SEM V ATKT PAPER 4 MOCK TEST

1	Total number of electric lines of force passing normally through a given area is
	A) electric flux
	B) magnetic flux
	C) flux density
	D) mechanical flux
	Answer - A
2	Which of the following law gives a relation between the electric flux through any
	closed surface and charge enclosed by the surface?
	A) Coulomb's law
	B) Newton's law
	C) Gauss's law
	D) Ampere's law
	Answer – C
3	A Gaussian surface encloses no charge. Which of the following is true for a point
	inside it?
	A) electric field must be zero
	B) electric potential must be zero
	C) both electric potential and intensity must be zero
	D) electric field must be non zero
	Answer – A
4	The electric field inside a spherical shell of uniform surface charge density is
	A) zero
	B) uniform
	C) non uniform
	D) nonzero
	Answer – A
5	A conducting sphere has charge Q and its electric potential is V, relative to the
	potential far away. If the charge is doubled to 2Q, the potential is
	A) V
	B) 2V
	C) 4V
	D) V/2
	Answer – B
l .	

6	Energy density also called as

(b) Energy per unit mass (c) Energy per unit surface area (d) Energy per unit length Answer: a 7		(a)	Energy per unit volume		
C Energy per unit surface area (d) Energy per unit length Answer: a		(b)	Energy per unit mass		
Column C		(c)			
Answer: a An electromagnetic wave traveling in a medium depends on: (a) Frequency (b) Wavelength (c) Time period (d) Velocity Answer:d The energy transported by the fields per unit time per unit area is called (a) Poynting Energy (b) Electromagnetic Energy (c) Flux density (d) Poynting vector Answer:c 9 Unit of Poynting vector is (a) Watt (b) Watt/s (c) Watt/m (d) Watt/m² Answer:d 10 Index of reflection of material is defined as Velocity of e.m. wave (a) In Vaccum /in material (b) In material*in vaccum (c) In material*in vaccum (d) 1/in vaccum*in material					
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(b) In material/in vaccum (c) In material*in vaccum (d) 1/in vaccum*in material	10	Index			
(c) In material*in vaccum (d) 1/in vaccum*in material		(a)			
(d) 1/in vaccum*in material		(b)			
		(c)			
Answer:a		(d)	1/in vaccum*in material		
		Ansv	ver:a		

11	For h	nomogeneous medium μ and ε		
	(a)	Increases, decreases		
	(b)	Constant, constant		
	(c)	Decreases, decreases		
	(d)	Increase, increases		
	Ans	wer: b		
12.	The curl of a gradient is always			
	(a)	0		
	(b)	1		
	(c)	2		
	(d)	3		
	Ansv	ver: a		
13.	In m	agnetostatics, $(\delta \rho / \delta t) =$		
	(a)	0		
	(b)	1		
	(c)	2		
	(d)	3		
	Answer: a			
14.	Stati	onary charges produce electric fields that are constant in time; hence the term		
14.		—.		
	(a)	statics		
	(b)	magnetostatics		
	(c)	variable		
	(d)	electrostatics		
	Answer: d			

15	The r	The net charge induced in the dielectric due to polarization of dielectric is	
	(a)	infinite	
	(b)	positive	

	(c)	zero
	(d)	negative
	Answ	er:c