Exercise-1

PART-I : ONLY ONE OPTION CORRECT TYPE

SECTION (A) : UNITS

1. One watt-hour is equivalent to -
(1) 3.6×10^3 Joule (2) 3.6×10^{-3} Joule (3) 6.3×10^3 Joule (4) 6.3×10^{-3} Joule

2. Which of the following is not equal to watt -
(1) Joule/second (2) Ampere×volt (3) $(\text{Ampere})^2 \times \text{ohm}$ (4) Ampere/volt

3. Which of the following is not the unit of length :
(1) micron (2) light year (3) angstrom (4) radian

4. Unit of Stiffen's constant is :-
(1) Watt $-m^2-K^4$ (2) Watt $-m^2-K^4$ (3) Watt $/m^2-K$ (4) Watt $/m^2\,K^4$

5 The S.I. unit of gravitaional potenital is
(1) J (2) J . kg^{-1} (3) J - kg (4) J - kg^{-2}

6. Length cannot be measured by
(1) Fermi (2) Debye (3) Micron (4) Light year

7. The Value of Plancks Constant is
(1) 6.63×10^{-34} J-sec (2) 6.63×10^{34} J/sec (4) 6.63×10^{-34} kg - M^2 (4) 6.63×10^{34} kg / sec

8. Faraday is the unit of
(1) Charge (2) emf (3) Mass (4) Energy

9. Curie is a unit of -
(1) half life (2) radioactivity (3) intensity of γ-rays (4) energy of γ-rays

10. Hertz is a unit of-
(1) Force (2) Acceleration (3) Frequency (4) Flux

11. Light year is a unit of-
(1) Time (2) Mass (3) Distance (4) Energy

12. SI unit of pressure is-
(1) Pascal (2) Dyne/cm^2 (3) cm of Hg (4) Atmosphere

13. Which of the following is not a fundamental unit –
(1) Kelvin (2) Second (3) Candela (4) Kilogram weight

14. If n is number and u is the unit of a physical quantity then which of the following is correct for the measurement of "n"-
(1) $n \propto$ size of u (2) $n \propto u^2$ (3) $n \propto \sqrt{u}$ (4) $n \propto \frac{1}{u}$

15. In C.G.S. system the magnitude of the force is 100 dynes. In another system where the fundamental physical quantities are kilogram, meter and minute, the magnitude of the force is-
(1) 0.036 (2) 0.36 (3) 3.6 (4) 36

16. Pick out the right choice $S^2 = at^4$. Here S is measured in meters, t in second. Then the unit of 'a' is-
(1) ms^{-2} (2) ms^2 (3) m^2s^4 (4) m^2s^{-4}

17. The units of angular momentum are-

(1) kg-m^2/s^2 (2) joules-s (3) joules/s (4) kg-m s^{-2}

18. 1eV is equal to -
(1) 10 erg (2) 1.6×10^{-12} erg (3) 1.6×10^{-13} erg (4) 1.6×10^{-19} erg

19. The ratio of S.I. units to the C.G.S units of 'G' is -
(1) 10^{-2} (2) 10^{-3} (3) 10^2 (4) 10^3

20. Time taken by light to travel from sun to the earth is approximately -
(1) 8 seconds (2) 8 hours (3) 8 minutes (4) 8 days

21. If the units M and L are increased three times, then the units of energy will be increased by -
(1) 3 times (2) 6 times (3) 27 times (4) 81 times

22. The SI unit of length is the meter. Suppose we adopt a new unit of length which equals to x meters. The area $1m^2$ expressed in terms of the new unit has a magnitude -
(1) x (2) x^2 (3) $\frac{1}{x}$ (4) $\frac{1}{x^2}$

23. Luminous flux is expressed in -
(1) Lux (2) Weber (3) Candela (4) Lumen

24. The ratio of S.I. to C.G.S units for Stefan's constant is -
(1) $\frac{1}{100}$ (2) $\frac{1}{1000}$ (3) 100 (4) 1000

25. If the units of ML are doubled then the unit of kinetic energy will become -
(1) 8 times (2) 16 times (3) 4 times (4) 2 times

26. Which of the following in not the unit of time -
(1) leap year (2) lunar month (3) solar day (4) parallactic second

27. Unit of impulse is :
(1) Newton (2) kg-m (3) kg- m/s (4) Joule

28. Which of the following is not the unit of time-
(1) Micro second (2) Shake (3) Lunar months (4) Parallactic second

29. The unit of permittivity of free space ε is :-
(1) Newton $metre^2/Coulomb^2$ (2) Coulomb/Newton metre
(3) $Coulomb^2$ /Newton $metre^2$ (4) $Coulomb^2$ / $(Newton\ metre)^2$

SECTION (B) : DIMENSIONS

1. The unit of $\frac{1}{\ell}\sqrt{\frac{T}{m}}$ is the same as that of (where T is tension and m is mass/length) -
(1) Frequency (2) Time period (3) Wave-length (4) Wave number

2. Which of the following is not dimensionally correct– (T = tension, m = mass/length, s = distance, h = height)
(1) $s = \frac{1}{2}at^2$ (2) $v = \sqrt{T/m}$ (3) $t = \frac{2h}{g}$ (4) $a = \frac{v^2}{r}$

3. Which of the following set have different dimensions?
(1) Pressure, Young's modulus, Stress (2) Emf, Potential difference, Electric potential
(3) Heat, Work done, Energy (4) Dipole moment, Electric flux, Electric field

4. The dimensional formula for magnetic flux is :
(1) $[ML^2T^{-2}A^{-1}]$ (2) $[ML^3T^{-2}A^{-2}]$ (3) $[M^0L^{-2}T^2A^{-2}]$ (4) $[ML^2T^{-1}A^2]$

5. The dimension of Planck constant equals to that of :
(1) Energy (2) Momentum (3) Angular momentum (4) Power

6. The dimensions of universal gravitational constant are :-
(1) ML^2T^{-1} (2) $M^{-2}L^3T^{-2}$ (3) $M^{-2}L^2T^{-1}$ (4) $M^{-1}L^3T^{-2}$

7. The dimensional formula of angular velocity is
(1) $M^0L^0T^{-1}$ (2) MLT^{-1} (3) $M^0L^0T^1$ (4) ML^0T^{-1}

8. Dimension formula for angular momentum is
(1) ML^2T^{-2} (2) ML^2T^{-1} (3) MLT^{-1} (4) $M^0L^2T^{-2}$

9. Which of the following pair does not have similar dimensions
(1) Stress and pressure (2) Angle and strain
(3) Tension and surface tension (4) planck's constant and angular momentum

10. Pressure gradient has the same dimesion as that of
(1) Velocity gradient (2) Potenital gradient
(3) Energy gradient (4) None of these

11. Dimension of R is
(1) ML^2T^{-1} (2) $ML^2T^{-3}A^{-2}$ (3) $ML^{-1}T^{-2}$ (4) None of these

12. "Pascal -Second ''has dimension of
(1) Force (2) Energy (3) Pressure (4) Coefficient of Viscosity

13. Which of the following is smallest unit
(1) Millimeter (2) Angstrom (3) Fermi (4) Meter

14. Which relation is wrong?
(1) 1 Calore = 4.18 Joules (2) 1Å = 10^{-10} m
(3) 1MeV = 1.6 ×10^{-13} Joules (4) 1 Newton =10^{-5} Dynes

15. Identify the pair whose dimensions are equal
(1) Torque and work (2) Stress and energy
(3) Force and stress (4) Force and work

16. The physical quantities not having same dimensions are -
(1) stress and Young's modulus (2) speed and $(\mu_0 \in_0)^{-1/2}$
(3) torque and work (4) momentum and Planck's constant

17. Dimensions of $1/(\mu_0 \in_0)$ where symbols have their usual meaning are -
(1) L^2T^{-2} (2) L^2T^2 (3) $L^{-1}T$ (4) LT^{-1}

18. In a given relation $F = at^1 + bt^2$, F and t denote the force and the time respectively, then dimensions of a and b are respectively as –
(1) $M^\circ L^\circ T^1$, $M^\circ L^\circ T^{-2}$ (2) $M^\circ L^1T^{-2}$, $M^\circ L^2T^{-2}$ (3) $M^1L^1T^{-3}$, $M^1L^1T^{-4}$ (4) $M^1L^1T^{-1}$, $M^1L^1T^{-2}$

19. Two quantities A and B have different dimensions. Which mathematical operation given below is physically meaningful-
(1) A/B (2) A + B (3) A – B (4) None

20. Dimensional formula for volume elasticity is-
(1) $M^2L^{-2}T^{-2}$ (2) $M^1L^{-3}T^{-2}$ (3) $M^1L^2T^{-2}$ (4) $M^1L^{-1}T^{-2}$

21. Position of a body with acceleration 'a' is given by $x = Ka^mt^n$, here t is time. Find dimension of m and n:
(1) m = 1, n = 1 (2) m = 1, n = 2 (3) m = 2, n = 1 (4) m = 2, n = 2

22. The dimension of the ratio of angular momentum and linear momentum is -
(1) L° (2) L^1 (3) L^2 (4) MLT

23. Dimensions of Torque are-

(1) $M_1L_2T_{-2}$ (2) $M_2L_2T_2$ (3) $M_{-1}LT_{-1}$ (4) $M_{-2}L_{-2}T_{-2}$

24. Out of the following which pair of quantities do not have same dimensions-
(1) Planck's constant and angular momentum. (2) Work and torque.
(3) Impulse and momentum. (4) Torque and moment of inertia

25. Dimensional formula of angular velocity is-
(1) $M_0L_0T_{-1}$ (2) $M_1L_1T_{-1}$ (3) $M_0L_{+1}T_{-1}$ (4) $M_0L_0T_{-2}$

26. Which of the following is dimensionless -
(1) universal gravitational constant (2) relative permittivity
(3) relative velocity (4) density

27. The physical quantity which has dimensional formula as that of $\frac{\text{Energy}}{\text{mass} \times \text{length}}$ is-
(1) Force (2) Power (3) Pressure (4) Acceleration

28. The dimensions of the Gravitational constant G are-
(1) $ML_{-1}T_{-1}$ (2) MLT_2 (3) $M_{-1}L_3T_{-2}$ (4) $M_2L_{-1}T_2$

29. What will be the unit of c in the equation $S = a + bt + ct^2$ if the units of S and t are meter and second respectively -
(1) meter (2) meter-sec_{-1} (3) meter-sec_{-2} (4) meter-sec

30. The dimensions of PV are equivalent to those of -
(1) Work (2) force (3) pressure (4) volume

31. The dimensions of mc^2 are -
(1) MLT_{-1} (2) ML_2T_{-1} (3) ML_2T_{-2} (4) ML_2T_2

32. In the equation $S_n = u + \frac{a}{2}(2n + 1)$ the dimensions of S_n are -
(1) $M_0L_1T_0$ (2) $M_0L_1T_{-1}$ (3) $M_1L_0T_{-1}$ (4) $M_0L_1T_{-2}$

33. The dimensions of light year is -
(1) T (2) L (3) LT (4) T_{-1}

34. Which of the following is dimensional constant -
(1) Refractive index (2) Poisson's ratio (3) Relative density (4) Gravitational constant

35. Which of the following quantities is dimensionless -
(1) strain (2) relative density (3) angle (4) all of these

36. If force $F = at + bt^2$ where t denotes time, the dimensions of a and b shall be -
(1) MLT_{-3}, ML_2T_4 (2) MLT_{-3}, MLT_{-4} (3) MLT_{-1}, MLT_0 (4) MLT_{-4}, MLT_1

37. A and B are two physical quantities having different dimensions. Then which of the following operation is dimensionally correct -
(1) A + B (2) $\log \frac{A}{B}$ (3) $\frac{A}{B}$ (4) $e^{A/B}$

38. For $10^{(at + 3)}$, the dimension of a is -
(1) $M_0L_0T_0$ (2) $M_0L_0T_1$ (3) $M_0L_0T_{-1}$ (4) none of these

39. If velocity (V), time (T) and force (F) were chosen as fundamental quantities, the dimensions of mass will be-
(1) FTV (2) $F_{-1}TV$ (3) FTV_{-1} (4) $FT_{-1}V$

40. If pressure P, velocity V and time T are taken as fundamental physical quantities, the dimensional formula of the force is-
(1) PV_2T_2 (2) $P_{-1}V_2T_{-2}$ (3) PVT_2 (4) $P_{-1}VT_2$

41. A particle of masss m is suspended by a spring if frequency of its oscilation is $n = cm^xk^y$ here c is a constant then the value of x and y are -

(1) $x = \frac{1}{2}, y = \frac{1}{2}$ (2) $x = -\frac{1}{2}, y = -\frac{1}{2}$ (3) $x = -\frac{1}{2}, y = \frac{1}{2}$ (4) $x = \frac{1}{2}, y = -\frac{1}{2}$

42. The velocity of a freely falling body changes as $g^p h^q$, where g is acceleration due to gravity and h is the height. The value of p and q are-

(1) $1, \frac{1}{2}$ (2) $\frac{1}{2}, \frac{1}{2}$ (3) $\frac{1}{2}, 1$ (4) 1, 1

43. In the formula $V = E^b d^a$, if V ; E and d are the velocity of longitudinal waves, bulk modulus of elasticity and density of the gaseous medium respectively, then the values of a and b are respectively -

(1) $-\frac{1}{\sqrt{2}}$ and $\frac{1}{2}$ (2) $\frac{1}{2}$ and $-\frac{1}{\sqrt{2}}$ (3) $-\frac{1}{\sqrt{2}}$ and $\frac{1}{\sqrt{2}}$ (4) $-\frac{1}{\sqrt{2}}$ and $-\frac{1}{\sqrt{2}}$

44. If force (F), area (A) and density (D) are taken as the fundamental units, the dimensional representation of Youngs modulus will be -

(1) $F^{-1}A^{-1}D^{-2}$ (2) $FA^{-2}D^{-2}$ (3) $FA^{-1}D^{0}$ (4) $FA^{-1}D$

45. A spherical body of mass m and radius r is allowed to fall in a medium of coefficient of viscosity η. The time in which its velocity rises to 0.63 times the critical velocity v is known as τ. τ is dimensionally represented by

(1) $mr^2/6\pi\eta$ (2) $\sqrt{6\pi\eta mr/g}$ (3) $m/6\pi\eta rv$ (4) none of the above

46. The dimensions of the coefficient of viscosity are -

(1) $ML^{-1}T^{-1}$ (2) MLT (3) $M^{-1}L^{-1}T^{-1}$ (4) $M^0L^0T^0$

47. The ratio of the dimension of Planck's constant and that of the moment of inertia is the dimension of :-

(1) Velocity (2) Angular momentum (3) Time (4) Frequency

48. The dimensions of the coefficient of viscosity are -

(1) $ML^{-1}T^{-1}$ (2) MLT (3) $M^{-1}L^{-1}T^{-1}$ (4) $M^0L^0T^0$

Exercise-2

1. An air bubble inside water oscillates due to some explosion with period T. If $T \propto P^a d^b E^c$ then determine the values of a, b and c. Here P, d and E are the static pressure, density and total energy of explosion of water respectively. -

(1) a = 5/6, b = 1, c = 1/3 (2) a = –5/6, b = 1/2, c = 1/3

(3) a = 1, b = 1, c = 1 (4) a = 0, b = 0, c = 1

2. The velocity of a particle depends upon time according to the relation $v = \alpha t + \frac{\beta}{t+\gamma}$. The dimensions of α, β and γ will be -

(1) LT^{-2}, L, T (2) L, T, LT^{-2} (3) T, L, LT^{-2} (4) LT^{-1}, L, T

3. The velocity of ripples on water surface depends upon the wavelength λ, density of water d and acceleration due to gravity g. Which of the following relations is correct among these quantities -

(1) $V^2 \propto g\lambda$ (2) $V^2 \propto \frac{1}{g\lambda}$ (3) $V^2 \propto \frac{\lambda}{gd}$ (4) $V^2 \lambda g \lambda d$

4. A wave is represented by
$y = a \sin (At - Bx + C)$
where A, B, C are constants. The dimensions of A, B, C are -
(1) T^{-1}, L, $M^0L^0T^0$ (2) T^{-1}, L^{-1}, $M^0L^0T^0$ (3) T, L, M (4) T^{-1}, L^{-1}, M^{-1}

5. The dimensions of Rydberg's constant are -
(1) $M^0L^{-1}T$ (2) M L T^{-1} (3) $M^0L^{-1}T^0$ (4) ML^0T^2

6. The SI unit of Mechanical Equivalent of heat is -
(1) Joule × Calorie (2) Joules@Calorie (3) Calorie × Ergs (4) Ergs@Calorie

7. Given that the displacement of a particle is given by $x = A^2 \sin kt$, where t denote the time. The unit of k is -
(1) hertz (2) metre (3) radian (4) seconds

8. In a relation $F = a \sin k_1x + b \sin k_2t$, F, x and t denote the force, distance and time respectively. Units of k_1 and k_2 are respectively as –
(1) Metre, sec (2) $Metre^{-1}$, sec^{-1} (3) $Metre^{-1}$, sec (4) Metre, sec^{-1}

9. E, m, J and G represent energy, mass, angular momentum and gravitational constant respectively. Then the dimensions of EJ^2/m^5G^2 are that of -
(1) angle (2) length (3) mass (4) time

10. If the velocity of light c, gravitational constant G and planck's constant h be taken as fundametal units the dimension of mass in the new system will be -
(1) $c^{1/2}h^{1/2}G^{1/2}$ (2) $c^{1/2}h^{1/2}G^{-1/2}$ (3) $c^{-3/2}h^{1/2}G^{1/2}$ (4) $c^{-5/2}h^{1/2}G^{1/2}$

11. Force $F = \frac{X}{\text{density}} + C$ is a dimensionally correct relation, then X will have dimensions -
(1) MLT^{-2} (2) MLT^{-3} (3) ML^2T^{-3} (4) $M^2L^{-2}T^{-2}$

12. If P is the pressure of a gas and ρ is its density, then dimension of velocity is given by -
(1) $P^{1/2}\rho^{-1/2}$ (2) $P^{1/2}\rho^{1/2}$ (3) $P^{-1/2}\rho^{1/2}$ (4) $P^{-1/2}\rho^{-1/2}$

13. The equation of a plane progressive wave is given by $y = A \sin(\omega t - kx)$. The dimensions of ω/k are that of –
(1) Frequency (2) Velocity (3) Wavelength (4) Inverse of velocity

14. If L denotes the inductance of an inductor through which a current i is flowing, the dimensions of Li^2 are-
(1) ML^2T^{-2} (2) Not expressible in MLT
(3) MLT^{-2} (4) $M^2L^{-2}T^{-2}$

15. The velocity v (in cm/sec) of a particle is given in terms of time t (in sec) by the relation $v = at + \frac{b}{t+c}$, the dimensions of a, b and c are-
(1) $a = L^2$, b = T, $c = LT^2$ (2) $a = LT^2$, b =LT, c = L
(3) $a = LT^{-2}$, b = L, C = T (4) a = L, b = LT, $c = T^2$

16. Which of the following represents a volt-
(1) Joule / second (2) Watt / Ampere (3) Watt / Coulomb (4) Coulomb / Joule

17. In the relation $y = a \cos (\omega t - kx)$ the dimensional formula for k is –
(1) $[M^o L^{-1}T^{-1}]$ (2) $[M^oLT^{-1}]$ (3) $[M^oL^{-1}T^o]$ (4) $[M^oLT]$

18. In a system of unit if force (F), acceleration (A) and time (T) are taken as fundamental units then the dimensional formula of energy is :
(1) FA^2T (2) FAT^2 (3) F^2AT (4) FAT

19. Out of following four dimensional quantities, which one quantity is to be called a dimensional constant
(1) Acceleration due to gravity (2) Surface tension of water
(3) Weight of a standard kilogram mass (4) The velocity of light in vacuum

20. In the formula $X = 3YZ^2$, X and Z have dimensions of capacitance and magnetic induction respectively. What are the dimensions of Y in MKSQ system?
(1) $[M^{-3} L^{-1} T^3 Q^4]$ (2) $[M^{-3} L^{-2} T^4 Q^4]$ (3) $[M^{-2} L^{-2} T^4 Q^4]$ (4) $[M^{-3} L^{-2} T^4 Q^1]$

21. The dimensions of $\left(\frac{1}{2}\right)\varepsilon_0 E^2$ (ε_0: permittivity of free space; E: electric field) are:
(1) MLT^{-1} (2) $ML^{-2}T^{-2}$ (3) MLT^{-2} (4) $ML^{-1}T^{-2}$
[note - there was no correct option in IIT so we made the correct option]

22. If the unit of force and length each be increased by four times, then the unit of energy is increased by
(1) 16 times (2) 8 times (3) 2 times (4) 4 times

Exercise-3

PART-I : NEET / AIPMT QUESTION (PREVIOUS YEARS)

1. If the dimensions of a physical quantity are given by $M^aL^bT^c$, then the physical quantity will be
(1) pressure if a =1, b= –1, c = –2 (2) velocity if a =1, b = 0, c = –1 **[AIPMT-2009]**
(3) acceleration if a =1, b= 1, c = –2 (4) force if a =0, b= –1, c = –2

2. The dimension of $\frac{1}{2}\varepsilon_0 E^2$, where ε_0 is permittivity of free space and E is electric field, is **[AIPMT-2010]**
(1) ML^2T^{-2} (2) $ML^{-1}T^{-2}$ (3) ML^2T^{-1} (4) MLT^{-1}

3. The density of material in CGS system of units is $4 g/cm^3$. In a system of units in which unit of lengths is 10 cm and unit of mass is 100 g, the value of density of material will be : **[AIPMT-2011]**
(1) 0.4 (2) 40 (3) 400 (4) 0.04

4. If force (F), velocity (V) and time (T) are taken as fundamental units, the dimensions of mass are **[AIPMT-2014]**
(1) $[FVT^{-1}]$ (2) $[FVT^{-2}]$ (3) $[FV^{-1}T^{-1}]$ (4) $[FV^{-1}T]$

5. If energy (E), velocity (V) and time (T) are chosen as the fundamental quantities, the dimensional formula of surface tension will be: **[AIPMT-2015]**
(1) $[EV^{-1} T^{-2}]$ (2) $[EV^{-2}T^{-2}]$ (3) $[E^{-2}V^{-1}T^{-3}]$ (4) $[EV^{-2} T^{-1}]$

PART - II : JEE (MAIN) / AIEEE PROBLEMS (PREVIOUS YEARS)

1. The density of a material in SI units is 128 kgm^{-3}. In certain units in which the units of length is 25 cm and the unit of mass is 50 g, the numerical value of density of the material is : **[JEE Main 2019]**
(1) 410 (2) 40 (3) 640 (4) 16

2. If speed (V), acceleration (A) and force (F) are considered as fundamental units, the dimension of Young's modulus will be : **[JEE Main 2019]**
(1) $V^{-4}A^2F$ (2) $V^{-2}A^2F^{-2}$ (3) $V^{-4}A^{-2}F$ (4) $V^{-2}A^2F^2$

3. Let ℓ, r, c and v represent inductance, resistance, capacitance and voltage, respectively. The dimension of $\frac{\ell}{rcv}$ in SI units will be : **[JEE Main 2019]**
(1) $[LT^2]$ (2) $[LA^{-2}]$ (3) [LTA] (4) $[A^{-1}]$

Answers

EXERCISE - 1

SECTION (A)

1.	(1)	**2.**	(4)	**3.**	(4)	**4.**	(4)	**5**	(2)	**6.**	(2)	**7.**	(1)
8.	(1)	**9.**	(2)	**10.**	(3)	**11.**	(3)	**12.**	(1)	**13.**	(4)	**14.**	(4)
15.	(3)	**16.**	(4)	**17.**	(2)	**18.**	(2)	**19.**	(4)	**20.**	(3)	**21.**	(3)
22.	(4)	**23.**	(4)	**24.**	(4)	**25.**	(1)	**26.**	(4)	**27.**	(3)	**28.**	(4)
29.	(3)												

SECTION (B)

1.	(1)	**2.**	(3)	**3.**	(4)	**4.**	(1)	**5.**	(3)	**6.**	(4)	**7.**	(3)
8.	(2)	**9.**	(3)	**10.**	(4)	**11.**	(2)	**12.**	(4)	**13.**	(1)	**14.**	(4)
15.	(1)	**16.**	(4)	**17.**	(1)	**18.**	(3)	**19.**	(1)	**20.**	(4)	**21.**	(2)
22.	(2)	**23.**	(1)	**24.**	(4)	**25.**	(1)	**26.**	(2)	**27.**	(4)	**28.**	(3)
29.	(3)	**30.**	(1)	**31.**	(3)	**32.**	(1)	**33.**	(2)	**34.**	(4)	**35.**	(4)
36.	(2)	**37.**	(3)	**38.**	(3)	**39.**	(3)	**40.**	(1)	**41.**	(3)	**42.**	(2)
43.	(1)	**44.**	(3)	**45.**	(4)	**46.**	(1)	**47.**	(4)	**48.**	(1)		

EXERCISE - 2

1.	(2)	**2.**	(1)	**3.**	(1)	**4.**	(2)	**5.**	(3)	**6.**	(2)	**7.**	(1)
8.	(2)	**9.**	(1)	**10.**	(2)	**11.**	(4)	**12.**	(1)	**13.**	(2)	**14.**	(1)
15.	(3)	**16.**	(2)	**17.**	(3)	**18.**	(2)	**19.**	(4)	**20.**	(2)	**21.**	(4)
22.	(1)												

EXERCISE - 3

PART - I

1.	(1)	**2.**	(2)	**3.**	(2)	**4.**	(4)	**5.**	(2)

PART - II

1.	(2)	**2.**	(1)	**3.**	(4)