DPP CAPACITANCE

1. The capacitance of a condenser is 20 μF and it is charged to a potential of 2000 V. The energy stored in it will be
(a) zero (b) 40 J (c) 80 J (d) 120 J

2. A 100 μF capacitor is charged to 200 volt. It is discharged through a 2 ohm resistance. The amount of heat generated will be
(a) 0.4 J (b) 0.2 J (c) 2 J (d) 4 J

3. The capacitance of a charged condenser is C and energy stored on account of charge on it is U, then the quantity of charge on the conductor will be
(a) $\sqrt{2UC}$ (b) $\sqrt{\frac{UC}{2}}$
(c) $2\,UC$ (d) zero

4. Two charged conducting spheres are joined by a conducting wire then
(a) nothing will be conserved
(b) the total energy will be conserved
(c) the total charge will be conserved
(d) the total charge and energy will be conserved

5. The net charge on a condenser is
(a) infinity (b) $q/2$
(c) $2q$ (d) zero

6. The capacitance of a spherical conductor of radius r is proportional to
(a) $1/r$ (b) r (c) $1/r^2$ (d) r^2

7. The energy stored between the plates of a condenser is *not* represented by
(a) $U = \frac{CV^2}{2}$ (b) $U = 2qV$
(c) $U = \frac{q^2}{2C}$ (d) $U = \frac{q^2}{2C}$

ANSWER 1.B 2.C 3.A 4.C 5.D 6.B 7.B