

Student Name: _____ Roll No: _____

1. How much is 8% of 40 kg?

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

2. 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 260
C) Rs 240 D) Rs 220

3. Convert 0.456 decimal fraction into percentage?

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

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

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

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

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

6. How much watt second in 1 watt hour?

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

7. What are fundamental units?

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

8. What percentage of 80 is 20?

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

9. What is the voltage? $R = 250 \text{ Ohms}$ $I = 0.44 \text{ Amps}$ $V = \underline{\hspace{1cm}}$ Volts

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

10. Which is same in series connection of resistors in a

circuit?

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

11. What is the formula for induced emf?

- A) $BL \sin \omega t$ volts B) $B^2 \sin \omega t$ volts
C) $B^2 \sin \omega t$ volts D) $BLV \sin \omega t$ volts

12. What is the square root of 529?

- A) 23 B) 12
C) 33 D) 43

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

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

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

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

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

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

16. Which is the unit of current?

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

17. Which law states about electromagnetic induction?

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

18. What is the product of 0.003×0.5 ?

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

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

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

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

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

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

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

22. What is the definition of ratio?

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

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

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

24. How many millimetres are there in 1 inch?

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

25. 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) 120 rpm D) 160 rpm

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

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

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

- A) "7/52" B) "28/7"
C) "7/28" D) (52/7)

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

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

29. Convert decimal 0.000659 to fraction?

- A) (659/10000) B) (659/1000000)

C) (659/100000)

D) (659/1000)

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

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

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

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

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

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

33. What denotes letter M in MKS system?

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

34. 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

35. 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) 96.8 ohms
C) 95.8 ohms D) 97.8 ohms

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

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

37. Convert 52% into fraction?

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

38. 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 94%
C) Cu 96% D) Cu 92%

39. Which is very good conductor?

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

40. Which is mineral insulator

- A) Mica B) Quartz

C) Porcelain

D) Glass

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

A) 0.195

B) 0.185

C) 0.175

D) 0.165

42. What is the voltage of the immersion heater? $P = 500$ watts $I = 2.27$ Amps $V = \underline{\hspace{1cm}}$ Volts

A) 210.3 volts

B) 230.3 volts

C) 200.3 volts

D) 220.3 volts

43. What is the square root of 0.017?

A) 0.001

B) 0.00001

C) 0.000001

D) 0.13

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

A) Resistance

B) Current

C) Voltage

D) EMF

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

A) 12

B) 42

C) 36

D) 18

46. Which is the example for statically induced emf?

A) Transformer

B) Generator

C) Refrigerator

D) Motor

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

A) $(\frac{3}{10})$

B) $(\frac{12}{10})$

C) $(\frac{13}{10})$

D) $(\frac{9}{10})$

48. 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) 2000 watts

D) 2010 watts

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

A) 6

B) 4

C) 10

D) 8