Parishram (2025)

Physics

Electrostatic Potential and Capacitance

Q1 What is the value of capacitance of a capacitor which has a voltage of 4V and has 16 C of charge?
(A) 2F   (B) 4F
(C) 6F   (D) 8F

Q2 Capacitor is a device used to :
(A) Store electrical energy
(B) Vary the resistance
(C) Store magnetic energy
(D) Dissipate energy

Q3 When the plate area of a capacitor increases:
(A) The capacitance increases
(B) The capacitance decreases
(C) The capacitance is unaffected
(D) The voltage it can withstand increases

Q4 Assuming the earth to be a spherical conductor of radius 6400 km, calculate its capacitance.
(A) 711 μF
(B) 644 μF
(C) 2000 μF
(D) 200 μF

Q5 The capacity of the conductor does not depend upon:

(A) Charge
(B) Voltage
(C) Nature of the material
(D) All of these

Q6 A conducting sphere of radius R = 20 cm is given a charge Q = 16μC. What is electric field $\vec{E}$ at centre :
(A) 3.6×10^6 N/C
(B) 1.8×10^6 N/C
(C) Zero
(D) 0.9×10^6 N/C

Q7 In a charged capacitor, the energy resides:
(A) in positive charge
(B) Both in positive and negative charge
(C) in the electric field between the plates
(D) Around the edge of the capacitor plates

Q8 The capacity of a parallel plate condenser is 15μF, when the distance between its plates is 6 cm. If the distance between the plates is reduced to 2 cm, then the capacity of this parallel plate condenser will be:
(A) 15μF   (B) 30μF
(C) 45μ F   (D) 60μ F

Answer Key

Q1	(B)		Q5	(D)
Q2	(A)		Q6	(C)
Q3	(A)		Q7	(C)
Q4	(A)		Q8	(C)