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**Score: 21/25 (84.00%)**

**Code: 5548**

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

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

A) Modulus of elasticity

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

C) Bulk modulus

D) Yield point

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)  $9x + y - 8z$

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

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

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

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

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

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)

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/-  
 C) Rs.225000/- (Incorrect)      D) Rs.265000/-

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

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

13. Which instrument is used to measure heat?

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

6. What is the current?

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

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

14. What is the melting point of aluminium?

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

7. What is the unit of strain?

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

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

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

16. Which one is non-metal?

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

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

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

- A) Selected Price                      B) Special Price  
C) **Selling Price (Correct)**        D) Super Price
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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)**
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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
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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%
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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
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25. Simplify:  $(3/4) + (2/5) - (5/20)$

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