

**Model Paper**  
**PHYSICS (New)**

Inter Part – II  
**(Fresh/Reappear)**

**Note:** Time allowed for Section – B and Section – C is 2 Hours and 40 minutes.

**Section – B**

**Marks: 40**

**Q-II** Attempt any TEN parts. Each part carries FOUR marks.

1. Do the electron tends to go to the region of low potential or high potential? Explain.
2. Define electric flux and briefly explain when will be the flux minimum and maximum?
3. Describe a circuit which gives a continuously varying electric potential.
4. Can step up transformer increase the power level? Explain.
5. Why don't we observe Compton Effect with ordinary light?
6. The peak voltage is 500 volts. What is the effective value of voltage?
7. A particle which produces more ionization is less penetrating. Why?
8. What do we mean by critical mass?
9. Why Laser light is harmful to our Eyes as compare to ordinary light?
10. Differentiate between inertial and non inertial frame of reference.
11. Differentiate soft and hard magnetic material with examples.
12. What do we mean when we say that the atom is ionized?
13. Why the base current is weak as compared to collector current?

**Section – C**

**Marks: 27**

**Note :** Attempt any THREE questions. All questions carry equal marks.

- Q-III (a) What is capacitor? Find the capacitance of a parallel plate capacitor.  
(b) A capacitor is connected in series with a resistor and charged. Explain why the potential difference across the resistor decreases with time during the charging?
- Q-IV (a) Discuss in detail Photon, Leptons and Hadrons with examples.  
(b) Calculate the current through a single loop of circuit if  $E = 12V$ ,  $R = 100 \text{ ohm}$  and  $r = 0.001 \text{ ohm}$ ?
- Q-V (a) State Einstein's postulate of special theory of relativity. Discuss its various results.  
(b) What is the mass of a 60 kg man in a space rocket traveling at  $0.8 C$  from us as measured from earth?
- Q-VI Write a short note on any two of the following.
- (i) Magnetic Hysteresis
  - (ii) LASER
  - (iii) Metal detector