Mohammed Khaidar University of Biskra

Module: PW Physics2 **Faculty of Science and Technology**

Level: 1st Year ST-LMD **Academic Year: 2023/2024**

Group :

Date :

Members of the Group:

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Practical Work Report 2:

Equipotential surfaces and electric field lines

I. Experiment 1:

1. Fill in the table.

(x,y) / Voltage	(x,4)	(x,6)	(x,8)	(x,10)	(x,12)
2 v					
4 v					
6 v					
8 v					

2. At the equal potential line (V=6v), the voltage values before and after this line are 1 cm.

voltage.		6V	
Coordinates X	X_6-1cm=……		X_6+1cm=……

3. Calculate the electric field strength $E_{moy}= \Delta V/\Delta X$ at this line.

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4. Represent isopotential lines as well as electric field lines in millimeter paper.

5. How are electric field lines?

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6. Graph the curve V=f(X).

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7. Represents the slope of the curve.

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8. In this case, deduce the relation V= f(X).

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II. Experiment 2:

1. Fill in the table.

(x,y) / Voltage	(X,0)	(-X,0)	(0,Y)	(0,-Y)
2 v				
4 v				
6 v				
8 v				

2. How does the voltage within the central conveyor change?

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conclude the value of the field

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3. Represent isopotential lines as well as electric field lines in millimeter paper.

4. Graph the curve V=f(r) in millimeter paper.

5. Calculate the values of E_{moy}

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V	V(2,4)	V(4,6)	V(6,8)
E_{moy}	…….	……..	……..

6. The relationship between these values and the spacing of isopotential lines.

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Conclusion :

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