

Student: Nishank

Score: 43/50 (86.00%)

Code: 2064

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

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

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)  $70 \text{ cm}^2$       **B)  $76.93 \text{ cm}^2$**   
C)  $75.06 \text{ cm}^2$  (Incorrect)      D)  $86.93 \text{ cm}^2$

4. Which is the unit of current?

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

5. Which is the unit of resistance?

- A) Ampere      B) Volt (Incorrect)  
**C) Ohm**      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      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 (Incorrect)  
**C) Transformer**      D) Refrigerator

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

<br>

W = 1 Kwh

<br>

P = 100 Watts

<br>

t = \_\_\_\_Hours

- A) 10 hours** (Correct)      B) 12 hours  
C) 18 hours      D) 24 hours

11. What is the unit of strain?

- A)  $\text{Kg/cm}^2$       B)  $\text{Newton/metre}^2$   
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  
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

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

15. What is the relative permittivity of rubber?

- A) Between 2 and 3** (Correct)      B) Between 5 and 6  
C) Between 8 and 10      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

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>B) Rs.60,00,000 (Correct)</b>                     |
| C) Rs.6,00,000                                                                                                                               | D) Rs.6,000,000                                      |
| <hr/>                                                                                                                                        |                                                      |
| <b>18.</b> Which affects the centre of gravity of the object                                                                                 |                                                      |
| A) Weight                                                                                                                                    | <b>B) Mass</b>                                       |
| C) Density                                                                                                                                   | <u>D) Shape (Incorrect)</u>                          |
| <hr/>                                                                                                                                        |                                                      |
| <b>19.</b> 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>B) Colorie (Correct)</b>                          |
| C) British thermal unit                                                                                                                      | D) Centigrade heat unit                              |
| <hr/>                                                                                                                                        |                                                      |
| <b>20.</b> What is the freezing point of water in kelvin scale (K)?                                                                          |                                                      |
| A) 373 Degree K                                                                                                                              | B) 313 Degree K                                      |
| C) 303 Degree K                                                                                                                              | <b>D) 273 Degree K (Correct)</b>                     |
| <hr/>                                                                                                                                        |                                                      |
| <b>21.</b> Which instrument is used to measure temperatures of red hot metals up to 3000 Degree C?                                           |                                                      |
| <b>A) Radiation pyrometer (Correct)</b>                                                                                                      | B) Thermoelectric pyrometer                          |
| C) Bimetal thermometer                                                                                                                       | D) Alcohol thermometer                               |
| <hr/>                                                                                                                                        |                                                      |
| <b>22.</b> What is the change in length per unit original length per degree rise in temperature is called?                                   |                                                      |
| A) Co-efficient of friction                                                                                                                  | <b>B) Co-efficient of linear expansion (Correct)</b> |
| C) Co-efficient of superficial expansion                                                                                                     | D) Co-efficient of cubical expansion                 |
| <hr/>                                                                                                                                        |                                                      |
| <b>23.</b> What is called for the materials that restricts heat flow by radiation, conduction and convection?                                |                                                      |
| A) Conductors                                                                                                                                | <b>B) Insulators (Correct)</b>                       |
| C) Ferrous                                                                                                                                   | D) Non-ferrous                                       |
| <hr/>                                                                                                                                        |                                                      |
| <b>24.</b> What is the density of aluminium?                                                                                                 |                                                      |
| <b>A) 2.7 g/cm<sup>3</sup> (Correct)</b>                                                                                                     | B) 3.7 g/cm <sup>3</sup>                             |
| C) 4.7 g/cm <sup>3</sup>                                                                                                                     | D) 5.7 g/cm <sup>3</sup>                             |
| <hr/>                                                                                                                                        |                                                      |
| <b>25.</b> What is the volume (V) of mercury in cm <sup>3</sup> , if mass (m) of mercury is 1 kg and density (r) is 13.6 g/cm <sup>3</sup> ? |                                                      |
| <b>A) 73.53 cm<sup>3</sup> (Correct)</b>                                                                                                     | B) 73.43 cm <sup>3</sup>                             |
| C) 73.33 cm <sup>3</sup>                                                                                                                     | D) 73.23 cm <sup>3</sup>                             |
| <hr/>                                                                                                                                        |                                                      |
| <b>26.</b> What is the name of the metal which do not contain iron?                                                                          |                                                      |
| A) Ferrous metals                                                                                                                            | <b>B) Non-ferrous metals (Correct)</b>               |
| C) Insulating metals                                                                                                                         | D) Non-Insulating metals                             |

|                                                                                                                                 |                                       |
|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| <b>27.</b> Which cast iron cannot be welded?                                                                                    |                                       |
| A) Grey cast iron                                                                                                               | <b>B) White cast iron (Correct)</b>   |
| C) Malleable cast iron                                                                                                          | D) Nodular cast iron                  |
| <hr/>                                                                                                                           |                                       |
| <b>28.</b> Which metal cannot be forged?                                                                                        |                                       |
| A) Alloy steel                                                                                                                  | <u>B) Mild steel (Incorrect)</u>      |
| C) Steel                                                                                                                        | <b>D) Cast iron</b>                   |
| <hr/>                                                                                                                           |                                       |
| <b>29.</b> What is the name of furnace to obtained cast iron?                                                                   |                                       |
| <b>A) Cupola (Correct)</b>                                                                                                      | B) Mild steel - Blast furnace         |
| C) Steel - Rever battery                                                                                                        | D) Alloy metal - Electric furnace     |
| <hr/>                                                                                                                           |                                       |
| <b>30.</b> What is the name of the property of an insulation that should brake down or puncture on application of high voltage? |                                       |
| <b>A) Di-electric strength (Correct)</b>                                                                                        | B) Specific resistance                |
| C) Mechanical strenth                                                                                                           | D) Non absorption                     |
| <hr/>                                                                                                                           |                                       |
| <b>31.</b> Which alloy steel is using for making precious instrument?                                                           |                                       |
| A) Silicon steel                                                                                                                | B) Manganese steel                    |
| <b>C) Invar steel (Correct)</b>                                                                                                 | D) Vanadium                           |
| <hr/>                                                                                                                           |                                       |
| <b>32.</b> Which steel is used for making files and cold chisel?                                                                |                                       |
| <u>A) Low carbon steel (Incorrect)</u>                                                                                          | B) Midium carbon steel                |
| <b>C) High carbon steel</b>                                                                                                     | D) Stainless steel                    |
| <hr/>                                                                                                                           |                                       |
| <b>33.</b> What is the perimeter of a rectangle whose length and breadth are 20 cm and 18 cm?                                   |                                       |
| A) 56 cm                                                                                                                        | B) 66 cm                              |
| <b>C) 76 cm (Correct)</b>                                                                                                       | D) 86 mm                              |
| <hr/>                                                                                                                           |                                       |
| <b>34.</b> What is the area of a rectangle, whose length and breadth are 10cm and 8cm respectively?                             |                                       |
| A) 75 cm <sup>2</sup>                                                                                                           | <b>B) 80 cm<sup>2</sup> (Correct)</b> |
| C) 85 cm <sup>2</sup>                                                                                                           | D) 90 cm <sup>2</sup>                 |
| <hr/>                                                                                                                           |                                       |
| <b>35.</b> What is the area of a right angled triangle having a base 10 cm and height 5 cm?                                     |                                       |
| A) 20 sq.cm                                                                                                                     | <b>B) 25 sq.cm (Correct)</b>          |
| C) 30 sq.cm                                                                                                                     | D) 35 sq.cm                           |
| <hr/>                                                                                                                           |                                       |
| <b>36.</b> Find the total surface area of cube whose side is 25 cm.                                                             |                                       |
| A) 3740 cm <sup>2</sup>                                                                                                         | B) 3745 cm <sup>2</sup>               |
| <b>C) 3750 cm<sup>2</sup> (Correct)</b>                                                                                         | D) 3755 cm <sup>2</sup>               |

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

- A)  $1340 \text{ m}^2$   
C)  $1540 \text{ m}^2$
- B)  $1440 \text{ m}^2$  (Correct)**  
D)  $1640 \text{ m}^2$

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

- A)  $11 \text{ m}^3$   
C)  $31 \text{ m}^3$
- B)  $21 \text{ m}^3$  (Correct)**  
D)  $41 \text{ m}^3$

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

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

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

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

41. What is the formula to find Loss %?

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

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

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

43. What is the formula to find Profit %?

- A)  $((\text{C.P}) / (\text{Profit})) \times 100$   
C)  $((\text{S.P} - \text{C.P}) / (\text{Profit})) \times 100$
- B)  $((\text{Profit}) / (\text{S.P})) \times 100$   
**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  
C) Rs.22500
- B) Rs.22050 (Correct)**  
D) Rs.25000

45. What is the unit of speed?

- A) Metre/second (Correct)**  
C) Metre/minute
- B)  $\text{Metre/second}^2$   
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  $\text{m/sec}^2$   
**C) 0.069  $\text{m/sec}^2$  (Correct)**
- B)  $0.59 \text{ m/sec}^2$   
D)  $0.69 \text{ m/sec}^2$

47. What is the work done in unit time?

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

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

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

50. Convert 52% into fraction?

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