



# SMART TEST SERIES

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Name:		Subject:	Physics-12
Roll # :		Unit(s):	12,
Class:	Inter Part-II	Test:	Type 2 - SQs Test - Marks=40
Date:		Time:	

## SHORT QUESTIONS TEST

### 1- Write short answers to any 7 questions: (7x2=14)

- (i) Distinguish between electric field and field intensity.
- (ii) Mention two situations of vector area in electric flux.
- (iii) Define electric flux. Mention the factors upon which it depends.
- (iv) Define Gaussian surface and electric lines of force.
- (v) Find electric intensity of field inside a hollow charged sphere.
- (vi) What is meant by EEG and ERG?
- (vii) Comment on electric field in region of constant potential.
- (viii) A particle carrying a charge of  $5e$  falls through a potential difference of  $10.0$  V. What will be the energy acquired by it.
- (ix) Differentiate between electrical potential difference and electric potential at a point.
- (x) What is the effect of polarization on the capacitance of a capacitor?

### 2- Write short answers to any 7 questions: (7x2=14)

- (i) Distinguish between conductor and photo-conductor.
- (ii) State and write formula of Gauss's Law.
- (iii) Show that  $1 \text{ N/C} = 1 \text{ v/m}$ .
- (iv) Write two similarities and dissimilarities among electric force and gravitational force?
- (v) Why capacitance of a parallel plate capacitor increase in the presence of dielectric?
- (vi) Define capacitance and electric polarization.
- (vii) What is time constant?
- (viii) Draw a graph between (q-t) for charging and discharging of a capacitor in case of R-C Circuit.
- (ix) Define time constant for RC circuit also draw (q-t) graph for charging capacitor in RC circuit.
- (x) How much is the amount of charge at start of discharging of capacitor and start of charging of a capacitor.

### 3- Write short answers to any 6 questions: (6x2=12)

- (i) Define Electric force and Electrostatics.
- (ii) What is Coulomb's law and effect of dielectric on Coulomb's force?
- (iii) Suppose that you follow can electric field line due to a positive point charge. Do electric field and potential increase or decrease?
- (iv) Describe five/four properties of electric field lines.
- (v) What is a photoconductor?
- (vi) Define unit of Capacitance give its units.
- (vii) How can you identify that which plate of a capacitor is positively charged?
- (viii) Describe the force or forces on a positive point charge when placed between parallel plates with similar and equal charges.
- (ix) Define electric polarization.