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Score: 20/25 (80.00%)

Code: 4760

1. What is the value of $14x + 3y + 25x + 2y$?

- A) $17x + 27y$ B) $16x + 28y$
C) $39x + 5y$ (Correct) D) $44xy$

2. What is the value of adding $(5x + 2y)$, $(4x - 7z)$ and $(15z - 3y)$?

- A) $9x - y + 8z$ (Correct)** B) $x - 9y + 8z$
 C) $x + 9y + 8z$ D) $9x + y - 8z$

3. What is the value of x , if $3(2x - 4) = -4x + 28$?

- A) 4 (Correct)** B) 8
 C) 6 D) 12

4. What is the value of $a^2 + b^2$ if $a + b = 9$ and $ab = 20$?

- A) 121 B) (-121)
C) 41 (Correct) D) (-41)

5. What is the radius of a circle whose diameter is 44 cm?

- A) 44 cm **B) 22 cm (Correct)**
 C) 23 cm D) 20 cm

6. What is the current?

$R = 50 \text{ Ohms}$
 220 Volts
 $I = \text{_____ Amps}$

- A) 4.1 Amps B) 4.2 Amps
 C) 4.3 Amps **D) 4.4 Amps (Correct)**

7. What is the unit of strain?

- A) Kg/cm^2 B) Newton/metre^2
 C) Metre **D) No unit (Correct)**

8. What is the ratio of ultimate load to area of original cross section?

- A) Factor of safety B) Yield point
C) Ultimate stress (Correct) D) Young's modulus

9. What is the ratio of shear stress to shear strain?

- A) Modulus of elasticity
 C) Bulk modulus

- B) Modulus of rigidity (Correct)**
 D) Yield point

10. What is the minimum permissible size of aluminium wire used in estimation?

- A) 1.5 sq.mm** B) 2.5 sq.mm (Incorrect)
 C) 5 sq.mm D) 3.5 sq.mm

11. What is the weight of the iron ball has volume of 250 cc and density 7.5 gm/cc?

- A) 1750 gram **B) 1875 gram (Correct)**
 C) 1975 gram D) 1785 gram

12. What is the total cost to assemble 10 personal computer systems, spares cost as given for one system: 1 TB hard disc Rs.4500/-, Intel i3 mother board Rs.7000/-, SMPS Rs.2500/-, monitor Rs.6000/-, keyboard Rs.1000/-, other material cost (Switches, USB, Cable)

- A) Rs.275000/-** B) Rs.250000/- (Incorrect)
 C) Rs.225000/- D) Rs.265000/-

13. Which instrument is used to measure heat?

- A) Calorie meter** B) Thermometer (Incorrect)
 C) Pyrometer D) Barometer

14. What is the melting point of aluminium?

- A) 660 Degree C (Correct)** B) 680 Degree C
 C) 670 Degree C D) 620 Degree C

15. What effort required to lift a load of 150 kg in a wheel and axle, if the velocity ratio is 2.5 and the efficiency of the machine is 75%?

- A) 70 kg **B) 80 kg (Correct)**
 C) 90 kg D) 100 kg

16. Which one is non-metal?

- A) Mercury (Incorrect) **B) Graphite**
 C) Brass D) Iron

17. Which mechanical property of a metal offers resistance to elastic deformation in a cutting tool?

- A) Ductility B) Malleability
C) Hardness (Correct) D) Toughness

18. What is the side of a square whose area is 625 mm^2 ?

- A) 15 mm B) 20 mm
C) **25 mm (Correct)** D) 30 mm

19. How many liters of water a cylindrical tank of radius 75 cm and height 100 cm can hold?

- A) **1766.25 liters** B) 1767.25 liters (Incorrect)
C) 1768.25 liters D) 1769.25 liters

20. What is the expanded form of S.P?

- A) Selected Price B) Special Price
C) **Selling Price (Correct)** D) Super Price

21. What is the formula to find Profit %?

- A) $((C.P)/(\text{Profit})) \times 100$ B) $((\text{Profit})/(S.P)) \times 100$
C) $((S.P - C.P)/(\text{Profit})) \times 100$ D) **$((\text{Profit})/(C.P)) \times 100$ (Correct)**

22. What is the compound interest on a principal of Rs.25000/- after 3 years at the rate of 12% per annum?

- A) Rs. 9000 B) Rs.9720
C) **Rs.10123.20 (Correct)** D) Rs.10483.20

23. What is the percentage of copper if the casting weight of copper 42.3 kg and tin weight 2.7 kg?

- A) Cu 92% B) **Cu 94% (Correct)**
C) Cu 96% D) Cu 98%

24. What is the angle of elevation of the top of a light house of 15 m height seen at a point 15 m away from the base?

- A) 30 Degree B) **45 Degree (Correct)**
C) 60 Degree D) 90 Degree

25. Simplify: $(3/4) + (2/5) - (5/20)$

- A) $(3/10)$ B) **$(9/10)$ (Correct)**
C) $(12/10)$ D) $(13/10)$