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Score: 18/25 (72.00%)

Code: 7375

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?

<br>

$R = 50 \text{ Ohms}$

<br>

220 Volts

<br>

$I = \underline{\hspace{1cm}} \text{ Amps}$

- 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)  $\text{Kg/cm}^2$  B)  $\text{Newton/metre}^2$   
 C) Metre (Incorrect) **D) No unit**

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) Youngs modulus

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

A) Modulus of elasticity

**B) Modulus of rigidity (Correct)**

C) Bulk modulus

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  
 C) 5 sq.mm (Incorrect) 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, Cabl

- 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**  
 C) 90 kg (Incorrect) D) 100 kg

16. Which one is non-metal?

- A) Mercury B) **Graphite (Correct)**  
 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  $625 \text{ mm}^2$ ?

- 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% (Incorrect)                      B) **Cu 94%**  
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)  $(13/10)$