



QUESTION PAPER (PHASE - I)

CLASS - X

ENGLISH (10)

Q1. Choose the correct meaning of the given idiom:

‘Bad blood’ means _____

- (A) A disease (B) Unfriendliness
(C) Unwelcome relatives (D) Impure blood

Q2. Which ‘figure of speech’ is used in the following sentence :

‘Opportunity knocks at the door but once.’

- (A) Hyperbole (B) Metaphor
(C) Personification (D) Simile

Q3. Choose the correct word to fill in the blank.

Our soldiers laid _____ to the town of the enemy.

- (A) cease (B) seize (C) siege (D) sieve

Q4. Match the following :

Column A	Column B
(i) To go bananas	A. Someone very old
(ii) Down to earth	B. Sensible and realistic
(iii) Old as the hills	C. To go crazy
(iv) A plum job	D. Something very easy

- (A) (i) – C, (ii) – B, (iii) – A, (iv) – D (B) (i) – D, (ii) – C, (iii) – B, (iv) – A
(C) (i) – C, (ii) – D, (iii) – A, (iv) – B (D) (i) – A, (ii) – B, (iii) – C, (iv) – D

Q5. Find the error part :

Unfortunately, many of the customers (A) / whom we invited for the event(B) / showed interest in our products (C) / No error(D) /

Q6. The following sentence has been rewritten. Find out the most suitable option.

It is possible that she will arrive late.

- (A) She must arrive late. (B) She should arrive late.
(C) She may arrive late. (D) She could arrive late.

Q7. Change the following sentence into Indirect Speech:

Suryank said, "Father, I want to go abroad after I finish my studies here."

- (A) Suryank told his father that he wanted to go abroad after he finished his studies there.
(B) Suryank said his father that he wanted to go abroad after he finished his studied there.
(C) Suryank told his father that he wanted to gone abroad after he finished his studies there.
(D) Suryank told his father that he wanted to go abroad after he finished his studies here.

Q8. Give one word for the given expression :

One who cannot be corrected.

- (A) Incurable (B) Panacea (C) Incurrigible (D) Hardened

Q9. Change the following sentence into Passive voice :

They will look after you well.

- (A) You will be looked after well by them.
(B) You will looked after well by them.
(C) You will be well look after by them.
(D) You will be look well after by them.

Q10. Choose the correct word to fill in the blank :

As you sow, so _____ you reap.

- (A) will (B) would (C) should (D) shall

MATHEMATICS (20)

Q. 11 The largest positive integer that will divide 100, 245 and 343 leaving remainders 4, 5 and 7 respectively is:

- (A) 49 (B) 58 (C) 48 (D) 50

Q12. If one of the zeroes of the quadratic polynomial $f(x) = 14x^2 - 42k^2x - 9$ is negative of the other, then value of ' k ' is:

- (A) 0 (B) 2 (C) 3 (D) 1

Q13. For what value of k , will the following system of equations have infinitely many solutions?

$$2x + 3y = 4$$

$$(k + 2)x + 6y = 3k + 2$$

- (A) 3 (B) 4 (C) 2 (D) 1

Q14. A two-digit number, when multiplied by 3, equals the square of the sum of its digits. If three times the sum of the digits is equal to the number itself, then the number is:

- (A) 27 (B) 28 (C) 30 (D) 26

Q15. If the roots of the equation $x^2 - bx + c = 0$ are two consecutive integers, then $b^2 - 4c$ equals:

- (A) -2 (B) 3 (C) 2 (D) 1

Q16. The equation $x - \frac{2}{x-1} = 1 - \frac{2}{x-1}$ has:

- (A) no root (B) one root
(C) two equals roots (D) infinitely many roots

Q17. Let $a_1, a_2, \dots, a_n$ be the terms of an AP. If $\frac{a_1 + a_2 + \dots + a_p}{a_1 + a_2 + \dots + a_q} = \frac{p^2}{q^2}$, $p \neq q$, then

a_6/a_{21} equals:

- (A) $\frac{41}{11}$ (B) $\frac{7}{2}$ (C) $\frac{2}{7}$ (D) $\frac{11}{41}$

Q18. The sum of integers from 1 to 100 that are divisible by 2 or 5 is _____

- (A) 3050 (B) 5030 (C) 2950 (D) 5029

Q19. A triangle with vertices $(4, 0)$, $(-1, -1)$, and $(3, 5)$ is:

- (A) isosceles and right angled. (B) isosceles but not right angled.
(C) right angled but not isosceles. (D) neither right angled nor isosceles.

Q20. If $P(1, 2)$, $Q(4, 6)$, $R(5, 7)$ and $S(a, b)$ are the vertices of a parallelogram $PQRS$, then

- (A) $a = 2, b = 4$ (B) $a = 3, b = 4$
(C) $a = 2, b = 3$ (D) $a = 1, b = -1$

Q21. If the sum of m terms of an AP is the same as the sum of its n terms, then the sum of its $(m + n)$ terms is:

- (A) 0 (B) 1 (C) 2 (D) 3

Q22. If the points $A(4, 3)$ and $B(x, 5)$ are on the circle with centre $O(2, 3)$ then value of x is:

- (A) 1 (B) 3 (C) 2 (D) 4

Q23. The ratio in which the line segment joining the points $(-3, 10)$ and $(6, -8)$ is divided by $(-1, 6)$ is:

- (A) 2 : 7 (B) 7 : 2 (C) 3 : 7 (D) 7 : 3

Q24. If $\sin \theta = \cos \theta$, then value of $2 \tan \theta + \cos^2 \theta$ is:

- (A) $2/5$ (B) $5/2$ (C) $5/6$ (D) $5/5$

Q25. Two cubes each of volume 64 cm^3 are joined end-to-end. The surface area of the resulting cuboid is:

- (A) 160 cm^2 (B) 161 cm^2 (C) 162 cm^2 (D) 163 cm^2

Q26. A solid is in the shape of a cone standing on a hemisphere with both their radii being equal to 1 cm and the height of the cone is equal to its radius. Then the volume of the solid is:

- (A) $\pi \text{ cm}^3$ (B) $\pi \text{ cm}^2$ (C) $\pi \text{ cm}$ (D) None of these

Q27. Mean of 25 observations was found to be 78.4. But later on it was found that 96 misread 69. The correct mean is:

- (A) 79.48 (B) 48.79 (C) 79.49 (D) 79.47

Q28. The sum of all the three digit natural numbers which on division by 7 leaves remainder 3 is:

- (A) 70821 (B) 70822 (C) 71821 (D) None of these

Q29. The value of $\cos 10^\circ - \sin 10^\circ$ is:

- (A) Positive (B) Negative (C) 0 (D) 1

Q30. If $\operatorname{cosec} A + \cot A = \frac{11}{2}$, then $\tan A$ is:

- (A) $\frac{21}{22}$ (B) $\frac{15}{16}$ (C) $\frac{44}{117}$ (D) $\frac{117}{43}$

SOCIAL SCIENCE (10)

Q31. Which among the following events forced Mahatma Gandhi to decide to withdraw the Non-cooperation Movement?

- | | |
|-------------------------------|-----------------------|
| (A) Jallianwala Bagh Massacre | (B) Rowlatt Act |
| (C) Chauri Chaura Incident | (D) None of the above |

Q32. Who became the emperor of Germany after the unification of Germany?

- | | |
|------------------------|---------------------------|
| (A) Victor Emmanuel II | (B) King Kaiser William I |
| (C) Count Cavour | (D) Giuseppe Garibaldi |

Q33. Uranium and Thorium are available in which of the following regions used for generating atomic and nuclear energy.

- | | |
|------------------------------------|---------------------------|
| (A) Jharkhand and Aravali range | (B) Nagarcoil and Madurai |
| (C) Puga valley and Parvati Valley | (D) Gulf of Khambhat |

Q34. Which is the largest jute exporting country in the world?

- | | | | |
|-----------|-----------|----------------|---------------|
| (A) India | (B) China | (C) Bangladesh | (D) Indonesia |
|-----------|-----------|----------------|---------------|

Q35. NTPC stands for –

- (A) National Thermal Power Corporation
- (B) Non Technical Power Corporation
- (C) Non Thermal Power Company
- (D) Non Technical Power Consumption

Q36. UNCED stands for –

- (A) United Nations Conference on Electronics and Development
- (B) United Nations Conference on Environment and Development
- (C) United Nations Council of Environment and Development
- (D) United Nations Council of Electronics and Development

Q37. How many days of employment does NREGA guarantee in a year in India?

- | | | | |
|-------------|-------------|--------------|--------------|
| (A) 30 days | (B) 60 days | (C) 100 days | (D) 150 days |
|-------------|-------------|--------------|--------------|

Q38. _____ is an asset that the borrower owns and uses this as a guarantee to a lender until the loan is repaid.

- | | |
|---------------------|---------------------------------|
| (A) Terms of credit | (B) SHG |
| (C) Collateral | (D) Double coincidence of wants |

Q39. A party that secures at least six per cent of the total votes in an election to the legislative Assembly of a state and wins at least _____ is recognised as a state party

- (A) two seats (B) three seats
(C) one seat (D) four seats

Q40. In which year Sri Lanka emerged as an independent country?

- (A) 1947 (B) 1948 (C) 1949 (D) 1950

SCIENCE (20 MARKS)

PHYSICS (7)

Q41. Dimensions of a block are $1\text{cm} \times 1\text{cm} \times 100\text{cm}$. If specific resistance of its material is $3 \times 10^{-7}\text{ohm} - \text{m}$, then the resistance between the square faces is:

- (A) $3 \times 10^{-9}\text{ohm}$ (B) $3 \times 10^{-7}\text{ohm}$
(C) $3 \times 10^{-5}\text{ohm}$ (D) $3 \times 10^{-3}\text{ohm}$

Q42. The electric bulbs have tungsten filaments of same length. If one of them gives 60W and other 100W, then

- (A) 100W bulb has thicker filament
(B) 60W bulb has thicker filament
(C) Both filaments are of same thickness
(D) It is possible to get different wattage unless the lengths are different

Q43. Two coils are placed close to each other. The mutual inductance of the pair of coils depends upon:

- (A) The rates at which currents are changing in the two coils
(B) Relative position and orientation of the two coils
(C) The materials of the wires of the coils
(D) The currents in the two coils

Q44. A cylindrical bar magnet is kept along the axis of a circular coil. If the magnet is rotated about its axis, then

- (A) A current will be induced in a coil
(B) No current will be induced in a coil
(C) Only an EMF will be induced in the coil
(D) An EMF and a current both will be induced in the coil

Q45. To obtain a magnification of + 2 with a concave mirror of radius of curvature 60 cm, the object distance must be:

- (A) – 90 cm (B) – 45 cm (C) – 30 cm (D) – 15 cm

Q46. The ratio of the refractive index of red light to blue light in air is:

- (A) Less than unity
- (B) Equal to unity
- (C) Greater than unity
- (D) Less as well as greater than unity depending upon the experimental arrangement

Q47. If a copper rod carries a direct current, the magnetic field associated with the current will be:

- (A) Only inside the rod
- (B) Only outside the rod
- (C) Both inside and outside the rod
- (D) Neither inside nor outside the rod

CHEMISTRY (7)

Q48. Which of the following is correct about Plaster of Paris?

- (i) Plaster of Paris has the formula $\text{CaSO}_4 \cdot \text{H}_2\text{O}$
- (ii) It is obtained by heating Gypsum at 100 K
- (iii) CaSO_4 is called dead burnt Plaster
- (iv) The ratio of water molecules in Plaster of Paris to Gypsum is 1: 4

- (A) (i) and (ii)
- (B) (ii) and (iii)
- (C) (iii) and (iv)
- (D) (i) and (iv)

Q49. Which of the following metals does not react even with hot water or steam?

- (A) Copper
- (B) Iron
- (C) Magnesium
- (D) Zinc

Q50. Saponification means:

- (A) Acid hydrolysis
- (B) Alkaline hydrolysis
- (C) Esterification
- (D) Dehydration

Q51. A hydrocarbon has 6 hydrogen atoms. Give its molecular formula if it is an alkyne.

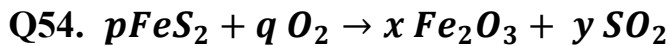
- (A) C_2H_6
- (B) C_3H_6
- (C) CH_4
- (D) C_4H_6

Q52. Which of the following metals has the lowest melting point?

- (A) Copper
- (B) Iron
- (C) Francium
- (D) Gallium

Q53. What happens when dil. H_2SO_4 is added to baking soda?

- (A) SO_2 gas is evolved
- (B) Sodium Sulphate is formed
- (C) Washing soda is formed
- (D) All of the above



The above reaction balances when

- (A) $p = 4, q = 11, x = 2, y = 8$ (B) $p = 11, q = 4, x = 8, y = 2$
 (C) $p = 2, q = 4, x = 8, y = 2$ (D) $p = 4, q = 11, x = 8, y = 2$

BIOLOGY (6)

Q55. Which of the following pairs is not correctly matched:

(A)	Vitamin B ₁₂	Pernicious Anaemia
(B)	Vitamin B ₆	Dermatitis and Anaemia
(C)	Vitamin B ₁	Beri-Beri
(D)	Vitamin B ₂	Pellagra

Q56. The Remains of Second Cotyledon occur in some grasses. It is called _____.

- (A) Scutellum (B) Hypocotyl (C) Epicotyl (D) Epiblast

Q57. A cross between F₁ hybrid and its Homozygous recessive parent is called _____.

- (A) Out cross (B) Test cross
 (C) Monohybrid cross (D) Dihybrid cross

Q58. Brush border surface is the distinct features of which of the following part of Nephron?

- (A) PCT (B) Ascending limb of loop of Henle
 (C) DCT (D) Collecting Duct

Q59. Which of the following is mismatched:

(A)	LUB	First heart sound associated with closure of tricuspid and bicuspid valves.
(B)	Cardiac Output	Stroke volume multiplied by Heart Rate
(C)	DUB	Second Heart Sound due to opening of Semilunar Valves
(D)	Duration of Cardiac Cycle	0.8 Seconds

Q60. Which part of the brain controls breathing?

- (A) Cerebrum (B) Cerebellum
 (C) Hypothalamus (D) Medulla Oblongata