

TEST-4
CH - 13

PHYSICS

Time Allowed: 15 Minutes

-019(10TH CLASS)

Paper: (Objective Type)

Maximum Marks : 12

Note : You have four choices for each objective type question as A,B,C and D. The choice which you think is correct fill that circle in front of that question number. Use marker or pen in fills this circle. Cutting or filling two or more circles will result in zero mark in that question.

Q. 1	QUESTIONS	(A)	(B)	(C)	(D)
1.	S.I unit of capacitance is	Coulomb	Electric volt	Farad	Volt
2.	Capacitance is defined as	VC	Q/V	QV	V/Q
3.	The unit of electric intensity.	ms ⁻¹	NS	Nm	Ne ⁻¹
4.	Electroscope is used to detect:	Charge	Current	Voltage	Resistance
5.	In series combination of capacitors each capacitor will have same.	Voltage	Charge	Capacitance	Charge and voltage
6.	The value of k in coulomb's law is.	$9 \times 10^9 \text{ Nm}^2\text{C}^{-2}$	$9 \times 10^9 \text{ Nm}^2\text{C}^{-2}$	$9 \times 10^8 \text{ Nm}^2\text{C}^{-2}$	$9 \times 10^{-9} \text{ Nm}^2\text{C}^{-2}$
7.	The SI Unit of charge is.	Volt	Coulomb	Ampere	Ohm
8.	How many factors are which effect the ability of capacitor to store charge?	2	3	4	5
9.	The coulomb's law is.	$F = k \frac{q_1 q_2}{r^2}$	$F = k \frac{q_1 q_2}{r^2}$	$F = qE$	$F = G \frac{m_1 m_2}{r^2}$
10.	Positive Electric charge is	Repels other positive charge	Attract other positive charge	Attract a neutral charge	Repels a neutral object
11.	To protect the gold leaves of electroscope from the external electric disturbances, the aluminum foil is grounded by a thin wire, which is made up of.	Aluminium	Silver	Copper	Brass
12.	Which device is used to store charge?	Resistor	Capacitor	Dielectric	Fuse

A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
1	(A)	(B)	(C)	(D)	4	(A)	(B)	(C)	(D)	7	(A)	(B)	(C)	(D)	10	(A)	(B)	(C)	(D)
2	(A)	(B)	(C)	(D)	5	(A)	(B)	(C)	(D)	8	(A)	(B)	(C)	(D)	11	(A)	(B)	(C)	(D)
3	(A)	(B)	(C)	(D)	6	(A)	(B)	(C)	(D)	9	(A)	(B)	(C)	(D)	12	(A)	(B)	(C)	(D)

نوٹ: معروضی سوال نامے کو توجہ سے پڑھیں اور ہر MCQ کی درست آپشن A,B,C,D کو پین کی سیابی یا مارکر سے اس طرح پُر کریں کہ سیابی دائرے سے باہر نہ نکلے۔ ایک سے زیادہ دائروں کو پُر کرنے یا کاٹ کر پُر کرنے کی صورت میں مذکورہ جواب غلط تصور ہوگا۔

PHYSICS**Time Allowed: 1:45 Hours****-019 (10th CLASS)****Paper: (Essay Type)
Maximum Marks: 48****(PART – I)****2. Write short answers to any Five (5) questions: 10**

- (i) Define electrostatic Induction.
- (ii) What is electroscope?
- (iii) What is the difference between capacitor and dielectric.
- (iv) Define charge and types of charge.
- (v) Define Coulomb's law. Write mathematical form.
- (vi) Define electric field and electric field intensity. Write its unit.
- (vii) What is meant by point charge?
- (viii) Define Electric intensity and write equation.

3. Write short answers to any five (5) questions: 10

- (i) What is electric field lines.
- (ii) What is potential difference and write its name of unit?
- (iii) What is electric potential? Write its Unit.
- (iv) Describe the construction of variable capacitor?
- (v) Does each capacitor carry equal charge in series combination? Explain.
- (vi) Two uses of Capacitors.
- (vii) What is gold leaf electroscope?
- (viii) Difference between variable and fixed type capacitor?
- (viii) Each capacitor in parallel combination has equal potential difference between its two plates. Justify the statement.

4. Write short answers to any Five (5) questions: 10

- (i) What do you mean by the capacitance of a capacitor?
- (ii) Define capacitance state its SI unit.
- (iii) What are hazards of static electricity?
- (iv) Draw circuit diagram for three capacitors circuit connected in series combination.
- (v) How energy stored in a capacitor?
- (vi) Write the formula of parallel combination of capacitor?
- (vii) When electrostatic force between charge become equal to the gravitational force at sea level?
- (viii) How electric potential and potential energy relate with electric field?

(PART – II)**Note: Attempt any TWO questions.**

- 5.** (a) What is meant by electric field and electric field intensity with help of example. **4** (b) Two-point charges $q_1 = 10 \mu C$ and $q_2 = 5 \mu C$ and placed at a distance of 150 cm. **5**

Find the Coulomb's force between them. Also find the direction of this force?

- 6.** (a) Explain briefly electrostatic Induction. **4**
 (b) Two capacitors of capacitance $6 \mu F$ and $12 \mu F$ are connected in series with **5**
 12 V battery. Find the equivalent capacitance of the combination. Find the charge and the potential across each capacitor.

- 7.** (a) How are capacitors connected in series? Describe the characters features of the combination. **4**
 (b) Two bodies are oppositely charged with $500 \mu C$ and $100 \mu C$. Find the force **5**
 between the two charges if the distance between them in air is 0.5 m.