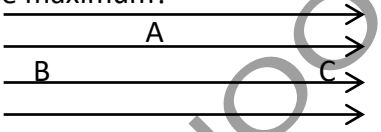
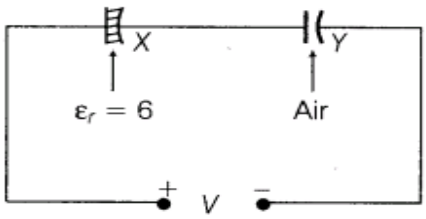
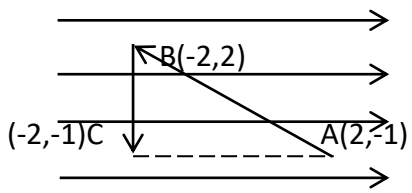
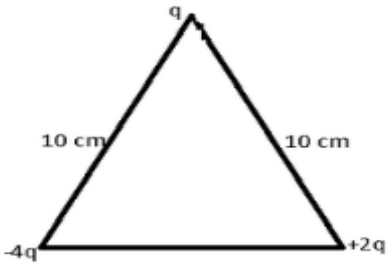
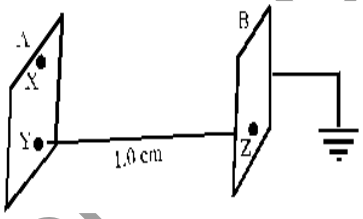
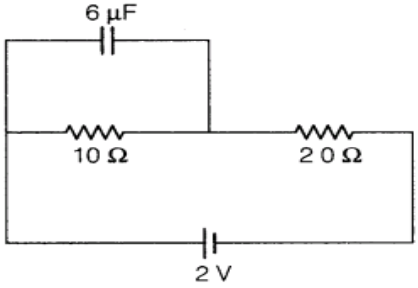
INDIAN SCHOOL DARSAIT
DEPARTMENT OF PHYSICS

Subject : PHYSICS	CHAPTER 2 : ELECTROSTATIC POTENTIAL AND CAPACITANCE	Date: 10.4.19
Resource Person: SUSAN ANIL		
Name of the Student :	Class & Division :	Roll Number :

1.	For any charge configuration, equipotential surface through a point is normal to the electric field. Justify.(**D2014**)	1
2.	Why electrostatic potential is constant throughout the volume of the conductor and has the same value as on its surface? (**F2012**)	1
3.	Why there is no work done in moving a charge from one point to another on an equipotential surface? (**F2012**)	1
4.	A hollow metal sphere of radius 5cm is charged such that the potential on its surface is 10V. What is the potential at the centre of the sphere?(**AI2011**)	1
5.	A 500μC charge is at the centre of a square of side 10cm. Find the work done in moving a charge of 10μC between two diagonally opposite points on the square.(**AI2008**)	1
6.	Figure given below shows three points A, B, C in a uniform electric field. At which of the points will the potential be maximum? 	1
7.	Define dielectric strength of a dielectric.(**D2008**)	1
8.	In the figure given below, X, Y represent parallel plate capacitors having the same area of plates and the same distance of separation between them. What is the relation between the energies stored in the two capacitors? (**F 2008**) 	1
9.	A test charge 'q' is moved without acceleration from A to C along the path from A to B and then from B to C in electric field as shown in the figure. Calculate the potential difference between A and C. (ii) At which point is the electric potential more and why? (**AI2012**) 	2

10.	Calculate the work done to dissociate the system of three charges placed on the vertices of a triangle as shown: (**D2008**)  	2
11.	Two uniformly large parallel thin plates having charge densities σ and-σ are kept in the XZ plane at a distance 'd' apart. Sketch an equipotential surface due to electric field between the plates. If a particle of mass 'm' and charge '-q' remain stationary between the plates, what is the magnitude and direction of this field. (**D2011**)	2
12.	Draw three equipotential surfaces corresponding to a field that uniformly increases in magnitude but remains constant along Z-direction. How are these surfaces different from that of a constant electric field along Z-direction? (**AI2009**)	2
13.	Two identical plane metallic surfaces A and B are kept parallel to each other in air separated by a distance of 1cm as shown in the figure.  Surface A is given a positive potential of 10V and the outer surface of B is earthed. What is the magnitude and direction of the uniform electric field between points Y and Z? What is the work done in moving a charge of 20μC from point X and point Y? (**SP2011**)	2
14.	A capacitor is charged with a battery and then its plate separation is increased without disconnecting the battery. What will be the change in Charge, Energy, Potential difference, Electric field between the plates of the capacitor? (**SP 2011**)	2
15.	Find the charge on the capacitor as shown in the circuit. (**F2014**)  	2