

### SEM V ATKT PAPER 4 MOCK TEST

1	<p>Total number of electric lines of force passing normally through a given area is...</p> <p><b>A) electric flux</b> B) magnetic flux C) flux density D) mechanical flux</p> <p>Answer - A</p>
2	<p>Which of the following law gives a relation between the electric flux through any closed surface and charge enclosed by the surface?</p> <p>A) Coulomb's law B) Newton's law <b>C) Gauss's law</b> D) Ampere's law</p> <p>Answer – C</p>
3	<p>A Gaussian surface encloses no charge. Which of the following is true for a point inside it?</p> <p><b>A) electric field must be zero</b> B) electric potential must be zero C) both electric potential and intensity must be zero D) electric field must be non zero</p> <p>Answer – A</p>
4	<p>The electric field inside a spherical shell of uniform surface charge density is .....</p> <p><b>A) zero</b> B) uniform C) non uniform D) nonzero</p> <p>Answer – A</p>
5	<p>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.....</p> <p>A) V <b>B) 2V</b> C) 4V D) V/2</p> <p>Answer – B</p>
6	<p>Energy density also called as</p>

	(a)	Energy per unit volume
	(b)	Energy per unit mass
	(c)	Energy per unit surface area
	(d)	Energy per unit length
	Answer: a	

7	An electromagnetic wave traveling in a medium depends on:	
	(a)	Frequency
	(b)	Wavelength
	(c)	Time period
	(d)	Velocity
	Answer:d	

8	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/m <sup>2</sup>
	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
	Answer:a	

11	For homogeneous medium $\mu$ ----- and $\epsilon$ -----	
	(a)	Increases, decreases
	(b)	Constant, constant
	(c)	Decreases, decreases
	(d)	Increase, increases
		Answer: b

12.	The curl of a gradient is always_____.	
	(a)	0
	(b)	1
	(c)	2
	(d)	3
		Answer: a

13.	In magnetostatics, $(\delta\rho/\delta t) =$ _____.	
	(a)	0
	(b)	1
	(c)	2
	(d)	3
		Answer: a

14.	Stationary charges produce electric fields that are constant in time; hence the term _____.	
	(a)	statics
	(b)	magnetostatics
	(c)	variable
	(d)	electrostatics
		Answer: d

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

	(c)	zero
	(d)	negative
	Answer:c	