2025
ANNUAL COMPETITION
CLASS-X
Time Allowed: 2(Two) hours

INSTRUCTIONS*:*
This booklet contains 60 questions. Each question comprises four possible answers. Select ONLY ONE answer which you consider the best and mark it on the answer sheet. All questions carry equal marks. No marks will be deducted for incorrect answers.

Section A (English)

1. Select the word that is most similar in meaning to "HAPPINESS":
    (A) Delight   (B) Agony
    (C) Distress   (D) Anguish

2. Which of the following words is an antonym for "HEROIC"?

    (A) Bold   (B) Fearless

    (C) Timid   (D) Daring

3. Change following sentence into indirect speech:

    He exclaimed, "What a beautiful painting!"

    (A) He exclaimed that it was a   (B) He exclaimed that it is a
    beautiful painting.   beautiful painting.

    (C) He exclaimed what a very   (D) He said what a beautiful
    beautiful painting it is.   painting.

4. Change the narration of the following sentence:

    He said to me, "Thank you for your help."

    (A) He told to me thank you for   (B) He thanked me for my help.
    your help.

    (C) He said thank you for my help.   (D) He told me thank you for his
                                          help.

5. Change the voice of the sentence given below:

The students are learning the lessons.

   (A) The lessons are learnt by the students.

   (B) The lessons were learned by the students.

   (C) The lessons are being learned by the students.

   (D) The lessons have been learned by the students.

6.   Fill in the blank: *The thief broke _____ the house last night.*

   (A) in   (B) into

   (C) on   (D) at

7.   Select the best option to fill in the blank:
He congratulated me _____ my success

   (A) for   (B) on

   (C) at   (D) in

8.   Which modal verb expresses *possibility*?

   (A) should   (B) would

   (C) might   (D) will

9.   Choose the correct tense to complete the sentence:

   "If I had known *earlier, I _____ helped you."*

   (A) will have.   (B) would have

   (C) shall have.   (D) will had

10. Choose the correct verb form: *"The news _____ shocking."*

   (A) is   (B) are

   (C) were   (D) have been

(Read the passage carefully and answer the questions 11 to 15)

Netaji Subhas Chandra Bose was a prominent Indian nationalist leader who played a crucial role in India's independence movement. Born in Cuttack, Odisha, Bose twice served as the President of the Indian National Congress.

However, his radical views and disagreements with Mahatma Gandhi led him to form the Forward Bloc. Seeking external support for India's independence during World War II, he famously escaped house arrest and travelled to Nazi Germany and later to Japanese-occupied Southeast Asia. There, he formed the Azad Hind Fauj (Indian National Army) with Indian prisoners of war and civilian volunteers, aiming to liberate India from British rule. His charismatic leadership and unwavering dedication made him a national hero, though his death remains a subject of speculation. Netaji's slogan "Give me blood, and I will give you freedom!" continues to inspire generations.

11. What was the primary goal of the Azad Hind Fauj (Indian National Army)?

    (A) To support the British in World War II.

    (B) To establish relations with Southeast Asian countries.

    (C) To liberate India from British rule.

    (D) To promote cultural exchange with Japan.

12. How many times did Subhas Chandra Bose serve as the President of the Indian National Congress?

    (A) Once

    (B) Twice

    (C) Thrice

    (D) Never

13. What organization did Subhas Chandra Bose form after disagreeing with Mahatma Gandhi?

    (A) The Muslim League

    (B) The Communist Party of India

    (C) The Swaraj Party

    (D) The Forward Bloc

14. What is a famous slogan associated with Netaji Subhas Chandra Bose?

    (A) "Satyameva Jayate"

    (B) "Vande Mataram"

    (C) "Jai Hind"

    (D) "Give me blood, and I will give you freedom!"

15. What was one of the places Netaji Subhas Chandra Bose travelled to in search of support for India's independence during World War II?

    (A) Great Britain

    (B) The United States of America

(C) Nazi Germany   (D) France

Section B (Science)

16. What is the resistance of a conductor if a current of 3 A flows through it when a potential difference of 6 V is applied?

    (A) 0.5 ohms   (B) 2 ohms

    (C) 9 ohms   (D) 18 ohms

17. Which of the following appliances works on the heating effect of electric current?

    (A) Electric bell   (B) Electric fan

    (C) Electric heater   (D) Television

18. Which instrument is used to measure electric current in a circuit?

    (A) Voltmeter   (B) Ammeter

    (C) Galvanometer   (D) Ohmmeter

19. When two resistors are connected in parallel, the total resistance

    (A) increases   (B) decreases

    (C) remains the same   (D) becomes zero

20. Electric power is given by the formula

    (A) $P = VI$ (B) $P = I/R$

    (C) $P = IR$ (D) $P = V/I$

21. The reaction of H_2 gas with oxygen gas to form water is an example of

    (A) combination reaction   (B) redox reaction

    (C) exothermic reaction   (D) all of these reactions.

22. Oxidation is a process which involves

    (A) removal of oxygen   (B) addition of hydrogen

    (C) addition of oxygen   (D) removal of hydrogen

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23. Electrolysis of water is a decomposition reaction. The mole ratio of hydrogen and oxygen gases liberated during electrolysis of water is

(A) 1:1   (B) 2:1

(C) 4:1   (D) 1:2

24. The elements in a group of the periodic table have the same

(A) valency   (B) atomic mass

(C) atomic number   (D) atomic radius

25. The two elements that do not follow the octet rule are:

(A) oxygen and hydrogen   (B) hydrogen and lithium

(C) helium and oxygen   (D) lithium and oxygen

26. Which part of the alimentary canal is responsible for the rhythmic movement known as *peristalsis*?

(A) Mouth   (B) Small intestine

(C) Oesophagus   (D) The entire alimentary canal

27. Which part of the digestive system stores and release bile?

(A) Liver   (B) Gall Bladder

(C) Pancreas   (D) small intestine

28. If a person feels fullness in stomach after eating, which part of the brain is primarily responsible for interpreting this sensation?

(A) Mid-Brain   (B) Fore -Brain

(C) Cerebellum   (D) Spinal Cord

29. What is true about the asexual reproduction?

(A) It involves gametes from two parents   (B) It produces genetically different organisms.

(C) it is slower than sexual reproduction   (D) It produces clones with identical genetic composition

30. Which hormone is primarily responsible for a plant bending towards light?

(A) Cytokinin

(B) Gibberellin

(C) Auxin

(D) Ethylene

Section C (Mathematics)

31. If the sum of the first two, three and four terms of an A.P. are 29, 36 and 38 respectively, then the common difference of the A.P. is

(A) −5

(B) 4

(C) 5

(D) 6

32. If $2k - 1, 12, 4k + 13$ are three consecutive terms of an A.P. then the value of k is

(A) −2

(B) −1

(C) −5

(D) 2

33. Which term from the end of the A.P.: 4, 9, 14, ..., 254 is 209?

(A) 12th

(B) 11th

(C) 10th

(D) 9th

34. If $tan\theta + \frac{1}{tan\theta} = 2$, then the value of $tan^2\theta + \frac{1}{tan^2\theta}$ is

(A) 2

(B) 4

(C) 3

(D) 5

35. If $\sqrt{3} \sin \theta - \cos \theta = 0$, then the value of $\sec \theta$ is equal to

(A) 1

(B) $\frac{1}{\sqrt{3}}$

(C) $\frac{\sqrt{3}}{2}$

(D) $\frac{2}{\sqrt{3}}$

36. If $sec^2 x (1 + \sin x)(1 - \sin x) = \lambda$, then the value of λ is

(A) $\frac{1}{2}$

(B) 1

(C) tan^2x (D) cot^2x

37. A kite is flying at a height of $25m$ from the ground. The length of the string from the kite to the ground is $50m$. Assuming that there is no slack in the string, the angle of elevation of the kite at the ground is

   (A) 30°   (B) 45°

   (C) 60°   (D) 90°

38. You are given a quadratic equation $ax^2 + bx + c = 0$. In solving this equation, you find no real roots. Then

   (A) Discriminant $(D) > 0$ (B) discriminant $(D) \leq 0$

   (C) discriminant $(D) < 0$ (D) discriminant $(D) \geq 0$

39. The value of k so that the quadratic equation $kx(3 - x) = 9$ has two equal roots is

   (A) $k = 0$ (B) $k = 4$

   (C) $k = 0,4$ (D) None of these

40. A quadratic equation $ax^2 + bx + c = 0$ has one root as 0. If another root is 1 then which of the following is true

   (A) $a = b$ (B) $a = c$

   (C) $a = -b$ (D) $b = -c$

41. The intersecting point of the two graphs representing the equations $2x - y = 1$ and $4x + 3y = 27$ is

   (A) (3,5)   (B) (5,3)

   (C) (−3,5)   (D) (3, −5)

42. The value of a for which the following pair of linear equations $2x + ay = 8$ and $ax + 8y = 4a$ has infinitely many solutions is

   (A) 2   (B) 4

   (C) 8   (D) 6

43. If n is any integer such that $n > 1$ then 6 can divide

(A) $n(n+1)$

(B) $n(n^2+1)$

(C) $n(n^2-1)$

(D) $n(n-1)$

44. If $a+b=3, b+c=5$ and $c+a=4$, then the value of $(a+b+c)(ab+bc+ca)-abc$ is equal to

(A) 60

(B) 45

(C) 0

(D) 50

45. The value of k for which $x-1$ is a factor of x^2+kx+2 is

(A) -2

(B) -3

(C) 2

(D) 3

46. If $a+b+c=0$, then which of the following is true?

(A) $a^2+b^2+c^2=2abc$

(B) $a^3+b^3+c^3=0$

(C) $a^3+b^3+c^3=3abc$

(D) $a^2+b^2-c^2=2ab$

47. The remainder when x^3+3x^2+3x+1 is divided by $2x+1$ is

(A) $-\dfrac{1}{8}$

(B) $-\dfrac{1}{2}$

(C) $\dfrac{1}{4}$

(D) $\dfrac{1}{8}$

48. If $a^2-b^2>0$, then which of the following is true?

(A) $a>b$

(B) $|a|>|b|$

(C) $a<b$

(D) $a<b$

49. The least number which when divided by $7, 8$ and 12 leaves the same remainder 5 in each case is

(A) 173

(B) 193

(C) 183

(D) 137

50. If α and β are the roots of the equation $x^2-x+1=0$, then the value of $\dfrac{\alpha^2}{\beta}+\dfrac{\beta^2}{\alpha}$ is

(A) -3

(B) -4

(C) −2   (D) 6

51. Which of the following pairs of lines have infinite number of solutions?

(A) $3x + 2y - 5 = 0$,
$4x - 3y + 2 = 0$

(B) $9x + 3y + 4 = 0$,
$18x + 6y + 8 = 0$

(C) $2x + y = 3$,
$3x - 2y + 6 = 0$

(D) $6x - 2y + 5 = 0$,
$3x - y + 9 = 0$

52. The length of one side of a rhombus if the two diagonals of the rhombus of lengths $8cm$ and $6cm$ is

(A) $5cm$ (B) $14cm$

(C) $12cm$ (D) $10cm$

53. The sum of the first 25 terms of an A.P. whose third and seventh terms are respectively 3 and 5 is

(A) 210   (B) 125

(C) 220   (D) 200

54. Two circles of radii $5cm$ and $3cm$ intersect at two points and the distance between their centres is $4cm$. The length of the common chord is

(A) $5cm$ (B) $8cm$

(C) $6cm$ (D) $7cm$

55. A chord of a circle is equal to the radius of the circle. The angle subtended by the chord at a point on the minor arc is

(A) 30°   (B) 150°

(C) 120°   (D) 60°

56. The areas of the three adjacent faces of a cuboid are $18cm^2$, $8cm^2$ and $25cm^2$. The volume of the cuboid is

(A) $60cm^2$ (B) $120cm^3$

(C) $18 \times 8 \times 25\ cm^3$ (D) $60cm^3$

57. If $\cot x = \sqrt{5}$, then the value of $\frac{cosec^2 x - sec^2 x}{cosec^2 x + sec^2 x}$ is

(A) $\frac{2}{5}$ (B) $\frac{2}{3}$

(C) $\frac{3}{5}$ (D) $\frac{5}{6}$

58. The sides of triangular plot are in the ratio $4:5:6$ and its perimeter is $120cm$. Then the sides are

(A) $20cm, 30cm, 40cm$ (B) $10cm, 20cm, 30cm$

(C) $30cm, 40cm, 50cm$ (D) $32cm, 40cm, 48cm$

59. The least number that is divisible by all the numbers from 1 to 5 is

(A) 30 (B) 60

(C) 50 (D) 40

60. Euclid's division lemma states that for two positive integers a and b, there exist unique integers q and r such that $a = bq + r$, where r must satisfy

(A) $1 < r < b$ (B) $0 < r \leq b$

(C) $0 \leq r < b$ (D) $0 < r < b$