

## PHYSICS

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1-A body moving with uniform velocity has

A - Zero acceleration

2-Unit of work is

A - Joule

3-If force is doubled and displacement is halved, work done is

A - same

4-Acceleration due to gravity on Earth is

A -  $9.8 \text{ m/s}^2$

5- Momentum depends on

A - both mass and velocity

6-SI unit of momentum is

A - Kg m/s

7-Work done is zero when angle between force & displacement is

A -  $90^\circ$

8-Kinetic energy =

A -  $\frac{1}{2} mv^2$

9-Potential energy depends on

A - height

10-SI unit of power is

A - watt

11 -Newton's first law is law of

A - inertia

12-Force =

A -  $ma$

13 -Action-reaction forces act on

A - different bodies

14-Friction always acts

A - opposite motion

15-Unit of force is

A - Newton

16-A body at rest has

A - zero momentum

17 -Impulse =

A - force  $\times$  time

18 -SI unit of impulse is

A - Ns

19-Heavier objects fall faster?

A - false

20 -Weight depends on

A - mass and gravity

21 - Displacement is:

A - vector

22 - Average velocity =

A - Total displacement / time

23 - If acceleration is zero, velocity is:

A - constant

24 - Area under velocity-time graph gives:

A - displacement

25 - Slope of velocity-time graph gives:

A- acceleration

26 - A body in free fall has:

A - constant acceleration

27 - Impulse = force  $\times$  velocity

A- force  $\times$  time

28 - Dimension of force:

A -  $MLT^{-2}$

29 - Coefficient of friction depends on:

A - nature of surface

30 - Centripetal force acts:

A - towards centre

31 - Work done by gravity is:

A - depends on direction

32 - Mechanical energy =

A - KE + PE

33 - Efficiency =

A - Output/Input  $\times 100$

34 - Torque =

A -  $F \times r$

35 - Angular velocity unit:

A - rad/ s

36 - Moment of inertia depends on:

A - mass, distance, axis

37 - Pressure in liquid increases with:

A- depth

38 - Buoyant force depends on:

A - volume displaced, density, g

39 - Surface tension unit:

A - N/m

40 - Viscosity measures:

A - flow resistance

41-Heat capacity unit:

A - J/K

42-Latent heat is:

A - heat without temp change

43-Isothermal process:

A - T constant

44-Adiabatic process:

A -  $Q = 0$

45-Young's modulus =

A - stress / strain

46-Strain is:

A - dimensionless

47-Wave length unit:

A - m

48-Echo depends on:

A - reflection

49-Speed of sound increases with:

A- temperature

50-Doppler effect depends on:

A - relative motion

51-Critical angle occurs when:

A - total internal reflection

52-Power of lens unit:

A- Diopter

53-Magnification=

A-  $v/u$

54-Electric field unit:

A - N/C

55-Electric potential =

A - work / charge

56-Capacitors in series:

A - decrease capacitance

57-Capacitors in parallel:

A - increase

58-Magnetic field around wire:

A- circular

59-Right-hand rule used for:

A - Field direction

60-Induced emf due to:

A - Magnetic flux change

61-Lenz law explains:

A - direction

62-Self inductance unit:

A - Henry

63-AC frequency in India:

A - 50 Hz

64-Peak value of AC:

A - max Value

65- RMS value relation:

A -  $V_0/\sqrt{2}$

66 - Semiconductor example:

A- silicon

67 -.p-type semiconductor has:

A - Holes

68 -n-type semiconductor has:

A- Electrons

69 -Diode allows current in:

A - one direction

70 -Zener diode used for:

A - voltage regulation

71 -Binding energy relates to:

A - stability

72 -Mass defect leads to:

A - energy release

73 -Half-life formula:

A -  $\ln 2/\lambda$

74 -Radioactive decay is:

A - random

75 - Photon energy =

A -  $hf$

76 -Photoelectric emission depends on:

A - frequency

77 -Stopping potential depends on:

A - frequency

78 -De Broglie wavelength =

A-  $h/p$

79 -Uncertainty principle:

A - cannot both be known

80 -Atomic model by Bohr explains:

A - spectrum

81 - A: Displacement can be zero

R: Initial = final position

A - Both true, R correct explanation

82 - A: Friction opposes motion

R: Surface roughness

A - Both true, R correct explanation

82 - A: Friction opposes motion

R: Surface roughness

A - Both true, R correct explanation

83 - A: Work done zero if no displacement

R:  $W = Fd$

A - Both true, R correct explanation

84 - A: KE depends on velocity

R:  $KE = \frac{1}{2}mv^2$

A - Both true, R correct explanation

85 - A: Pressure same at same depth

R: Depends only on depth

A - Both true, R correct explanation

86 - A: Surface tension decreases with temp

R: Molecular forces reduce

A - Both true, R correct explanation

87 - A: Heat flows naturally

R: From hot to cold

A - Both true, R correct explanation

88 - A: Sound faster in solids

R: Strong intermolecular force

A - Both true, R correct explanation

89 - A: Total internal reflection occurs

R: Angle > critical

A - Both true, R correct explanation

90 - A: Lens bends light

R: Refraction

A - Both true, R correct explanation

91 - A: Electric field exists

R: Due to charge

A - Both true, R correct explanation

92 - A: Potential difference needed

R: For current flow

A - Both true, R correct explanation

93 - A: Magnetic field circular

R: Around current

A - Both true, R correct explanation

94 - A: EM waves travel in vacuum

R: No medium needed

A - Both true, R correct explanation

95 - A: AC varies

R: Time-dependent

A - Both true, R correct explanation

96 - A: Semiconductor conductivity increases

R: Temperature effect

A - Both true, R correct explanation

97 - A: Diode conducts forward

R: Low resistance

A - Both true, R correct explanation

98 - A: Nuclear energy huge

R:  $E=mc^2$

A - Both true, R correct explanation

99 - A: Photon has no mass

R: Has energy

A - Both true, R correct explanation

100 - A: Electron shows wave nature

R: De Broglie theory

A - Both true, R correct explanation