

**Physics-Model Question Paper**

- 51.[BT:K] Bodies which do not allow the charges to pass through it are called\_\_\_\_\_.  
(A) Conductors (B) Insulator (C) Semiconductor (D) Superconductor.
- 52.[BT:K] Two equal and opposite charges separated by a small distance constitute an\_\_\_\_\_.  
(A) Electric Dipole (B) Electric Quadrupole  
(C) Electric Octapole (D) Electric Potential.
- 53.[BT:K] \_\_\_\_\_ is defined as the rate of flow of charges across any cross-sectional area of A conductor.  
(A) Current (B) Velocity (C) Resistivity (D) None of the above.
- 54.[BT:C] Electromagnetic waves are\_\_\_\_\_.  
(A) Transverse (B) Longitudinal (C) May be Transverse or Longitudinal  
(D) Neither Transverse nor Longitudinal.
- 55.[BT:C] What is polarizer?  
(A) A device which examines a plane polarized light  
(B) A device which produces a plane polarized light.  
(C) The instrument used for the measurement of potential difference  
(D) A device used to perform constructive Interference of Light.
- 56.[BT:C] The cathode rays are\_\_\_\_\_.  
(A) A stream of electrons (B) A stream of positive ions (C) A stream of uncharged particles (D) None of the above.
- Isotopes have
- 57.[BT:A]  
(A) Same Mass number but different Atomic number  
(B) Same Proton number and Neutron number  
(C) Same Proton number but different Neutron number  
(D) Same mass number.

58.[BT:K] What are  $\alpha$ -rays?

- (A) It is a helium nucleus consisting of two protons and two neutrons.
- (B) It carries one unit of negative charge and mass equal to that of an electron
- (C) They are electromagnetic waves of very short wavelength
- (D) It is a stream of uncharged particles.

59.[BT:C] The process of breaking up the nucleus of a heavier atom into 2 fragments with the release of a large amount of energy is called \_\_\_\_\_.

- (A) Nuclear Fission (B) Nuclear Fusion (C) Chain Reaction
- (D) Controlled Chain reaction.

60.[BT:K] When the positive terminal of the battery is connected to the P-side and negative terminal to the N-side then the PN junction diode is said to be \_\_\_\_\_.

- (A) Reverse biased (B) Forward biased (C) Avalanche Breakdown
- (D) Avalanche Effect.

61.[BT:C] \_\_\_\_\_ gates are called Universal gates.

- (A) NOT and NOR (B) AND and NOR (C) NAND and NOR (D) OR and NOT.

62.[BT:K] When the frequency of carrier wave is changed in accordance with the intensity of the signal, the process is called \_\_\_\_\_.

- (A) Amplitude Modulation (B) Frequency Modulation (C) Band width
- (D) None of the above.

63.[BT:A] Four charges  $+q$ ,  $+q$ ,  $-q$  and  $-q$  respectively are placed at the corners A, B, C and D of a square of side 'a'. The Electric potential at the centre 'O' of the square is \_\_\_\_\_.

- (A)  $q/4\pi\epsilon_0 a$  (B)  $4q/4\pi\epsilon_0 a$  (C) Zero (D)  $4q$ .

64.[BT:C] The phenomenon of producing an induced emf due to the changes in the magnetic flux associated with a closed circuit is known as \_\_\_\_\_.

- (A) Electromagnetic Induction (B) Thermoelectric current (C) Photo-electric current
- (D) Magnetic Induction.

65.[BT:K] The ratio of longitudinal stress to longitudinal strain is known as \_\_\_\_\_.

- (A) Young's Modulus of the material (B) Bulk Modulus of the material
- (C) Rigidity Modulus of the material (D) Moment of Inertia.

66.[BT:K] The bending of the waves around the edges of an obstacle is called \_\_\_\_\_.

- (A) Interference (B) Diffraction (C) Refraction (D) Polarisation.

67.[BT:A] Which of the following quantity is scalar?

- (A) Electric Force (B) Electric field (C) Electric Potential (D) All the above.

68.[BT:C] The material through which electric charge can flow easily is \_\_\_\_\_.

- (A) Rubber (B) Quartz (C) Copper (D) Glass.

- 69.[BT:K]The unit used to express the mass of the nucleus is \_\_\_\_\_.  
 (A) Atomic mass unit (B) Metre (C) Centimetre (D) Millimetre.
- 70.[BT:K]Best example for semiconductor is \_\_\_\_\_.  
 (A) Germanium (B) Copper (C) Wood (D) Rubber.
- 71.[BT:K]The SI unit of Electric field strength is \_\_\_\_\_.  
 (A) Newton/Coulomb (B)Coulomb (C) Newton (D) Coulomb metre.
- 72.[BT:C] \_\_\_\_\_ gate or Invertor is a device whose output is 1 when its input is 0 and whose output is 0 when its input is 1.  
 (A) OR Gate (B) AND Gate (C) NOT Gate (D) None of the above.
- 73.[BT:C]Theejection of electrons from the surface of the metal under the action of light is called \_\_\_\_\_.  
 (A) Gravitation effect (B) Magnetic effect (C) Photo-electric effect (D) Peltier Effect.
- 74.[BT:K]The rate of change of displacement is \_\_\_\_\_.  
 (A) Velocity (B) Dispersion (C) Energy (D) Acceleration.
- 75.[BT:C]The property of a conductor which enables to induce an emf in it when the current in the circuit changes is called \_\_\_\_\_.  
 (A) Self-Induction (B) Mutual Induction (C) Thermal Conduction  
 (D) Thermoelectric current.

### Answers(Physics)

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|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 51(B) | 52(A) | 53(A) | 54(A) | 55(B) | 56(A) | 57(C) | 58(A) | 59(A) | 60(B) |
| 61(C) | 62(B) | 63(C) | 64(A) | 65(A) | 66(B) | 67(C) | 68(C) | 69(A) | 70(A) |
| 71(A) | 72(C) | 73(C) | 74(A) | 75(A) |       |       |       |       |       |