Bhavan's Tripura Vidyamandir

2nd Terminal Examination (2024–2025)

Class:-7 **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 (16 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 co-efficient of x^2 in the expression $5x^2y - 3x$
   a)5 b)5y c)5y-3 d)-3
2. $(-2)^4 \times (-3)^4 =$
   a) $(-2)^8$ b) $(-3)^8$ c) $(-6)^4$ d) 6^4
3. The given decimal fraction 2.1 , converted to per cents is
   a) 2.1% b) 21% c) 0.21% d) 210%
4. Which of the following is not a 3D shape?
   a) Square b) Cylinder c) Pyramid d) Cone
5. Per cent is derived from Latin word 'per centum' meaning 'per _____
   a) Hundred b) thousand c) ten d) none
6. The corners of a solid shape are called its _____
   a) Edge b) corners c) vertices d) none
7. Area of a parallelogram= base × _____.
   a) Length b) breadth c) height d) none
8. The circumference of a circle with diameter= 2r is _____
   a) 2rπ b) πr c) 4πr d) none
9. Fill in the box 5/4 = ?/16=25/?
   a) 20,20 b) 25,20 c)10,20 d)20,25
10. Which one is the negative rational number?
    a) 2/5 b)-3/5 c)1/2 d)3/7
11. The Expression x+ y -xy is classify as
    a) Monomial b) Trinomial c) Binomial d) polynomial
12. Identify the term in the expression -4x + 5
    a) 4x, 5 b) 4x, -5 c) -4x , 5 d) All of the above
13. If x=2 then the value of x+4 is
    a) 2 b) 6 c) 4 d) None
14. $(-2)^4$ = ?
    a) -16 b) 16 c) 8 d) -8
15. Which one is the algebraic expression of monomial ?
    a) $2a^3 - b^5$ b) $3x^3 + 3y/x$ c) $3a^4b^2$ d) $7x^2+yx$

Section B

A boy runs in a circular track and covers a distance of 154 m after completion of one round. Based on the above information answer the following questions:

16. Find the radius of the circle.
    a) 49 cm b) 24.5 cm c) 49 m d) 24.5 m
17. Find the diameter of the circle.
    a) 49 cm b) 98 cm c) 49 m d) 98 m
18. Find the area of the circular field.
    a) 1886.5 m^2 b) 7546 cm^2 c) 1886.5 cm^2 d) 7546m^2

19. How much distance covers if runs $2\frac{1}{2}$ rounds.

a) 308 m b) 385 m c) 462 m d) 539 m

20. Find the cost of the turfing the field at rate ₹10 per m^2.

a) ₹1886.5 b) ₹18865 c) ₹7546 d) ₹75460

Section C

21. Identify the terms and their factors in the following expressions. Show the terms and factors by tree diagrams $5xy^2 + 7x^2y$.
22. Meeta saves ₹4000 from her salary. If this is 10% off her salary. What is her original salary ?
23. Write two equivalent rational number of $\frac{-5}{3}$
24. In a parallelogram ABCD, AB = 7.2 cm and the perpendicular from C on AB is 4.5 cm. Find the area of the parallelogram ABCD.
25. Write down the number of faces vertices and edges of a cuboid have?
26. Simplify $(2^3 X 3^4 X 4) \div (3 X 32)$
27. Reduce $\frac{-45}{135}$ in standard form
28. What is the circumference of a circle of diameter 14 cm?
29. Find the values of the following expressions for x = 2.
    (i) $x + 4$
    (ii) $4x - 3$
30. Find the value of x:- $32 \times 2^x = 16$

Section D

31. Express 3125 using exponential notation.
32. Anima Buys a book for rupees 275 and sells it at a loss of 15%. How much does she sell it for?
33. Find the sum- (i) $\frac{-9}{10} + \frac{22}{15}$

    Find the product (ii) $\frac{2}{3} \times \frac{-7}{9}$
34. Find the base of a parallelogram whose area is 15.54 sq. cm and height is 15 cm.
35. Simplify the expressions $x - \{2x - 2(3x + 4)\}$ and find the value if x is equal to 2.
36. From a circular card sheet of radius 14 centimeter, two circle of radius 3.5cm and a rectangle of length 3cm and breadth 1 cm are removed. Find the area of the remaining sheet. (Take π=22/7)
37. Simplify the expression (2a – 2b – 4 – 5 + a) and find the value if a = – 1, b = – 2.
38. Simplify: (i) 2×10^3 (ii) $7^2 \times 2^2$

Section E

39. When a = 0, b = (– 1), find the value of the given expressions:
    i) $2a^2 + b^2 + 1$
    ii) $2a^2b + 2ab^2 + ab$
40. (i) Find the amount to be paid at the end of 3 year when principal is ₹1200 at 12% per annum.
    (ii) Convert 3:1 in percentage
41. Get the algebraic expressions in the following cases using variables, constants and arithmetic operations.
    i) Numbers x and y both squared and added.
    ii) Number 5 added to three times the product of numbers m and n.
    iii) Product of numbers y and z subtracted from 10.
    iv) Sum of numbers a and b subtracted from their product.

42. PQRS is a parallelogram. QM is the height from Q to SR and QN is the height from Q to PS. If SR=12 cm and QM = 7.6 cm. Find:
    a) The area of the parallelogram PQRS.
    b) QN, if PS = 8 cm.