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Score: 11/25 (44.00%)

Code: 8600

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

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

2. What is the area of the sector, whose diameter is 40 mm and angle is 120 Degree?

- A) 418.66 mm²**
 B) 400.50 mm²
C) 415.5 mm² (Incorrect)
 D) 416.6 mm²

3. What is the formula for induced emf?

- A) $B \cdot L \cdot \sin \theta$ volts
 B) $BL \sin \theta$ volts
C) $BLV \sin \theta$ volts
D) $B \cdot L \cdot V \sin \theta$ volts (Incorrect)

4. Which one of the following geometrical shapes centre of gravity lies from its base is 1/3 of its height?

- A) Square (Incorrect)
C) Triangle
 B) Rhombus
 D) Cone

5. Which symbol is used to express change in length?

- A) L
 C) l
B) Δl (Correct)
 D) e

6. What is the tensile stress if a square rod of 10 mm side is tested for a tensile load of 1000 kg?

- A) 1 kg/mm²
 C) 100 kg/mm²
B) 10 kg/mm² (Correct)
 D) 1000 kg/mm²

7. Which standard schedule of rates to be considered for estimation?

- A) Standard schedule of rates of the last year
 C) Standard schedule of rates of the average of last 5 years
B) Standard schedule of rates of the average of the last 10 years (Incorrect)
D) Standard schedule of rates of the current year

8. What is the main factor to be considered while preparing a detailed estimate?

- A) Shape of material
C) Quantity, availability and transportation of materials (Correct)
 B) Brand of the materials
 D) Location of material

9. What is the other term of pocket reference in engineering works?

- A) Hand tool
 C) Good book
B) Hand book (Correct)
 D) New book

10. Which one is related to estimation of work?

- A) Bill of material (Correct)**
 C) Information table
 B) Packing
 D) Hand book

11. What is the estimation of milling cost of a rectangular block size 100 X 80 X 60 mm, if cost of the milling is Rs.2/sq.cm?

- A) Rs.652/-
C) Rs.572/- (Incorrect)
B) Rs.752/-
 D) Rs.960/-

12. What is the total cost of painting of a class room including ceiling, if the size of length is 6m, breadth is 5m and height is 4m. (Painting + labour cost Rs.150/- per sq.m)

- A) Rs.15000/-
C) Rs.17700/- (Correct)
 B) Rs.16700/-
 D) Rs.18700/-

13. Which one of the following geometrical shape's centre of gravity lies from its base is 1/3 of its height?

- A) Square
C) Triangle (Correct)
 B) Rhombus
 D) Cone

14. Convert 45 Degree C (Centigrade) into Degree F (Fahrenheit)

- A) 110 Degree F
C) 112 Degree F (Incorrect)
 B) 111 Degree F
D) 113 Degree F

15. What is the change in length per unit original length per degree rise in temperature is called?

- A) Co-efficient of friction
 C) Co-efficient of superficial expansion
B) Co-efficient of linear expansion
D) Co-efficient of cubical expansion (Incorrect)

16. Which one is heat insulator?

- A) Thermocole**
 B) Copper

C) Brass (Incorrect)

D) Aluminium

17. Which is the suitable nitriding process for all alloyed and unalloyed steels?

A) Silver nitriding

B) Nitriding in salt-bath (Correct)

C) Nitriding in Quenching tank

D) Gas nitriding

18. What is the name of the heat treatment process, where the metal is heated and quenched in water or oil?

A) Hardening

B) Normalising and Tempering

C) Annealing (Incorrect)

D) Tempering

19. 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

20. What is the force with which a body is attracted by the earth towards its centre?

A) Mass (Incorrect)

B) Weight

C) Volume

D) Density

21. What is the density (ρ) in g/cm^3 of an iron cube, if it weighs (W) 4.8 kg and volume (V) is 640 cm^3 ?

A) 6.6 g/cm^3

B) 6.9 g/cm^3 (Incorrect)

C) 7.2 g/cm^3

D) 7.5 g/cm^3

22. Which metal is widely used for making casting of machinery parts?

A) Grey cast iron (Correct)

B) White cast iron

C) Malleable cast iron

D) Wrought iron

23. What is the improper fraction for the given mixed fraction $7 \frac{3}{7}$?

A) $\frac{52}{7}$

B) $\frac{7}{52}$

C) $\frac{28}{7}$ (Incorrect)

D) $\frac{7}{28}$

24. What is the square root of 529?

A) 12

B) 23 (Correct)

C) 33

D) 43

25. How many millimetres are there in 1 inch? | 1 ಇಂಚಿನಲ್ಲಿ ಎಷ್ಟು ಮಿಲಿಮೀಟರ್‌ಗಳಿವೆ?

A) 2.54 mm (Incorrect)

B) 25.4 mm

C) 24.5 mm

D) 2.45 mm