V8M

Virudhunagar District
Common Second Mid Term Test - 2024

Standard 8

Time: 1.30 Hrs.   **MATHS**   Marks: 50

I. Choose the correct answer: 5×1=5

1) $(p+q)(p^2-pq+q^2)$ is equal to _____.
   a) p^3+q^3 b) p^3-q^3 c) $(p+q)^3$ d) $(p-q)^3$

2) Sum of a number and its half is 30 then the number is _____.
   a) 15   b) 20   c) 25   d) 40

3) If 5 persons can do 5 jobs in 5 days, then 50 persons can do 50 jobs in _____ days.
   a) 50   b) 250   c) 5   d) 10

4) Factors of $4-m^2$ are _____.
   a) $(2+m)(2+m)$ b) $(2-m)(2-m)$
   c) $(2+m)(2-m)$ d) $(4+m)(4-m)$

5) The largest number of three consecutive numbers is $x+1$, then the smallest number is _____.
   a) x b) $x+1$ c) $x+2$ d) $x-1$

II. Fill in the blanks: 5×1=5

6) The linear equation in one variable has _____ solution.

7) A alone can do a piece of work in 35 days. If B is 40% more efficient than A, them B will finish the work in _____ days.

8) Area of parallelogram = _____.

9) The solution of the equation $ax+b = 0$ is _____.

10) 24 men can make 48 articles in 12 day. Then 6 men can make _____ articles in 6 days.

III. Say True or False: 2×1=2

11) Sum of a number and two times that number is 48 can be written as $y+2y = 48$.

12) Linear equation in are variable has only one variable with power 2.

IV. Match the following: 5×1=5

13) $\frac{x}{2} = 10$ - $x = 4$

14) $2x-5 = 3-x$ - $x = -24$

15) $\frac{4}{11} - x = \frac{-7}{11}$ - $x = 20$

16) $7x-4-8x = 20$ - $x = \frac{8}{3}$

17) $20 = 6x-4$ - $x = 1$

V8M

V. Answer any 5 questions: 5×2=10

18) Factorise: $49x^2 - 64y^2$

19) Find the volume of the cube whose side is $(x+1)$ cm.

20) A and B together can do a piece of work in 16 days and A alone can do it in 48 days. How long will B take to complete the work?

21) 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?

22) Solve: $2x+5 = 9$

23) One number is seven times another. If their difference is 18, find the numbers.

24) Factorise: m^2+m-7^2

VI. Answer ANY 3 questions: 3×5=15

25) Expand: $(x+3)(x+5)(x+2)$

26) If a train runs at 60 km/hr it reaches its destination late by 15 minutes. But if it runs at 85 kmph it is late by only 4 minutes. Find the distance covered by the train.

27) X, Y and Z can do a piece of job in 4, 6 and 10 days respectively. If X, Y and Z work together to complete, then find their separate shares if they will be paid ₹ 31,000 for completing the job.

28) If 6 container lorries can transport 135 tonnes of goods in 5 days, how many more lorries are required to transport 180 tonnes of goods in 4 days?

29) Factorise: $64x^3+144x^2+108x+27$ using $(a+b)^3$ identity.

VII. Answer any one of the following: 1×8=8

30) a) Construct a parallelogram BIRD with BI = 6.5 cm, IR = 5 cm and ∠BIR = 70°. Also find its area.   **(OR)**

      b) Construct a parallelogram CAMP, CA = 6 cm, AP = 8 cm and CP = 5.5 cm. Also find its area.