WORKSHOP CALCULATION AND SCIENCE

June 2026

MOCK TEST -10

Q. ID: ITISKILL9070P2

GOVT ITI HOLENARASIPURA

Question Paper

Student: A M Madan kumar
Score: 1/50 (2.00%)

Code: 8346

1. Which machine converts mechanical energy into electrical energy?

A) Battery
B) Generator
C) Heater
D) Iron box

2. Which is the unit of resistance?

A) Ampere
B) Volt
C) Ohm
D) Watt

3. Which is mineral insulator

A) Glass
B) Quartz
C) Mica
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
B) 7 ohm
C) 17 ohms
D) 1/17 ohms

5. What is the resistance?

I = 11.5 Amps

V = 380 Volts

R = _____Ohms

A) 13 ohms
B) 23 ohms
C) 33 ohms
D) 43 ohms

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

A) 1 watt
B) 1 kilowatt
C) 1 HP
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
B) 2010 watts
C) 2020 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
B) 95.8 ohms
C) 96.8 ohms
D) 97.8 ohms

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

A) wb/m
B) m/wb
C) Hertz
D) Coloumb

10. What is the power required?

I = 0.455 Amps

R = 484 Ohms

P = _____Watts

A) 98.2 watts
B) 99.2 watts
C) 100.2 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
B) 9.4 watts
C) 9.6 watts
D) 9.8 watts

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

A) Density
B) Volume
C) Mass
D) Specific gravity

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

A) Mass
B) Weight
C) Volume
D) Density

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

A) Mass
B) Weight
C) Density
D) Volume

15. Wha is the mass if the density of a body is 7.6 g/cm³ and its volume is 25 cm³?

A) 190 grams
B) 200 grams
C) 210 grams
D) 220 grams

16. What is the mass in gram, if a force of 15 dyres acting on a mass m producing an acceleration of 2.5 cm/sec²?

A) 9 grams
B) 8 grams
C) 7 grams
D) 6 grams

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

A) 6.166 B) 3.166
C) 2.166 D) 1.166

18. Which one is non-metal?

A) Mercury **B) Graphite**
C) Brass D) Iron

19. Which is brittle metal?

A) Cast iron (Correct) B) Steel
C) Mild steel D) Alloy steel

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

A) Conductivity B) Malleability
C) Fusibility D) Tenacity

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

A) 0.02% to 0.03% B) 0.15% to 0.25%
C) 0.25% to 0.50% **D) 0.50% to 1.50%**

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

A) Butyl B) Hypalone
C) Silicon D) Nitrite butadiene

23. Which insulator is used in over head lines?

A) Mica B) Rubber
C) P.V.C **D) Porcelain**

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 B) Specific resistance
C) Mechanical strenth D) Non absorption

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

A) 39.29 cm B) 39.39 cm
C) 39.49 cm **D) 39.59 cm**

26. What is the side of a square whose area is 625 mm²?

A) 15 mm B) 20 mm
C) 25 mm D) 30 mm

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

A) 75 cm² **B) 80 cm²**
C) 85 cm² D) 90 cm²

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

A) 3740 cm² B) 3745 cm²
C) 3750 cm² D) 3755 cm²

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

A) 86 sq.metre **B) 88 sq.metre**
C) 90 sq.metre D) 92 sq.metre

30. What is the unit of speed?

A) Metre/second B) Metre/second²
C) Metre/minute D) Metre/hour

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

A) Speed B) Velocity
C) Vector quantity **D) Scalar quantity**

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

A) Body at rest B) Body at motion
C) Speed **D) Velocity**

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 B) 32 km/hour
C) 34 km/hour **D) 36 km/hour**

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/sec² **B) 0.30 m/sec²**
C) 0.20 m/sec² D) 0.10 m/sec²

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

A) Work B) Energy
C) Efficiency D) Acceleration

36. How many newtons for 1 kilogram?

A) 981 Newtons B) 98.1 Newtons
C) 9.81 Newtons D) 0.981 Newtons

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

A) 725.5 watts **B) 735.5 watts**
C) 745.5 watts D) 755.5 watts

38. What is the formula for potential energy?

A) mgh joule B) mgh² joule

C) 1/2 mgh joule
D) 2/3 mgh joule

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

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
D) 669 Joules

41. What is the square root of 0.017?

A) 0.001
B) 0.13
C) 0.00001
D) 0.000001

42. What is the x value for x² + 62 = 126?

A) 4
B) 6
C) 8
D) 10

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
D) 1.75 metre

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
D) 180 rpm

45. What is the decimal fraction of conversion of 18.5%?

A) 0.185
B) 0.175
C) 0.165
D) 0.195

46. How many millimetres are there in 1 inch?

A) 2.54 mm
B) 25.4 mm
C) 24.5 mm
D) 2.45 mm

47. What is the HCF of 18, 42, 24?

A) 2
B) 6
C) 18
D) 24

48. Simplify: (3/4)+(2/5)-(5/20)

A) (3/10)
B) (9/10)
C) (12/10)
D) (13/10)

49. Divide (20/31)/(15/62)

A) 2(4/3)
B) 2(1/3)
C) 2(3/2)
D) 2(2/3)

50. Simplify: (17.49x5.2)/(6.5)

A) 13.69
B) 13.79
C) 13.89
D) 13.99