

Student Name: _____	Roll No: _____
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1. Which is mineral insulator

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

2. What is the formula for induced emf?

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

3. What is the square root of 0.017?

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

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

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

5. 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

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

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

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

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

8. Which is very good conductor?

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

9. Which is the example for statically induced emf?

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

10. Which law states about electromagnetic induction?

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

11. How much watt second in 1 watt hour?

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

12. 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

13. 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) 2030 watts D) 2020 watts

14. Convert 0.456 decimal fraction into percentage?

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

15. What is the voltage of the immersion heater? $P = 500$ watts $I = 2.27$ Amps $V =$ _____Volts

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

16. How much is 8% of 40 kg?

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

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

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

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

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

19. 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) 94.8 ohms
- D) 97.8 ohms

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

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

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

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

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

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

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) 11 ohms
- C) $1/17$ ohms
- D) 7 ohm

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

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

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

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

26. Convert 52% into fraction?

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

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

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

28. What is the improper fraction for the given mixed fraction $7 \times (3/7)$

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

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

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

30. What percentage of 80 is 20?

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

31. What denotes letter M in MKS system?

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

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

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

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

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

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

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

35. What are fundamental units?

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

36. What is the square root of 529?

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

37. Convert decimal 0.000659 to fraction?

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

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

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

39. What is the product of 0.003×0.5 ?

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

40. How many millimetres are there in 1 inch?

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

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

- A) $I = R/V$
- B) $I = V/R$

C) $I = R$

D) $I = 1/V$

C) 140 rpm

D) 180 rpm

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

A) 13.89

B) 13.79

C) 13.99

D) 13.69

46. What is the length L2, if total length (L) is 2.75 metre and $L1:L2 = 2:3$?

A) 1.75 metre

B) 1.25 metre

C) 1.1 metre

D) 1.65 metre

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

A) British and Metric

B) Metric and International

C) Gravitational and non-gravitational

D) Fundamental and derived

47. Which is the unit of current?

A) Volt

B) Watt

C) Ampere

D) Ohm

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

A) Rs 240

B) Rs 260

C) Rs 220

D) Rs 200

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

A) 0.28 metre

B) 0.25 metre

C) 0.23 metre

D) 0.29 metre

45. 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) 160 rpm

B) 120 rpm

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

A) 108 Volts

B) 110 Volts

C) 105 Volts

D) 100 Volts