<u>STD:12</u>	PART-1 NCERT	CH: 1,2&3SET:B (Combine).	HARDIK THAKKAR
12E PART-1	CH:1,2 &3 Combine	SET:B	MARKS:100 TIME:3HR
Section-A METHOD (REASON) COMPLIL SORY (Each carry 1 marks) [30]			
(1) Dimensional formula of electric field.			
(2) electrons (excess) are there on body which has -1μ C charge.			
(3) Flux at a point in electric field is			
(4) An infinite li	ne charge produces field of 9 x 1	04 N/C at distance of 2 cm. Calculate lir	near charge density.
(5) Electric dipole moment of dipole is $\mathbf{p}=10^{-7}(5\mathbf{i}+\mathbf{j}-2\mathbf{k})$ Cm and electric field is $\mathbf{E}=10^{7}(\mathbf{i}+\mathbf{j}+\mathbf{k})$ V/m then magnitude of torque			
IS NM.			
(6) A 12pF capacitor is connected to 50V battery. How much electrostatic energy is stored in capacitor?			
(7) For air dielectric strength is nearly 3000 V/mm. Find minimum radius of the conducting sphere to deposit 3mC			
charge?			
(8) A parallel plate capacitor is charged and battery is disconnected. Now dielectric slab is inserted in it then			
remains consta	ant.		
(9) If electric field	eld is 60 V/m then what will be en	ergy density?	
(10) Define polarisation.			
(11) The energy	y density outside charged spheri	cal shell is	
(12) For capaci	itor distance between plates is 4	κ and field is Ε₀. Now dielectric slab hav	ving dielectric slab have dielectric
constant 3 and thickness x. In this condition what is p.d. between its two plates?			
(13) Define 1 coulomb.			
(14) If wire is st	tretched by 100% what will be ne	w resistance?	
(15) Current fic	owing in our nerves are of the ord	ler of	
(16) The resisti	vity of a conductor with the curr	ent density of 2.5 A/m^2 when an electric	c field 5 X 10 ⁻⁸ V/m is applied to it
(17) Write relation between current density and drift velocity for electron with direction.			
(18) If internal resistance of cell is 12 Ω and emf is 90V. Find its current if external resistance is 8 Ω .			
(19) 1J is equiv	alent to how many kWh?		
(20) Define volu	ume charge density.		
(21) What is sat	fe voltage supplied to 98Ω -0.5W	resistance?	
(22) The charge	e on parallel plates of capacitor i	s increased by 2times, find change in c	apacitance if the capacitor.
(23) Define cur (24) Write state	ment of Kirchhoff's 2nd law		C.U
(25) Define can	pacitor.		
()		1 + P 5 a	
(26) A particle	having mass 1g and electric cha	rge 10 ⁻⁸ C	ectric potential 600V to point B
having zero po	tential. What would be change in	its an it is energy?	
(27) If electron is moving freely with initial vel. city 3.2 x 10 ⁶ m/s in direction of electric field 9.1 x 10 ² N/C. What will be			
distance covered by electron before a cones to rest?			
(28) By rubbing (29) A \cdot in above	two bodies to the tome charge	ed new erzeler masses are increased. I	rue/Faise ? Explain
(25) A . III abs	ale ule of polar dielectric polse	asses permanent dipole moment. But in	absence of external field they are
randomly oriented in all direction. The resultant of which becomes zero.			
(a)Both assertion and reason are true and reason is correct explanation of assertion.			
(b)Botl	h assertion and reason are true a	ind reason is not correct explanation of	assertion.
(c)Ass	ertion is true but reason is false.		
(d)Both assertion and reason are false.			
(30) By placing	medium of dielectric constant K	between two plates of capacitor in abs	sence of battery
(a) Electric	II-A	Jection-B (i) Bocomes 1/K times	
(b) Flectri	ic potential	(ij) Becomes K times	
(2) 210001		(iii) remains constant	
Section-B		(Each carry 2 marks)	[20]
(1) Explain force	es between multiple charges.		
(2) Derive the equation of electric field due to uniformly charged infinite plane sheet.			

(3) Write important points of gauss law.

(4) Define dipole moment and derive the equation for electric field on axis.

(5) Explain potential energy of dipole in external electric field.

(6) Explain parallel plate capacitor and derive equation of capacitance.

(7) Define equipotential surface and get the relation between Electric field and potential.

(8) Write limitations of ohm's law.

(9) Derive the vector relation among the current density, conductivity and electric field.

(10) Explain in detail mobility.