

Duration: 90 Mins

Total Marks: 66

ID: ITISKILL1368GL

Student Name: _____ Roll No: _____

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

- A) White cast iron B) Malleable cast iron
C) Wrought iron D) Grey cast iron

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

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

3. Which is the example for statically induced emf?

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

4. Which metal contains iron as a major content?

- A) Ferrous metal B) Bronze metal
C) Brass metal D) Zinc

5. What is the volume of mercury in cm³, if the mass (m) of mercury is 136 grams (g) and density (r) of mercury is 13.6 g/cm³?

- A) 13.6 cm³ B) 136 cm³
C) 10.0 cm³ D) 10.6 cm³

6. How much watt second in 1 watt hour?

- A) 3600 watt sec B) 2000 watt sec
C) 4000 watt sec D) 1000 watt sec

7. What is the density (r) in g/cm³ of an iron cube, if it weighs (W) 4.8 kg and volume (V) is 640 cm³?

- A) 7.5 g/cm³ B) 7.2 g/cm³
C) 6.9 g/cm³ D) 6.6 g/cm³

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

- A) 95.8 ohms B) 96.8 ohms
C) 97.8 ohms D) 94.8 ohms

9. Which furnace is used to get pig iron from iron ore?

- A) Mild steel - Rever battery B) Blast furnace
C) Electric furnace D) Cupola

10. What is the specific gravity of the metal, if the piece of metal weighs 150 grams in air and 125 grams in water?

- A) 10 B) 25
C) 6 D) 15

11. What is the current? $R = 50 \text{ Ohms}$ $V = 220 \text{ Volts}$
 $I = \text{_____ Amps}$

- A) 4.4 Amps B) 4.1 Amps
C) 4.3 Amps D) 4.2 Amps

12. Which is the unit electrical power?

- A) Ampere B) Watts
C) Ohms D) Volts

13. Which is mineral insulator

- A) Quartz B) Porcelain
C) Glass D) Mica

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

- A) 2020 watts B) 2030 watts
C) 2010 watts D) 2000 watts

15. What is the voltage of the immersion heater? $P = 500 \text{ watts}$
 $I = 2.27 \text{ Amps}$ $V = \text{_____ Volts}$

- A) 230.3 volts B) 210.3 volts
C) 220.3 volts D) 200.3 volts

16. Which law states that at constant temperature the current passing through a closed circuit is directly proportional to the potential difference and inversely proportional to the resistance?

- A) Newton's law B) Hooke's law
C) Lenz's law D) Ohm's law

17. Which law states about electromagnetic induction?

- A) Faraday's law
C) Ohm's law

- B) Lenz's law
D) Hooke's law

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

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

19. 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
- B) 7 ohm
D) 1/17 ohms

20. Which alloy used in electric lamp as filament?

- A) Vanadium
C) Cobalt
- B) Tungsten
D) Silicon

21. Which cast iron cannot be welded?

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

22. Which is equal to electric power?

- A) IR
C) RI
- B) $R^2 I$ watts
D) $I^2 R$ watts

23. What is the mass if the density of a body is 7.6 g/cm^3 and its volume is 25 cm^3 ?

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

24. How much voltage will be required to illuminate a 40 watts fluorescent lamp draws a current of 0.10 amperes?

- A) 405 volts
C) 395 volts
- B) 390 volts
D) 400 volts

25. What is the specific gravity of the solid, if density of the solid is 19.5 g/cm^3 ?

- A) 18.5
C) 19.5
- B) 8
D) 19

26. Which is the example for dynamically induced Emf?

- A) Motor bike
C) Generator
- B) Car
D) Motor

27. What is the formula for induced emf?

- A) $B^2 L \sin \theta$ volts
C) $B^2 V \sin \theta$ volts
- B) $BL \sin \theta$ volts
D) $BLV \sin \theta$ volts

28. What is the total resistance if two resistances of 4 ohms and 6 ohms are connected in parallel?

- A) 2.4
C) 5
- B) 4
D) 10

29. Which is the unit of resistance?

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

30. What is the rated power if an adjustable resistor bears the following label $1.5 \text{ k ohms} / 0.08\text{A}$?

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

31. Which one is non-metal?

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

32. Which property of a substance is opposing the flow of electric current?

- A) EMF
C) Current
- B) Resistance
D) Voltage

33. What is the power required? $I = 0.455 \text{ Amps}$ $R = 484 \text{ Ohms}$ $P = \text{___ Watts}$

- A) 98.2 watts
C) 101.2 watts
- B) 99.2 watts
D) 100.2 watts

34. What is the volume (V) of mercury in cm^3 , if mass (m) of mercury is 1 kg and density (r) is 13.6 g/cm^3 ?

- A) 73.23 cm^3
C) 73.53 cm^3
- B) 73.43 cm^3
D) 73.33 cm^3

35. Which statement is correct according to ohm's law?

- A) $I = V/R$
C) $I = R$
- B) $I = 1/V$
D) $I = R/V$

36. What metals contained in brass alloy?

- A) Copper and aluminium
C) Copper and lead
- B) Copper and tin
D) Copper and zinc

37. Which is the unit of current?

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

38. What is the flow of electrons in any conductor?

- A) Current
C) Power
- B) Voltage
D) Resistance

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

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

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

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

41. Which one of the following properties is the mechanical properties of metal?

- A) Corrosion
B) Ductility
C) Fusibility
D) Structure

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

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

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

- A) Non-Insulating metals
B) Non-ferrous metals
C) Insulating metals
D) Ferrous metals

44. Which is brittle metal?

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

45. What does EMF stands for?

- A) Electromated Force
B) Electro Motive Force
C) Electro Magnetic Force
D) Electronic Magnetic Force

46. What is the other name of low carbon steel?

- A) Low alloy steel
B) High speed steel
C) Mild steel
D) High alloy steel

47. What is the mass in gram, if a force of 15 dyres acting on a mass m producing an acceleration of 2.5 cm/sec^2 ?

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

48. Which mechanical property of a metal offers resistance to elastic deformation in a cutting tool?

- A) Hardness
B) Ductility
C) Toughness
D) Malleability

49. What is the density of aluminium?

- A) 4.7 g/cm^3
B) 3.7 g/cm^3

- C) 5.7 g/cm^3
D) 2.7 g/cm^3

50. What is the weight force of a car has a mass of 800 kg?(Take $g = 9.81 \text{ m/sec}^2$)

- A) 7748 Newton
B) 7847 Newton
C) 7487 Newton
D) 7848 Newton

51. Which is very good conductor?

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

52. Which property of metal has its power of returning to its original shape after the applied force is released?

- A) Malleability
B) Plasticity
C) Tenacity
D) Elasticity

53. 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) 18 hours
B) 12 hours
C) 24 hours
D) 10 hours

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

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

55. Which is same in series connection of resistors in a circuit?

- A) Voltage
B) Power
C) Resistance
D) Current

56. What is the voltage? $R = 250 \text{ Ohms}$ $I = 0.44 \text{ Amps}$ $V = \text{ ___Volts}$

- A) 110 Volts
B) 100 Volts
C) 105 Volts
D) 108 Volts

57. What is the block weighs (W) in kg, if volume (V) is 320 cm^3 and density 8.9 g/cm^3 ?

- A) 2.448
B) 2.948 kg
C) 2.648 kg
D) 2.848 kg

58. What is the current Flow in the bulb? $P = 550 \text{ watts}$ $R = 22 \text{ Ohms}$ $I = \text{ ___Amps}$

- A) 3 Amps
B) 2 Amps
C) 4 Amps
D) 5 Amps

59. Which metal cannot be forged?

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

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

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

61. What is the resistance? $I = 11.5$ Amps $V = 380$ Volts $R = \underline{\hspace{2cm}}$ Ohms

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

62. Which property of material enables to formation of permanent deformation without fracture?

- A) Plasticity
- B) Elasticity
- C) Ductility
- D) Brittleness

63. Which machine converts mechanical energy into electrical energy?

- A) Heater
- B) Generator

C) Iron box

D) Battery

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

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

65. What is called the ratio between the density of a substances density of water at 4 Degree Centigrade?

- A) Specific gravity
- B) Mass
- C) Density
- D) Weight

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

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