

# TALEEMI DUNYA

## Test Syllabus: Unit # 1

St. Name		Test	PHYSICS	T. Marks	30	Time	60 Min
F.Name		Class	12 <sup>th</sup>	T. Code	U#1	T. Date	

NOTE: Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle in front of that Question with Marker or Pen ink. Cutting or filling two or more circles will result in zero mark in that question. **6.**

1	Total flux through a closed surface depends on:						
(a)	Shape of surface	(b)	Charge enclosed only	(c)	Medium only	(d)	Charge and Medium
2	Electric flux does not depend upon:						
(a)	Medium	(b)	Shape of closed surface	(c)	Charge enclosed	(d)	Medium and charge enclosed
3	A particle carrying a charge of $2e$ falls through a potential difference of 3 V. The energy acquired by it is:						
(a)	$9.6 \times 10^{-18} \text{ J}$	(b)	$9.6 \times 10^{-19} \text{ J}$	(c)	$1.6 \times 10^{-19} \text{ J}$	(d)	$9.6 \times 10^{-17} \text{ J}$
4	The work done in bringing a unit positive charge from infinity to that point in an electric field is called:						
(a)	Potential	(b)	Potential difference	(c)	Absolute potential	(d)	All of these
5	A charge of 10 C between two parallel plates 1 cm apart experience a force of 10 N:						
(a)	10 V	(b)	$10^2 \text{ V}$	(c)	$10^3 \text{ V}$	(d)	$10^4 \text{ V}$
6	Charge carriers in electrolytes are:						
(a)	Protons	(b)	Electrons	(c)	Holes	(d)	Positive and Negative ions

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### Q.2 Write short answers of the following questions.

(8x2=16)

1. Describe five/four properties of electric field lines.
2. Define electric potential difference with unit.
3. Do electrons tend to go to region of high potential or of low potential?
4. What is the difference between electric and gravitational force?
5. Define unit of Capacitance give its units.
6. How can you identify that which plate of a capacitor is negatively charged?
7. Define dielectric constant give its mathematical form.
8. What is time constant?

### Q.3 Write long answers of the following questions.

(4+4=8)

- (a) Describe the Millikan's method to find the charge on an electron.
- (b) The time constant of a series RC circuit is  $t = RC$ . Verify that an ohm time farad is equivalent to second.