Bhavan's Tripura Vidyamandir

2nd Terminal Examination : (2024 –2025)

Class:-6 **Subject: Mathematics**

Time: - 3 hours Total: - 80 Marks

Name of the student: Roll: Sec:

General Instruction:

- ***Section A*** *contains 15 questions (1 to 15) each carries 1 mark.*
- ***Section B*** *contains 1 case-study (15 to 20) each carries 1 mark.*
- ***Section C*** *contains 10 questions (21 to 30) each carries 2 marks.*
- ***Section D*** *contains 8 questions (31 to 38) each carries 3 marks.*
- ***Section E*** *contains 4 questions (39 to 42) each carries 4 marks.*

SECTION-A

1. The additive inverse of 5 is

   a) $+5$ b) -5 c) $5+5$ d) $5-5$

2. The absolute values of $+42$ is

   a) -41 b) $+41$ c) $+42$ d) -42

3. The next number in the pattern $40, 52, 64, 76, \_\_\_$ is

   a) 80 b) 82 c) 86 d) 88

4. What type of a polynomial is $5a+3b-8c$?

   a) Monomial b) Binomial c) Trinomial d) Linear

5. The coefficient of a^4 in $2xa^4$ is

   a) $2x$ b) 2 c) x d) $2xa^4$

6. The decimal form of $\frac{111}{40}$ is

   a) 1.11 b) 2.775 c) 2.75 d) 1.25

7. ₹12 is equivalent to

   a) 1200 paise b) 0.12 paise c) 120 paise d) 0.1200 paise

8. 1 m = ____ km

   a) 0.01 b) 0.0001 c) 0.001 d) 0.01

9. Perimeter of a regular hexagon is

   a) 6 ÷ length of one side b) 6 + length of one side

   c) 6 × length of one side d) 6 − length of one side

10. The side of a square is equal to

    a) Perimeter + 4 b) Perimeter − 4 c) Perimeter × 4 d) Perimeter ÷ 4

11. The length and breadth of a rectangle are 12 cm and 9 cm, respectively. Its area is

    a) 21 cm^2 b) 108 cm^2 c) 42 cm^2 d) 48 cm^2

12. Convert the ratio 16 : 48 to their lowest form.
    a) 1 : 4 b) 1 : 3 c) 4 : 1 d) 3 : 1
13. When two ratios are _____ they are said to be in proportion.
    a) Equal b) different c) middle term d) extremes
14. The diameter is the greatest _____ of a circle.
    a) Arc b) Chord c) Radius d) secant
15. The data collected in the original form is called _____.
    a) Raw data b) Frequency c) tally mark d) array

SECTION-B

Case-based question:

A street lane is to be paved with tiles of length 12 cm and breadth 10 cm. The length of the lane is 120m and its breadth is 24 m. Based on the above information answer the following questions.

16. How many meters is the length of the tile?
    a) 12 m b) 1200m c) 0.12 m d) 0.012 m
17. How many meters is the breadth of the tile?
    a)10 m b) 100 m c) 0.001 m d) 0.10 m
18. What is the area of the tile?
    a) $120cm^2$ b) $120\ m^2$ c) $240\ m^2$ d) 120 cm
19. What is the area of the lane?
    a) $2880\ cm^2$ b) $240\ m^2$ c) $1440\ m^2$ d) $2880\ m^2$
20. Find the number of the tile needed?
    a)24 b) 240 c) 2,400 d) 2,40,000

SECTION-C

21. Fill in the blanks.
    i) The sum of two negative integers is always a _____ integer.
    ii) The sum of (−15) and (−10) gives you _____.
22. Decimal 3.6 as fraction. Reduce the fraction to the simplest form.
23. A rectangular table top measures 2 m 50 cm by 2 m. what is the area in square meters?
24. Find the perimeter of a regular octagon with each side measuring 12 cm.
25. A car runs 492 km in 36 litres of diesel. How many kilometers would it run in 33 litres of diesel?
26. If 0.5, 0.05, 0.005, x are proportional, find the value of x.
27. Translate the word expression into algebraic expression.
    i. 6 more than five times a.
    ii. Quotient of square of x by y subtracted from z.

28. Aditya is 11 years old. How old would he be
    i. 3 years from now?
    ii. t years from now?
29. Define chord of the circle.
30. Give one example of each for primary data and secondary data.

SECTION-D

31. Subtract $4a - b + 3c$ from $6a - 2b + c$ and find the value of the result when $a = -2, b = 0, c = -1$
32. Write: (i) three negative integers greater than -25.
    (ii) three negative integers less than -15.
33. The cost of fencing a rectangular field at ₹ 32 per meter is ₹ 2560. If the length is 24 cm, finds its breadth.
34. Divide 308 into three parts in the ratio $2 : 4 : 5$
35. The area of a rectangle of length 48 m is equal to the area of a square of side 16m. Find the breadth of the rectangle.
36. A jar contained 6.25 litres of water. If 405 mL of water is poured out of it, how much water does it contain now?
37. Draw a circle of radius 4 cm and draw (i) a diameter and (ii) segment.
38. There are 32 students in a class. The marks scored by them in a Mathematics test out of 10 are as follows:
    8, 9, 5, 7, 6,10, 9, 8, 9, 7, 6, 7, 6, 5, 9, 6, 7, 8, 5, 7, 8, 5, 8, 9, 10, 8, 6, 7, 8, 9, 5, 6.
    Draw a frequency distribution table.

SECTION-E

39. Anil bought vegetables weighing 15 Kg. Out of them 2 kg 750 g are potatoes, 3 Kg 75 g are brinjals, 1.5 Kg are onions and the rest are tomatoes. How many kilograms of tomato did Anil buy?
40. i) Add. $(a - 2b + 5c)$ and $(-7a + 3b - 8c)$ ii) Subtract. $(a - b + c)$ from $(3a + 2b - c)$
41. The cost of 5 Kg of flour is ₹ 150.
    (a) What is the cost of 8 Kg of flour?
    (b) How much flour can be purchased for ₹ 285 ?
42. The length of the rectangular floor of a room is 4.5 m and breadth is 3 m. How many square tiles will be needed to cover the floor if each side of square tile is 25cm?