

Student: Shivu k

Score: 37/50 (74.00%)

Code: 4119

1. Which machine converts mechanical energy into electrical energy?

- A) Battery  
 C) Heater  
**B) Generator (Correct)**  
 D) Iron box

2. Which is the unit of resistance?

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

3. Which is mineral insulator

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

4. What is the total resistance if three resistances of 3 ohms, 9 ohms and 5 ohms are connected in series?

- A) 11 ohms  
**C) 17 ohms (Correct)**  
 B) 7 ohm  
 D) 1/17 ohms

5. What is the resistance?

<br>  
 $I = 11.5 \text{ Amps}$   
 <br>  
 $V = 380 \text{ Volts}$   
 <br>  
 $R = \text{_____ Ohms}$

- A) 13 ohms  
**C) 33 ohms (Correct)**  
 B) 23 ohms  
 D) 43 ohms

6. What is the power if an emf of one volt causes a current flow of 1ampere?

- A) 1 watt (Correct)**  
 C) 1 HP  
 B) 1 kilowatt  
 D) 1 Kilowatt hour

7. How much power does it consumes if an electric heater draws a current of 10 amps at 200 volts?

- A) 2000 watts (Correct)**  
 C) 2020 watts  
 B) 2010 watts  
 D) 2030 watts

8. What is the resistance of an electric iron if the rating of electric iron is 220 V and 500 watts?

- A) 94.8 ohms  
**C) 96.8 ohms**  
 B) 95.8 ohms (Incorrect)  
 D) 97.8 ohms

9. What is the unit of intensity of magnetic field?

- A) wb/m**  
 C) Hertz  
 B) m/wb (Incorrect)  
 D) Coloumb

10. What is the power required?

<br>  
 $I = 0.455 \text{ Amps}$   
 <br>  
 $R = 484 \text{ Ohms}$   
 <br>  
 $P = \text{_____ Watts}$

- A) 98.2 watts  
**C) 100.2 watts (Correct)**  
 B) 99.2 watts  
 D) 101.2 watts

11. What is the rated power if an adjustable resistor bears the following label 1.5 k ohms/ 0.08A?

- A) 9.2 watts  
**C) 9.6 watts**  
 B) 9.4 watts  
 D) 9.8 watts

12. What is termed as the quantity of matter contained in a body?

- A) Density  
**C) Mass (Correct)**  
 B) Volume  
 D) Specific gravity

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

- A) Mass  
 C) Volume  
**B) Weight (Correct)**  
 D) Density

14. What is called mass per unit volume of a substances?

- A) Mass  
**C) Density (Correct)**  
 B) Weight  
 D) Volume

15. What is the mass if the density of a body is  $7.6 \text{ g/cm}^3$  and its volume is  $25 \text{ cm}^3$ ?

- A) 190 grams (Correct)**  
 C) 210 grams  
 B) 200 grams  
 D) 220 grams

16. What is the mass in gram, if a force of 15 dynes acting on a mass  $m$  producing an acceleration of  $2.5 \text{ cm/sec}^2$ ?

- A) 9 grams  
 C) 7 grams  
 B) 8 grams  
**D) 6 grams (Correct)**

17. What is the specific gravity of the metal, if it weighs 6.5 kgf in air and 3.5 kgf in water?

A) 6.166  
**C) 2.166 (Correct)**

B) 3.166  
D) 1.166

C) 85 cm<sup>2</sup>  
(Incorrect)

D) 90 cm<sup>2</sup>

18. Which one is non-metal?

A) Mercury  
C) Brass

**B) Graphite (Correct)**  
D) Iron

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

A) 3740 cm<sup>2</sup>  
**C) 3750 cm<sup>2</sup>**  
D) 3755 cm<sup>2</sup>

19. Which is brittle metal?

**A) Cast iron (Correct)**  
C) Mild steel

B) Steel  
D) Alloy steel

29. What is the total surface area of a cylinder having radius 2 metres and height 5 metres?

A) 86 sq.metre (Incorrect)  
C) 90 sq.metre

**B) 88 sq.metre**  
D) 92 sq.metre

20. Which property of a metal possessed by it melts when heat is applied?

A) Conductivity  
**C) Fusibility (Correct)**

B) Malleability  
D) Tenacity

30. What is the unit of speed?

**A) Metre/second**  
C) Metre/minute (Incorrect)

B) Metre/second<sup>2</sup>  
D) Metre/hour

21. What is the carbon percentage in high carbon steel?

A) 0.02% to 0.03%  
C) 0.25% to 0.50%

B) 0.15% to 0.25%  
**D) 0.50% to 1.50% (Correct)**

31. What is called if a body posses only magnitude or size alone?

A) Speed  
C) Vector quantity

B) Velocity  
**D) Scalar quantity (Correct)**

22. Which rubber is used as insulator for power cables and control wires?

A) Butyl  
**C) Silicon**

B) Hypalone (Incorrect)  
D) Nitrite butadiene

32. What is the rate of change of displacement of a body?

A) Body at rest  
C) Speed

B) Body at motion  
**D) Velocity (Correct)**

23. Which insulator is used in over head lines?

A) Mica  
C) P.V.C

B) Rubber  
**D) Porcelain (Correct)**

33. What is the speed of a train of 80 metre long train passes a railway station platform of 120 metres length in 20 seconds?

A) 30 km/hour  
C) 34 km/hour

B) 32 km/hour  
**D) 36 km/hour (Correct)**

24. 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 (Correct)**  
C) Mechanical strenth

B) Specific resistance  
D) Non absorption

34. What is the retardation of a car moving with a velocity of 50 km/hr is brought to rest in 45 seconds?

A) 0.40 m/sec<sup>2</sup>  
C) 0.20 m/sec<sup>2</sup>

**B) 0.30 m/sec<sup>2</sup> (Correct)**  
D) 0.10 m/sec<sup>2</sup>

25. What is the diagonal of a square plate whose side is 28 cm?

A) 39.29 cm  
C) 39.49 cm

B) 39.39 cm  
**D) 39.59 cm (Correct)**

35. What is the ratio of power output to power input?

A) Work  
**C) Efficiency (Correct)**

B) Energy  
D) Acceleration

26. What is the side of a square whose area is 625 mm<sup>2</sup>?

A) 15 mm  
**C) 25 mm (Correct)**

B) 20 mm  
D) 30 mm

36. How many newtons for 1 kilogram?

A) 981 Newtons  
**C) 9.81 Newtons (Correct)**  
D) 0.981 Newtons

B) 98.1 Newtons

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

A) 75 cm<sup>2</sup>  
**B) 80 cm<sup>2</sup>**

37. How many watts for 1 horse power in metric system?

A) 725.5 watts (Incorrect)  
C) 745.5 watts

**B) 735.5 watts**  
D) 755.5 watts

38. What is the formula for potential energy?

- A) **mgh joule (Correct)**      B)  $mgh^2$  joule  
C)  $\frac{1}{2} mgh$  joule      D)  $\frac{2}{3} mgh$  joule
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39. What is the potential energy, if a body of mass 250 kg is at a height of 30 metre?

- A) 72.57 KJ      **B) 73.57 KJ**  
C) 74.57 KJ      D) 75.57 KJ (Incorrect)
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40. What is the work done in joules if a load of 15.5 kg is lifted through a height of 4.4 metres?

- A) 639 Joules      B) 649 Joules  
C) 659 Joules (Incorrect)      **D) 669 Joules**
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41. What is the square root of 0.017?

- A) 0.001      **B) 0.13 (Correct)**  
C) 0.00001      D) 0.000001
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42. What is the x value for  $x^2 + 62 = 126$ ?

- A) 4      B) 6  
**C) 8 (Correct)**      D) 10
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43. What is the length L2, if total length (L) is 2.75 metre and  $L1:L2 = 2:3$ ?

- A) 1.1 metre      B) 1.25 metre  
**C) 1.65 metre (Correct)**      D) 1.75 metre
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44. What will be the rpm of smaller gear if a 180 mm dia

meshes with 60 mm dia gear and the bigger gear makes 60 rpm?

- A) 120 rpm      B) 140 rpm  
C) 160 rpm (Incorrect)      **D) 180 rpm**
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45. What is the decimal fraction of conversion of 18.5%?

- A) 0.185 (Correct)**      B) 0.175  
C) 0.165      D) 0.195
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46. How many millimetres are there in 1 inch?

- A) 2.54 mm      **B) 25.4 mm (Correct)**  
C) 24.5 mm      D) 2.45 mm
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47. What is the HCF of 18, 42, 24?

- A) 2      **B) 6 (Correct)**  
C) 18      D) 24
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48. Simplify:  $(\frac{3}{4}) + (\frac{2}{5}) - (\frac{5}{20})$

- A)  $(\frac{3}{10})$       **B)  $(\frac{9}{10})$  (Correct)**  
C)  $(\frac{12}{10})$       D)  $(\frac{13}{10})$
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49. Divide  $(\frac{20}{31}) / (\frac{15}{62})$

- A)  $2(\frac{4}{3})$       B)  $2(\frac{1}{3})$   
C)  $2(\frac{3}{2})$  (Incorrect)      **D)  $2(\frac{2}{3})$**
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50. Simplify:  $(17.49 \times 5.2) / (6.5)$

- A) 13.69      B) 13.79  
C) 13.89      **D) 13.99 (Correct)**
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