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Score: 12/50 (24.00%)

Code: 8405

1. Which is equal to $(a^m)^n$?

- A) a^{m-n} B) a^{m+n} (Incorrect)
C) $a^{m/n}$ D) a^{mn} (Correct)

2. What is the value of $5x^4 / 5x^3$?

- A) $5x$ B) $5x^2$
C) x (Correct) D) $5x^4 / 5x^3$

3. What is the area of the semicircle, if the diameter is 14 cm?

- A) 70 cm^2 B) 76.93 cm^2 (Correct)
C) 75.06 cm^2 D) 86.93 cm^2

4. Which is the unit of current?

- A) Ampere (Correct) B) Volt
C) Ohm D) Watt (Incorrect)

5. Which is the unit of resistance?

- A) Ampere B) Volt
C) Ohm (Correct) D) Watt

6. Which is very good conductor?

- A) Copper (Correct) B) Cast iron
C) Wrought iron D) Steel

7. Which is mineral insulator

- A) Glass (Incorrect) B) Quartz
C) Mica (Correct) D) Porcelain

8. What is the filament resistance if a 6 volt bulb draws a current of 0.5 Amps?

- A) 12 W (Correct) B) 10 W
C) 3 W D) 1.2 W

9. Which is the example for statically induced emf?

- A) Generator B) Motor
C) Transformer (Correct) D) Refrigerator

10. How many hours will take for a 100 watts bulb to consume 1 kwh energy?

$W = 1 \text{ Kwh}$

$P = 100 \text{ Watts}$

$t = \text{_____ Hours}$

A) 10 hours

C) 18 hours

B) 12 hours (Incorrect)

D) 24 hours

11. What is the unit of strain?

- A) Kg/cm^2 (Incorrect) B) Newton/metre²
C) Metre D) No unit (Correct)

12. What is the term used for maximum stress attained by a material before rupture?

- A) Tensile stress B) Compressive stress (Incorrect)
C) Working stress D) Ultimate stress (Correct)

13. What is a hand book?

- A) Model book of various works B) Type of reference work or other collection of instruction (Correct)
C) Design book of latest works D) Dictionary of materials (Incorrect)

14. What is the use of engineering drawing?

- A) For estimation of material and execution of work (Correct) B) For colourful appearance
C) For reducing the cost D) For increasing the cost (Incorrect)

15. What is the relative permittivity of rubber?

- A) Between 2 and 3 (Correct) B) Between 5 and 6
C) Between 8 and 10 (Incorrect) D) Between 12 and 14

16. What is the total estimation cost for making the component of 8 drilled hole dia 10 mm and 4 Numbers of M6 taps in the plate, if Rs.8/- per drilled holes and Rs.12 per drill and tap?

- A) Rs.102 B) Rs.100
C) Rs.112 (Correct) D) Rs.110 (Incorrect)

17. What is the total construction cost of a house

construction area of 3000 sq.ft. (cost of construction Rs.2000/- per sq.ft including material and labour)?

- A) Rs.30,000,000 **B) Rs.60,00,000 (Correct)**
C) Rs.6,00,000 D) Rs.6,000,000

18. Which affects the centre of gravity of the object

- A) Weight **B) Mass**
C) Density (Incorrect) D) Shape

19. What is the quantity of heat required to raise the temperature of 1 gram of water through 1 Degree Centigrade is called?

- A) Specific heat **B) Colorie**
C) British thermal unit (Incorrect) D) Centigrade heat unit

20. What is the freezing point of water in kelvin scale (K)?

- A) 373 Degree K B) 313 Degree K
C) 303 Degree K (Incorrect) **D) 273 Degree K**

21. Which instrument is used to measure temperatures of red hot metals up to 3000 Degree C?

- A) Radiation pyrometer** B) Thermoelectric pyrometer
C) Bimetal thermometer (Incorrect) D) Alcohol thermometer

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

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

23. What is called for the materials that restricts heat flow by radiation, conduction and convection?

- A) Conductors **B) Insulators**
C) Ferrous D) Non-ferrous (Incorrect)

24. What is the density of aluminium?

- A) 2.7 g/cm³** B) 3.7 g/cm³
C) 4.7 g/cm³ (Incorrect) D) 5.7 g/cm³

25. What is the volume (V) of mercury in cm³, if mass (m) of mercury is 1 kg and density (r) is 13.6 g/cm³?

- A) 73.53 cm³** B) 73.43 cm³
C) 73.33 cm³ (Incorrect) D) 73.23 cm³

26. What is the name of the metal which do not contain iron?

A) Ferrous metals

B) Non-ferrous metals (Correct)

C) Insulating metals

D) Non-Insulating metals

27. Which cast iron cannot be welded?

- A) Grey cast iron **B) White cast iron**
C) Malleable cast iron (Incorrect) D) Nodular cast iron

28. Which metal cannot be forged?

- A) Alloy steel B) Mild steel
C) Steel (Incorrect) **D) Cast iron**

29. What is the name of furnace to obtained cast iron?

- A) Cupola** B) Mild steel - Blast furnace (Incorrect)
C) Steel - Rever battery D) Alloy metal - Electric furnace

30. What is the name of the property of an insulation that should brake down or puncture on application of high voltage?

- A) Di-electric strength** B) Specific resistance
C) Mechanical strenth D) Non absorption (Incorrect)

31. Which alloy steel is using for making precious instrument?

- A) Silicon steel B) Manganese steel
C) Invar steel D) Vanadium (Incorrect)

32. Which steel is used for making files and cold chisel?

- A) Low carbon steel B) Midium carbon steel
C) High carbon steel D) Stainless steel (Incorrect)

33. What is the perimeter of a rectangle whose length and breadth are 20 cm and 18 cm?

- A) 56 cm B) 66 cm
C) 76 cm D) 86 mm (Incorrect)

34. What is the area of a rectangle, whose length and breadth are 10cm and 8cm respectively?

- A) 75 cm² **B) 80 cm² (Correct)**
C) 85 cm² D) 90 cm²

35. What is the area of a right angled triangle having a base 10 cm and height 5 cm?

- A) 20 sq.cm **B) 25 sq.cm**
C) 30 sq.cm (Incorrect) D) 35 sq.cm

36. Find the total surface area of cube whose side is 25 cm.

- A) 3740 cm^2 B) 3745 cm^2
C) **3750 cm^2** D) 3755 cm^2
(Incorrect)

37. Find the total surface area of a cast iron bar whose length, width and height are 20m, 15m and 12m.

- A) 1340 m^2 B) **1440 m^2**
C) 1540 m^2 D) 1640 m^2
(Incorrect)

38. What is the capacity of a conical tank of radius 2 m and height 5m?

- A) 11 m^3 B) **21 m^3**
C) 31 m^3 D) 41 m^3
(Incorrect)

39. What is the term, if an article is purchased?

- A) Selling price B) **Cost price (Correct)**
C) Margin price D) Discount price

40. How the 'Principal' is denoted in simple interest calculation?

- A) 'P' B) 'I'
C) 'R' (Incorrect) D) 'n'

41. What is the formula to find Loss %?

- A) **$(\text{Loss} \times 100) / (\text{C.P})$** B) $(\text{CP}) / (\text{Loss} \times 100)$
C) $(\text{Loss} + 100) / (\text{S.P})$ D) $(\text{S.P}) / (\text{Loss} + 100)$
(Incorrect)

42. What is the cost price (C.P) formula if there is a profit?

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

43. What is the formula to find Profit %?

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

C) $((\text{S.P} - \text{C.P}) / (\text{Profit})) \times 100$

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

44. What is the maturity amount if Rs.20000 is deposited at 5% compound interest per annum for 2 years?

- A) Rs.22000 B) **Rs.22050 (Correct)**
C) Rs.22500 D) Rs.25000

45. What is the unit of speed?

- A) **Metre/second** B) Metre/second^2
(Incorrect)
C) Metre/minute D) Metre/hour

46. What is the acceleration of a car if the speed of the car has increased from 25 km per hour to 40 km per hour in one minute?

- A) 0.059 m/sec^2 B) 0.59 m/sec^2
C) **0.069 m/sec^2** D) 0.69 m/sec^2
(Incorrect)

47. What is the work done in unit time?

- A) Energy (Incorrect) B) **Power**
C) Force D) Acceleration

48. How much work done in one hour, if a pump can raise 100 liters of water through a height of 200 meters in one minutes?

- A) $12 \times 104 \text{ kg meter}$ B) **$12 \times 105 \text{ kg meter}$**
C) $12 \times 106 \text{ kg meter}$ D) $12 \times 107 \text{ kg meter}$
(Incorrect)

49. What is the kinetic energy of a bullet of mass 5gm travels with a speed of 500 m/sec?

- A) 620 Joules B) **625 Joules**
C) 630 Joules (Incorrect) D) 635 Joules

50. Convert 52% into fraction?

- A) (9/25) B) (11/25) (Incorrect)
C) **(13/25)** D) (17/25)