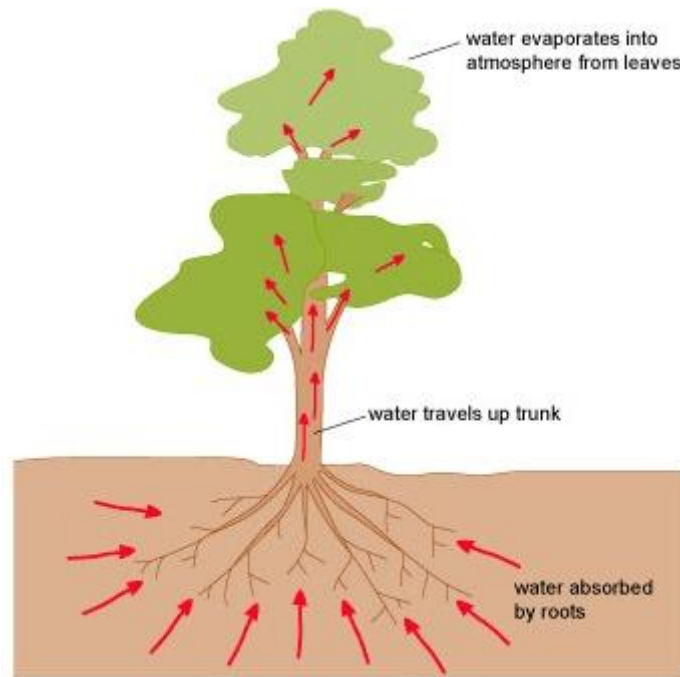
11. Study the schematic representation of human circulatory system shown in the figure.



Identify the correct option from the following.

- A. Pulmonary artery – takes pure blood from heart to lungs
- B. Pulmonary veins – takes impure blood to heart
- C. Vena cava – takes impure blood from the body parts to the right auricle
- D. Aorta – takes impure blood from the heart to the body parts

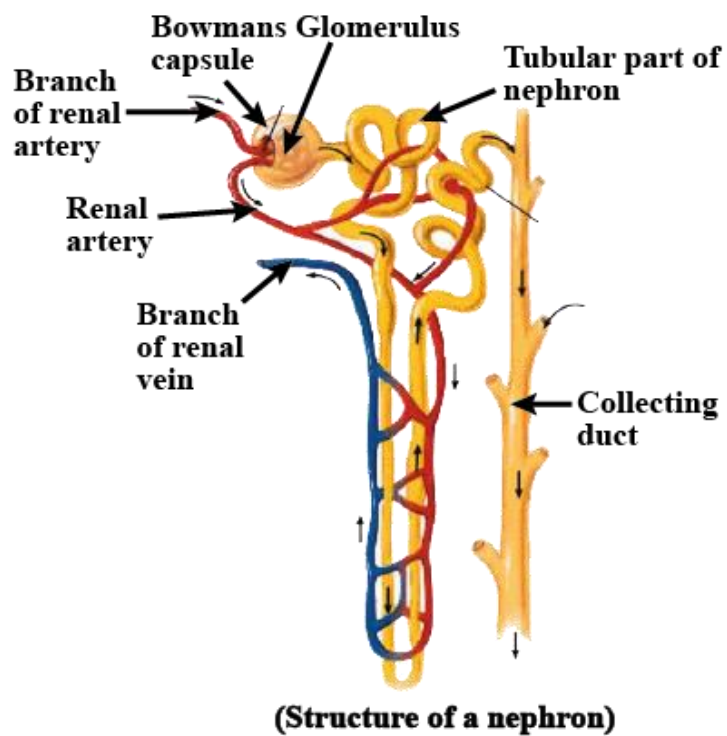
12. Study the figure given below.



The upward arrow mark indicates

- A. Movement of water through xylem
- B. Movement of water through phloem
- C. Movement of water and food through phloem
- D. Movement of water and food through xylem

13. Carefully study the diagram of the nephron.



Identify the part of the nephron where the reabsorption of water is taking place.

- A. Glomerulus
- B. Collecting duct
- C. Tubular part of the nephron
- D. Renal artery

14. Break down of pyruvate using oxygen takes place in which part of the cell?

- A. Mitochondria
- B. Cytoplasm
- C. Plastid
- D. Ribosome

15. Major nitrogenous waste product in human beings is _____.

- A. Nitrogen
- B. Ammonia
- C. Urea
- D. Carbon dioxide

16. Our normal blood pressure is _____.

- A. 130/100 mm of Hg
- B. 90/120 mm of Hg
- C. 70/120 mm of Hg
- D. 120/80 mm of Hg

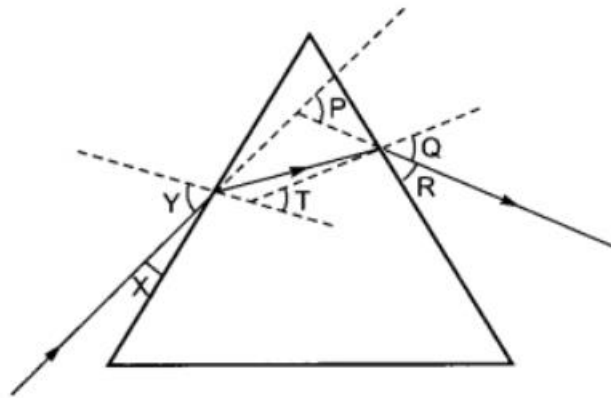
17. The image formed by a plane mirror is _____.

- A. Virtual and erect
- B. Laterally inverted
- C. Same size as that of object
- D. All of these

18. In a concave mirror, a light ray passing through the centre of curvature, after reflection _____.

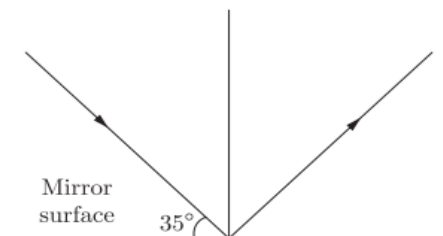
- A. Will pass through the principal focus
- B. Will emerge parallel to the principal axis
- C. Is reflected back along the same path
- D. Is reflected obliquely

19. In the following diagram, the path of a ray of light passing through a glass prism is shown:



In this diagram the angle of incidence, the angle of emergence and the angle of deviation respectively are (select the correct option): _____.

- A. X, R and T
 - B. Y, Q and T
 - C. X, Q and P
 - D. Y, Q and P
20. An object is placed 40 cm in front of a convex mirror. The image appears 15 cm behind the mirror. The focal length of the mirror is _____.
- A. + 24 cm
 - B. - 24 cm
 - C. + 11 cm
 - D. - 11 cm
21. The angle of incidence and angle of reflection in the following diagram are : _____.

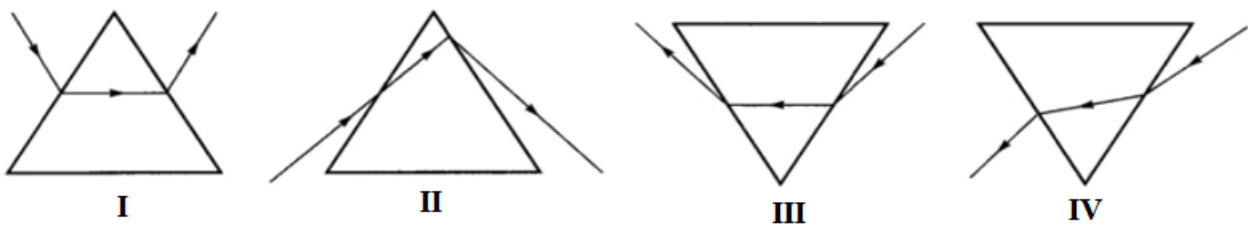


- A. 35° and 35°
 - B. 55° and 35°
 - C. 55° and 45°
 - D. 55° and 55°
22. A student traces the path of a ray through a glass prism for four different values of angle of

incidence. On analysing the diagrams he is likely to conclude that the emergent ray _____.

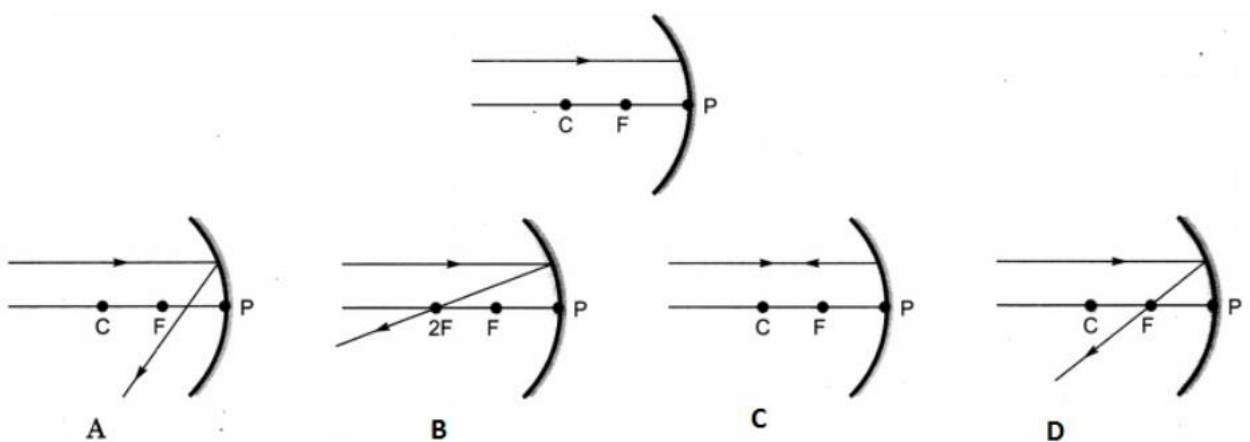
- A. Is always parallel to the incident ray.
- B. Is always perpendicular to the incident ray.
- C. Is always parallel to the refracted ray.
- D. Always bends at an angle to the direction of incident ray.

23. While performing the experiment to trace the path of a ray of light passing through a glass prism, four students marked the incident ray and the emergent ray in their diagrams in the manner shown below.



The correct path of the rays has been shown by:

- A. I
 - B. II
 - C. III
 - D. IV
24. Which of the following ray diagrams is correct for the ray of light incident on a concave mirror as shown in figure?

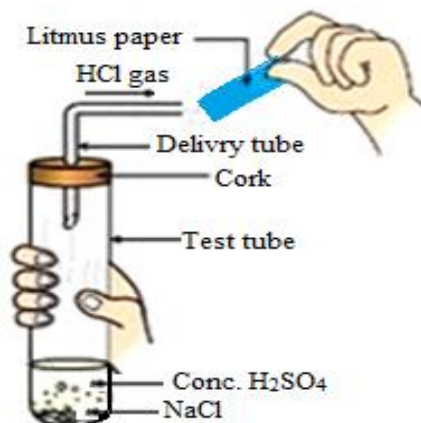


- A. Fig. A
- B. Fig. B
- C. Fig. C
- D. Fig. D

SECTION – B

Section – B consists of 24 questions (Sl. No.25 to 48). Attempt any 20 questions from this section. **The first attempted 20 questions would be evaluated.**

25. The figure given below represents the experiment carried out between conc. sulphuric acid and sodium chloride, which react with each other to form HCl gas.



Blue litmus paper is brought near the mouth of the delivery tube to check the presence of hydrochloric acid but no change is observed in the colour of litmus paper because:

- A. The litmus paper used is dry
 - B. The litmus paper used is moist
 - C. Blue litmus paper does not change its colour with an acid
 - D. The litmus paper is kept very close to the mouth of the delivery tube
26. The sample of soil from a particular place was tested for its pH value. It came out to be 5. Which one of the following should be added to the soil to make it suitable for the plant growth?
- i. Calcium chloride
 - ii. Calcium Hydroxide
 - iii. Calcium oxide

Choose the correct option:

- A. Both (i) and (ii)
 - B. Both (ii) and (iii)
 - C. Only (i)
 - D. Only (iii)
27. Which gas is produced when dilute hydrochloric acid is added to a reactive metal?
- A. Hydrogen
 - B. Carbon dioxide
 - C. Oxygen

D. Nitrogen

28. Study the following statements related to ionic compounds.

- i) Ionic compounds are solids.
- ii) Ionic compounds have low melting and boiling points.
- iii) Ionic compounds are soluble in water and insoluble in organic solvents.
- iv) Ionic compounds are poor conductors of electricity in the molten state.

Identify the correct option.

- A. i and ii
 - B. ii and iii
 - C. iii and iv
 - D. i and iii
29. A compound which is prepared from gypsum has the property of hardening when mixed with proper quantity of water. Identify the compound.
- A. Quick lime
 - B. Slaked lime
 - C. Plaster of Paris
 - D. Common salt
30. Which of the following is the correct arrangement of the given metals in descending order of their reactivity?

Metals - Zinc, Iron, Magnesium, Sodium

- A. Zinc > Iron > Magnesium > Sodium
- B. Sodium > Magnesium > Iron > Zinc
- C. Sodium > Zinc > Magnesium > Iron
- D. Sodium > Magnesium > Zinc > Iron

Question No. 31 to 35 consist of two statements – Assertion(A) and Reason (R). Answer these questions selecting the appropriate option given below.

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

31. **Assertion:** After white washing the walls, a shiny white finish on walls is obtained after two or three days.

Reason: Calcium oxide reacts with carbon dioxide to form Calcium hydrogen carbonate which gives shiny white finish.

32. **Assertion:** Silver chloride turns grey in sunlight.

Reason: It is due to the decomposition of silver chloride into silver and chlorine.

33. **Assertion:** Ventricles have thinner muscular walls than atria.

Reason: Ventricles have to pump blood into various organs.

34. **Assertion :** Deviation for red light in a glass prism is maximum.

Reason : Red light travels faster inside glass.

35. **Assertion:** Aluminium oxide is an amphoteric oxide.

Reason: It reacts with both acids as well as bases to produce salt and water.

36. Which of the following components of the blood helps in the clotting of blood?

- A. RBC
- B. WBC
- C. Platelets
- D. Plasma

37. The correct path of urine is

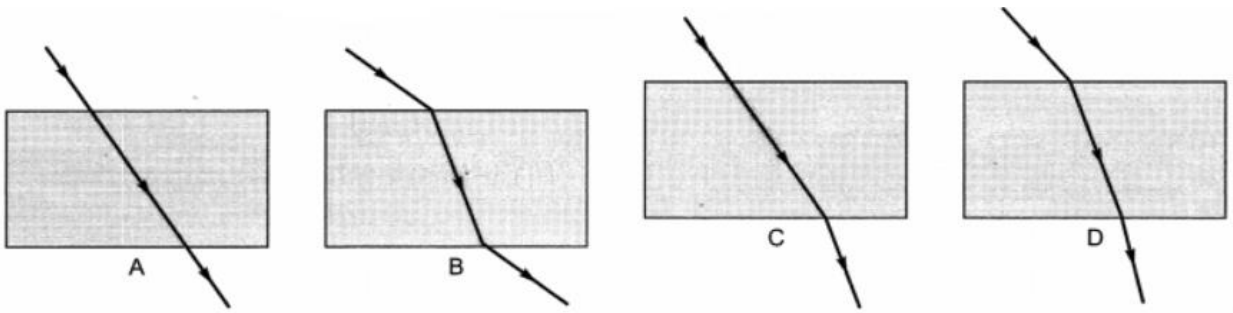
- A. Kidney → ureter → urethra → urinary bladder
- B. Kidney → urinary bladder → urethra → ureter
- C. Kidney → ureter → urinary bladder → urethra
- D. Urinary bladder → kidney → ureter → urethra

38. Choose the event that does not occur in photosynthesis?

- A. Absorption of light energy by chlorophyll
- B. Reduction of carbon dioxide to carbohydrates
- C. Oxidation of carbon to carbon dioxide
- D. Conversion of light energy to chemical energy

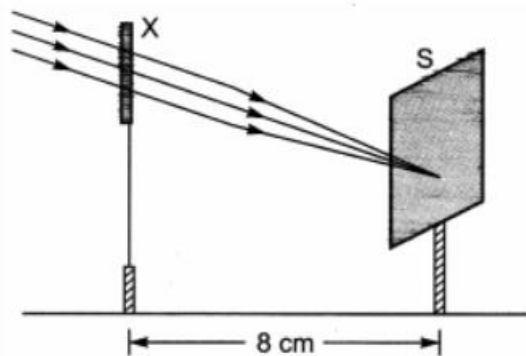
39. The refractive indices of four substances A, B, C and D are 1.50, 1.36, 1.77 and 1.31 respectively. The speed of light is maximum in the substance _____ .

- A. Substance A
 - B. Substance B
 - C. Substance C
 - D. Substance D
40. Which of the following phenomena contributes significantly to the reddish appearance of the sun at sunrise or sunset?
- A. Dispersion of light
 - B. Scattering of light
 - C. Total internal reflection of light
 - D. Reflection of light from the earth
41. Choose the correct statement that describes arteries:
- A. They have thick elastic walls, blood flows under high pressure; collect blood from different organs and bring it back to the heart
 - B. They have thin walls with valves inside, blood flows under low pressure and carry blood away from the heart to various organs of the body
 - C. They have thick elastic walls, blood flows under low pressure; carry blood from the heart to various organs of the body
 - D. They have thick elastic walls without valves inside. The Blood flows under high pressure and carry blood away from the heart to different parts of the body
42. The opening and closing of stomatal pore depends upon _____.
- A. Oxygen
 - B. Water in guard cells
 - C. Concentration of carbon dioxide in stomata
 - D. Temperature
43. A convex lens of focal length 10 cm is placed in contact with a concave lens of focal length – 20 cm. The focal length of this combination of lenses will be _____.
- A. + 10 cm
 - B. + 20 cm
 - C. – 10 cm
 - D. – 20 cm
44. The path of a ray of light coming from air passing through a rectangular glass slab traced by four students are shown as A, B, C and D in figure. Which one of them is correct?



- A. Fig A
- B. Fig B
- C. Fig C
- D. Fig D

45. A student used a device (X) to obtain/focus the image of a well illuminated distant building on screen (S) as shown alongside in the diagram. Select the correct statement about the device (X).

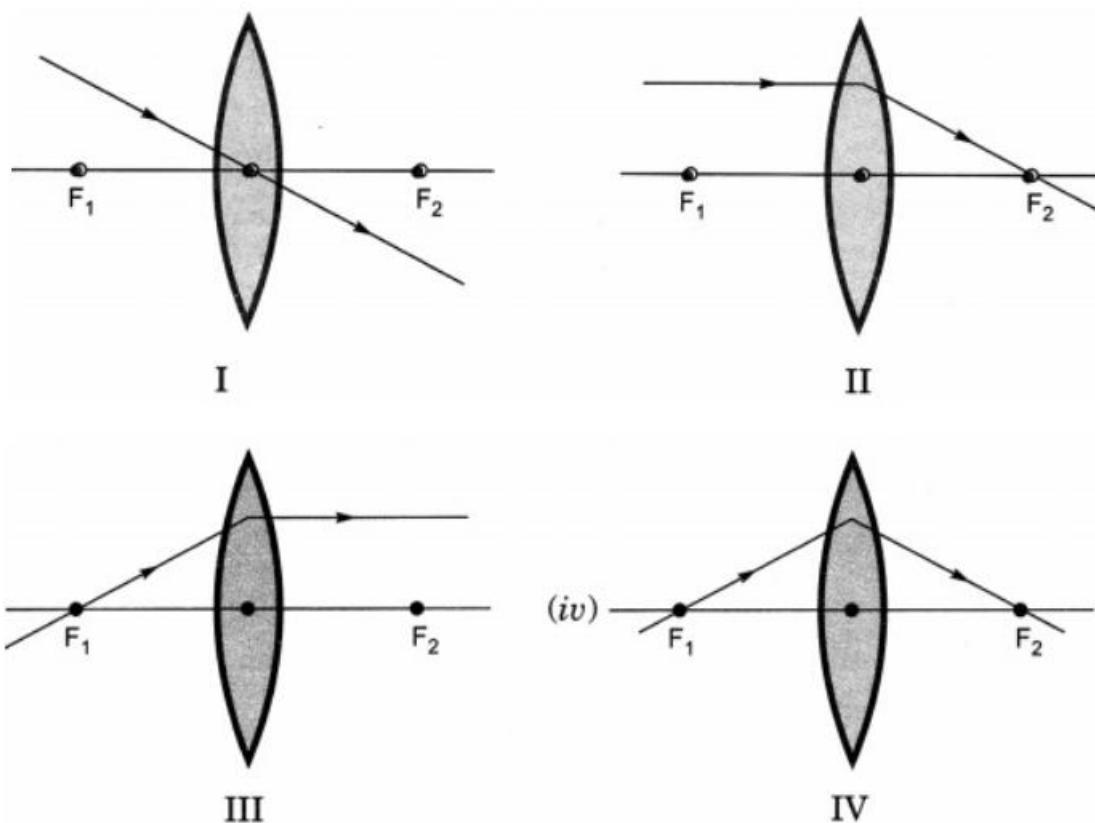


- A. This device is a concave lens of focal length 8 cm.
- B. This device is a convex mirror of focal length 8 cm.
- C. This device is a convex lens of focal length.
- D. This device is a convex lens of focal length 8 cm.

46. Refractive index of diamond with respect to glass is 1.6. If the absolute refractive index of glass is 1.5, then the absolute refractive index of diamond is _____.

- A. 1.4
- B. 2.4
- C. 3.4
- D. 4.4

47. The diagrams showing the correct path of the ray after passing through the lens are _____.



- A. II and III only
- B. I and II only
- C. I, II and III
- D. I, II and IV

48. Aqua regia, is a freshly prepared mixture of concentrated hydrochloric acid and concentrated nitric acid in the ratio of _____.

- A. 1:3
- B. 3:1
- C. 2:1
- D. 1:1

SECTION – C

Section – C consists of three cases followed by questions. There are a total of 12 questions in this section. Attempt any 10 questions from this section.

The first attempted 10 questions would be evaluated.

Case

Salt of a strong acid and strong base is neutral with a pH value of 7. NaCl common salt is formed by a combination of hydrochloric acid and sodium hydroxide solution. This is the salt that is used in food. Deposits of solid salts are also found in several parts of the world. Beds of rock salt were formed when seas of bygone ages dried up. The common salt thus obtained is an important raw material for various materials of daily use, such as sodium hydroxide, baking soda, washing soda, bleaching powder.

49. What is the pH of common salt?

A. 10

B. 7

C. 3

D. 9

50. What is the formula of baking soda?

A. K_2CO_3

B. $KHCO_3$

C. $NaHCO_3$

D. Na_2CO_3

51. Which of the following is treated with chlorine to obtain bleaching powder?

A. $CaSO_4$

B. $Ca(OH)_2$

C. $Mg(OH)_2$

D. KOH

52. What is the pH of hydrochloric acid used in the formation of common salt?

A. Between 1 to 3

B. Between 5 to 8

C. Between 7 to 11

D. Between 11 to 14

Case

Normal Hemoglobin Levels (g/dl)	
Male	
Age 12 - 18 years	13.0 to 16.0 (mean 14.5)
Age > 18 years	13.6 to 17.7 (mean 15.5)
Female	
Age 12 - 18 years	12.0 to 16.0 (mean 14.0)
Age > 18 years	12.1 to 15.1 (mean 14.0)
Children	
Birth	13.5 to 24.0 (mean 16.5)
Age < 1 month	10.0 to 20.0 (mean 13.9)
1 - 2 months	10.0 to 18.0 (mean 11.2)
2 - 6 months	9.5 to 14.0 (mean 12.6)
6 months - 2 years	10.5 to 13.5 (mean 12.0)
2 - 6 years	11.5 to 13.5 (mean 12.5)
6 - 12 years	11.5 to 15.5 (mean 13.5)

The above chart shows the normal haemoglobin levels in human beings. Haemoglobin is present in the RBC of the blood and it gives red colour to the blood.

53. In human beings haemoglobin has a very high affinity for X and is present in Y. Identify X and Y respectively.

- A. X- Oxygen. Y- RBC
- B. X- Carbon dioxide. Y- RBC
- C. X- Oxygen, Y- WBC
- D. X- Carbon dioxide, Y- WBC

54. The haemoglobin level which is considered excellent for an adult is _____.

- A. 15 g/dL
- B. 10 g/dL
- C. 7 g/dL
- D. 4 g/dL

55. Which disease is caused by the low haemoglobin level in the blood?

- A. Goitre

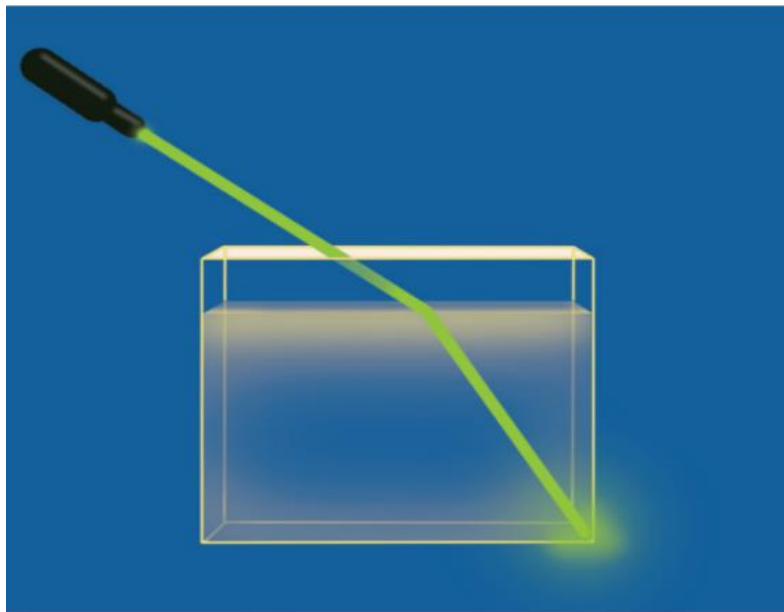
- B. Anaemia
- C. Polio
- D. Night blindness

56. Name the element which is transported by haemoglobin from lungs to all parts of the body.

- A. Carbon dioxide
- B. Hydrogen
- C. Oxygen
- D. Nitrogen

Case

Sindhu filled three fourths of a transparent vessel with water as shown in the figure below. She added one or two drops of milk into it and filled portion of the vessel above water with smoke. She closed the vessel using an OHP glass sheet. She then allowed green light from a laser torch to pass through water as shown below.



57. The property of light Sindhu wanted to observe in this activity is _____.

- A. Reflection of light
- B. Refraction of light
- C. Dispersion of light
- D. Scattering of light

58. The source of green laser light used by Sindhu is _____.
- A. Monochromatic
 - B. Polychromatic
 - C. Multichromatic
 - D. Composite
59. When light travels from air to water which of its characteristics will change?
- A. Frequency and wave length
 - B. Frequency and velocity
 - C. Wave length and velocity
 - D. Wave length, frequency and velocity
60. If the refractive index of water is 1.33 and the sine value of the angle of refraction is 0.376, the angle of incidence in air is nearly equal to _____.
- A. 30°
 - B. 40°
 - C. 45°
 - D. 60°
-

Atomic Energy Education Society
Model Examination for Term-1 -2021-22
For Offline purpose

Class: X
Subject: English

Time: 90 minutes
Marks: 40

General Instructions:

1. The Question Paper contains THREE sections.
2. Section A-READING has 18 questions. Attempt a total of 14 questions, as per specific instructions for each question.
3. Section B-WRITING & GRAMMAR has 12 questions. Attempt a total of 10 questions, as per specific instructions for each question.
4. Section C-LITERATURE has 30 questions. Attempt 26 questions, as per specific instructions for each question.
5. All questions carry equal marks.
6. There is no negative marking.
7. The marks obtained by students will be computed / appropriated keeping 40 marks as maximum.

READING

1. Read the passage given below.

WHAT IS WELLNESS?

Wellness is the act of practicing healthy habits on a daily basis to attain better physical and mental health outcomes, so that instead of just surviving, you're thriving.

To understand the significance of wellness, it's important to understand how it's linked to your health. According to the World Health Organization (WHO), health is defined as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."

Several key areas of your lifestyle are considered dimensions of overall Wellness. They include: social connectedness, exercise, nutrition, sleep and mindfulness. Each one has an impact on your physical and mental health. By making simple and healthy choices on a daily basis, you will be

well on your way towards reducing stress, having positive social interactions and achieving optimal wellness.

Start with small changes within each dimension and take it *one* day at a time – you don't have to run a marathon or go on a restrictive diet to implement wellness into your everyday life! We've listed a few examples for each dimension:

Social Connectedness-Connecting with friends or loved ones is a great way to help improve your physical and mental health. Take 10 minutes out of your day to call someone you've been thinking about. This is a great way to connect and catch up with the people that matter the most to you.

Exercise-Even 20 or 30 minutes of daily exercise can have a positive impact on your overall sense of well-being and help improve your mood. Don't know where to start? Try a brisk walk on your lunch break or opt for the stairs instead of the elevator when you can.

Nutrition-By adding wholesome ingredients to your plate, you'll be taking steps towards becoming a healthier you. Some food for thought: pack an apple and some raw veggies in your bag to keep as a handy snack. This may help you avoid vending machines or fast food when you're on the go.

Sleep-Consider your sleep hygiene. Avoid caffeine after 12pm, include quiet and calm activities before going to bed, and wake up at the same time every day – these are simple ways you can begin your journey towards becoming a successful sleeper.

Mindfulness-Did you know that practicing mindfulness is good for the body and mind, helps with focus and also changes the brain? Take a moment right now to consider your own mind and how you are feeling. The more you tap into your own thoughts, the more you may become aware of how you react to stressful events – so start practicing mindfulness today!

Based on your understanding of the passage, answer any eight out of the ten questions by choosing the correct option.

Q.1 What is to be done to attain better physical and mental health outcomes?

- A. eat and sleep a lot
- B. do not practice any healthy habits
- C. practice healthy habits on a daily basis
- D. exercise rarely

Q.2 When you practice healthy habits on a daily basis you

- A. just not survive, but thrive.
- B. just survive, not thrive.
- C. may survive, not thrive.
- D. neither survive, nor thrive.

Q.3 According to the World Health Organization (WHO), health is defined as

- A. a state of incomplete physical, mental and social well-being.
- B. a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.
- C. merely the absence of disease or infirmity.
- D. neither a state of complete physical, mental and social well-being, nor merely the absence of disease or infirmity.

Q.4 If one makes simple and healthy choices on a daily basis, one will be well able to

- A. have negative social interactions which will lead to ill-health.
- B. increase stress, that will have positive social interactions and achieve optimal wellness.
- C. reduce stress, have positive social interactions and achieve optimal wellness.
- D. reduce stress, but have negative social interactions to achieve optimal wellness.

Q.5 The key areas of your lifestyle that are considered dimensions of overall wellness are

- A. social connectedness, exercise, nutrition, sleep and mindfulness.
- B. social connectedness, pastime, nutrition, sleep and mindfulness
- C. social connectedness, exercise, nutrition, entertainment.
- D. social connectedness, exercise, nutrition, wakefulness and mindfulness.

Q.6 To connect and catch up with the people that matter the most to you

- A. will result in improvement of your physical but not your mental health.
- B. will not result in improvement of your physical and mental health.
- C. will not improve your physical health but will improve your mental health.
- D. will result in improvement of your physical and mental health.

Q.7 By adding wholesome ingredients to your plate, you'll be taking steps towards

- A. becoming lethargic
- B. becoming healthy
- C. becoming lazy
- D. becoming sick

Q.8 Even a 20 to 30 minutes of vigorous walk can

- A. impact you positively
- B. make you unhappy
- C. injure you
- D. trouble you

Q.9 According to the passage, how can you avoid vending machines or fast food when you're on the go?

- A. having some chips in your bag.
- B. having some fruit in your bag.
- C. keeping no eatables with you.
- D. having soft drinks in your bag.

Q.10 "catch up with the people" in the paragraph **Social Connectedness** means

- A. to agree with people
- B. to ignore people
- C. to get in touch with the people
- D. to move fast enough to join the people

2. Read the passage given below.

THE ARAVALLIS

The Aravallis of North-western India, one of the oldest fold mountains of the world, now form residual mountains with an elevation of 300m to 900m.

The mountains are divided into two, main ranges – the Sambhar Sirohi Range and the Sambhar Khetri Range in Rajasthan, where their extension is about 560 km. These are fold mountains of which rocks are formed primarily of folded crust, when two convergent plates move towards each other by the process called orogenic movement.

The Aravallis date back to millions of years when a pre-Indian sub-continent collided with the mainland Eurasian Plate. Carbon dating has shown that copper and other metals mined in the ranges date back to at least 5th century BC.

Significance of Aravalli

The Aravalli is rich in biodiversity and provides habitat to 300 native plant species, 120 bird species and many exclusive animals like the jackal and mongoose.

Aravallis have an impact upon the climate of northwest India and beyond. During monsoons, it provides barrier and monsoon clouds move eastwards towards Shimla and Nainital, thus helping nurture the sub-Himalayan rivers and feeding the north Indian plains. In the winter months, it protects the fertile alluvial river valleys from the cold westerly winds from Central Asia.

For Haryana, having the lowest forest cover at around 3.59% of the total forest cover in India, the Aravalli range is the only saving grace, providing the major portion of its forest cover.

The Hazards of Mining

More than 25% and 31 hill ranges of the Aravallis in Rajasthan had vanished due to illegal quarrying. It has suffered the loss of a great number of flora and fauna like leopards, striped hyenas, golden jackals, nilgais, palm civets and wild boar.

Many rivers originating in the Aravalli like Banas, Luni, Sahibi and Sakhi, are now dead.

The major reason for air pollution in the NCR region is particulate matter, especially Respirable Particulate Matter (RPM), a direct contribution of mining and crushing.

The hydrological system and consequent water table in the whole NCR region is under threat, with altered natural drainage patterns.

The Prevalence of Mining

In the absence of proper industrialization and lack of sustained livelihood source, people are depending upon mining and ancillary industry for income. There is phenomenal demand for construction material in NCR and adjacent region, mining in Aravalli meets those needs.

Based on your understanding of the passage, answer any six out of the eight questions by choosing the correct option.

Q.11 In the line “..... now form residual mountains”, the word “residual” DOES NOT refer to

- A. remaining
- B. whole
- C. leftover
- D. unused

Q.12 The extension of Aravallis in Rajasthan is

- A. about 550 km.
- B. about 570 km.
- C. about 560 km.
- D. about 566 km.

Q.13 Carbon dating has shown that copper and other metals mined in the ranges date back to at least 5th century BC. It was when

- A. a pre-Indian sub-continent collided with the American Plate.
- B. a pre-African continent collided with the mainland Eurasian Plate.
- C. a pre-Indian sub-continent collided with the Arctic Plate.
- D. a pre-Indian sub-continent collided with the mainland Eurasian Plate.

Q.14 How do Aravallis help nurture the sub-Himalayan rivers and feed the north Indian plains?

- A. During monsoons, it provides barrier helping monsoon clouds move westwards.
- B. During monsoons, it doesn't provide barrier helping monsoon clouds move eastwards.
- C. During monsoons, it provides barrier helping monsoon clouds move southwards.
- D. During monsoons, it provides barrier helping monsoon clouds move eastwards.

Q.15 In the winter months, Aravallis protect the fertile alluvial river valleys from

- A. the cold easterly winds from Central Asia.
- B. the cold westerly winds from Central Asia.
- C. the cold westerly winds from Western Asia.
- D. the warm westerly winds from Central Asia.

Q.16 Many rivers originating in the Aravalli are now dead due to

- A. legal quarrying.
- B. earthquake.
- C. easterly winds.
- D. illegal quarrying.

Q.17 The major reason for air pollution in the NCR region, a direct contribution of mining and crushing is

- A. Respirable Particulate Matter.
- B. Reliable Particulate Matter.
- C. Releasable Particulate Matter.
- D. Repairable Particulate Matter.

Q.18 People are depending upon mining and ancillary industry for income because of the

- A. abundance of sustained livelihood source.
- B. lack of agriculture.
- C. lack of sustained livelihood source.
- D. abundance of educated people.

GRAMMAR and WRITING

GRAMMAR

III. Answer any five out of the six questions by selecting the most appropriate option for each.

Q.19 There's not much time left. I _____ start packing for the tour.

- A. need to

- B. might
- C. can
- D. could

Q.20 There isn't ____ sugar left in the jar.

- A. much
- B. both
- C. many
- D. every

Q.21 Tom _____ at eight tomorrow morning.

- A. will arrives
- B. is about to arrive
- C. will going to arrive
- D. will arrive

Q.22 Which option displays the correct change of the following to reported speech?

Rahul said, "I will manage hereafter."

- A. Rahul said that he would manage hereafter.
- B. Rahul said that he will manage thereafter.
- C. Rahul said that he would manage thereafter.
- D. Rahul said that he will manage hereafter.

Q.23 Which option displays the correct change of the following to reported speech?

Meera said, "It's time. I must go now."

- A. Meera said that it is time and she should leave.
- B. Meera said that it was time and she had to go then.
- C. Meera said that it was time to go then.
- D. Meera said it is time and she may go.

Q.24 My friend _____ my new dress yet.

- A. haven't seen

- B. didn't see
- C. hasn't see
- D. hasn't seen

WRITING

IV. Answer any five out of the six questions given, with reference to the context below.

You are Shyam of 12 MG Road, Mumbai. Write a letter to the editor of a newspaper about the nuisance caused by loudspeakers in the city during examination days drawing attention of the authorities concerned to the problem.

Q.25 Select the option with relevant aspects that Shyam should select for this letter.

- (1) The newspaper's name
 - (2) Attached proof of the newspaper subscription
 - (3) Shyam's address
 - (4) Formal tone
 - (5) Expected date of the letter's receipt
- A. (2) and (5)
 - B. (1), (3) and (4)
 - C. (3) and (5)
 - D. (2), (3) and (4)

Q.26 Select the appropriate subject for this letter.

- A. Drawing attention towards stress during examination days.
- B. Loudspeakers are necessary for festival celebrations.
- C. Inconvenience by loudspeakers for the general public
- D. Inconvenience caused by loudspeakers in the city during examination days.

Q.27 Which option should Shyam select, to elaborate on problems caused by loudspeakers to students during examination days?

- A. Appeal to the concerned authorities to take necessary actions for the welfare of these students.
- B. Appeal to the students to ignore the loudspeaker disturbance.
- C. Appeal to the general public to continue to use the loudspeakers.

D. Appeal to the concerned authorities to not take any action for the welfare of these students.

Q.28 Shyam shares some problems in his letter, that the students face.

Select the option that helps him discuss these problems appropriately.

During the day the loud noise from the speakers disturbs the students. Even late at night, they are not able to concentrate properly and the noise is seriously unbearable. Students are facing anxiety and stress issues all day. It is indeed not good for their health.

- A. beliefs and traditions
- B. cautioning the authorities
- C. showing preferences
- D. being very interfering

Q.29 Select the option that correctly justifies the choice of the concluding portion of this letter.

1. I appeal to you to publish my letter in your columns so that the authorities may take appropriate action on this issue.
 2. Publish this letter in your columns. I expect the authorities to take action on this issue.
- A. Yes, to Option (2) because of the authoritative tone.
 - B. No, to Option (1) because of the informal tone.
 - C. Yes, to Option (1) because of the tone of polite expectation.
 - D. No, to Option (2) because of the uncertainty in the tone.

Q.30 Select the option that completes the concluding line of this latter appropriately.

I hope that my letter will

- A. lead to action by the responsible authorities.
- B. result in positive reviews by the readers.
- C. improve circulation of the national daily.
- D. cause disturbance in the general public.

LITERATURE

This section has sub-sections – V, VI, VII, VIII & IX. There are a total of 30 questions in this section. Attempt any 26 questions from the sub-sections V to IX.

V. Read the given extract to attempt the questions that follow:

“It was only when I began to learn that my boyhood freedom was an illusion, when I discovered as a young man that my freedom had already been taken from me, that I began to hunger for it. At first as a student, I wanted freedom only for myself, the transitory freedoms of being able to stay out at night, read what I pleased and go where I chose. Later, as a young man in Johannesburg, I yearned for the basic and honourable freedoms...”
(Nelson Mandela: Long Walk to Freedom)

Q.31 The title that best suits this extract is

- A. Freedom for everything
- B. Knowledge about Freedom
- C. Significance of Freedom
- D. Realisation of Freedom

Q.32 Why do you think the speaker mentions some freedoms as ‘transitory’?

- A. The freedoms are momentary and keep changing with time.
- B. The definition of freedom is constant but perspectives differ.
- C. Freedom means different things to different people.
- D. Freedom is not that important after a certain age.

Q.33 Choose the option that best fits the usage of the word ‘illusion’ as used in the extract.

- A. He was never able to get past the illusion.
- B. The illusion I experienced was quite intriguing.
- C. A large mirror in the room creates an illusion.
- D. I was living under the illusion that this is possible.

Q.34 The speaker says, ‘at first as a student I wanted freedom only for myself.’

Why do you think he only thought about himself?

- A. He didn’t want to think about the freedom denied to others.
- B. He was being selfish and was only bothered about himself.

- C. He didn't think that freedom denied to him was important for others.
- D. He was too young to realise that freedom was denied to others as well.

Q.35 A part of the extract has been paraphrased. Choose the option that includes the most appropriate solution to the blanks in the given paraphrase of the extract.

The speaker's belief about freedom, since childhood proved false. It was not until the speaker grew up to be a young man when it i) _____ on him that he was ii) _____ of freedom. Then he began iii) _____ it.

- A. desired ii) dawned iii) depriving
- B. dawned ii) deprived iii) desiring
- C. dawned ii) arrived iii) desiring
- D. arrived ii) deprived iii) dawned

VI. Read the given extract to attempt the questions that follow:

"Mr Keesing had a good laugh at my arguments, but when I proceeded to talk my way through the next lesson, he assigned me a second essay. This time it was supposed to be on 'An Incurable Chatterbox'. I handed it in, and Mr Keesing had nothing to complain about for two whole lessons. However, during the third lesson, he'd finally had enough. "Anne Frank, as a punishment for talking in class, write an essay entitled- 'Quack, Quack, Quack, said Mistress Chatterbox'."

(From the Diary of Anne Frank)

Q.36 What convincing argument was made by Anne?

- A. She was talkative just like any other student in the class.
- B. She had the right to be talkative, as it was a classroom and not a prison.
- C. She had inherited the trait from her mother, so couldn't stop being talkative.
- D. She found it impossible to be quiet like the others as she couldn't change herself.

Q.37 What does 'had a good laugh' imply, in the context of Mr. Keesing? It means that he

- A. celebrated his ability to make Anne write the essay.
- B. ridiculed Anne in front of the whole class.
- C. pulled up Anne for her arguments in the essay.
- D. realised the humour in it and was amused.

Q.38 Based on this extract, pick the option with the list of words that best describe Mr Keesing.

- A. jovial and creative
- B. strict and innovative
- C. tolerant and strict
- D. innovative and jovial

Q.39 Why do you think Mr Keesing chose the title - 'An Incurable Chatterbox' – for Anne, to write on? This was so because he expected

- A. Anne to express her inability to elaborate on such a topic.
- B. that this would embarrass Anne and would check her indiscipline.
- C. her to apologise and not repeat her talkative behaviour.
- D. Anne to explore her creative writing skills.

Q.40 How did Anne feel when she was punished the third time by Mr Keesing? She

- A. was happy as she had to write three essays on the same topic.
- B. enjoyed making fun of Mr. Keesing in her own way.
- C. was worried as she had run out of original ideas for her essay.
- D. was thrilled at another opportunity to showcase her writing abilities.

VII. Read the given extract to attempt the questions that follow:

The way a crow

Shook down on me

The dust of snow

From a hemlock tree

Has given my heart

A change of mood

And saved some part

Of a day I had rued.

(Dust of snow)

Q.41 Of the many symbols the hemlock tree represents, which one do you think is the symbol represented, according to Frost?

- A. longevity.
- B. togetherness.
- C. healing.
- D. protection.

Q.42 Choose the option that lists the possible feelings of the poet prior to the experience shared in the poem.

- 1) reassured
 - 2) disappointed
 - 3) curious
 - 4) demotivated
 - 5) thankful
 - 6) disheartened
 - 7) impulsive
- A. 1, 3 & 7
 - B. 2, 4 & 6
 - C. 5 & 7
 - D. 1 & 3

Q.43 The poet says, "Of a day I had rued". What is the meaning of "rued"?

- A. ruined
- B. held in regret
- C. ruled
- D. conquered

Q.44 Synecdoche is a poetic device that uses a part to represent the whole. E.g.

That's a great set of wheels! (*Set of wheels* has been used for *car*.)

Pick an example of synecdoche from the poem.

- A. Has given my heart / A change of mood
- B. The way a crow/ Shook down on me
- C. The dust of snow / From a hemlock tree
- D. And saved some part / Of a day I had rued

Q.45 Choose the option showing the reason NOT corresponding with “... *a crow / Shook down on me / The dust of snow*”.

- A. The crow’s landing on the branch of the tree.
- B. The shivering of the crow, due to the cold.
- C. The readjustment of position of the crow on the branch.
- D. The cawing of the crow hidden in the foliage.

VIII. Read the given extract to attempt the questions that follow:

He should be lurking in shadow,

Sliding through long grass

Near the water hole

Where plump deer pass.

(A Tiger in the Zoo)

Q.46 According to the extract, the poet wishes for the tiger to be ‘sliding’ through the foliage as this would

- A. assist in keeping the prey unsuspecting of the predator’s sound.
- B. aid in camouflaging the presence of the predator before it rushes in.
- C. help the predator pounce on the prey comfortably without getting tired.
- D. Support the predator’s vision as it eyes its prey.

Q.47 Which fact DOES NOT connect with the significance of the water hole for the tiger?

- A. Many tigers chase prey into the water and holds the victim’s head under water until it drowns.
- B. Prey feed in the water on water-lilies, and often wander into the middle of the water hole, where they are vulnerable and easy for the tiger to kill.

- C. Prey that has quenched its thirst ensures consumption of hydrated meat for the tiger.
- D. Chasing the panicked prey from shallow to deep water where the tiger grabs it.

Q.48 Pick the option that DOES NOT use 'lurking' correctly to fill in the blank.

- A. The thug was lurking in the alley late evening, for unsuspecting passers-by.
- B. The hyena was lurking in its den after a good meal.
- C. The detective cautioned her team about the lurking dangers likely to impact the case.
- D. The prejudices lurking beneath the surface create misunderstandings.

Q.49 'shadow' here, refers to the shadow of

- A. the tiger.
- B. long grass.
- C. water hole.
- D. deer

Q.50 Pick the phrase that DOES NOT suggest that the forest in the extract is lush.

- A. long grass
- B. the water hole
- C. plump deer
- D. lurking in shadow

IX. Attempt the following.

Q.51 What did Lencho think of the post-office employees?

- A. bunch of crooks
- B. rude
- C. unhelpful
- D. proud

Q.52 Why do some people say that the world will end in ice?

- A. because love among people is increasing fast.
- B. because hatred among people is increasing fast.

- C. because lust among people is increasing fast.
- D. because people just don't care.

Q.53 What was the name of the aeroplane that the pilot was flying?

- A. Airbus
- B. Boeing
- C. Dakota
- D. Minesotta

Q.54 In the story "Two Stories About Flying", why was the young seagull afraid to fly?

- A. he was a coward
- B. he was afraid his wings will not support him
- C. he was afraid that everyone would judge him
- D. both 1 and 2

Q.55 In the poem *The Ball Poem*, according to the poet, what is the child learning?

- A. to bear loss
- B. to take care of things
- C. to be responsible
- D. to be careful

Q.56 Why did Maddie not write to Peggy in the first place?

- A. She was afraid she'd be next to get teased
- B. She thought Peggy was right in teasing Wanda
- C. She did not really care
- D. She realised Wanda deserved it

Q.57 What does the narrator refer to Tricki as, in the group of other dogs?

- A. silky little object
- B. shaggy little object
- C. he didn't say anything
- D. none of the above

Q.58 In 'The Thief's Story', how did the narrator attempt at being friends with Anil?

- A. flattering him
- B. teasing him
- C. introducing himself
- D. none of the above

Q.59 "The two boys started in surprise at the fresh muddy imprints of a pair of _____"

- A. Pants
- B. Shoes
- C. Tyres
- D. bare feet

Q.60 "The structure they created formed the basis of one of the harshest, most inhumane, societies the world has ever known." What structure is Mandela talking about?

- A. Poverty and suffering
 - B. Racial domination against the black skinned
 - C. Discrimination against the poor
 - D. oppression of women
-

ATOMIC ENERGY EDUCATION SOCIETY
MODEL EXAMINATION FOR TERM-1 (2021-22)
For Offline purpose

CLASS-X**TIME: 90 MINUTES****SUBJECT-SOCIAL SCIENCE****MARKS-40****General Instructions:**

1. The question paper contains 4 sections.
2. Section A has 24 questions, attempt any 20 questions.
3. Section B has 22 questions. Attempt any 18 questions
4. Section C has 12 questions (case based). Attempt any 10 questions.
5. Section D contains 2 map-based questions. Attempt both the questions.
6. All questions carry equal marks.
7. There is no negative marking.
8. The marks obtained by students will be computed / appropriated keeping 40 marks as maximum.

SECTION A**(Attempt any 20 out of 24)**

1	Which region was ruled over by the Habsburg Empire? (a) Austria Hungary. (b) France -Netherlands (c) Spain -Portugal (d) Scotland – Ireland
2	Which among the following best signifies the idea of liberal nationalism of 19 th century Europe? (a) Emphasis on social justice (b) State planned and socio-economic system (c) freedom of the individual and equality before law (d) supremacy of state-oriented nationalism
3	Which one of the following is NOT true regarding the “Balkan Problem” (a) The Balkan states were not under the control of Ottoman Empire. (b) The Balkan states were very jealous of each other. (c) Each state wanted to gain more territory under the control of Ottoman Empire (d) The Balkan were also the scene of big power Rivalry
4	Which one of the following was not the result of the treaty of Vienna in 1815? (a) The kingdom of the Netherlands was set up in the north. (b) Austria was given the control of the northern Italy. (c) Prussia was given important new territories on its Western Frontier. (d) Russia was given German confederation of 39 states.

5	<p>Which Treaty recognized Greece as an Independent Nation?</p> <p>(a) Treaty of Versailles (b) Treaty of Vienna (c) Treaty of Constantinople (d) Treaty of Germany</p>
6	<p>Which among the following are examples of coming together federation?</p> <p>(a) India, Spain and Belgium (b) India, USA, and Spain. (c) USA, Switzerland, Australia (d) Belgium and Sri Lanka</p>
7	<p>In a holding together federation</p> <ol style="list-style-type: none"> A large country divides its powers between constituent states and the national government. The central government tends to be more powerful than the state. All the constituent states usually have equal power Constituent states have unequal power. <p>Which of the above statements are correct?</p> <p>(a) i,ii,iii,iv (b) i and iv (c) ii and iii (d) i, ii and iv</p>
8	<p>Residuary subject means a _____.</p> <p>(a) Subject under union list (b) Subject under state list. (c) Subject under both state and union list. (d) Subjects which are not under any list.</p>
9	<p>States such as Assam, Nagaland, Arunachal Pradesh and Mizoram enjoy special powers under certain provisions of the constitution of India (Article 371), under which context do they get these provisions?</p> <p>(a) Because of trade and commerce (b) Because of land rights of indigenous people (c) Special provisions for agriculture (d) For defense purposes.</p>
10	<p>Who elects the community government in Belgium?</p> <p>(a) people belonging to one language community only (b) By the leader of Belgium (c) The citizens of the whole country (d) The community leaders of Belgium</p>
11	<p>The Constitution of Belgium prescribes that the number of Dutch and French-speaking ministers in the central government?</p> <p>(a) shall be equal</p>

	(b) Dutch speaking will be more (c) French speaking will be more (d) will not be included
12	The system of Panchayati Raj involves a _____. (a) The village, block and district level (b) The village and state levels (c) The village, district and state levels (d) The village, state and union levels
13	Which one of the following statements is correct in regard to international resources? (a) Resources which are regulated by international institutions (b) Resources which lie beyond the territorial water. (c) Resources which are found along the international frontier (d) Resources which are not yet developed
14	Soil formed by intense leaching is _____. (a) alluvial soil (b) red soil (c) Laterite soil (d) desert soil
15	Which one of the following statements is incorrect in regards to commercial farming? (a) Use of Heavy doses of modern inputs (b) Crops are grown for sale. (c) Family members are involved in growing crops. (d) Practiced on large land holdings.
16	Grouping of small land holdings into a bigger one is called _____. (a) Ceiling of land holdings (b) Collectivization (c) cooperative farming (d) Consolidation of land holdings
17	Punjab and Haryana grow rice mainly due to ____ (a) Availability of cheap labour (b) Development of canals, irrigation and tube wells. (c) Fertile soil (d) Development of transport network
18	If BMI is less than 18.5, the person would be considered _____. (a) overweight (b) long height (c) under nourished (d) short height
19	When we produce a good by exploiting natural resources, it is an activity of the _____. (a) Secondary sector (b) Tertiary sector (c) Primary sector

	(d) Organised sector
20	Resources which will get exhausted after years of use are _____. (a) Renewable resources (b) Non-Durable resources (c) Non-renewable resources (d) Competing resources
21	The act guaranteed 100 days of employment in a year or unemployment allowances to the people should be provided by the government is known as _____. (a) Mahatma Gandhi National Rural Employment Guarantee Act 2005 (b) Pradhan Mantri Jan Sandhan Yojna (c) National Social assistance scheme (d) Rajiv Gandhi Jeevandayi Arogya Yojna
22	A situation in which more persons are employed on a job than are optimally required, is _____. (a) Structural unemployment (b) Disguised unemployment (c) Cyclical unemployment (d) Seasonal unemployment
23	_____ sector is governed by various laws such as factory act, minimum wages act etc. (a) organized sector (b) unorganized sector (c) both of them (d) none of them
24	All goods which are used as raw material for further production of other goods or for resale in the same year are called _____. (a) Primary goods (b) intermediate goods (c) Final goods (d) None of the above

SECTION B

(Attempt any 18 out of 22)

25	Following image is the personification of Germany commonly associated with the Romantic era and the revolution of 1848. Identify its name.
----	--



- (a) Marianna
- (b) Phillipe viet
- (c) Germania
- (d) La italia

- 26** Which one of the following is true regarding the ideas provided by Mazzini _____.
- (a) Opposition to monarchy and support to democratic republic
 - (b) To establish liberty and freedom under monarchy
 - (c) Disintegration of the German confederation of 39 states
 - (d) Censorship of books, plays and songs

27 Match the following

A	B
A. Treaty of Vienna 1815	1. Mazzini founded Young Europe
B. A Nation state	2. Undo the changes that came because of Napoleonic wars
C. Act of Union 1707	3. Citizens and the rulers have a common identity and share history
D. Berne 1833	4. Between England and Scotland

Choose the correct code

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

- 28** Assertion: Giuseppe Garibaldi participated in a republican uprising in Piedmont in 1834
Reason: Sardinia- Piedmont was ruled by an Italian Princely House
- (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

29	<p>Which of the following reactions to the language policy holds true in the case of India?</p> <p>(a) The language-based states have divided the people as they make everyone conscious of the language</p> <p>(b) The policy of accommodation has strengthened the national unity</p> <p>(c) The language policy has helped to spread the dominance of English over all the other languages</p> <p>(d) All of the above</p>				
30	<p>Which of the following is the incorrect match?</p> <p>(a) State list – it includes subjects like trade and commerce</p> <p>(b) Union list- it includes subjects like defense, foreign affairs etc</p> <p>(c) Residuary list- it includes subjects like computer software</p> <p>(d) Concurrent list- it includes subjects like agriculture, police etc</p>				
31	<p>Assertion: Power is taken away from the center and state government and given to local governments and it is known as decentralization</p> <p>Reason: Large number of problems and issues are best settled at the local level and it is the basic idea behind decentralization</p> <p>(a) Both A and R are true and R is the correct explanation of A</p> <p>(b) Both A and R are true but R is not the correct explanation of A</p> <p>(c) A is true, but R is false.</p> <p>(d) A is false but R is true</p>				
32	<p>Consider the following statements</p> <p>i. In a federation the powers of the Federal and Provincial government are clearly demarcated</p> <p>ii. India is a federation because the powers of the union and state governments are specified in the constitution and they have exclusive jurisdiction on their respective subjects.</p> <p>iii. Sri Lanka is a federation because the country is divided into provinces</p> <p>iv. India is no longer a federation because some powers of the states have been given to the local government bodies</p> <p>Identify the correct statements</p> <p>(a) i, ii and iii</p> <p>(b) i, iii and iv</p> <p>(c) I, and ii only</p> <p>(d) Ii, and iii only</p>				
33	<p>Match the following</p> <table border="1"> <thead> <tr> <th>A</th><th>B</th></tr> </thead> <tbody> <tr> <td>A. Coalition government</td><td>i. Each organ of the government checks</td></tr> </tbody> </table>	A	B	A. Coalition government	i. Each organ of the government checks
A	B				
A. Coalition government	i. Each organ of the government checks				

		the other
	B. Civil War	ii. Government of more than two political parties
	C. Check and balance	iii. Power may also be shared among different social group
	D. Community government	iv. A violent conflict between opposing groups
	(a) A-ii, B-iv, C-I, D- iii (b) A-I, B-ii, C-iii, D-iv (c) A-iii, B-iv, C-I, D-iii (d) A-iv, B-ii, C-iii, D-I	
34	Ethnic group is referred to as social division based on _____. (a) Economics and education (b) Culture and language (c) Physical appearance (d) Moods and habits	
35	Suppose your government is giving you the preference in education and service because you belong to the majority group of that country, so your country's government is following the policy of _____. (a) Reservation (b) Majoritarianism (c) Power sharing (d) Policy of democratic choice	
36	The state follows the policy of power sharing because _____. (a) It is the spirit of democracy (b) It wants to separate the powers at different levels (c) Follow the policy of checks and balance. (d) It is a type of balancing powers	
37	I consist of various proportions of sand, silt and clay and found in the northern plains. I am also classified by my age. Which soil am I? (a) Black soil (b) Alluvial soil (c) Laterite soil (d) Arid soil	
38	Which of the following categories of resources can we put tidal energy in? (a) Renewable resources (b) Non-renewable resources (c) Actual resources (d) Potential resources	
39	Assertion: India has experienced some significant changes in the contribution to GDP by the primary sector.	

	<p>Reason: In terms of GDP, the service sector emerged as the largest producing sector in India replacing the primary sector.</p> <p>(a) Both A and R are true and R is the correct explanation of A</p> <p>(b) Both A and R are true but R is not the correct explanation of A</p> <p>(c) A is true, but R is false.</p> <p>(d) A is false but R is true</p>
40	<p>Statement 1: different people have different goals</p> <p>Statement 2: the goals of different people can be conflicting</p> <p>(a) Both the statements are wrong</p> <p>(b) Both the statements are correct</p> <p>(c) Statement 1 is correct, statement 2 is wrong</p> <p>(d) Statement 1 is wrong, statement 2 is correct.</p>
41	<p>_____ ensures availability of essential commodities like wheat, rice, sugar, edible oils and kerosene etc. to the consumers through a network of fair price shops.</p> <p>(a) Malls</p> <p>(b) Public distribution systems</p> <p>(c) Wholesale market systems</p> <p>(d) All the above.</p>
42	<p>When there is a sustained increase in real per capita income which reduces poverty, unemployment and inequalities in distribution of income. It means there is a _____.</p> <p>(a) Sustainable economic development</p> <p>(b) Economic development</p> <p>(c) All round development</p> <p>(d) Social development</p>
43	<p>If my job is not regular, it does not provide me job security. It means I am working in _____.</p> <p>(a) Unorganized sector</p> <p>(b) Organized sector</p> <p>(c) Public sector</p> <p>(d) None of the above</p>
44	<p>Gross domestic product means _____.</p> <p>(a) The value of final goods and services in each sector</p> <p>(b) The value of all final goods and services in one sector</p> <p>(c) The total income of the country</p> <p>(d) The value of every good of each sector</p>
45	<p>Underemployment occurs when people _____.</p> <p>(a) do not want to work</p>

	(b) are working in a lazy manner (c) are working less than what they are capable of doing (d) are not paid for their work
46	The main aim of the private sector is _____. (a) To do the social work (b) To gain maximum profit (c) To help the country (d) All the above

SECTION C

(This section consists of two cases. There are total of 12 questions in this section. Attempt any 10 from this section. Five from each case)

Q. Read the source given below and answer the questions by choosing the most appropriate option.

While it is easy enough to represent a ruler through a portrait or a statue, how does one go about giving a face to a nation? Artists in the eighteenth and nineteenth centuries found a way out by personifying a nation. In other words, they represented a country as if it were a person. Nations were then portrayed as female figures. The female form that was chosen to personify the nation did not stand for any particular woman in real life; rather it sought to give the abstract idea of the nation a concrete form. That is, the female figure became an allegory of the nation.

25. Which statement is true about allegory?
 - (a) It represents the living king.
 - (b) It represents the power of the nation.
 - (c) It is the personification of the nation.
 - (d) It represents the queen of the nation.
26. How were nations portrayed?
 - (a) Nations were portrayed as male figures.
 - (b) Nations were portrayed as female figures.
 - (c) Nations were portrayed as baby figures.
 - (d) Nations were portrayed as transgender figures.
27. In which centuries did artists find a way out by personifying a nation?
 - (a) Artists in the seventeenth and nineteenth centuries found a way out by personifying a nation.
 - (b) Artists in the tenth and twentieth centuries found a way out by personifying a nation.

- (c) Artists in the eighteenth and nineteenth centuries found a way out by personifying a nation
- (d) Artists in the twenty first centuries found a way out by personifying a nation.

28. How did the artists represent the country?

- (a) The artists represented a country as if it was a bird.
- (b) The artists represented a country as if it was a fruit.
- (c) The artists represented a country as if it was a flower.
- (d) The artists represented a country as if it was a person.

29. Do you think the allegory had any connection with the real life person?

- (a) yes
- (b) no

30. If the allegory of France was known as Marianne, the allegory of Italy was known as:

- (a) Marianna
- (b) Phillipe viet
- (c) Germania
- (d) La italia

Q. Read the source given below and answer the questions by choosing the most appropriate option

Sustained uses of land without compatible techno-institutional changes have hindered the pace of agricultural development. In spite of development of sources of irrigation most of the farmers in large parts of the country still depend upon monsoon and natural fertility in order to carry on their agriculture. For a growing population, this poses a serious challenge. Agriculture which provides livelihood for more than 60 per cent of its population needs some serious technical and institutional reforms. Thus, collectivization, consolidation of holdings, cooperation and abolition of zamindari, etc, were given priority to bring about institutional reforms in the country after Independence. 'Land reform' was the main focus of our First Five Year Plan. The right of inheritance had already led to fragmentation of land holdings necessitating consolidation of holdings.

31. What was the main focus of the First Five Year Plan'?

- (a) Its main focus was on 'Land reforms'
- (b) Its main focus was on development of tertiary sector.
- (c) Its main focus was on development of secondary sector.
- (d) Its main focus was to practise right to equality.

32. What was the serious challenge for the growing population?

- (a) The serious challenge was that in spite of development of storage system most of the farmers in large parts of the country still depend upon monsoon and natural fertility in order to carry on their business.
 - (b) The serious challenge was that in spite of development of sources of harvesting most of the farmers in large parts of the country still depend upon monsoon and natural fertility in order to carry on their agriculture.
 - (c) The serious challenge was that in spite of development of sources of irrigation most of the farmers in large parts of the country still depend upon monsoon and natural fertility in order to carry on their agriculture.
 - (d) The serious challenge was that in spite of development of fertilizers most of the farmers in large parts of the country still depend upon monsoon and natural fertility in order to carry on their agriculture.
33. Agriculture provided livelihood to how much population?
- (a) Agriculture provided livelihood to 60% of the population.
 - (b) Agriculture provided livelihood to 50% of the population.
 - (c) Agriculture provided livelihood to 55% of the population.
 - (d) Agriculture provided livelihood to 70% of the population.
34. Which right had led to fragmentation of land holdings?
- (a) The right of inheritance had led to fragmentation of land holdings.
 - (b) The right to equality had led to fragmentation of land holdings.
 - (c) The right to speech had led to fragmentation of land holdings.
 - (d) The right to religion had led to fragmentation of land holdings.
35. Fragmentation of small holdings means:
- (a) Small separated plots owned by one farmer.
 - (b) A big plot separated into small plots for different cultivation
 - (c) Farmers having a small piece of land.
 - (d) All of these
36. Name the shortcomings that hindered the pace of agricultural development.
- (a) Sustained used of land.
 - (b) Lack of compatible technological changes.
 - (c) No institutional changes.
 - (d) All of these.

SECTION D

(Attempt both the map-based questions)

On the given map of India, Identify the location with the help of specified information.)

59. The type of soil present in shaded area
- (a) Black soil
 - (b) Alluvial soil
 - (c) Laterite soil

(d) Forest soil.



60. On the same given map of India identify the dam (arrow)

- (a) Salal
- (b) koyna
- (c) sardar sarovar
- (d) Damodar

परमाणु ऊर्जा शिक्षण संस्था
आदर्श परीक्षा, प्रथम-सत्र - 2021-22

कक्षा : दसवीं

समय : 90 मिनट

विषय : हिंदी ('अ' वर्ग)

पूर्णांक : 40 अंक

सामान्य निर्देश :-

- प्रश्न-पत्र तीन खण्डों में विभाजित है - क, ख, और ग ।
- प्रश्न-पत्र में कुल 10 वस्तुपरक प्रश्न पूँछे गए हैं । सभी प्रश्नों के उपप्रश्न दिए गए हैं ।
| दिए गए निर्देशों का पालन करते हुए प्रश्नों के उत्तर दीजिए ।
- खंड -'क' में कुल 20 प्रश्न पूँछे गए हैं, दिए गए निर्देशों का पालन करते हुए केवल 10 प्रश्नों के ही उत्तर दीजिए ।
- खंड -'ख' में कुल 20 प्रश्न पूँछे गए हैं, दिए गए निर्देशों का पालन करते हुए केवल 16 प्रश्नों के ही उत्तर दीजिए ।
- खंड -'ग' में कुल 14 प्रश्न पूँछे गए हैं । सभी प्रश्न अनिवार्य हैं ।
- प्रश्नों के अंक उनके सामने अंकित हैं ।
- यथा संभव प्रत्येक खंड के प्रश्नों के उत्तर क्रमशः दीजिए ।

खंड - 'क'
(अपठित बोध)

प्रश्न-1 नीचे दो गद्यांश दिए गए हैं । किसी एक गद्यांश को ध्यानपूर्वक पढ़िए और उस पर आधारित प्रश्नों के उत्तर दीजिए - (1X5=5)

आत्म विस्तार का मतलब है हमारे पास जो कुछ है उसे प्रकृति में बाँटें । प्रकृति विराट है

और उसमें जड़-चेतन सारे प्राणी समाविष्ट हैं। मैं कुछ नहीं हूँ किसी अदृश्य शक्ति का दिया हुआ उपहार हूँ। प्रकृति ने हमारे लिए सारे संसाधन जुटाए हैं। प्रकृति स्वयं हमें उपहार के रूप में ग्रहण एवं स्वीकार करती है। हमें यह भली-भाँति समझना चाहिए कि अगर हम उसके लिए उपहार नहीं होते, तो प्रकृति हमारे पालन-पोषण, सुरक्षा, संवर्धन के लिए इतने संसाधन नहीं जुटाती। प्रकृति हमारी हर सुख-सुविधा का ध्यान रखती है। प्रकृति के लिए हम में से कोई छोटा-बड़ा नहीं है। वह सब पर समभाव से स्नेह वर्षा करती है। यह सब कुछ निःशुल्क है। क्या कभी हम निःस्वार्थ भाव से किसी की सेवा सहायता के लिए प्रस्तुत होते हैं? प्रस्तुत होने की बात दूर, इन चीजों पर हमारा कभी ध्यान ही नहीं रहता है यहाँ तक कि अनंतवत्सला प्रकृति को प्रेम से कुछ पल देखने के लिए भी हम कभी समय नहीं निकालते हैं। प्रकृति से साक्षात्कार नहीं होने के कारण मनुष्य अपनी मूल प्रकृति से कोसों दूर है। उसकी प्रवृत्ति प्रकृतिजन्य नहीं है अर्थात् वह अपने स्वभाव में नहीं है।

निम्नलिखित में से निर्देशानुसार सही विकल्प का चयन कीजिये -

I. प्रकृति हमारे पालन-पोषण सुरक्षा और संवर्धन के लिए साधन क्यों जुटाती है ?

क. क्योंकि यह उसका कार्य है

ख. क्योंकि प्रकृति स्वयं हमें उपहार के रूप में ग्रहण और स्वीकार करती है

ग. क्योंकि ऐसा करना उसकी मजबूरी है

घ. इनमें से कोई नहीं

II. प्रकृति में दो प्रकार के प्राणी कौन-कौन से हैं ?

क. जीवित और मृत

ख. सुखी और दुखी

ग. आस्तिक और नास्तिक

घ. जड़ और चेतन

III. प्रकृति से हमें क्या सीखना चाहिए ?

- क. निःस्वार्थ सेवा हेतु तत्पर रहना
- ख. सदा अपनी सुख-सुविधाओं के बारे में सोचना
- ग. किसी को कुछ भी न देना
- घ. स्वार्थ पूर्ति में लगे रहना

IV. 'उपहार' शब्द में कौन-सा उपसर्ग है ?

- क. हार
- ख. पहा
- ग. उप
- घ. इनमें से कोई नहीं

V. गद्यांश का उपयुक्त शीर्षक क्या होगा ?

- क. प्रकृति
- ख. आत्मविस्तार
- ग. निःस्वार्थ सेवा
- घ. प्राकृतिक संसाधन

अथवा

अर्थ-प्रणाली के कारण व्यक्ति का नैतिक पतन हुआ है । आज मनुष्य सिद्धियों के पीछे भाग रहा है । वह अपनी उच्च संस्कृति को और श्रेष्ठ साधनाओं को भूलता जा रहा है । मन की चंचलता, लोभ, उद्विग्नता, आशा भंग, दुविधा, पलायन आदि मनुष्य को भ्रष्टाचार की ओर ले जा रहे हैं । वैदिक शिक्षा में धर्म, अर्थ, काम, मोक्ष नामक चार फल मानव को सन्मार्ग पर अग्रसर करने के लिए स्वीकार किए गए हैं । आज का मानव केवल अर्थ और काम के पीछे अंधा हो रहा है । उसे अर्थ या पैसा चाहिए और पैसे से वह काम अर्थात् भ्रष्ट

आचरण की ओर बढ़ता है | आज की सर्वव्यापी अशांति और असंतोष का मूल कारण यही भ्रष्टाचार है | व्यक्ति का मन शुद्ध न रहने से समाज दूषित हो रहा है | व्यक्ति यह तथ्य भूल चुका है कि आत्मिक बल और नैतिक आचरण के बिना भौतिक उन्नति का कोई लाभ नहीं है | जो राष्ट्र, समुदाय या संप्रदाय अपने धर्म अर्थात् कर्तव्य को नैतिकता के साथ नहीं जोड़ते वहाँ असंतोष, घृणा और वैमनस्य अवश्य बढ़ता है |

निम्नलिखित में से निर्देशानुसार सही विकल्प का चयन कीजिये -

I. व्यक्ति के नैतिक पतन का प्रमुख कारण है -

- क. वर्तमान धर्म व्यवस्था
- ख. वर्तमान अर्थ-प्रणाली
- ग. वर्तमान सामाजिक व्यवस्था
- घ. इनमें से कोई नहीं

II. गद्यांश में दिए गए 'सिद्धियों' शब्द का अभिप्राय क्या है ?

- क. सिद्ध पुरुष
- ख. साधारण चीजें
- ग. धार्मिक उपलब्धियाँ
- घ. भौतिक उपलब्धियाँ

III. वैदिक शिक्षा के अनुसार कौन से चार फल मानव को सन्मार्ग की ओर अग्रसर करते हैं ?

- क. धर्म, अर्थ, काम और मोक्ष
- ख. धर्म, अर्थ योग और मोक्ष
- ग. कर्म, अर्थ, काम और मुक्ति
- घ. इनमें से कोई नहीं

IV. सर्वव्यापी अशांति और असंतोष का मूल कारण क्या है ?

- क. व्यक्ति का आत्मकेन्द्रित होना
- ख. व्यक्ति का स्वार्थी होना
- ग. मानव का भ्रष्टाचार में लिप्त होना
- घ. व्यक्ति का क्रोध और अहंकार

V. राष्ट्र, समुदाय या संप्रदाय की उन्नति के लिए कर्तव्य को किस से जोड़ना चाहिए ?

- क. स्वार्थ से
- ख. नेता से
- ग. भावना से
- घ. नैतिकता से

प्रश्न-2 अधोलिखित अपठित पद्यांशों में से किसी एक पद्यांश को ध्यानपूर्वक पढ़िए और उस पर आधारित प्रश्नों के उत्तर दीजिए - (1X5=5)

सुख और शोक,

अंधकार और आलोक

मोह और मत्सर,

शांति और संघर्ष

आते-जाते बने रहें,

तो व्यक्ति को लगता है

वह जी रहा है अभी,

जब से पैदा हुआ है वह

मंशाएँ इसी तरह उधेड़ रहा है, सी रहा है

और इसी में रमा हुआ है

कभी सुख से एक होता है

कभी शोक से, अभी अंधकार से

कभी आलोक से

गति और दुर्गति इसीलिए

उसके पाँवों में हैं ।

और गति अगर कहीं है तो सिर्फ उसके घावों में है ।

वे हरे हैं, जैसे के तैसे ।

निम्नलिखित में से निर्देशानुसार सही विकल्प का चयन कीजिये -

I. कवि ने जीने का आधार किसे माना है ?

क. सुख और दुःख को

ख. मोह और ईर्ष्या-द्वेष को

ग. शांति और संघर्ष को

घ. इन सभी को

II. जन्म लेने के बाद से मनुष्य किस उधेड़बुन में रहता है ?

क. खेल-कूद में समय बिताने की कोशिश में

ख. एक बेहतर जीवन जीने के संघर्ष में

ग. दूसरों को नीचा दिखाने की कोशिश में

घ. इनमें से कोई नहीं

III. मनुष्य के उधेड़बुन में रहने का क्या कारण है ?

- क. उसे परेशानियों से बाहर निकलने का समय नहीं मिलता
- ख. वह सोता रहता है
- ग. वह अपने को श्रेष्ठ समझता है
- घ. ये सभी कारण हैं

IV. 'गति और दुर्गति इसीलिए उसके पाँवों में है'- पंक्ति का क्या भाव है ?

- क. ये दोनों उसके पैरों के नीचे हैं
- ख. वह जैसे कर्म करेगा वैसा ही उसका परिणाम होगा
- ग. ये दोनों एक-दूसरे के पूरक हैं
- घ. एक और दो दोनों

V. घावों के हरे होने से कवि का क्या तात्पर्य है ?

- क. घाव हरे हो जाते हैं
- ख. जीवन में दुःख आते रहते हैं
- ग. एक और दो दोनों
- घ. जीवन में बिताए हुए दुखद क्षणों की पीड़ा सदैव बनी रहती है

अथवा

लक्ष्य तक पहुँचे बिना, पथ में पथिक विश्राम कैसा !

लक्ष्य है अति दूर दुर्गम, मार्ग भी हम जानते हैं,

जब पथ के कंटकों को, हम सुमन ही मानते हैं ,

जब प्रगति का नाम जीवन, यह अकाल विराम कैसा ॥

धनुष से जो छूटता है, बाण मग में ठहरता ।

देखते ही देखें वह, लक्ष्य का ही भेद करता,
लक्ष्य प्रेरित बाण हैं हम, ठहरने का काम कैसा ॥
बस वही है पथिक जो पथ पर निरंतर अग्रसर हो,
हो सदा गतिशील जिसका, लक्ष्य प्रतिक्षण निकटतर हो ।
हार बैठे जो डगर में पथिक उसका नाम कैसा ।
बाल रवि की स्वर्ण किरणें, निमिष में भू पर पहुँचती
कालिमा का नाश करतीं, ज्योति जगमग धरतीं,
ज्योति के हम पुंज, फिर हमको अमा से भीति कैसा ॥
आज तो अति ही निकट है, देख लो यह लक्ष्य अपना,
पग बढ़ाते ही चलो, बस शीघ्र होगा सत्य सपना ।
धर्म-पथ के पथिक को फिर देव दक्षिण वाम कैसा॥

निम्नलिखित में से निर्देशानुसार सही विकल्प का चयन कीजिये -

I. सच्चा पथिक कौन है ?

- क. जो बहुत यात्राएँ करता है
- ख. जो अपने पथ पर निरंतर अग्रसर रहता है
- ग. जो हमेशा सत्य बोलता है
- घ. जो सही रास्ते पर चलता है

II. पथ के कंटक को सुमन मानने का क्या अभिप्राय है ?

- क. दुर्गम को भी सुगम मानना
- ख. फूलों में काँटे होना

ग. पथ पर हर पल काँटों का मिलना

घ. उपर्युक्त सभी

III. 'ज्योति के पुंज' किन्हें कहा गया है ?

क. जो सदा राह के अंधकार से लड़ते रहे

ख. जो निरंतर अपने पथ पर अग्रसर रहते हैं

ग. उपर्युक्त दोनों सही हैं

घ. उपर्युक्त दोनों गलत हैं

IV. अपने कर्म द्वारा बाल रवि हमें क्या प्रेरणा देता है ?

क. सदा गतिशील रहने की

ख. बिना घबराए बाधाओं से लड़ने की

ग. रात को जल्दी सो जाने की

घ. इनमें से कोई नहीं

V. उपर्युक्त काव्यांश में आए हुए 'निमिष' शब्द का अर्थ है -

क. अंधकारमय

ख. संध्या-समय

ग. पलक झपकते ही

घ. मध्य रात्रि में

खंड - 'ख'

(व्यावहारिक व्याकरण)

प्रश्न-3 निम्नलिखित पाँच भागों में से किन्हीं चार भागों के उत्तर दीजिए - (1X4=4)

I. वह आकर लौट भी गया, परन्तु किसी को कानों कान खबर भी नहीं हुई ?

(सरल वाक्य में बदलिए)

क. वह आया भी और लौट भी गया परन्तु किसी को कानों कान खबर भी नहीं हुई ।

ख. उसके आकर लौट जाने की किसी को कानों कान खबर नहीं हुई ।

ग. उसके आने की किसी को कानों कान खबर नहीं हुई ।

घ. इनमें से कोई नहीं ।

II. एक मोटर कार उनकी दुकान के सामने आकर रुकी । (संयुक्त वाक्य में बदलिए)

क. एक मोटर कार आते ही उनकी दुकान के सामने रुक गई ।

ख. एक मोटर कार उनकी दुकान के सामने आने के बाद रुक गई ।

ग. एक मोटर कार उनकी दुकान के सामने आई और रुक गई ।

घ. इनमें से कोई नहीं ।

III. सभी विद्यार्थी कवि सम्मेलन में समय से पहुँचे और शांति से बैठे रहे ।

(मिश्र वाक्य में बदलिए)

क. जब सभी विद्यार्थी कवि सम्मेलन में समय से पहुँचे तब शांति से बैठे रहे ।

ख. सभी विद्यार्थी कवि सम्मेलन में समय से पहुँचने के बाद शांति से बैठे रहे ।

ग. ज्यों ही सभी विद्यार्थी कवि सम्मेलन में समय से पहुँचे त्यों ही शांति से बैठे रहे ।

घ. दो और तीन दोनों ।

IV. वे चाहते थे कि मैं वहीं बैठूँ । (रचना के आधार पर वाक्य भेद लिखिए)

क. सरल वाक्य

ख. संयुक्त वाक्य

ग. प्रधान उपवाक्य

घ. मिश्र वाक्य

V. जहाँ मैच खेला गया था वहीं खिलाड़ियों की सभा हुई । (प्रधान उपवाक्य बताइए)

क. वहीं खिलाड़ियों की सभा हुई।

ख. जहाँ मैच खेला गया ।

ग. मैच खेला गया ।

घ. खिलाड़ियों की सभा हुई ।

प्रश्न-4 निम्नलिखित पाँच भागों में से किन्हीं चार भागों के उत्तर दीजिए -

(1X4=4)

I. मधुरिमा दिल्ली जा रही है । (रेखांकित पद का पद-परिचय दीजिए)

क. जातिवाचक संज्ञा, स्त्रीलिंग, एकवचन, कर्म कारक

ख. व्यक्तिवाचक संज्ञा, स्त्रीलिंग, एकवचन, कर्ता कारक

ग. व्यक्तिवाचक संज्ञा, पुल्लिंग, एकवचन, कर्ता कारक

घ. भाववाचक संज्ञा, स्त्रीलिंग, एकवचन, कर्म कारक

II. राघव मुझे यहीं मिला था । (रेखांकित पद का पद-परिचय दीजिए)

क. क्रिया, अकर्मक, पूर्ण भूतकाल, पुल्लिंग, एकवचन, कर्तृवाच्य

ख. क्रिया, सकर्मक, पूर्ण भूतकाल, पुल्लिंग, एकवचन, कर्मवाच्य

ग. क्रिया, अकर्मक, वर्तमान काल, स्त्रीलिंग, एकवचन, कर्तृवाच्य

घ. क्रिया, अकर्मक, पूर्ण भूतकाल, पुल्लिंग, एकवचन, भाववाच्य

III. मैं दसवीं कक्षा में पढ़ता हूँ । (रेखांकित पद का पद-परिचय दीजिए)

क. विशेषण, संख्यावाचक, स्त्रीलिंग, एकवचन, 'कक्षा' विशेष्य

ख. विशेषण, परिमाणवाचक, स्त्रीलिंग, एकवचन, 'कक्षा' विशेष्य

ग. विशेषण, गुणवाचक, स्त्रीलिंग, एकवचन, 'कक्षा' विशेष्य

घ. विशेषण, संख्यावाचक, पुल्लिंग, एकवचन, 'कक्षा' विशेष्य

IV. हम पेड़ के नीचे बैठे हैं । (रेखांकित पद का पद-परिचय दीजिए)

क. अव्यय, सम्बन्ध बोधक, 'पेड़' से सम्बन्ध

ख. अव्यय, समुच्चय बोधक, विभाजक

ग. अव्यय, योजक, 'हमें' और 'पेड़' को जोड़ रहा है ।

घ. अव्यय, क्रिया विशेषण

V. तुम किस देख रहे हो ? (रेखांकित पद का पद-परिचय दीजिए)

क. सर्वनाम, निजवाचक, एकवचन, कर्म कारक

ख. सर्वनाम, निश्चयवाचक, एकवचन, कर्ता करक

ग. सर्वनाम, संबंधवाचक, बहुवचन, कर्ता कारक

घ. सर्वनाम, प्रश्नवाचक, एकवचन, कर्म कारक

प्रश्न-5 निम्नलिखित पाँच भागों में से किन्हीं चार भागों के उत्तर दीजिए - (1X4=4)

I. लड़की रात भर सो न सकी । (भाववाच्य में बदलिए)

क. लड़की रात भर सो नहीं पाई ।

ख. लड़की से रात भर सोया न जा सका ।

ग. लड़की से रात भर सोया न जाएगा ।

घ. इनमें से कोई नहीं ।

II. उसके द्वारा खाना खाया जाता है । (कर्तृवाच्य में बदलिए)

क. वह खाना खाती है ।

ख. उससे खाना खाया जाता है ।

ग. उसने खाना खाया ।

घ. वह खाना खा चुकी है ।

III. इनमें से कर्मवाच्य वाले वाक्य के सही विकल्प को चुनिए।

क. स्मिता मधुर गीत गाती है ।

ख. अध्यापिका द्वारा बच्चों को कहानी सुनाई जाती है ।

ग. पक्षियों से उड़ा जाता है ।

घ. एक और दो दोनों ।

IV. 'चलो, अब पढ़ा जाए' वाक्य में प्रयुक्त वाच्य है -

क. कर्तृवाच्य

ख. कर्मवाच्य

ग. भाववाच्य

घ. इनमें से कोई नहीं

V. निम्नलिखित में से कौन-सा वाक्य कर्मवाच्य का उदाहरण नहीं है ?

क. अकाल पीड़ितों को राहत सामग्री बाँटी गई ।

ख. वृद्ध से चला नहीं जाता ।

ग. न्यायाधीश द्वारा गुनहगार को कड़ी सजा दी गई ।

घ. वर्षा के कारण क्रिकेट मैच रद्द कर दिया गया ।

प्रश्न-6 निम्नलिखित पाँच भागों में से किन्हीं चार भागों के उत्तर दीजिए - (1X4=4)

I. निम्नलिखित में से कौन-सा अवयव रस का अंग नहीं है ?

क. स्थायी भाव

ख. अस्थायी भाव

ग. विभाव

घ. संचारी भाव

II. हास्य रस की उत्पत्ति होती है -

क. किसी व्यक्ति या वास्तु को देखकर या उसका वर्णन सुनकर आश्चर्य होने पर

ख. व्यक्ति के मन में क्रोध का भाव आने पर

ग. किसी व्यक्ति या वस्तु को देखकर या उसका वर्णन सुनकर हँसी आने पर

घ. उत्साह की अधिकता होने पर

III. निम्नलिखित काव्य पंक्तियों में कौन-सा रस है ?

कौरवों का श्राद्ध करने के लिए, या कि रोने को चिता के सामने,

शेष अब है रह गया कोई नहीं, एक वृद्धा एक अंधे के सिवा ।

क. वीर रस

ख. करुण रस

ग. भयानक रस

घ. शांत रस

IV. चरण कमल बंदौ हरि राइ ।

जाकि कृपा पंगु गिरि लंघे, अंधे कौ सब कुछ दरसाई ॥

(काव्य पंक्तियों का स्थायी भाव बताइए)

क. उत्साह

ख. शोक

ग. रति

घ. निर्वेद

V. 'जुगुप्सा' किस रस का स्थायी भाव है ?

क. वीभत्स

ख. करुण

ग. भयानक

घ. रौद्र

खंड- 'ग'

(पाठ्य-पुस्तक पर आधारित प्रश्न)

प्रश्न-7 निम्नलिखित गद्यांश को पढ़कर प्रश्नों के सर्वाधिक उपयुक्त विकल्पों का चयन

कीजिए -

(1X5=5)

कार्तिक आया नहीं कि बालगोबिन भगत की प्रभातियाँ शुरू हुई, जो फाल्गुन तक चला करतीं। इन दिनों वह सवेरे ही उठते। न जाने किस वक्त जगकर वह नदी-स्नान को जाते- गाँव से दो मील दूर। वहाँ से नहा-धोकर लौटते और गाँव के बाहर ही, पोखर के ऊँचे भिंडे पर, अपनी खँजड़ी लेकर जा बैठते और अपने गाने ढेरने लगते। मैं शुरू से ही देर तक सोने वाला हूँ, एक दिन, माघ की उस दाँत किटकिटाने वाली भोर में भी उनका संगीत मुझे पोखर पर ले गया था। अभी आसमान के तारों के दीपक बुझे नहीं थे। हाँ, पूरब में लोही लग गयी थी, जिसकी लालिमा को शुक्र तारा और बढ़ा रहा था। खेत, बगीचा, घर-सब पर कुहासा छा रहा था। सारा वातावरण अजीब रहस्य से आवृत मालूम पड़ता था। उस रहस्यमय वातावरण में एक कुश की चटाई पर पूरब मुँह, काली कमली ओढ़े बालगोबिन भगत अपनी खँजड़ी लिए बैठे थे। उनके मुँह से शब्दों का ताँता लगा था, उनकी अँगुलियाँ खँजड़ी पर लगातार चल रही थीं। गाते-गाते इतने मस्त हो जाते, इतने सुरूर में आ जाते, उत्तेजित हो उठते कि मालूम होता, अब खड़े हो जाएँगे। कमली तो बार-बार सर से नीचे सरक जाती। मैं जाड़े से कंपकंपा रहा था, किन्तु तारे की छाँव में भी उनके मस्तक के श्रमबिंदु, जब-तब चमक ही पड़ते।

1. प्रभातियाँ क्या होती हैं ?

क. दोपहर को गाया जाने वाला गीत

ख. रात को गाया जाने वाला गीत

ग. संध्या समय गाया जाने वाला गीत

घ. भोर की बेला में गाया जाने वाला गीत

II. भगत प्रातःकाल जल्दी उठकर कहाँ जाते थे ?

क. गाँव से दो मील दूर नदी-स्नान करने

ख. अपने खेत में काम करने

ग. मंदिर में भजन गाने

घ. इनमें से कोई नहीं

III. भगत के प्रभाती गायन का लेखक पर क्या असर हुआ ?

क. लेखक को बहुत क्रोध आया

ख. लेखक बेचैन हो गया

ग. भोर की कडकडाती सर्दी में भी लेखक पोखर तक पहुँच गया

घ. इनमें से कोई नहीं

IV. लेखक ने भगत को किस रूप में देखा ?

क. वे एक कुश की चटाई पर पूरब की ओर मुँह किए बैठे थे

ख. वे काली कमली ओढ़े थे

ग. वे खँजड़ी बजा रहे थे

घ. उपर्युक्त सभी

V. कडकडाती सर्दी में भी भगत के माथे पर पसीना चमकने का क्या कारण था ?

क. भगत का खेतों में कठिन परिश्रम

ख. भगत का अत्यंत तन्मयता से प्रभाती गायन

ग. भगत का आँच तापना

घ. इनमें से कोई नहीं

प्रश्न-8 निम्नलिखित प्रश्नों के उत्तर सही विकल्प चुनकर दीजिए -

(1X2=2)

I. कैप्टन को साक्षात् देखने से पहले हालदार साहब के मानस पटल पर उसका कैसा चित्र रहा होगा ?

- क. शारीरिक रूप से बलिष्ठ व्यक्ति का
- ख. आजाद हिन्द फ़ौज के अनुशासित सिपाही का सा
- ग. वह प्रभावशाली और सम्मानजनक व्यक्तित्व का स्वामी होगा
- घ. उपर्युक्त सभी

II. बालगोबिन भगत द्वारा अपने पुत्र की मृत्यु पर शोक न मनाने अथवा आनंदोत्सव मनाने का क्या कारण था ?

- क. वे सब कुछ भूल चुके थे
- ख. वे कबीर के भक्त थे
- ग. वे मृत्यु को विरहिणी आत्मा और परमात्मा का मिलन मानते थे
- घ. इनमें से कोई नहीं ।

प्रश्न-9 निम्नलिखित पद्यांश को पढ़कर प्रश्नों के सर्वाधिक उपयुक्त विकल्पों का चयन कीजिए - (1X5=5)

ऊधों, तुम हों अति बड़भागी ।

अपरस रहत सनेह तगा तै, नाहिन मन अनुरागी ।

पुइनि पात रहत जल भीतर, तार रस देह न दागी ।

ज्यों जल माँह तेल की गागरि, बूँद न ताकौ लागी ।

प्रीति-नदी में पाऊँ न बोरयो, दृष्टि न रूप परागी ।

‘सूरदास’ अबला हम भोरी, गुर चाँटी ज्यों पागी ।

I. गोपियाँ उद्धव पर कटाक्ष करते हुए उन्हें ‘बड़भागी’ क्यों कहती हैं ? क्योंकि -

- क. उद्धव योग के ज्ञाता हैं
- ख. उद्धव श्रीकृष्ण के प्रेम बंधन में नहीं बंधे हैं
- ग. उद्धव श्रीकृष्ण के मित्र हैं
- घ. उपर्युक्त सभी

II. गोपियाँ उद्धव की प्रेम-निर्लिप्तता को बताने के लिए किन-किन वस्तुओं का उदाहरण देती हैं ?

- क. कमल पत्र और तेल की गागर का
- ख. प्रीति नदी और पाँव का
- ग. गुड़ और चींटी के
- घ. इनमें से कोई नहीं

III. गोपियों के अनुसार उद्धव ने किस नदी में अपना पाँव नहीं डुबोया है ?

- क. गंगा में
- ख. यमुना में
- ग. प्रीति नदी में
- घ. गोदावरी में

IV. गोपियाँ स्वयं को किस प्रकार का बता रही हैं ?

- क. मूर्ख और अज्ञानी
- ख. अबला और भोली
- ग. चतुर
- घ. नासमझ

V. काव्यांश की भाषा और छंद है -

- क. अवधी - पद
- ख. खड़ी बोली - दोहा

ग. ब्रजभाषा - चौपाई

घ. ब्रजभाषा - पद

प्रश्न-10 निम्नलिखित प्रश्नों के उत्तर सही विकल्प चुनकर दीजिए -

(1X2=2)

I. 'राम-लक्ष्मण-परशुराम संवाद' पाठ (प्रसंग वर्णन) में किस छंद का प्रयोग किया गया है?

क. पद

ख. दोहा और चौपाई

ग. सवैया

घ. सोरठा

II. गोपियों के अनुसार सच्चा राज-धर्म क्या है ?

क. प्रजा के सुख-दुःख की परवाह न करना

ख. राजा के रूप में सब सुख-सुविधाओं का उपभोग करना

ग. अपनी प्रजा के हितों की रक्षा और उनके कष्टों का निवारण करना

घ. अपनी प्रजा पर अत्याचार करना

ATOMIC ENERGY CENTRAL SCHOOL NO-2 & 4, RAWATBHATA

ARTIFICIAL INTELLIGENCE (SUBJECT CODE 417)

CLASS X (SESSION – 2021-2022)

MODEL QUESTION PAPER FOR TERM-I

Max. Time Allowed: 1 hour

Max. Marks: 25

General Instructions:

1. Please read the instructions carefully
2. This Question Paper is divided into 03 sections, viz. Section A, Section B and Section C.
3. Section A is of 05 marks and has 06 questions on Employability Skills.
4. Section B is of 15 marks and has 20 questions on Subject specific Skills.
5. Section C is of 05 marks and has 07 competency-based questions.
6. Do as per the instructions given in the respective sections.
7. Marks allotted are mentioned against each section/question.
8. All questions must be attempted in the correct order.

SECTION-A		
Answer any 5 questions out of the given 6 questions on Employability Skills		
(1 x 5 = 5 marks)		
1.	How do you receive information on phone? (a) Listening (b) Speaking (c) Reading (d) Writing	1
2.	Identify the object in the sentence, "The children played football." (a) The children (b) Children played (c) Played (d) Football	1
3.	Which of the following is not a self-management skill? (a) Problem solving (b) Bargaining (c) Understanding self (d) Confidence building	1
4.	Ravi works hard to get the best student award at the end of year. What type of motivation is this? (a) Internal (b) External (c) Both internal and external (d) Not any specific type of motivation	1
5.	Which part of the home screen is visible on all pages? (a) Status bar (b) Main icon area (c) Dock (d) Clock	1
6.	Which is the shortcut key used for copy something? (a) Ctrl+Y (b) Ctrl+C (c) Ctrl+Z (d) Ctrl+F	1

SECTION-B

Answer any 15 questions out of the given 20 questions

(1 x 15 = 15 marks)

7.	Which of the following statement is correct about sustainable development? (a) It can be defined as "development that caters to the present need without compromising the future generation demand of the need". (b) It is the systematic approach to growth and development. (c) It is organizing principle to meet human development goals (d) All of the above.	1
8.	The reason for evaluation of AI is i) Decision making ii) Problem solving iii) Perception iv) Making another human mind (a) i and iii only (b) i, iii and iv only (c) ii and iv only (d) i, ii and iii only	1
9.	The basic of computer vision is (a) to see (b) Identify (c) clicking photos (d) process image	1
10.	Which one of the following is not an application of AI (a) google mapping (b) smart home devices (c) google search (d) online ads network	1
11.	Which of the following is not done in the machine learning stage? (a) decision making (b) predicting the future (c) to learn new things from data (d) creating self learning algorithms	1
12.	Which of the following can be a simple objective system that depends on human judgment? (a) Logical Decision (b) Logical Data (c) Logical Input (d) Logical Access	1
13.	Which of the following is an example of data science? (a) Social media websites (b) Price Comparison websites (c) Online Shopping websites (d) Blog web site	1
14.	The ability to communicate with others by understanding other people's feelings influence of the person is known as _____ intelligence. (a) Naturalist Intelligence (b) Intrapersonal Intelligence (c) Interpersonal intelligence (d) Musical Intelligence	1
15.	Which of the following is a supervised learning technique that works on continuous data? (a) clustering (b) dimension reduction (c) regression (d) reinforcement learning	1
16.	A rule based system uses _____ is the basis of the representation of knowledge. (a) Protocols (b) Rules (c) Design (d) Output	1
17.	Unscramble the letters and find the name of a popular personal assistant offered by Apple iPhone and iPad (a) IRSI (b) NEFLIXT (c) ALAXE (d) AMZNOA	1

18.	Which of the following is true about neural networks? (a) Neural Networks tend to perform better with larger amounts of data. (b) Neural Networks tend to perform poorer with larger amounts of data. (c) Neural Networks tend to perform better with smaller amounts of data. (d) Neural Networks need no data	
19.	Which of the following is true for problem scoping? (a) Solution of a problem (b) developing algorithm for a problem solution (c) Exploring the patterns out of the collected data sets (d) Identifying the problem and having a vision to solve it	1
20.	Which of the following are the 4Ws in the '4Ws problem canvas'? (a) whom, what, which, why (b) what, where, whom, when (c) whose, whom, which, when (d) who, what, where, why	1
21.	Choose the correct option (a) SystemMaps → element, language (b) SystemMaps → element, interconnection (c) SystemMaps → data, interpretation (d) SystemMaps → language, commands	1
22.	Which of the following data helps in forming an accurate of actions over time? (a) structured data (b) unstructured data (c) semi-structured (d) time-stamped	1
23.	Which one the modeling approach, machine designs its own algorithm for data. (a) learning-based (b) rule-based (c) both (a) & (b) (d) none of these	1
24.	The actual processing occurs in which of the following layer in the ANNs? (a) input layers (b) hidden layers (c) output layers (d) None of these	1
25.	Which of the following Google tool can be used for data visualization? (a) Google Site (b) Google Meet (c) Google Data Studio (d) Google Maps	1
26.	Which of the following is not a method to collect data? (a) Surveys (b) Web Scrapping (c) Sensors (d) Archives	1

SECTION-C

Answer any 5 questions out of the given 7 questions

(1 x 5 = 5 marks)

27.	An AI system uses two broad classes of data namely content data which includes the raw video streams title, description, etc, and user activity data that includes rating a video, favorite / liking a video, or subscribing to an up loader, and watch time. Based on this, the AI system measures a user's engagement and happiness. It then starts computing personalized recommendations to the user. Which of the following applications can you relate to this? a) Self-driving car b) Siri c) Email filters d) YouTube	1
28.	In the student performance predicted AI system, student inbuilt ability, Family issues, Influence of electronic gadgets, Teacher talent and resources are considered as a data features. Which one of the following tool you will use to represent the relationships of the student performance AI system with that element? a) Google Map b) System Map c) Mind Map d) World Map	1

29.	Anand wants to know in the '4Ws problem canvas' what does, 'who' stands for. Answer his query a) 'who' stands for the people who is creating the project b) 'who' stands for the people who is helping to create the project. c) 'who' stands for the people getting affected directly or indirectly due to the problem d) 'who' stands for the people who are deploying the AI machines in their company or business.	
30.	The health care industry has been looking for a viable voice transcription solution instead of prescription. In order to improve the documentation procedures during surgeries and appointments. Speech to text software has been a very relevant and promising topic in healthcare since the early eighties. The solution is achieved by a) Computer vision b) Robotics c) Speech Recognition d) Neural Network	1
31.	Ramu with his friends wanted to set up a restaurant . In this restaurant he wants to incorporate a robot to take the order and serve the food to customers. Thus he wanted to design a robot with the help of a company. He wanted to know the order in which the AI project cycle appears? a) Problem scoping→Data acquisition→Data exploration→Data modeling→Evaluation b) Problem scoping→ Data exploration→Data acquisition→ Data modeling→Evaluation c) Problem scoping→Data acquisition→Data exploration→Evaluation →Data modeling d) Problem scoping→Evaluation→Data modeling →Data exploration→Data acquisition	1
32.	Nirmala clicked a selfie using her smart phone. Now she wants to add flowers, cat ears , spectacles to her photo. Suggest to her which one of the given application she can use do the same a) Snapchat b) Instagram filters c) whatsapp d) Both (a) and(b)	1
33.	Artificial Intelligence (AI) is rapidly becoming the centre of the global power play, due to the rat race of the technological development. This rapid acceleration in computing power, memory, big data and high speed communication is not only creating innovation, investment and application frenzy but is also intensifying the quest for AI chips. Here are talking about a) Data privacy b) AI Access c) AI Bias d) Data Exploration.	1

- : All the Best: -

Atomic Energy Education Society
Model Exam for Half yearly/Term-1 Exam -2021-22

Class : X

For Offline purpose

Time: 90 minutes

Subject : MATHEMATICS

Marks : 40

ANSWER KEY

1 MARK FOR EACH CORRECT ANSWER

SECTION-A-16 MARKS					
Q.NO.	CORRECT OPTION	ANSWER	Q.NO.	CORRECT OPTION	ANSWER
1	d	$2q + 1$	11	b	13 m
2	a	105,85	12	c	4.5 cm
3	a	2	13	a	Representative fraction
4	b	5	14	c	± 4
5	d	Intersecting or co-incident	15	b	12/13
6	b	Intersecting at (a,b)	16	c	isosceles
7	b	2	17	d	60°
8	b	4	18	a	1 : 2
9	a	18 cm	19	b	$\frac{2}{7}$
10	d	2500 sq.cm	20	a	$\frac{1}{6}$

SECTION-B-16 MARKS					
Q.NO.	CORRECT OPTION	ANSWER	Q.NO.	CORRECT OPTION	ANSWER
21	a	750	31	a	3
22	b	132	32	a	$\cos\theta$
23	d	3	33	b	30°
24	a	0	34	b	1
25	d	$a \neq 4$	35	c	125 %
26	b	1	36	a	$\frac{\theta}{180} \times \pi r$
27	a	4 : 5	37	b	88 cm
28	c	6	38	b	10
29	a	(2, 0)	39	a	$\frac{1}{2}$
30	d	3:4	40	c	$x = 3 \text{ \& } y = 2$

SECTION-C-08 MARKS					
Q.NO.	CORRECT OPTION	ANSWER	Q.NO.	CORRECT OPTION	ANSWER
41	b	Parabola	46	c	(6,4)
42	b	Open downwards	47	a	$\sqrt{18}$
43	a	Has no linear term & the constant is negative	48	a	Mahati & Meenakshi
44	c	2 distinct points	49	c	Square
45	c	$-3, -1, 2$	50	d	4

Atomic Energy Education Society

Model Examination for Term-1 (2021-22)

For Offline purpose

Class : X
Subject : Science

Time : 90 Minutes
Marks 40

Note: The marks obtained by students will be computed / appropriated keeping 40 as maximum.

ANSWER KEY

Q. No	OPTION	ANSWER
1	C	Displacement reaction
2	A	CaCO ₃
3	C	Blue to white
4	B	CH ₄ (g) + 2 O ₂ (g) → CO ₂ (g) + 2 H ₂ O (g)
5	D	i and ii
6	D	iii and iv
7	D	Double displacement reaction
8	A	Methanoic acid
9	B	H ₂ SO ₄ and NaOH
10	C	Copper powder turns black in colour
11	C	Vena cava – takes impure blood from the body parts to the right auricle
12	A	Movement of water through xylem
13	C	Tubular part of the nephron
14	A	Mitochondria
15	C	Urea
16	D	120/80 mm of Hg
17	D	All of these
18	C	Is reflected back along the same path
19	D	Y, Q and P

20	A	+ 24 cm
21	C	55° and 55°
22	D	Always bends at an angle to the direction of incident ray.
23	C	III
24	D	Fig. D
25	A	The litmus paper used is dry
26	B	Both (ii) and (iii)
27	A	Hydrogen
28	D	i and iii
29	C	Plaster of Paris
30	D	Sodium > Magnesium > Zinc > Iron
31	C	A is true but R is false.
32	A	Both A and R are true and R is the correct explanation of A.
33	D	A is false but R is true.
34	D	A is false but R is true.
35	A	Both A and R are true and R is the correct explanation of A.
36	C	Platelets
37	C	Kidney → ureter → urinary bladder → urethra
38	C	Oxidation of carbon to carbon dioxide
39	D	Substance D
40	B	Scattering of light
41	D	They have thick elastic walls without valves inside. The Blood flows under high pressure and carry blood away from the heart to different parts of the body
42	B	Water in guard cells
43	B	+ 20 cm
44	B	Fig B

45	D	This device is a convex lens of focal length 8 cm.
46	B	2.4
47	C	I, II and III
48	B	3:1
49	B	7
50	C	NaHCO_3
51	B	Ca(OH)_2
52	A	Between 1 to 3
53	A	X- Oxygen. Y- RBC
54	A	15 g/dL
55	B	Anaemia
56	C	Oxygen
57	B	Refraction of light
58	A	Monochromatic
59	C	Wave length and velocity
60	A	30°

Atomic Energy Education Society
Model Examination for Term-1 -2021-22

Class: X
Subject: English

Time: 90 minutes
Marks: 40

ENGLISH

LANGUAGE & LITERATURE (184)
CLASS-X

MARKING SCHEME
MM-40
Time: 90 Min.

For Offline purpose

I. (any 8)

- Q1. C) practice healthy habits on a daily basis
- Q2. A) just not survive, but thrive.
- Q3. B) a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.
- Q4. C) reduce stress, have positive social interactions and achieve optimal wellness.
- Q5. A) social connectedness, exercise, nutrition, sleep and mindfulness.
- Q6. D) will result in improvement of your physical and mental health.
- Q7. B) becoming healthy
- Q8. A) impact you positively
- Q9. B) having some fruit in your bag.
- Q10. C) to get in touch with the people

II. (any 6)

- Q11. B) whole
- Q12. C) about 560 km.
- Q13. D) a pre-Indian sub-continent collided with the mainland Eurasian Plate.
- Q14. D) During monsoons, it provides barrier helping monsoon clouds move eastwards.
- Q15. B) the cold westerly winds from Central Asia.
- Q16. D) illegal quarrying.
- Q17. A) Respirable Particulate Matter.
- Q18. C) lack of sustained livelihood source.

III. (any 5)

- Q19. A) need to
- Q20. A) much
- Q21. D) will arrive
- Q22. C) Rahul said that he would manage thereafter.
- Q23. B) Meera said that it was time and she had to go then.
- Q24. D) hasn't seen

IV. (any 5)

- Q25. B) (1), (3) and (4)
- Q26. D) Inconvenience caused by loudspeakers in the city during examination days.
- Q27. A) Appeal to the concerned authorities to take necessary actions for the welfare of these students.
- Q28. B) cautioning the authorities
- Q29. C) Yes, to Option (1) because of the tone of polite expectation.
- Q30. A) lead to action against the responsible authorities.

V. (any 4)

- Q31. B) Knowledge about Freedom
Q32. B) The definition of freedom is constant but perspectives differ..
Q33. C) A large mirror in the room creates an illusion.
Q34. D) He was too young to realise that freedom was denied to others as well.
Q35. B) dawned ii) deprived iii) desiring

VI. (any 4)

- Q36. C) She had inherited the trait from her mother, so couldn't stop being talkative.
Q37. D) realised the humour in it and was amused.
Q38. B) strict and innovative
Q39. B) that this would embarrass Anne and would check her indiscipline.
Q40. C) was worried as she had run out of original ideas for her essay.

VII. (any 4)

- Q41. C) healing.
Q42. B) 2, 4 & 6
Q43. B) held in regret
Q44. A) Has given my heart / A change of mood
Q45. D) The cawing of the crow hidden in the foliage.

VIII. (any 4)

- Q46. A) assist in keeping the prey unsuspecting of the predator's sound.
Q47. C) Prey that has quenched its thirst ensures consumption of hydrated meat for the tiger.
Q48. B) The hyena was _____ in its den after a good meal.
Q49. B) long grass.
Q50. D) lurking in shadow

IX. (all 10)

- Q51. A) bunch of crooks
Q52. B) because hatred among people is increasing fast.
Q53. C) Dakota
Q54. B) he was afraid his wings will not support him
Q55. A) to bear loss
Q56. A) She was afraid she'd be next to get teased
Q57. A) silky little object
Q58. A) flattering him
Q59. D) bare feet
Q60. B) Racial domination against the black skinned
-

ATOMIC ENERGY EDUCATION SOCIETY
MODEL EXAMINATION FOR
TERM -1(2021-22)
MARKING SCHEME

CLASS-X
SUBJECT-SOCIAL SCIENCE

TIME – 90 MINUTES
MARKS-40

General Instructions:

1. The question paper contains 4 sections.
2. Section A has 24 questions, attempt any 20 questions.
3. Section B has 22 questions. Attempt any 18 questions
4. Section C has 12 questions (case based). Attempt any 10 questions.
5. Section D contains 2 map based questions. Attempt both the questions.
6. All questions carry equal marks. Each answer carries 0.80 marks.
7. There is no negative marking.

SECTION A
(Attempt any 20 out of 24)

1. A
2. C
3. A
4. D
5. C
6. c
7. D
8. D
9. B
10. A
11. A
12. A
13. A
14. C
15. C
16. D
17. B
18. C
19. C
20. C
21. A
22. B
23. A
24. B

SECTION B
(Attempt any 18 out of 22)

- 25. C
- 26. A
- 27. A
- 28. B
- 29. B
- 30. D
- 31. A
- 32. C
- 33. A
- 34. B
- 35. B
- 36. A
- 37. B
- 38. A
- 39. B
- 40. B
- 41. B
- 42. B
- 43. A
- 44. A
- 45. C
- 46. B

SECTION C

**(This section consists of two cases. There are total of 12 questions in this section.
Attempt any 10 from this section. Five from each case)**

- 47. C
- 48. B
- 49. C
- 50. D
- 51. B
- 52. D
- 53. A
- 54. C
- 55. A
- 56. A
- 57. A
- 58. D

SECTION-D

- 59. B
- 60. A

परमाणु ऊर्जा शिक्षण संस्था
आदर्श परीक्षा, प्रथम-सत्र - 2021-22

उत्तर कुंजी

कक्षा : दसवीं

समय : 90 मिनट

विषय : हिंदी ('अ' वर्ग)

पूर्णांक : 40 अंक

(खंड - 'क' अपठित बोध)

प्रश्न- 1 अपठित गद्यांश पर आधारित प्रश्न -

(1X5=5)

गद्यांश - 1

1. क्योंकि प्रकृति स्वयं हमें उपहार के रूप में ग्रहण और स्वीकार करती है
2. जड़ और चेतन
3. निस्वार्थ सेवा हेतु तत्पर रहना
4. उप
5. प्रकृति

गद्यांश - 2

1. वर्तमान अर्थ-प्रणाली
2. भौतिक उपलब्धियाँ
3. धर्म, अर्थ, काम और मोक्ष
4. मानव का भ्रष्टाचार में लिप्त होना
5. नैतिकता से

प्रश्न-2 अपठित पद्यांश पर आधारित प्रश्न -

(1X5=5)

पद्यांश - 1

1. इन सभी को
2. एक बेहतर जीवन जीने के संघर्ष में
3. उसे परेशानियों से बाहर निकलने का समय नहीं मिलता
4. वह जैसे कर्म करेगा वैसा ही उसका परिणाम होगा
5. जीवन में बिताए हुए दुखद क्षणों की पीड़ा सदैव बनी रहती है

पद्यांश - 2

1. जो अपने पथ पर निरंतर अग्रसर रहता है
2. दुर्गम को भी सुगम मानना
3. उपर्युक्त दोनों सही हैं
4. बिना घबराए बाधाओं से लड़ने की
5. पलक झपकते ही

(खंड - 'ख' व्यावहारिक व्याकरण)

प्रश्न-3 निम्नलिखित पाँच भागों में से किन्हीं चार भागों के उत्तर दीजिए - (1X4=4)

1. उसके आकर लौट जाने की किसी को कानों कान खबर नहीं हुई ।
2. एक मोटर कार उनकी दुकान के सामने आई और रुक गई ।
3. ज्यों ही सभी विद्यार्थी कवि सम्मेलन में समय से पहुंचे त्यों ही शांति से बैठे रहे ।
4. मिश्र वाक्य
5. खिलाड़ियों की सभा हुई ।

प्रश्न-4 निम्नलिखित पाँच भागों में से किन्हीं चार भागों के उत्तर दीजिए - (1X4=4)

1. व्यक्तिवाचक संज्ञा, स्त्रीलिंग, एकवचन, कर्ता कारक
2. क्रिया, अकर्मक, पूर्ण भूतकाल, पुल्लिंग, एकवचन, कर्तृवाच्य
3. विशेषण, संख्यावाचक, स्त्रीलिंग, एकवचन, 'कक्षा' विशेष्य
4. अव्यय, सम्बन्ध बोधक, 'पेड़' से सम्बन्ध
5. सर्वनाम, प्रश्नवाचक, एकवचन, कर्म कारक

प्रश्न-5 निम्नलिखित पाँच भागों में से किन्हीं चार भागों के उत्तर दीजिए - (1X4=4)

1. लड़की से रात भर सोया न जा सका ।
2. वह खाना खाती है ।
3. अध्यापिका द्वारा बच्चों को कहानी सुनाई जाती है ।
4. भाववाच्य
5. वृद्ध से चला नहीं जाता ।

प्रश्न-6 निम्नलिखित पाँच भागों में से किन्हीं चार भागों के उत्तर दीजिए - (1X4=4)

1. अस्थायी भाव
2. किसी व्यक्ति या वस्तु को देखकर या उसका वर्णन सुनकर हँसी आने पर
3. करुण रस
4. निर्वेद
5. वीभत्स

(खंड- 'ग' पाठ्य-पुस्तक पर आधारित प्रश्न)

प्रश्न-7 निम्नलिखित गद्यांश को पढ़कर प्रश्नों के सर्वाधिक उपयुक्त विकल्पों का चयन

कीजिए - (1X5=5)

1. भोर की बेला में गाया जाने वाला गीत
2. गाँव से दो मील दूर नदी-स्नान करने
3. भोर की कडकडाती सर्दी में भी लेखक पोखर तक पहुँच गया
4. उपर्युक्त सभी
5. भगत का अत्यंत तन्मयता से प्रभाती गायन

प्रश्न-8 निम्नलिखित प्रश्नों के उत्तर सही विकल्प चुनकर दीजिए -

(1X2=2)

1. उपर्युक्त सभी
2. वे मृत्यु को विरहिणी आत्मा और परमात्मा का मिलन मानते थे

प्रश्न-9 निम्नलिखित पद्यांश को पढ़कर प्रश्नों के सर्वाधिक उपयुक्त विकल्पों का चयन कीजिए -

(1X5=5)

1. उद्धव श्रीकृष्ण के प्रेम बंधन में नहीं बंधे हैं ।
2. कमल पत्र और तेल की गागर का
3. प्रीति नदी में
4. अबला और भोली
5. ब्रजभाषा - पद

प्रश्न-10 निम्नलिखित प्रश्नों के उत्तर सही विकल्प चुनकर दीजिए -

(1X2=2)

1. दोहा और चौपाई
2. अपनी प्रजा के हितों की रक्षा और उनके कष्टों का निवारण करना
