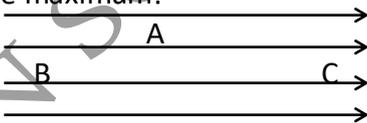
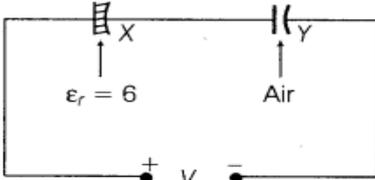


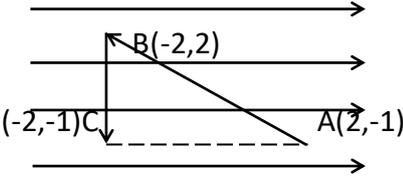
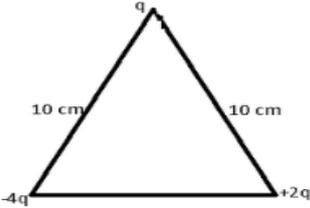
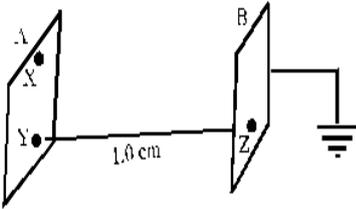
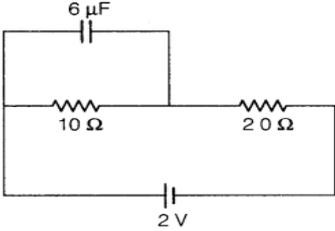


INDIAN SCHOOL DARSAIT
DEPARTMENT OF PHYSICS



Subject : PHYSICS	Topic : <u>ELECTROSTATIC</u> <u>POTENTIAL</u>	Date of Worksheet : 10.4.18
Resource Person: SUSAN ANIL		Date of submission: 12.4.18
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 $500\mu\text{C}$ charge is at the centre of a square of side 10cm. find the work done in moving a charge of $10\mu\text{C}$ 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.	<p>Calculate the work done to dissociate the system of three charges placed on the vertices of a triangle as shown: (D2008)</p> 	2
11.	<p>Two uniformly large parallel thin plates having charge densities σ and $-\sigma$ 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)</p>	2
12.	<p>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)</p>	2
13.	<p>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.</p>  <p>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 $20\mu\text{C}$ from point X and point Y? (SP2011)</p>	2
14.	<p>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)</p>	2
15.	<p>Find the charge on the capacitor as shown in the circuit. (F2014)</p> 	2