

Student Name: \_\_\_\_\_ Roll No: \_\_\_\_\_

1. What is the product of  $0.003 \times 0.5$ ?

- A) 0.015                      B) 0.0015  
C) 0.15                        D) 0.00015

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

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

3. Divide  $(20/31)/(15/62)$

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

4. What is the definition of ratio?

- A) Relation of two quantities of the different kind  
B) Inequality between two ratios  
C) Relation of two quantities of the same kind  
D) Equality between two ratios

5. Which law states about electromagnetic induction?

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

6. Simplify:  $(17.49 \times 5.2)/(6.5)$

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

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

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

8. What is the formula for induced emf?

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

9. What is the LCM of 12, 18, 6, 36?

- A) 18                              B) 42  
C) 36                              D) 12

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

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

11. Which is mineral insulator

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

12. How many millimetres are there in 1 inch?

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

13. What denotes letter M in MKS system?

- A) Millimeter                              B) Mile  
C) Micron                              D) Meter

14. What is the square root of 0.017?

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

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

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

16. What is the length  $L_2$ , if total length (L) is 2.75 metre and  $L_1:L_2 = 2:3$ ?

- A) 1.75 metre                              B) 1.25 metre  
C) 1.1 metre                              D) 1.65 metre

17. Which is the example for statically induced emf?

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

18. A motor cycle tyre is sold for Rs 300/- what is the purchase price if 25% profit is added to it.

- A) Rs 200                              B) Rs 240  
C) Rs 260                              D) Rs 220

19. What is the percentage of copper if the casting weight of copper 42.3 kg and tin weight 2.7 kg?

- A) Cu 98%
- B) Cu 92%
- C) Cu 96%
- D) Cu 94%

20. Which is the unit of current?

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

21. How much is 8% of 40 kg?

- A) 2.2 kg
- B) 3.2 kg
- C) 4.2 kg
- D) 5.2 kg

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

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

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

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

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

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

25. What are the two classifications of system of units?

- A) British and Metric
- B) Fundamental and derived
- C) Metric and International
- D) Gravitational and non-gravitational

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

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

27. What are fundamental units?

- A) Length, Pressure, Volume
- B) Length, Mass, Time
- C) Length, Mass, Area
- D) Length, Mass, Volume

28. What is the x value for  $x^2 + 62 = 126$ ?

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

29. Simplify:  $(\frac{3}{4}) + (\frac{2}{5}) - (\frac{5}{20})$

- A)  $(\frac{9}{10})$
- B)  $(\frac{3}{10})$
- C)  $(\frac{12}{10})$
- D)  $(\frac{13}{10})$

30. What is the improper fraction for the given mixed fraction  $7 \frac{3}{7}$ ?

- A)  $\frac{7}{52}$
- B)  $\frac{7}{28}$
- C)  $(\frac{52}{7})$
- D)  $\frac{28}{7}$

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

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

32. 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) 140 rpm
- B) 180 rpm
- C) 160 rpm
- D) 120 rpm

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

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

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

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

35. Which is very good conductor?

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

36. How many days a mechanic takes to assemble 64 machines if he assembles 8 machines in 3 days?

- A) 20 days
- B) 24 days
- C) 26 days
- D) 22 days

37. What is the voltage?  $R = 250 \text{ Ohms}$   $I = 0.44 \text{ Amps}$   $V = \text{___ Volts}$

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

38. What is the square root of decimal number 550.37?

- A) 22.46
- B) 21.26
- C) 23.46
- D) 22.26

39. How much watt second in 1 watt hour?

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

40. Convert 52% into fraction?

- A)  $(\frac{13}{25})$
- B)  $(\frac{17}{25})$
- C)  $(\frac{11}{25})$
- D)  $(\frac{9}{25})$

41. What is the ratio of 4 kg to 800 grams?

- A) 05:01                      B) 02:04  
C) 04:08                      D) 08:04

42. What is the voltage of the immersion heater?  $P = 500$  watts  $I = 2.27$  Amps  $V = \underline{\hspace{2cm}}$  Volts

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

43. What percentage of 80 is 20?

- A) 0.4                                  B) 0.8  
C) 0.2                                  D) 0.25

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

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

45. What is the square root of 529?

- A) 12                                      B) 43

C) 33

D) 23

46. Convert 0.456 decimal fraction into percentage?

- A) 0.0456                              B) 0.456  
C) 45.6                                  D) 0.000456

47. What is the length of each part is a copper wire of 225 metre long is cut into 900 equal parts?

- A) 0.23 metre                          B) 0.29 metre  
C) 0.28 metre                          D) 0.25 metre

48. Convert decimal 0.000659 to fraction?

- A) (659/100000)                          B) (659/1000000)  
C) (659/1000)                              D) (659/10000)

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

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