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TTK

8 - Std

SECOND MID - TERM TEST - 2024
MATHEMATICS

Time : 1.30 Hrs

Marks : 50

I Choose the Correct Answer. **1×4=4**

1. If $x^2 - y^2 = 16$ and $(x+y)=8$ then $(x-y)$ is _____
   a) 8 b) 3 c) 2 d)1
2. Factors of $4 - m^2$ are_____ .
   a) (2+m)(2+m) b) (2-m)(2-m) c) (2+m)(2-m) d) (4+m)(4-m)
3. What is 11^{th} Fibonacci number?
   a) 55 b)77 c)89 d)144
4. Every 3^{rd} number of Fibonacci sequence is a multiple of _____
   a) 2 b)3 c)5 d)8

II Fill in the blanks. **1×4=4**

5. The value of x in the equation x+5=12 is _____
6. The linear equation in one variable has _____ solution.
7. In an equation a+b =23 , the value of a is 14, then the value of b is _____.
8. If 5 persons can do 5 jobs in 5 days , then 50 persons can do 50 jobs in _____ days.

III Say True or False . **1×4=4**

9. The linear equation in one variable has only one variable with power 2.
10. " Sum of a number and two times that number is 48 " can be written as y+2y=48.
11. Area of a Circle and its radius is in Direct variation.
12. The 3^{rd} term of the Fibonacci sequence is the difference between 1^{st} term and 2^{nd} term.

IV Answer any 5 questions. **5×2=10**

13. Expand . $(105)^2$
14. Find the volume of cube whose side is (x+1) cm .
15. Factorize. 3y+6
16. Solve : 2x+5=9
17. i) If x and y are in Direct variation then the Proportionality constant k =
    ii) If x and y are in InDirect variation then the Proportionality constant k =
18. Give two examples for Direct variation.
    (E.g : If speed increases then distance also increases)
19. Write any two properties of Special quadrilateral Parallelogram.
20. List first four Fibonacci numbers in that sequence.

V Answer any FOUR of the following questions. **4×5=20**

21. Expand : (x+3)(x+5) (x+6)
22. Factorize : i) $x^2+8x+16$ ii) $y^2-10y+25$
23. Solve : i) $\frac{2x}{7}=3$ ii) -2 = 4m-6
24. The sum of two numbers is 36 and one number exceeds another by 8.Find the numbers.
25. A cement factory makes 7000 cement bags in 12 days with the help of 36 machines. How many bags can be made in 18 days using 24 machines?
26. Using Repeated subtraction method find H.C.F of 280 and 420.

VI Answer the following question. **1×8=8**

27. Construct a Parallelogram BIRD with BI=6.5 cm , IR=5 cm and ∠BIR =70°
    Also find its area. ***(OR)***
    Construct a Rhombus ROSE with RO=5 cm and RS=8 cm. Also find its area.