Physics 12 Chapter 12 - ELECTROSTATICS Solved MCQ's and All Subjects Notes from website Www.lasthopestudy.com

1. Solid bodies are charged due to the transfer of: (a) Protons (b) Electrons (c) Neutrons (d) All of these 2. The SI unit if electric charge is: (a) Volt (b) Henry (c) Coulomb (d) Weber 3. Charge on an electron is: (a) 1.6 × 10 ⁻¹³ C (c) 0.1 × 10 ⁻³¹ C (d) 1.67 × 10 ⁻²⁷ C 4. How many electron will have a charge of one coulomb? (a) 5.2 × 10 ¹³ (d) 5.2 × 10 ¹³ (a) 6.2 × 10 ¹⁴ (b) 6.2 × 10 ¹⁷ (c) 5.2 × 10 ¹⁸ (d) 5.2 × 10 ¹⁹ MCQ # 1: (b) MCQ # 2: (c) MCQ # 3: (b) MCQ # 4: (a) MCQS Related to "12.1 COULOMB'S LAW" (d) All charges (e) Big charges (f) Boal charges (f) Boal charges (f) Boal charges (f) Boand charges (f)	MCQs Related to "ELECTRIC CHARGE"									
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(a) Volt (b) Henry (c) Coulomb (d) Weber 3. Charge on an electron is: (a) $1.6 \times 10^{10} C$ (b) $1.6 \times 10^{-19} C$ (c) $9.1 \times 10^{-31} C$ (d) $1.67 \times 10^{-27} C$ 4. How many electron will have a charge of one coulomb? (a) 6.2×10^{19} (b) $1.6 \times 10^{19} C$ (c) 5.2×10^{18} (d) 5.2×10^{19} MCQ # 1:(b) MCQ#2:(c) MCQ#3:(b) MCQ#4:(a) MCQs Related to "12.1 COULOME'S LAW" 1. Coulomb's law is only applicable for (a) Big charges (b) Small charges (c) Point charges (d) All charges 2. If the distance between two point charges is doubled, the force between them will become: (a) Doubled (b) Half (c) Three Times (d) One forth 3. The constant k in Coulomb's Law depends upon (a) Nature of medium (b) System of units (c) Intensity of charge (d) Both a & b 4. The value of permittivity of free space e_0 is: (a) $8.85 \times 10^{-12} \frac{C'}{Nm^2}$ (b) $8.85 \times 10^{-12} \frac{Nm}{C^2}$ (c) $8.85 \times 10^{-12} \frac{Nm}{C^2}$ 5. The value of coulomb's constant k is: (a) $9 \times 10^{9} \frac{c^{2}}{mn^{2}}$ (b) $9 \times 10^{9} \frac{Mm^{2}}{C^{2}}$ (c) $9 \times 10^{9} \frac{Nm}{C^{2}}$ 6. Unit relative permittivity is (a) $\frac{1}{Nm^{2}}$ (b) $\frac{Nm^{2}}{C^{2}}$ (c) $\frac{N}{Cm^{2}}$ (d) $9 \times 10^{9} \frac{N}{C^{2}m^{2}}$ 6. Unit relative permittivity is (a) $\frac{1}{Nm^{2}}$ (b) $\frac{Nm^{2}}{C^{2}}$ (c) $\frac{N}{Cm^{2}}$ (d) 1.6 1. Unit (2. Coulomb's constant k is: (a) 1.6 (b) 1.006 (c) 1.006 (d) 1.6 1. Ho value of relative permittivity for all the dielectrics is always: (a) Loses not effect the electrostatic force (b) One newton (c) $9 \times 10^{9} N$ (d) $9 \times 10^{19} N$ 11. If the magnitude of charges and distance between two is always: (a) 1.06 (b) 1.006 (c) 1.0006 (d) 1.6 10. The force between two similar unit charges placed one meter apart in air is: (a) Zero (b) One newton (c) $9 \times 10^{9} N$ (d) $9 \times 10^{19} N$ 11. If the magnitude of charges and distance between two charges, the electrostatic force: (a) Dubbed (b) Halved (c) Remain same (d) On forth 12. When an insulating medium is placed between two charges, the electrostat	2. The SI un	2. The SI unit if elelctric charge is:								
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MCQs Related to "12.1 COULOM'S LAW"1. Coulomb's law is only applicable for(a) Big charges(b) Small charges(c) Three Times(d) All charges(a) Doubled(b) Half(c) Three Times(d) One forth3. The constant k in Coulomb's Law depends upon(a) Nature of medium(b) System of units(c) Intensity of charge(d) Both a & b4. The value of permittivity of free space ε_p is:(a) 8.85 × 10 ⁻¹² $\frac{C^2}{m^2}$ (b) 8.85 × 10 ⁻¹² $\frac{Nm^2}{C^2}$ (c) 9 × 10 ⁹ $\frac{Cm}{Tm^2}$ (b) 9 × 10 ⁹ $\frac{Nm^2}{C^2}$ (c) 9 × 10 ⁹ $\frac{Mm^2}{C^2}$ (c) 9 × 10 ⁹ $\frac{Nm}{C^2}$ (d) 9 × 10 ⁹ $\frac{Nm^2}{C^2m^2}$ (c) $9 × 10^9 \frac{Nm}{C^2}$ (d) 10 nunitPresence of dielectric always:(a) Larce static force(b) Decreases the electrostatic force(c) Does not effect the electrostatic force(c) Louob(d) C) crater than unity(c) Equal to unity(d) C crater than unity(c) C area(a) Lote(d) 0.106(c) 1.0006(d) 1.610. The force between two similar unit charges placed one meter apart in air is:(a) 2cro(b) 1.006(c) 2 remo(d) 9 × 10 ¹⁹ N11. If the magnitude of charges and distance between two sharges, the electrostatic force:(a) Increases(b) decreases(c) 2 remo(d) 9 × 10 ¹⁹ N11. If the magnitude of charges and distance between them is doubled, then the force will be:(a) Doubled(b) Halved(c) 2 remo(d) Remain Same13. The electros	MCO # 1	MCQ # 1: (b) MCQ # 2: (c) MCQ # 3: (b) MCQ # 4: (a)								
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(a) Doubled (b) Hain (c) Think (c) Thinks (c) Doke for the formal (c) One for the formal (c) one for the formal (c) the formal (c) one for the formal (c) one formal (c) one for the formal (c) one for the formal (c) one f	(a) Doubled	(b)	Half	(c) Three	times	(d) One forth	in become.			
3. The constant X in Coulom's Law depends upon(a) Nature of medium (b) System of units(c) Intensity of charge(d) Both a & b4. The value of permittivity of free space ε_0 is:(a) $8.85 \times 10^{-12} \frac{N^2}{M\pi^2}$ (b) $8.85 \times 10^{-12} \frac{N^2}{R^2}$ (c) $8.85 \times 10^{-12} \frac{N^2}{R^2}$ 5. The value of coulomb's constant k is:(a) $9 \times 10^9 \frac{K^2}{Rm^2}$ (c) $9 \times 10^9 \frac{Nm}{C^2}$ (d) $9 \times 10^9 \frac{N}{C^2m^2}$ 6. Unit relative permittivity is(c) $\frac{N}{C^2m^2}$ (c) $9 \times 10^9 \frac{Nm}{C^2}$ (d) $9 \times 10^9 \frac{N}{C^2m^2}$ 6. Unit relative permittivity is(c) $\frac{N}{C^3m^2}$ (c) $\frac{N}{C^3m^2}$ (d) no unit7. Presence of dielectric always:(a) Increases the electrostatic force(b) Decreases the electrostatic force(a) Lacreases the electrostatic force(b) Dubles the electrostatic force8. The value of relative permitivity for all the dielectrics is always:(a) 1.06(b) 1.006(c) 1.0006(d) 1.61.610. The force between two similar unit charges placed one meter apart in air is:(a) Zero(b) 0 ne newton(c) $9 \times 10^9 N$ (d) $9 \times 10^{19} N$ 11. If the magnitude of charges and distance between them is doubled, then the force will be:(a) Doubled(b) Halved(c) Remain same12. When an insulating medium is placed between two charges, the electrostatic force:(a) 1.76(b) $28 \times 2N$ (c) $2N$ (d) $20 N$ MCQ # 3: (d) MCQ # 3: (d) MCQ # 4: (a) MCQ # 5: (b) MCQ # 6: (d) MCQ # 7: (b) MCQ # 1: (c) MCQ # 2: (b) MCQ # 1: (c) MCQ	2 The const	tant k in Could	mb's Low don	(c) Three	1 mes	(u) one for th				
(a) Nature of mention (b) system of units (c) methods of charge (d) both a d b 4. The value of mention (b) system of units (c) methods of charge (d) both a d b 4. The value of coulomb's constant k is: (a) $8.85 \times 10^{-12} \frac{c^2}{m^2}$ (b) $8.85 \times 10^{-12} \frac{M^2}{c^2}$ (c) $8.85 \times 10^{-12} \frac{M}{c^2}$ (d) $8.85 \times 10^{-12} \frac{N}{c^2m^2}$ 5. The value of coulomb's constant k is: (a) $9 \times 10^9 \frac{c^2}{m^2}$ (b) $9 \times 10^9 \frac{Mm^2}{c^2}$ (c) $9 \times 10^9 \frac{Mm}{c^2}$ (d) $9 \times 10^9 \frac{N}{c^2m^2}$ 6. Unit relative permittivity is (a) $\frac{c^2}{m^2}$ (b) $\frac{Nm^2}{c^2}$ (c) $\frac{N}{c^2m^2}$ (d) no unit 7. Presence of dielectric always: (a) Increases the electrostatic force (b) Decreases the electrostatic force (c) Does not effect the electrostatic force (d) Doubles the electrostatic force 8. The value of relative permittivity for all the dielectrics is always: (a) Less than unity (b) Greater than unity (c) Equal to unity (d) Zero 9. Relative permittivity of air is: (a) 1.06 (b) 1.006 (c) 1.006 (d) 1.6 10. The force between two similar unit charges placed one meter apart in air is: (a) Zero (b) One newton (c) $9 \times 10^9 N$ (d) $9 \times 10^{19} N$ 11. If the magnitude of charges and distance between them is doubled, then the force will be: (a) Doubled (b) Halved (c) Remain same (d) On forth 12. When an insulating medium is placed between two charges, the electrostatic force: (a) Increases (b) decreases (c) zero (d) Remain Same 13. The electrostatic force between two charges is 42. N. If we place a dielectric of $\varepsilon_r = 2.1$, between the charges, then the force between two charges is 42. N. If we place a dielectric of $\varepsilon_r = 2.1$, between the charges, then the force between two charges is 42. N. If we place a dielectric of $\varepsilon_r = 2.1$, between the charges, then the force between two charges is 42. N. If we place a dielectric of $\varepsilon_r = 2.1$, between the charges, then the force between two charges is 42. N. If we place a dielectric of $\varepsilon_r = 2.1$, between the charges, then the force between two charges is (b) MCQ # 5:	(a) Natura of	ant K III Could	Sustom of units	(a) Intonsi	ity of charge	(d) Poth a & h				
(a) $8.85 \times 10^{-12} \frac{c^2}{Nm^2}$ (b) $8.85 \times 10^{-12} \frac{Nm^2}{C^2}$ (c) $8.85 \times 10^{-12} \frac{Nm}{c^2}$ (d) $8.85 \times 10^{-12} \frac{N}{C^2m^2}$ 5. The value of coulomb's constant <i>k</i> is: (a) $9 \times 10^9 \frac{C^2}{Nm^2}$ (b) $9 \times 10^9 \frac{Nm^2}{C^2}$ (c) $9 \times 10^9 \frac{Nm}{C^2}$ (d) $9 \times 10^9 \frac{N}{c^2m^2}$ 6. Unit relative permittivity is (a) $\frac{c^2}{Nm^2}$ (b) $\frac{Nm^2}{C^2}$ (c) $9 \times 10^9 \frac{Nm}{C^2}$ (d) no unit 7. Presence of dielectric always: (a) Increases the electrostatic force (b) Decreases the electrostatic force (c) Does not effect the electrostatic force (d) Doubles the electrostatic force 8. The value of relative permittivity of all the dielectrics is always: (a) Less than unity (b) Greater than unity (c) Equal to unity (d) Zero 9. Relative permittivity of ari is: (a) 1.06 (b) 1.006 (c) 1.0006 (d) 1.6 10. The force between two similar unit charges placed one meter apart in air is: (a) Zero (b) One newton (c) $9 \times 10^9 N$ (d) $9 \times 10^{19} N$ 11. If the magnitude of charges and distance between them is doubled, then the force will be: (a) Doubled (b) Halved (c) Remain same (d) On forth 12. When an insulating medium is placed between two charges, the electrostatic force: (a) Increases (b) decreases (c) $2ro$ (d) Remain Same 13. The electrostatic force between two charges is 42 N. If we place a dielectric $\epsilon_r = 2.1$, between the charges, then the force become equal to: (a) 42N (b) 88.2N (c) 2N (d) 20N MCQ # 1: (c) MCQ # 2: (d) MCQ # 3: (d) MCQ # 4: (a) MCQ # 5: (b) MCQ # 6: (d) MCQ # 7: (b) MCQ # 1: (c) MCQ # 2: (d) MCQ # 3: (d) MCQ # 11: (c) MCQ # 13: (d) MCQ # 1: (c) MCQ # 2: (d) MCQ # 3: (d) MCQ # 11: (c) MCQ # 13: (d) MCQ # 1: (c) MCQ # 2: (d) MCQ # 3: (d) MCQ # 11: (c) MCQ # 13: (d) MCQ # 1: (c) MCQ # 2: (d) MCQ # 3: (d) MCQ # 11: (c) MCQ # 13: (d) MCQ # 1: (c) MCQ # 2: (d) MCQ # 3: (d) MCQ # 11: (c) MCQ # 13: (d) MCQ # 1: (c) MCQ # 2: (d) MCQ # 3: (d) MCQ # 11: (c) MCQ # 13: (d) MCQ # 1: (c) MCQ # 2: (d) MCQ # 3: (d) MCQ # 10: (c) Gravitational field (d) Nuclear field 2. The for	4. The value	e of permitivit	y of free space	ε_0 is:	ity of charge	(u) boui a & b				
5. The value of colomb's constant k is: (a) $9 \times 10^9 \frac{C^2}{Nm^2}$ (b) $9 \times 10^9 \frac{Nm^2}{C^2}$ (c) $9 \times 10^9 \frac{Nm}{C^2}$ (d) $9 \times 10^9 \frac{N}{C^2m^2}$ 6. Unit relative permittivity is (a) $\frac{C^2}{Nm^2}$ (b) $\frac{Nm^2}{C^2}$ (c) $\frac{N}{C^2m^2}$ (d) no unit 7. Presence of dielectric always: (a) Increases the electrostatic force (b) Decreases the electrostatic force (c) Does not effect the electrostatic force (d) Doubles the electrostatic force (c) Does not effect the electrostatic force (d) Doubles the electrostatic force 8. The value of relative permittivity for all the dielectrics is always: (a) Less than unity (b) Greater than unity (c) Equal to unity (d) Zero 9. Relative permittivity of air is: (a) 1.06 (b) 1.006 (c) 1.0006 (d) 1.6 10. The force between two similar unit charges placed one meter apart in air is: (a) Zero (b) One newton (c) $9 \times 10^9 N$ (d) $9 \times 10^{19} N$ 11. If the magnitude of charges and distance between them is doubled, then the force will be: (a) Doubled (b) Halved (c) Remain same (d) On forth 12. When an insulating medium is placed between two charges, the electrostatic force: (a) Increases (b) decreases (c) zero (d) Remain Same 13. The electrostatic force between two charges is $42 N$. If we place a dielectric of $\varepsilon_r = 2.1$, between the charges, then the force between two charges is $42 N$. If we place a dielectric of $\varepsilon_r = 2.1$, between the charges, then the force become equal to: (a) $42N$ (b) $88.2 N$ (c) $2N$ (d) $20 N$ MCQ# 1.1 (c) MCQ# 2.2 (d) MCQ# 3.2 (d) MCQ# 4.2 (d) MCQ# 5.2 (b) MCQ# 6.2 (d) MCQ# 7.2 (b) MCQ# 8.6 (d) MCQ# 7.2 (b) Magnetic field (c) Gravitational field (d) Nuclear field 2. A charge at rest creates around it (a) Electric field (b) Magnetic field (c) Gravitational field (d) Nuclear field 3. NC ⁻¹ is a unit of	(a) 8.85 × 10 ⁻	$-12 \frac{C^2}{Nm^2}$ (b) 8	$3.85 \times 10^{-12} \frac{Nm}{C^2}$	$\frac{u^2}{2}$ (c) 8.85 ×	$10^{-12} \frac{Nm}{C^2}$	(d) 8.85×10^{-1}	$2\frac{N}{C^2m^2}$			
(a) $9 \times 10^9 \frac{C^2}{Mm^2}$ (b) $9 \times 10^9 \frac{Nm^2}{C^2}$ (c) $9 \times 10^9 \frac{Nm}{C^2}$ (d) $9 \times 10^9 \frac{N}{C^2m^2}$ 6. Unit relative permittivity is(c) $\frac{C^2}{Rm^2}$ (d) no unit7. Presence of dielectric always:(d) no unit(a) Increases the electrostatic force(b) $\frac{Nm^2}{C^2}$ (c) $\frac{N}{C^2m^2}$ (d) no unit7. Presence of dielectric always:(a) no unit(b) Ecreases the electrostatic force(c) Decreases the electrostatic force(c) Does not effect the electrostatic force(b) Decreases the electrostatic force(c) Equal to unity(d) Zero8. The value of relative permitivity for all the dielectrics is always:(a) 1.06(c) 1.0006(d) 1.610. The force between two similar unit charges placed one meter apart in air is:(a) 2ero(b) 0ne newton(c) $9 \times 10^9 N$ (d) $9 \times 10^{19} N$ 11. If the magnitude of charges and distance between them is doubled, then the force will be:(a) Doubled(b) Halved(c) Zero(d) Remain Same(a) Increases(b) decreases(c) $2 xro$ (d) Remain Same(d) On forth12. When an insulating medium is placed between two charges is 42 N. If we place a dielectric of $\varepsilon_r = 2.1$, between the charges, then the force become equal to:(d) $20 N$ (a) $42N$ (b) $88.2 N$ (c) $2 N$ (d) $20 N$ $MCQ \# 1: (c)$ $MCQ \# 3: (d)$ $MCQ \# 4: (a)$ $MCQ \# 5: (b)$ $MCQ \# 7: (b)$ $MCQ \# 1: (c)$ $MCQ \# 3: (d)$ $MCQ \# 4: (a)$ $MCQ \# 5: (b)$ $MCQ \# 7: (b)$ $MCQ \# 1: (c)$ $MCQ \# 3: (d)$ $MCQ \# 3: (d)$ $MCQ \# 3: (d)$ MC	5. The value	e of coulomb's	constant k is:		0					
(a) $VATO_{NM2}^{2}$ (b) $VATO_{C2}^{2}$ (c) $VATO_{C2}^{2}$ (d) $VATO_{C2m^{2}}^{2}$ 6. Unit relative permittivity is (a) $\frac{c^{2}}{Nm^{2}}$ (b) $\frac{Nm^{2}}{C^{2}}$ (c) $\frac{N}{C^{2m^{2}}}$ (d) no unit 7. Presence of dielectric always: (a) Increases the electrostatic force (b) Decreases the electrostatic force (c) Does not effect the electrostatic force (d) Doubles the electrostatic force 8. The value of relative permittivity for all the dielectrics is always: (a) Less than unity (b) Greater than unity (c) Equal to unity (d) Zero 9. Relative permittivity of air is: (a) 1.06 (b) 1.006 (c) 1.0006 (d) 1.6 10. The force between two similar unit charges placed one meter apart in air is: (a) Zero (b) One newton (c) $9 \times 10^{9} N$ (d) $9 \times 10^{19} N$ 11. If the magnitude of charges and distance between them is doubled, then the force will be: (a) Doubled (b) Halved (c) Remain same (d) On forth 12. When an insulating medium is placed between two charges, the electrostatic force: (a) Increases (b) decreases (c) zero (d) Remain Same 13. The electrostatic force between two charges is 42 N. If we place a dielectric of $\varepsilon_{r} = 2.1$, between the charges, then the force become equal to: (a) 42N (b) 88.2 N (c) 2 N (d) 20 N MCQ # 1:(c) MCQ # 3:(d) MCQ # 3:(d) MCQ # 1:(c) MCQ # 1:2 (b) MCQ # 1:3 (d) MCQ # 1:(c) MCQ # 3:(d) MCQ # 3:(d) MCQ # 1:1 (c) MCQ # 1:2 (b) MCQ # 1:3 (d) MCQ # 1:0 (b) Magnetic field (c) Gravitational field (d) Nuclear field 2. The force experience by a unit positive charge placed at a point in an electric field is called: (a) Coulomb's force (b) Faraday's force (c) Lorentz's force (d) Electric field intensity 3. NC ⁻¹ is a unit of	(a) $9 \times 10^9 \frac{c^3}{c^3}$	2 — (h) ($9 \times 10^9 \frac{Nm^2}{2}$	$(c) 9 \times 10$	9 <u>Nm</u>	(d) $9 \times 10^9 \frac{N}{100}$	_			
6. Unit relative permittivity is (a) $\frac{c^2}{Nm^2}$ (b) $\frac{Nm^2}{c^2}$ (c) $\frac{N}{c^2m^2}$ (d) no unit 7. Presence of dielectric always: (a) lncreases the electrostatic force (b) Decreases the electrostatic force (c) Does not effect the electrostatic force (d) Doubles the electrostatic force 8. The value of relative permitivity for all the dielectrics is always: (a) Less than unity (b) Greater than unity (c) Equal to unity (d) Zero 9. Relative permitivity of air is: (a) 1.06 (b) 1.006 (c) 1.0006 (d) 1.6 10. The force between two similar unit charges placed one meter apart in air is: (a) Zero (b) One newton (c) $9 \times 10^9 N$ (d) $9 \times 10^{19} N$ 11. If the magnitude of charges and distance between them is doubled, then the force will be: (a) Doubled (b) Halved (c) Remain same (d) On forth 12. When an insulating medium is placed between two charges, the electrostatic force: (a) Increases (b) decreases (c) zero (d) Remain Same 13. The electrostatic force between two charges is 42 N. If we place a dielectric of $\varepsilon_r = 2.1$, between the charges, then the force between two charges is 42 N. If we place a dielectric of $\varepsilon_r = 2.1$, between the charges, then the force become equal to: (a) $42N$ (b) $88.2 N$ (c) $2 N$ (d) $20 N$ MCQ#11: (c) MCQ#2: (d) MCQ#3: (d) MCQ#4: (a) MCQ#5: (b) MCQ#13: (d) MCQ#13: (c) MCQ#3: (d) MCQ#3: (d) MCQ#4: (a) MCQ#13: (d) MCQ#13: (b) MCQ#3: (c) MCQ#10: (c) MCQ#11: (c) MCQ#13: (d) MCQ#13: (c) MCQ#3: (d) MCQ#3: (d) MCQ#4: (a) MCQ#13: (d) MCQ#10: (c) MCQ#10: (c) MCQ#10: (c) MCQ#11: (c) MCQ#13: (d) MCQ#10: (c) MCQ#3: (d) MCQ#3: (d) MCQ#13: (d) MCQ#10: (c) MCQ#3: (d) MCQ#3: (d) MCQ#13: (d) MCQ#10: (c) MCQ#10: (c) MCQ#10: (c) MCQ#10: (c) MCQ#13: (d) MCQ#10: (c) MCQ#3: (d) MCQ#3: (d) MCQ#10: (c) MCQ#13: (d) MCQ#10: (c) MCQ#3: (d) MCQ#3: (d) MCQ#10: (c) MCQ#10: (c) MCQ#13: (d) MCQ#10: (c) MCQ#3: (d) MCQ#3: (d) MCQ#3: (d) MCQ#13: (d) MCQ#10: (c) MCQ#3: (d) MCQ#3: (d) MCQ#3: (d) MCQ#13: (d) MCQ#10: (c) MCQ#10: (c) MCQ#10: (c) MCQ#10: (c) MCQ#10: (c) MCQ#10: (c) MCQ#10: (c)	$(a) \rightarrow 10 Nn$	1 ² (0)	C^2		C ²	C^2m^2	2			
(a) $\frac{e^{-1}}{Nm^2}$ (b) $\frac{Mn^2}{C^2}$ (c) $\frac{N}{C^2m^2}$ (d) no unit 7. Presence of dielectric always: (a) Increases the electrostatic force (b) Decreases the electrostatic force (a) Increases the electrostatic force (b) Doubles the electrostatic force (c) Doubles the electrostatic force 8. The value of relative permitivity for all the dielectrics is always: (a) Less than unity (b) Greater than unity (c) Equal to unity (d) Zero 9. Relative permitivity of air is: (a) 1.06 (c) 1.0006 (d) 1.6 (d) 9 × 10 ¹⁹ N 10. The force between two similar unit charges placed one meter apart in air is: (a) Zero (b) One newton (c) 9 × 10 ⁹ N (d) 9 × 10 ¹⁹ N 11. If the magnitude of charges and distance between them is doubled, then the force will be: (a) Doubled (b) Halved (c) Zero (d) Remain Same 13. Increases (b) decreases (c) 2 N (d) 20 N (d) 20 N MCQ # 1: (c) MCQ # 2: (d) MCQ # 3: (d) MCQ # 5: (b) MCQ # 7: (b) MCQ # 1: (c) MCQ # 3: (d) MCQ # 4: (a) MCQ # 5: (b) MCQ # 7: (b) MCQ # 1: (c) MCQ # 3: (d) MCQ # 5: (b) MCQ # 6: (d) MCQ # 7: (b) MCQ # 1: (c	6. Unit relat	live permitivit	y 1S							
7. Presence of dielectric always: (a) Increases the electrostatic force (b) Decreases the electrostatic force (a) Increases the electrostatic force (d) Doubles the electrostatic force 8. The value of relative permitivity for all the dielectrics is always: (a) Less than unity (b) Greater than unity (c) Equal to unity (d) Zero 9. Relative permitivity of air is: (a) 1.6 (b) 1.006 (c) 1.0006 (d) 1.6 10. The force between two similar unit charges placed one meter apart in air is: (a) Zero (b) One newton (c) 9 × 10 ⁹ N (d) 9 × 10 ¹⁹ N 11. If the magnitude of charges and distance between them is doubled, then the force will be: (a) Doubled (b) Halved (c) Remain same (d) On forth 12. When an insulating medium is placed between two charges, the electrostatic force: (a) Increases (b) decreases (c) Zero (d) Remain Same 13. The electrostatic force between two charges is 42 N. If we place a dielectric of $\varepsilon_r = 2.1$, between the charges, then the force become equal to: (a) 42N (b) 88.2 N (c) 2 N (d) 20 N MCQ # 1: (c) MCQ # 3: (d) MCQ # 4: (a) MCQ # 5: (b) MCQ # 7: (b) MCQ # 8: (b) MCQ # 9: (c) MCQ # 11: (c) MCQ # 12: (b) MCQ # 7: (b)	(a) $\frac{C^2}{Nm^2}$	(b) ¹	$\frac{\sqrt{m^2}}{C^2}$	(c) $\frac{N}{C^2 m^2}$		(d) no unit				
(a) Increases the electrostatic force(b) Decreases the electrostatic force(c) Does not effect the electrostatic force(d) Doubles the electrostatic force8. The value of relative permitivity for all the dielectrics is always:(a) Less than unity(b) Greater than unity(c) Equal to unity(d) Zero9. Relative permitivity of air is:(a) 1.06(b) 1.006(c) 1.0006(d) 1.610. The force between two similar unit charges placed one meter apart in air is:(a) Zero(b) 0ne newton(c) $9 \times 10^9 N$ (d) $9 \times 10^{19} N$ 11. If the magnitude of charges and distance between them is doubled, then the force will be:(a) Doubled(b) Halved(c) Remain same(d) On forth12. When an insulating medium is placed between two charges, the electrostatic force:(a) Increases(b) decreases(c) zero(d) Remain Same13. The electrostatic force between two charges is 42 N. If we place a dielectric of $\varepsilon_r = 2.1$, between the charges, then the force become equal to:(a) 42N(b) 88.2 N(c) 2 N(d) 20 NMCQ # 1: (c)MCQ # 3: (d)MCQ # 4: (a)MCQ # 5: (b)MCQ # 6: (d)MCQ # 3: (b)MCQ # 3: (d)MCQ # 11: (c)MCQ # 13: (d)MCQ# 8 rest creates around it(a) Electric field(b) Magnetic field(c) Gravitational field(d) Nuclear field2. The force experience by a unit positive charge placed at a point in an electric field is called:(a) Colomb's force(b) Faraday's force(c) Lorentz's force3. NC ⁻¹ is a unit of(b) Faraday's force<	7. Presence	of dielectric a	lways:							
(c) Does not effect the electrostatic force(d) Doubles the electrostatic force8. The value of relative permitivity for all the dielectrics is always:(a) Less than unity(b) Greater than unity(c) Equal to unity(d) Zero9. Relative permitivity of air is:(a) 1.06(b) 1.006(c) 1.0006(d) 1.610. The force between two similar unit charges placed one meter apart in air is:(a) Zero(b) One newton(c) $9 \times 10^9 N$ (d) $9 \times 10^{19} N$ 11. If the magnitude of charges and distance between them is doubled, then the force will be:(a) Doubled(b) Halved(c) Remain same(d) On forth12. When an insulating medium is placed between two charges, the electrostatic force:(a) Increases(b) decreases(c) Zero(d) Remain Same13. The electrostatic force between two charges is 42 N. If we place a dielectric of $\varepsilon_r = 2$. 1, between the charges, then the force become equal to:(a) 42N(b) 88.2 N(c) 2 N(d) 20 NMCQ# 1: (c)MCQ # 2: (d)MCQ # 3: (d)MCQ # 4: (a)MCQ # 5: (b)MCQ# 8: (b)MCQ # 10: (c)MCQ # 11: (c)MCQ # 13: (d)MCQs Related to "12.2 FIELDS OF FORCE"I A charge at rest creates around it(a) Electric field(b) Magnetic field(c) Gravitational field(d) Nuclear field2. The force experience by a unit positive charge placed at a point in an electric field is called:(a) Culomb's force(b) Faraday's force3. NC ⁻¹ is a unit of(c) Lorentz's force(d) Electric field intensity(d) Electric f	(a) Increases	the electrostati	c force	(b) Decrea	ases the electi	rostatic force				
8. The value of relative permitivity for all the dielectrics is always: (a) Less than unity (b) Greater than unity (c) Equal to unity (d) Zero 9. Relative permitivity of air is: (a) 1.06 (b) 1.006 (c) 1.0006 (d) 1.6 10. The force between two similar unit charges placed one meter apart in air is: (a) Zero (b) One newton (c) $9 \times 10^9 N$ (d) $9 \times 10^{19} N$ 11. If the magnitude of charges and distance between them is doubled, then the force will be: (a) Doubled (b) Halved (c) Remain same (d) On forth 12. When an insulating medium is placed between two charges, the electrostatic force: (a) Increases (b) decreases (c) Zero (d) Remain Same 13. The electrostatic force between two charges is 42 N. If we place a dielectric of $\varepsilon_r = 2.1$, between the charges, then the force become equal to: (a) 42N (b) 88.2 N (c) 2 N (d) 20 N MCQ # 1: (c) MCQ # 2: (d) MCQ # 3: (d) MCQ # 4: (a) MCQ # 5: (b) MCQ # 6: (d) MCQ # 7: (b) MCQ # 8: (b) MCQ # 9: (c) MCQ # 10: (c) MCQ # 11: (c) MCQ # 12: (b) MCQ # 13: (d) MCQ # 8: (b) MCQ # 9: (c) MCQ # 10: (c) C) Gravitational field (d) Nuclear field 2. The force experience by a unit positive charge placed at a point in an electric field is called: (a) Coulomb's force (b) Faraday's force (c) Lorentz's force (d) Electric field intensity 3. NC ⁻¹ is a unit of	(c) Does not e	ffect the electro	ostatic force	(d) Double	es the electro	static force				
(a) Less than unity(b) Greater than unity(c) Equal to unity(d) Zero9. Relative permitivity of air is:(a) 1.06(b) 1.006(c) 1.0006(d) 1.610. The force between two similar unit charges placed one meter apart in air is:(a) Zero(b) One newton(c) $9 \times 10^9 N$ (d) $9 \times 10^{19} N$ 11. If the magnitude of charges and distance between them is doubled, then the force will be:(a) Doubled(b) Halved(c) Remain same(d) On forth12. When an insulating medium is placed between two charges, the electrostatic force:(a) Increases(b) decreases(c) Zero(d) Remain Same13. The electrostatic force between two charges is 42 N. If we place a dielectric of $\varepsilon_r = 2.1$, between the charges, then the force become equal to:(a) 42N(b) 88.2 N(c) 2 N(d) 20 NMCQ#11: (c)MCQ#2: (d)MCQ#3: (d)MCQ#4: (a)MCQ#5: (b)MCQ#6: (d)MCQ*88: (b)MCQ#9: (c)MCQ#10: (c)MCQ#11: (c)MCQ#13: (d)MCQs Related to "12.2 FIELDS OF FORCE"1. A charge at rest creates around it(a) Electric field(b) Magnetic field(c) Gravitational field(d) Nuclear field2. The force experience by a unit positive charge placed at a point in an electric field is called:(a) Coulomb's force(b) Faraday's force(c) Lorentz's force(d) Electric field intensity3. NC ⁻¹ is a unit of	8. The value	of relative pe	ermitivity for a	ll the dielectri	cs is always:					
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(a) 1.06(b) 1.006(c) 1.0006(d) 1.610. The force between two similar unit charges placed one meter apart in air is:(a) Zero(b) One newton(c) $9 \times 10^9 N$ (d) $9 \times 10^{19} N$ 11. If the magnitude of charges and distance between them is doubled, then the force will be:(a) Doubled(b) Halved(c) Remain same(d) On forth12. When an insulating medium is placed between two charges, the electrostatic force:(a) Increases(b) decreases(c) zero(d) Remain Same13. The electrostatic force between two charges is 42 N. If we place a dielectric of $\varepsilon_r = 2.1$, between the charges, then the force become equal to:(a) 42N(b) 88.2 N(c) 2 N(d) 20 NMCQ # 11: (c)MCQ # 2: (d)MCQ # 3: (d)MCQ # 4: (a)MCQ # 5: (b)MCQ # 6: (d)MCQ # 7: (b)MCQ # 88: (b)MCQ # 9: (c)MCQ # 10: (c)MCQ # 11: (c)MCQ # 13: (d)MCQ # 13: (d)MCQs Related to "12.2 FIELDS OF FORCE"1. A charge at rest creates around it(a) Electric field(b) Magnetic field(c) Gravitational field(d) Nuclear field2. The force experience by a unit positive charge placed at a point in an electric field is called:(a) Coulomb's force(b) Faraday's force(c) Lorentz's force(d) Electric field intensity3. NC ⁻¹ is a unit of	9. Relative i	permitivity of	air is:	, (c) 2444	ie unity	(1) 2010				
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11. If the magnitude of charges and distance between them is doubled, then the force will be: (a) Doubled (b) Halved (c) Remain same (d) On forth 12. When an insulating medium is placed between two charges, the electrostatic force: (a) Increases (b) decreases (c) Zero (d) Remain Same 13. The electrostatic force between two charges is 42 N. If we place a dielectric of ε _r = 2. 1, between the charges, then the force become equal to: (a) 42N (b) 88.2 N (c) 2 N (d) 20 N MCQ # 1: (c) MCQ # 2: (d) MCQ # 3: (d) MCQ # 4: (a) MCQ # 5: (b) MCQ # 7: (b) MCQ # 8: (b) MCQ # 10: (c) MCQ # 11: (c) MCQ # 13: (d) MCQ # 7: (b) MCQs Related to "12.2 FIELDS OF FORCE" Image: the force experience by a unit positive charge placed at a point in an electric field (b) Magnetic field (c) Gravitational field (d) Nuclear field 2. The force experience by a unit positive charge placed at a point in an electric field intensity (c) Lorentz's force (d) Electric field intensity 3. NC ⁻¹ is a unit of Image: the second s	(a) Zero	(h) (h	e newton	$(c) 9 \times 10$	⁹ N	(d) $9 \times 10^{19} N$				
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 (a) Coulomb's force (b) Faraday's force (c) Lorentz's force (d) Electric field intensity 3. NC ⁻¹ is a unit of	2. The force experience by a unit positive charge placed at a point in an electric field is called:									
3. NC^{-1} is a unit of	(a) Coulomb's force (b) Faraday's force (c) Lorentz's force (d) Electric field intensity									
	3. NC^{-1} is a unit of									
(a) Force (b) Charge (c) Current (d) Electric Intensity	(a) Force	(h) Charge	(c) Curren	it	(d) Electric In	tensity			
4. If we move away from a charge, the magnitude to electric intensity	4. If we mov	ve away from a	, charge, the m	agnitude to el	ectric intens	itv				
(a) Remains constant (b) Increases (c) Decreases (d) Vanish	(a) Remains of	onstant (h) Increases	(c) Decrea		(d) Vanish				
5 Of the following quantities the one that is vector in character is an	5 Of the foll									
(a) Electric Charge (b) Electric Field Intensity										

MCQs F.Sc. Physics			Chapter # 12: Electrostatics				
(c) Electric Energy		(d) El	(d) Electric Potential Difference				
6. A charge of 1 μC exp	eriences electros	tatic force	tic force of 10^{-6} N. the electric field intensity at that point				
(a) 10^6 NC^{-1}	b) 10 ⁻⁶ NC ⁻¹	(c) 10	(c) 10^{-12} NC^{-1} (d) 1 NC^{-1}				
7. The electric intensit	v at infinite dista	nce from n	oint charge is	()			
(a) Infinite	b) zero	۾و ري (ري)	sitive	(d) negative			
MCO # 1: (a) MCO # 2:	(d) MCO # 3: (d)	MCO # 4	(c) MCO # 5:	(b) MCO # 6: (d)	MCO # 7: (b)		
MCQs Related to "12.3 E	ELECTRIC FIELD L	INES"					
1. The lines which prov	vide information	about the	electric force e	xerted on charged j	particles are:		
(a) Magnetic field lines	(b) Electric field	lines	(c) Tangent line	es (d) Curved line	es		
2. Electric field lines an	re						
(a) Actual Line	(b) Imaginary Li	ines	(c) Solid Lines	(d) None of Th	ese		
3. The tangent to a fiel	d line at any poin	t gives the	direction of				
(a) Electric Intensity	(b) Electric Flux		(c) Vector Area	(d) Electric Cu	rrent		
4. The electric field lin	es are closer whe	re the field	d is:				
(a) Strong	(b) Weak		(c) Uniform	(d) Variable			
5. Electric field lines c	an never		(0) 0				
(a) Attract each other	(h) Repel each o	ther	(c) Intersect ea	ch other			
6 The electric field nr	oduced due to ne	oative chai	rge is always.				
(a) Radially outward	(b) Radially inw	ard	(c) Circular	(d) Zero			
7 The electric field and	ated hy nositivo	chargo ice	(c) on culai	(u) 2010			
(a) Padially outward	(b) Zoro	charge is.	(c) Circular	(d) Padially in	word		
9 Electric lines of force	(U) Lei U	l oqually cr	(c) Circular	oloctric field is:	waru		
o. Electric filles of forc	(b) Strong	i equally sp	(a) Non Uniform	electric field is:			
	(b) Strong	(h)	(c) Non-Uniform	n (a) Uniform	7		
	(C) MCQ # 2:	(b)	MCQ # 3: (a) MCO # 7: (a)	MCQ # 4: (a) MCO # 8: (d)	-		
			110g " / . (u)				
MCQs Related to "12.4 A	APPLICATIONS OF	ELECTRO	STATICS"				
1. Photo-copier and in	kjet printers are	the applica	ations of:				
(a) Electronics	(b) Magnetism	(c) Electrostatics	(d) Thermod	ynamics		
2. The word "Xerograp	ohy" means:	20					
(a) Writing by left hand	(b) Writing by c	hildren (c) Dry writing	(d) Writing b	y water colors		
3. Aluminum is an exc	ellent		DY				
(a) Conductor	(b) semi-condu	uctor	(c)Insulator	(d) photoco	onductor		
4. Selenium is a condu	ctor material whe	en exposed	l to				
(a) Dark	(b) Light	(c) Magnetic field	d (d) None of t	hese		
5. Selenium is an							
(a) Insulator	(b) Conductor	(c) Semiconducto	or (d) Photocom	ductor		
6. Which part of photo	copier is known a	as the hear	t of machine				
(a) Drum	(b) lamp	(c) roller	(d) toner			
7. In ink-jet printer, th	e droplets are pa	ssed throu	gh				
(a) Gutter	(b) Charging ele	ctrode (c) Deflection pla	ates (d) Both b &	с		
8. In an inkjet printer,	the charged ink d	lrops are d	liverted by the	deflection plates			
(a) Towards the charging	electrodes	- (b`) Towards the g	utter			
(c) Towards a blank pape	er	(ď) In inkjet printe	er, ink cannot be char	ged		
MCQ # 1: (c)	MCQ # 2: (<mark>c)</mark>	<u>MCQ # 3: (</u>	(a) <u>M</u>	CQ # 4: (b)		
MCQ # 5: (d)	MCQ # 6: (a)	MCQ # 7: ((d) M	CQ # 8: (b)		
MCOs Palatad to "12 E E	Π Γ ΩΤΡΙ <u>Ο</u> ΕΙ ΠΥ"						
1 Norshan of all stairs		·					
1. Number of electric l	ines of force pass	ing throug	n a certain area	a is known as	1 1:00		
(a) Electric field	(b) Electric flux	(c) Electric poter	itial (d) Potentia	al difference		
2. Electric flux is define	ed as:			E			
(a) $\phi = \mathbf{A} \cdot \mathbf{B}$	(b) $\phi = \mathbf{E} \times \mathbf{A}$	(c) $\phi = \mathbf{E} \cdot \mathbf{A}$	(d) $\phi = \frac{E}{A}$			
3. For the computation	n of electric flux, t	he surface	area should be	e:			
(a) Parallel	(b) Curved	(c) Spherical	(d) Flat			
4. When vector area is	held perpendicu	lar to the f	ield lines. then	the magnitude of e	lectric flux is:		
(a) Negative	(b) Maximum	(c) Minimum	(d) Zero			
5. When vector area is	held narallel to e	lectric fiel	d lines. the the	magnitude of elect	ric flux is:		
(a) Maximum	(b) Minimum) (c) Zero	(d) Negativ	e		
6. The SI unit of electri	ic flux is:	C C	-, 2010	(a) negativ	-		
(a) NmC^{-1}	(b) Nm^2C^{-1}	ſ	c) <i>NmC⁻²</i>	(d) Nm^2C^{-1}	2		
N J S S S S S S S S S S	· · · ·	l l	· · ·	()			

7. Which one of the following can be taken as measure of electric field intensity:							
(a) $\frac{F}{I}$	(b) $\frac{\phi_e}{d}$	(d) $\frac{q\varepsilon_o}{z}$					
MCO # 1: (b) MCO # 2: (c)	MCO # 3: (d) MCO	ε_0) # 4: (d) MCO # 5: (a)	A MCO # 6: (b) 7: (b)				
MCQs Related to "12.6 El	LECTRIC FLUX THROUG	H A SURFACE ENCLOS	ING A CHARGE"				
1. The total electric flux	<i>a</i> through the surface o	the sphere due to a cl	harge q at its center is:				
(a) $\frac{q}{\varepsilon_r}$	(b) $\frac{q}{\varepsilon_0}$	(c) $\frac{q}{q}$	(d) both a & b				
2. Electric flux through	a close surface does no	ot depend upon:					
(a) Shape	(b) medium	(c) charge	(d) none of these				
3. The direction of vect	or area is						
(a) Parallel to flat surface		(b) perpendicular to f	lat surface				
4. Negative and positiv	e charges in a hollow s	phere are equal in ma	gnitude, then the flux from the				
(a) Zero	(h) Positive	(c) Negative	(d) Both positive and pegative				
MCQ # 1: (b)	MCQ # 2: (a)	MCQ # 3: (b)	MCQ # 4: (a)				
MCQs Related to "12.7 G	AUSS'S LAW"	<u> </u>					
1. The total electric flux	(b) Engloged shares	face is directly propor	tional to:				
 (a) Eliciosed mass 2 According to Gauss's 	law electric flux throu	(c) volume	(d) Electric potential				
$c d = \frac{1}{q}$	$a d = \frac{1}{q}$	q	$(\mathbf{n} \mathbf{d} - 1)$				
(a) $\varphi_e = \frac{1}{4\pi\varepsilon_o} \frac{1}{r}$	(b) $\varphi_e = \frac{1}{\varepsilon_o r}$	(c) $\varphi_e = \frac{1}{\varepsilon_o}$	(d) $\varphi_e = \frac{1}{4\pi\varepsilon_o} (q)$				
	MCQ # 1: (a)	MCQ # 2: (c)					
MCQs Related to "12.8 A	PPLICATIONS OF GAUS	S'S LAW"					
1. Gauss's law is more u	seful in the cases whe	re the charge distribut	ions:				
(a) are made of discrete po	oint charges	(b) are finite in their	special extent				
(c) symmetrical charge dis	stribution	(d) gives rise to inve	rse square law distribution				
2. The imaginary close measured is called:	surface which passes	through the point at v	which electric intensity is to be				
(a) Amperean loop	(b) Gaussian surface	(c) Vector area					
3. Electric intensity ins	ide hollow charged sph	iere is:					
(a) $\left(\sigma / \varepsilon_0 \right)$	(b) $\left(\frac{\sigma}{2\varepsilon_0}\right)$	(c) $\left(\frac{1}{\varepsilon_0}\right)$	(d) zero				
4. The magnitude of the	ne electric field inside	oppositely charged p	plates, having uniform surface				
charge density σ , is:							
(a) $\left(\frac{\sigma}{\varepsilon_0}\right)$	(b) $\left(\frac{\sigma}{2\varepsilon_{0}}\right)$	(c) $\left(\frac{q}{\varepsilon_0 r}\right)$	(d) $\left(\frac{\sigma}{2\epsilon_0 r}\right)$				
5. The electric intensity	y near an infinite plate	of positive charge will	be:				
(a) $\binom{q}{\epsilon_0}$	(b) $\left(\frac{\sigma}{2\sigma}\right)$	(c) $\binom{q}{4}$	(d) $\left(\frac{\sigma}{\varepsilon_{c}}\right)$				
MCO # 1: (c)	$\frac{(7/2\epsilon_0)}{MCO \# 2: (b)}$	CO # 3: (d) MCO	0 # 4: (a) MCO # 5: (b)				
MUUS KEIATED TO "12.9 ELEUTKIU PUTENTIAL"							
1. If a charged body is n	(b) Vinotic operation	(c) Mochanical operation	(d) Cravitational anormy				
2. The work done in moving a unit nositive charge from one point to another while keeping the							
charge in equilibrium is called:							
(a) Potential energy	(b) Kinetic energy	(c) Mechanical energy	(d) Potential Difference				
3. Work done in bring	ing a unit positive cha	rge from infinity to t	hat point in an electric field is				
called:							
(a) Potential Difference	(b) Resistance	Capacitance	(d) Absolute electric potential				
4. Absolute electric pot	ential, due of point cha	rge of 1C at a distance	of 1m is given by:				
$(a) 9 \times 10^{\circ} volts$	(b) $9 \times 10^{\circ}$ volts	(C) 9 × 10° volts	(a) 9 × 10' volts				
joule	newton	coulomb	watt				
(a) $\frac{1}{coulomb}$	(b) $\frac{1}{coulomb}$	(c) second	(d) $\frac{1}{second}$				
6. Electric field intensit	y is also known as						
(a) Electric potential	(b) Electric flux	(c) Potential gradient	(d) None				

MCQs F.Sc. P	hysics				(Chapter	# 12: El	ectrostatics
7. The expression	$\frac{\Delta V}{\Delta V}$ re	present:						
(a) Gauss's law	Δr	(h) Elec	tric flux	(c)	Electric Intensity	v (d) I	Potential	Difference
8. In a region w	here the	electric	field is zero. th	1e e	lectric potential	is alway	s:	Difference
(a) Positive		(b) Neg	ative	(c)	Zero	(d) (Constant	
9. In the expres	sion E =	$= -\frac{\Delta V}{\Delta V}$. th	e negative sign	ı sh	ow that the dired	ction of F	E is along	2:
(a) Increasing not	ential	Δr , c_{-}		(h	Decreasing note	ntial		5-
10. The electric i	ntensity	, is expre	essed in unit of	N/(Cor	intiai		
	licensie		boeu in unit of				volt	
(a) volts		(b) wat	t	(c)	joules	(d) - 1	neter	
MCQ # 1: (a)	MCQ #	2: (d)	MCQ # 3: (d)		MCQ # 4: (d)	MCQ #	‡ 5: (a)	MCQ # 6: (c)
MCQ # 7: (c)	MCQ #	8: (a)	MCQ # 9: (b)		MCQ # 10: (d)			
MCQs Related to	"12.10 I	ELECTRO	N VOLT"					
1. Electron volt	is the u	nit of						
(a) Electric Currer	nt (k	o) Electric	Energy	(c)	Electric Potentia	l (d) Electri	ic Force
2. The amount of	of energ	y equal t	$0 1.6 \times 10^{-19} J$	is o	called			
(a) 1 volt	(ł	o) 1 milli-	volt	(c)	1 electron volt	(d) 1 meg	a electron volt
3. A particle hav	ring 2e o	charge fa	lls through a p	ote	ntial difference o	ot 5V. En	ergy acq	uired by it is:
(a) 2.5 eV	(t 01 C = -) 20 eV	thuowah	(C)	U.4 eV	ИЕ ((uj 10 eV	
4. A cnarge of 0.		Celerated	i inrough a p.d	(10	LOUU V acquires	ћ.Е	d) 400 ~7	T
$\begin{bmatrix} a \end{bmatrix} 1 \cup \end{bmatrix}$	(Ľ	100 J		(C)	200 J	(uj 400 eV	/
5. I JULIE =	 ՝ Ո) 6 25 V	10 ⁻¹⁸ مال	പ്ര	$1.6 \times 10^{-19} av$	r.	d) Q 1 🗸 '	10 ⁻³¹ oV
6 One electron	u) Volt is e	aual to	10 ev	(L)	1.0 × 10 ev	(uj 9.1 ^ .	10 87
(a) $6.25 \times 10^{18} I$	Conc 15 C	$1625 \times$	10^{-18} I	(c)	$1.6 \times 10^{-19} I$	G	d) 9 1 x ⁻	10^{-31} I
7. If a positive c	harge p	article m	oves against th	1e e	lectric field. it w	ill gain:		
(a) Kinetic Energy	8 - F (t) Gravita	tional Energy	(c)	Electric Potentia	l Energy		
8. If a positive c	harge p	article is	allowed to mo	ves	from positive to	negativ	e plate, i	t will gain:
(a) Kinetic Energy	(ł) Gravita	tional Energy	(c)	Electric Potential	l Energy	- ·	U
MCQ # 1: (b)		N	MCQ # 2: (c)		MCQ # 3: (d)		MCQ # 4: (a)
MCQ # 5: (a)		N	ACQ # 6: (c)	9	MCQ # 7: (c)		MCQ # 8: (a)
MCQs Related to	"12.11 I	ELECTRI	CAND GRAVITA	4110	UNAL FORCES (A	COMPA	RISON)"	
1. Electrostatic	force as	compar	ed to the gravit	tatio	onal force is			
(a) Very weak	fores h	(b) Very	/ strong		(c) Infinite		(d) No	ne of these
2. Gravitational	Iorce D	(h) Maa	wo objects doe	es no	(a) Distance		(d) Ma	dium
a) ruite	forcois		565		(C) Distance		(u) Me	ululli
(a) Attractive force		(h) Ren	ulsive Force		(c) Attractive	as well a	s renulsi	76
4. Electrostatic	c force is:				(c) Attractive		srepulsi	
(a) Attractive force	e	(b) Rep	ulsive Force		(c) Attractive	as well a	s repulsiv	ve
MCQ # 1: (b)	-	(-)P	4CQ # 2: (d)		MCQ # 3: (a))	F	MCQ # 4: (c)
MCO - Dalata da	(10 10)						"	
MCQs Related to			UN AN ELECTR	UN	BY MILLIKAN'S N	NETHOD		
1. The charge of	n the ele	Chill T	as calculated by	y	(c) Millikan		(d) Ein	stoin
(a) ratauay2 Millikan davi	cod a to	(D) J.J. I chniquo	for moscurome	nt	(C) MIIIIKali	loctron	(u) EIII in	stem
(a) 1889	scu a te	(b) 189	9	-110	(c) 1909		ጠ (ፈ) 192	29
3. In Millikan's	exneri	ment. t	, he oil dron c	an	be suspended	betweer	two n	lates when the
gravitational	force is	equal to	op o				P	
(a) Magnetic Force	9	(b) Elec	tric Force		(c) Normal Ford	ce	(d) Nu	clear Force
A A		h . l .			1 due 1			
4. An electric fie	eia that		the weight of a	n oi	aropiet will act			
(a) Downward	fonthe	(D) Upw	aru		(c) Along surfac	e or sphe	ere	
(a) $6\pi m$ (b) $8\pi m$								
$\begin{bmatrix} a \end{bmatrix} \cup i i j i \\ 6 \mathbf{The charge } \mathbf{d}_i \end{bmatrix}$	otormin	(U) 0///) ed by th	n Nillikan's ovr	ıori	ment is		(u) 0111	ע ון
(a) $a = \frac{mgd}{mgd}$		(b) = -	mVd		$\int a = \frac{gVd}{gVd}$			no of these
(a) q - v		(U) q =	g		$(c)q = \frac{m}{m}$			
	MCO +	+ 7. (a)	MCO # 2. (b)		$MCO # 4 \cdot (h)$	MCO #	E 5+ (d)	MCO # 6. (a)

MCQs Related to "12.13 CAPACITOR"								
1. Capacitors may be considered as a device for								
(a) Storing energy	(b) Increasing resistar	nce (c) Decreasing re	esistance (d) None					
2. The charge store	ed in a capacitor is directl	ly proportional to						
(a) Resistance	(b) Resistivity	(c) Amount of	Current (d) Potential Difference					
3. An expression for	or magnitude of charge or	n either of the plates of	f a capacitor is given by:					
(a) $Q = CA$	(b) $Q = CV$	(c) $Q = \frac{C}{A\varepsilon_0}$	(d) $Q = \frac{A\varepsilon_0}{d}$					
4. Farad is the S.I.	unit of							
(a) Charge	(b) Current	(c) Electric Flu	x (d) Capacitance					
5. Farad is defined	as:	Coulmb	Ioula					
(a) $\frac{coulomb}{Volt}$	(b) $\frac{Ampere}{Volt}$	(c) $\frac{Coull b}{Joult}$	(d) $\frac{fourte}{Coulomb}$					
6. A capacitor of o	capacitance $1\mu F$ is fully	charged from a 20 V	D.C. source. What is the charge					
$(a) 2 \mu f$	(b) 20μ	$(c) 0.5 \mu C$	(d) 200 μ C					
M(0 # 1; (a))	MCO # 2: (d) MCO # 3: (d)	b) MCO # 4: (d)	MCO = 5: (a) MCO = 6: (b)					
110Q # 1. (u)								
MCOs Related to "12	2.14 CAPACITANCE OF A P	PARALLEL PLATE CAPA	CITOR"					
1. If the medium	between the plates of a	a narallel nlate cana	ritor is air or vacuum, then its					
capacitance is g	iven by:	a paraner place capa	citor is an or vacuality then its					
(a) $C_{vac} = \frac{A}{s d}$	(b) $C_{vac} = \frac{A\varepsilon_0}{d}$	(c) $C_{vac} = \frac{\varepsilon_0 d}{4}$	(d) $C_{vac} = \frac{d}{c_{a}}$					
2. The medium use	ed between the plates of c	anacitor is called	c ₀ A					
(a) Polarization	(b) Dielectric	(c) Insulators	(d) Medium					
3. If some dielectr	ic medium of dielectric c	constant ε_{r} is inserted	between the plates of a parallel					
plate capacitor,	then its capacitance is giv	ven by:	r r r					
(a) $\int dt = \frac{A}{A}$	(h) $C_{r} = \frac{A\varepsilon_0 \varepsilon_r}{\varepsilon_r}$	(c) $\int dt = \frac{\varepsilon_0 \varepsilon_r d}{\varepsilon_r t}$	(d) $C_{1} = \frac{d}{d}$					
$\mathbf{L}_{nea} = \mathbf{\varepsilon}_0 \mathbf{\varepsilon}_r d$	ectric between the plates d	A	$\sum_{i=1}^{n} \varepsilon_{i} \varepsilon_{r} A$					
4. Inserting a area	ter i e between the plates ((h) In our constant of p						
(a) Decreases Capaci	tance	(b) Increases capac	itance					
(c) Leaves the capaci	and C is equal to	(u) Encourages the	breakdown between plates					
5. The factor C_{vac}	$\frac{1}{2}$ and C_{med} is equal to		(h) ¹					
(a) ε_r	$(0)\frac{1}{\varepsilon_r}$	(c) ε_0	$(a) \frac{1}{\varepsilon_0}$					
6. If 'Q' is the cha	rge on either of the plat	es of a parallel plate	capacitor of area A, the surface					
charge density o	on the plate is given by:	0	24					
(a) $\sigma = \frac{A}{Q}$	(b) $\sigma = \frac{Q}{2A}$	(c) $\sigma = \frac{Q}{A}$	(d) $\sigma = \frac{2A}{Q}$					
MCQ # 1: (c)	MCQ # 2: (d) MCQ # 3: (b) MCQ # 4: (b)	MCQ # 5: (c) MCQ # 6: (d)					
MCQs Related to "12.15 ELECTRIC POLARIZATION OF DIELECTRICS"								
1. When a dielectr	ic material s placed in an	electric field, it:						
(a) Conducts	(b) Exhibit Charge	(c) Undergoes Electro	olysis (d) Become Polarized					
2. Two equal and o	opposite charge separated	l by a small distance fo	orm:					
(a) Electric dipole	(b) Amperean current	(c) Null charge	(d) Neutral source					
3. Dielectric is also	o called:							
(a) Conductor	(b) Insulator	(c) Semi-Conductor						
4. The increase in	capacitance of a capaci	tor due to presence	of dielectric is due toof					
dielectric								
(a) Electrification	(b) Ionization	(c) Electrolysis	(d) Electric Polarization					
MCQ # 1: (d)	MCQ # 2: (a)	MCQ # 3: (t	b) MCQ # 4: (d)					
MCQs Related to "12.16ENERGY STORED IN A CAPACITOR"								
1. The expression	of energy stored in a capa	citor is given by:						
(a) $U = CV^2$	(b) $U = \frac{1}{2}CV^2$	(c) $U = \frac{1}{2}C^2V$	(d) $U = \frac{1}{2} (CV)^2$					
2. If the potential	difference across the two	$\frac{2}{2}$ plates of a parallel n	late capacitor is double, then the					
energy stored in	it will be:	r Paramor P						
(a) 2 times	(b) 8 times	(c) 4 times	(d) Remains constant					
3. Energy density i	n case of a capacitor is alv	ways proportional to						
(a) ε_0	(b) <i>C</i>	(c) V^2	(d) E^2					

MCQs F.Sc.	Physics		Chapter # 12: Electrostatics					
4. Unit of energy density of electric field is:								
(a) $J C^{-1}$ (b) $J V^{-1}$		-1	(c) $J m^{-3}$ (d) J		3			
5. A capacitor stores energy in the form of:								
(a) Magnetic field (b) Heat energy			(c) Electrical ener	(c) Electrical energy (d) Mecha				
6. The express	ion for the energ	y density <i>u</i> is:						
(a) $\frac{1}{2}\varepsilon_0\varepsilon_r E^2$ (Ad)	(b) $\frac{1}{2} \varepsilon_0$	$_{0}\varepsilon_{r}E^{2}$	$(C)\frac{1}{2}\frac{\varepsilon_0\varepsilon_r E^2}{Ad}$	(d) $\frac{\varepsilon_0 \varepsilon_r H}{Ad}$	(d) $\frac{\varepsilon_0 \varepsilon_r E^2}{Ad}$			
7. Will a capac	itor store more e	nergy with a die	lectric other than	air?				
(a) Yes	(b) No							
8. In a charged	l capacitor, the en	nergy resides in:						
(a) In the negative	ve plate (b) in t	he positive plate	(c) edges of plates	sin (d) field	l between plates			
MCQ # 1: (b)	MCQ # 2: (c)	MCQ # 3: (d)	MCQ # 4: (c)	MCQ # 5: (c)	MCQ # 6: (b)			
MCQ # 7: (a)	MCQ # 8: (d)							
MCQs Related to "12.17 CHARGING AND DISCHARGING A CAPACITOR"								
1. The speed o	f charging or disc	charging a cpacit	or depends upon j	product of resis	stance and			
(a) Current	(b) ^v	Voltage	(c) Capacitan	ce	(d) Charge			
2. The term "R	C" has same unit	as that of:						
(a) Potential	(a) Potential (b) Capacitance		(c) Energy		(d) Time			
3. During charging of a capacitor, the ratio of instantaneous charge and maximum charge on plates								
of capacitors at t = RC is								
(a) 36.8%	(a) 36.8% (b) 63.2%		(c) 20%		(d) 30%			
4. If RC is small, then capacitor will be charged and discharged								
(a) Slowly (b) Quickly			(c) With Med	ium Speed	(d) No Effect			
5. In RC series circuit, the correct relation for the time constant is:								
(a) $R.t = C$ (b) $C.t = R$			(c) $R.C = t$		(d) $C.V = Q$			
6. A 5 M Ω resistor is connected with a 2 μ F capacitor. The time constant of the circuit is:								
(a) 0.1 s	(b) 1	1 s	(c) 2.5 s		(d) 10 s			
MCQ # 1: (c)	MCQ # 2: (d)	MCQ # 3: (b)	MCQ # 4: (b)	MCQ # 5: (c)	MCQ # 6: (d)			

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