SY BSC SEM 3 UNIT 5 CHAPTER - 7 SINGLE STAGE TRANSISTOR AMPLIFIER				
SR NO	**QUESTIONS**		**OPTIONS**	**ANSWER**
1	A single stage transistor amplifier contains _____ along with associated circuitary.	A	two transistor	C
		B	three transistor	
		C	one transistor	
		D	four transistor	
2	The phase difference between input voltage and output voltage of a CE ampliifer_____.	A	360°	B
		B	180°	
		C	270°	
		D	90°	
3	The transistor should have _____ input impedence .	A	very law	B
		B	very high	
		C	high	
		D	low	
4	A CE amplifier is also known as _____ circuit.	A	grounded base	C
		B	grounded collector	
		C	grounded emitter	
		D	none of this	
5	The purpose of d.c. condition in a transistor is to _____.	A	forward bias the emitter	C
		B	reverse bias the emitter	
		C	set up the operating point	
		D	none of this	
6	In a CE amplifier the phase difference betweeen voltage across collector load and input volatage is_____.	A	zero	A
		B	180°	
		C	270°	
		D	90°	
7	The purpose of capacitors in a transistor amplifier is to _____.	A	provide biasing	D
		B	cool the transistor	
		C	protect transistor	
		D	couple or bypass the a.c.	

8	The slope of a.c. load line is _____ that of d.c. load line	A	less than	C
		B	the negetive of	
		C	more than	
		D	the same as	
9	The voltage gain of an amplifier is generally expressed_____.	A	as volts	C
		B	as currents	
		C	as a number	
		D	none of these	
10	A transistor in a voltage amplifier converts _____.	A	high resistance into low res	C
		B	a.c. power into d.c. power	
		C	d.c. power into a.c. power	
		D	bypass the d.c.	
11	A transistor amplifier has high output impedence because _____.	A	collector has reverse bias	A
		B	emitter is reverse biased	
		C	base is forward biased	
		D	none of this	
12	The d.c. load of a transistor amplifier is generally _____ that of the a.c. load.	A	more than	A
		B	the same as	
		C	less than	
		D	none of this	
13	The output power of a transistor amplifier is more than the input power, the additional power comes from_____.	A	transistor	D
		B	capacitors	
		C	biasing resistors	
		D	collector supply Vcc	
14	For highest power gain the configuration should be used is_____.	A	CE	A
		B	CB	
		C	CC	
		D	None of this	
15	The point of intersection of a.c. and d.c. load lines is called_____.	A	operating point	A
		B	cut off point	
		C	as a number	
		D	none of this	
16	Short circuiting the input capacitor of a transistor amplifier _____.	A	will change bias conditions	A
		B	will destroy transistor	
		C	will black input signal	
		D	none of these	

17	In a transistor amplifier Vcc = 10 V then the collector cut off voltage under d.c. conditions is _____.	A	15 V	B
		B	10 V	
		C	20 V	
		D	5 V	
18	When input signal is applied to an amplifier , the operating point moves along _____.	A	d.c. load line	B
		B	a.c. load line	
		C	remains unmoved	
		D	none of these	
19	A single stage transistor amplifier with no load sees an a.c. load of _____.	A	$R_c + R_E$	D
		B	$R_c . R_E$	
		C	R_c / R_E	
		D	R_c	
20	The capacitors are considered as _____ in the d.c. euqivalent circuit of transistor amplifier.	A	open	A
		B	short	
		C	partially short	
		D	partially open	

ANSWER THE FOLLOWING QUESTIONS : 2 MARKS	
1	Explain single stage ampifier.
2	What is a d.c. load line ?
3	What is a a.c. load line ?
4	Define : fequency response
5	Define : bandwidth
6	Explain collector current variation with the help of output characteristics .
ANSWER THE FOLLOWING QUESTIONS : 3 MARKS	
1	What is a.c. and d.c.load lines ? How they will be constructed on the output characteristics?
2	Explain 180° phase reversal with the help of graphical representation.
3	Derive an equation for the volatge gain of a transistor ampliifier from it's a.c. circuit .
4	Show that output voltage of a single stage CE ampliifer is 180° out of phase with the input voltage .
5	Find the voltage of an amplifier having Rc = 5 KΩ, RL = 10 KΩ, Rm = 2K Ω and **β** = 100.
6	Explain classification of amplifiers.
ANSWER THE FOLLOWING QUESTIONS : 5 MARKS	
1	Find the transistor amplifier having Rc = 12 KΩ, R_E = 10 KΩ, Vcc = 20 V , R in = 2K Ω and **β** = 200. find the volatge gain.
2	Draw the circuit of a single stage amplifier and explain the functions of its various elements .
3	Derive an expression for the voltage gain of a transistor amplifier from its a.c. equivalent circuit.
4	A standard CE amplifier has the following values : VCC = 30V, R1 = 51 kΩ, R2 = 5.1 kΩ, RC = 5.1 kΩ, RE = 910Ω and β = 250. Determine the voltage gain of the amplifier.
5	Explain practical circuit of transistor amplifier with their various circuit element.

SY BSC SEM 3 UNIT 5 CHAPTER - 6 TRANSISTOR BIASING & STABILISATION OF OPERATING POINT				
SR NO	**QUESTIONS**		**OPTIONS**	**ANSWER**
1	Transistor biasing represents ..... conditions.	A	a.c.	B
		B	d.c.	
		C	both a.c. and d.c.	
		D	none of the above	
2	Operating point represents	A	values of IC and VCE when signal is applied	C
		B	the magnitude of signal	
		C	zero signal values of IC and VCE	
		D	none of the above	
3	If biasing is not done in an amplifier circuit, it results in	A	decrease in base current	B
		B	unfaithful amplification	
		C	excessive collector bias	
		D	none of the above	
4	Transistor biasing is generally provided by a	A	biasing circuit	A
		B	bias battery	
		C	diode	
		D	none of the above	
5	The circuit that provides the best stabilisation of operating point is	A	base resistor bias	C
		B	collector feedback bias	
		C	potential divider bias	
		D	none of the above	
6	The point of intersection of d.c. and a.c. load lines represents	A	operating point	A
		B	current gain	
		C	voltage gain	
		D	none of the above	

7	An ideal value of stability factor is	A	100	D
		B	200	
		C	more than 200	
		D	1	
8	The disadvantage of base resistor method of transistor biasing is that it	A	is complicated	B
		B	is sensitive to changes in β	
		C	provides high stability	
		D	none of the above	
9	For proper operation of the transistor, its collector should have	A	proper forward bias	B
		B	proper reverse bias	
		C	very small size	
		D	none of the above	
10	The operating point is also called the	A	cut off point	B
		B	quiescent point	
		C	saturation point	
		D	none of the above	
11	For proper amplification by a transistor circuit, the operating point should be located at ..... of the d.c. load line.	A	the end point	B
		B	middle	
		C	the maximum current point	
		D	none of the above	
12	The operating point ..... on the a.c. load line.	A	also lies	A
		B	does not lie	
		C	may or may not lie	
		D	data insufficient	
13	The disadvantage of voltage divider bias is that it has	A	high stability factor	C
		B	low base current	
		C	many resistors	
		D	none of the above	
14	Thermal runaway occurs when	A	collector is reverse biased	B
		B	transistor is not biased	
		C	emitter is forward biased	
		D	junction capacitance is high	

15	The base resistor method is generally used in	A	amplifier circuits	B
		B	switching circuits	
		C	rectifier circuits	
		D	none of the above	
16	For germanium transistor amplifier, V_{CE} should ..... for faithful amplification.	A	be zero	C
		B	be 0.2 V	
		C	not fall below 0.7 V	
		D	none of the above	
17	The stability factor of a collector feedback bias circuit is ..... that of base resistor bias.	A	the same as	C
		B	more than	
		C	less than	
		D	none of the above	
18	If the value of collector current I_C increases, then value of V_{CE}	A	remains the same	B
		B	decreases	
		C	increases	
		D	none of the above	
19	If the temperature increases, the value of VBE	A	remains the same	C
		B	is increased	
		C	is decreased	
		D	none of the above	
20	The value of V_{BE}	A	depends upon IC to moderate extent	B
		B	is almost independent of IC	
		C	is strongly dependent on IC	
		D	none of the above	

ANSWER THE FOLLOWING QUESTIONS : 2 MARKS	
1	What is operating point?
2	What is thermal runway?
3	Explain transistor biasing : Why it is need?
4	Define : Stability factor
5	Define : faithful amplification
6	Give the advantages of base resistor method.
ANSWER THE FOLLOWING QUESTIONS : 3 MARKS	
1	Derive the general expression of stability factor for CE configuration.
2	Mention step to design for transistor biasing
3	Derive stability factor of biasing with feedback resistor method.
4	Derive stability factor of voltage divider biasing method.
5	Write a short note on variation of transistor parameter.
6	Why stabilization of the operating point is necessary ?
ANSWER THE FOLLOWING QUESTIONS : 5 MARKS	
1	Explain voltage divider biasing method .
2	Explain base resistor method with their advantages & disadvantages.
3	Explain biasing with feedback resistor method .
4	Describe the various methods used for transistor biasing. State their advantages and disadvantages.
5	Write short notes on the following : (i) Operating point (ii) Stabilisation of operating point

SY BSC SEM 3 UNIT 4 CHAPTER - 5 MAGNETIC FIELDS IN MATTER				
SR NO	**QUESTIONS**		**OPTIONS**	**ANSWER**
1	The presence of parallel alignment of magnetic dipole moment is given by which materials?	A	Diamagnet	B
		B	Ferromagnet	
		C	Paramagnet	
		D	None of the above	
2	Which material acquires a weak magnetisation aligned with an external applied magnetic filed and lose magnetization?	A	Diamagnet	C
		B	Ferromagnet	
		C	Paramagnet	
		D	None of the above	
3	Diamagnets acquires a weak magnetization _____ an external applied magentic field, lose their allignment.	A	aligned with	B
		B	opposite	
		C	align in same direction	
		D	None of the above	
4	Ferromagnets material are known as _____.	A	linear	B
		B	Non linear	
		C	symmetric	
		D	None of the above	
5	Magnetic dipole moment of the loop is m = _____.	A	Iab	A
		B	Ia/b	
		C	I/ab	
		D	None of the above	
6	Electrons do not spin only ,they also revolve around the nucleas ina orbit. True/ False.	A	True	A
		B	False	
		C		
		D		

7	The property of diamagnetism is that magnetic dipole moment is the _____ direction to the applied field.	A	opposite	A
		B	aligned with	
		C	align in same direction	
		D	None of the above	
8	The property of paramagnetism is that magnetic dipole moment is the _____ direction to the applied field.	A	opposite	C
		B	aligned with	
		C	in same	
		D	None of the above	
9	Magnetic dipole moment per unit volume is known as _____.	A	Magnetization	A
		B	polarization	
		C	magnetic flux	
		D	None of the above	
10	_____ is a paramagnetic substance.	A	Copper chloride	A
		B	NaCl	
		C	lead	
		D	None of the above	
11	_____ is a diamganetic substance.	A	Copper chloride	B
		B	NaCl	
		C	aluminium	
		D	None of the above	
12	If the material exhibit solenoidal symmetry using Ampere's law is known as $\vec{\nabla} \times \vec{M}$ = _____.	A	0	A
		B	1	
		C	2	
		D	None of the above	
13	Magnetic susceptiblity is serves as_____.	A	χ_m	A
		B	μ_0	
		C	ϵ_0	
		D	none of the above	
14	Magnetic susceptiblity is dimensionless quantity. True /False	A	True	A
		B	False	

15	Paramagentic material have _____ value of magnetic susceptibility.	A	Positive	A
		B	Negative	
		C	zero	
		D	None of the above	
16	Diamagentic material have _____ value of magnetic susceptibility.	A	Positive	B
		B	Negative	
		C	zero	
		D	None of the above	
17	Permeability of free space serves as _____.	A	χ_e	B
		B	μ_0	
		C	ϵ_0	
		D	none of the above	
18	In feromagnets the individual dipole moments interact with each other . True/ False.	A	True	A
		B	False	
		C		
		D		
19	Diamagnetism is actually a quantom mechanical effect. True/ False.	A	True	A
		B	False	
		C		
		D		
20	Magnetization is _____ quantity.	A	scalar	B
		B	vector	
		C	dimensionless	
		D	none of the above	

ANSWER THE FOLLOWING QUESTIONS : 2 MARKS	
1	Explain the mechanism responsible for dimagentism.
2	Define : linear media
3	Explain the physical origin of magnetic dipoles.
4	Give the mechanism responsible for paramgnetism.
5	Define : Magnetization.
6	Define : macroscopic magnetic field.
ANSWER THE FOLLOWING QUESTIONS : 3 MARKS	
1	Define : diamagnets, paramgnets, and ferromagnets.
2	Explain the magnetization of material.
3	Derive equation for torque acting on a magnetic dipole in a magnetic field.
4	Derive the equation for force acting magnetic dipole in a magnetic field.
5	Explain linear media derive relationship involving magnetic intensity $\vec{H}$.
ANSWER THE FOLLOWING QUESTIONS : 5 MARKS	
1	Derive the equation for the field of a magnetised object.
2	Give the phyiscal interpretation of bound currents.
3	Derive equation of Ampere's law in magnetised material.
4	Explain the effect of magnetic field on atomic orbits with necessary equations.
5	Explain the magentic field inside matter, derive equation for a small sphere of radius r.

SY BSC SEM 3 UNIT 4 CHAPTER - 4 ELECTRIC FIELDS IN MATTER				
SR NO	**QUESTIONS**		**OPTIONS**	**ANSWER**
1	The dielectric serves as a_____.	A	semiconductor	B
		B	insulator	
		C	conductor	
		D	nonr of the above	
2	A dielectric is always an insulator. But an insulator is not necessarily a dielectric. State True/False.	A	True	A
		B	False	
3	Dipole induced dipole forces occur in molecules, it is having a mixture of_____.	A	polar and non polar compounds	A
		B	polar and polar compounds	
		C	sulphur containing compounds	
		D	Light compounds	
4	The best definition of polarisation is _____.	A	Orientation of dipoles in random direction	B
		B	Electric dipole moment per unit volume	
		C	Orientation of dipole moments	
		D	Change in polarity of every dipole	
5	Polarizability is defined as the_____.	A	Product of dipole moment and electric field	B
		B	Ratio of dipole moment to electric field	
		C	Ratio of electric field to dipole moment	
		D	Product of dielectric constant and dipole moment	

6	Which statement is true about Polar Molecules?	A	They are asymmetrical	A
		B	they have similar charges on one end	
		C	They dissolve with non polar compund	
		D	none of the above	
7	Which statement is true about Non Polar Molecules?	A	They are symmetrical	A
		B	they have different charges on one end	
		C	They dissolve with polar compund	
		D	none of the above	
8	_____ molecules experiences a torque when they are subjected to an electric field.	A	Polar	A
		B	Non polar	
		C	Die electric	
		D	None of the above	
9	The atomic polarizibility identified by _____.	A	∂	B
		B	$\boldsymbol{\alpha}$	
		C	$\boldsymbol{\beta}$	
		D	None of the above	
10	The field is not too strong, the polarisation is prapotional to the electirc field , these material called _____.	A	linear dielectric	A
		B	semiconductor	
		C	insulator	
		D	none of the above	
11	Electric susceptiblity serves as _____.	A	$\boldsymbol{\chi}_e$	A
		B	$\boldsymbol{\mu}_0$	
		C	$\boldsymbol{\epsilon}_0$	
		D	none of the above	
12	Electric susceptiblity is a dimensionless quantity. True/False.	A	True	A
		B	False	
		C		
		D		

13	Permitivity of free space serves as _____.	A	χ_e	C
		B	μ_0	
		C	ϵ_0	
		D	none of the above	
14	Dielectric constant serves as _____.	A	χ_e	B
		B	ϵ_r	
		C	ϵ_0	
		D	none of the above	
15	The value of electric susceptiblity of ICE _____.	A	98	A
		B	0	
		C	70	
		D	none of the above	
16	The induced electric dipole moment $\vec{P}$ =_____.	A	$\alpha \vec{E}$	A
		B	$\beta \vec{E}$	
		C	$\alpha / \vec{E}$	
		D	none of the above	
17	The value of relative permitivity of vaccum is _____.	A	1	A
		B	0	
		C	4.9	
		D	none of the above	
18	The bound charges are not just a mathematical analogy, but are real charges. True/False .	A	True	A
		B	False	
19	If the problem exhibits spherical symmetry for which $\vec{\nabla} \times \vec{P}$ = _____	A	0	A
		B	1	
		C	2	
		D	None of the above	
20	Atomic polarizibility depends on properties of atom. True/False.	A	True	A
		B	False	

ANSWER THE FOLLOWING QUESTIONS : 2 MARKS	
1	Explain : dielectrics.
2	What do you understand by induced dipoles? Explain in brief.
3	What is the physical significance of the bound charge ?
4	What do you mean by induced dipoles?
5	Explain polarizibility of a dielectric material.
6	Write the boundry condition in terms of $\vec{D}$.
ANSWER THE FOLLOWING QUESTIONS : 3 MARKS	
1	Derive the equation for force acting on a electric dipole.
2	Explain the polarisation of matter.
3	Explain the electric displacement.
4	Derive the equation for Guass's law in presence of dielectris.
5	Discuss the parallels between $\vec{E}$ and $\vec{D}$.
6	Explain the linear dielectrics.
7	What is the boundry condition on $\vec{D}$ and $\vec{E}$ in the presence od dielectrics.
ANSWER THE FOLLOWING QUESTIONS : 5 MARKS	
1	Give the physical interpretation of bound charges.
2	Explain the electric field inside a dieelectric. Derive the equation for a small sphere of radius r.
3	Explain the dieelectric displacement and derive the equation for Gauss's law in differential as well as integral form.
4	Explain linear dielectrics and derive relationship involving electric displacement $\vec{D}$.

SEM 3, Unit 3, Magnetostatics

1	Who discovered a compass needle?	A	Lorentz	C
		B	Ferade	
		C	**Orested**	
		D	Coulomb	
2	Which relation is known as cyclotron formula?	A	**$qvB = mv^2/r$**	A
		B	$Mv = qBr$	
		C	$qB = mv^2r$	
		D	None of the above	
3	Cyclotron motion convert into helical motion because _____.	A	Partical unaffected by the electrical field	D
		B	affected by the magnetic field	
		C	affected by the electrical field	
		D	**Partical unaffected by the magnetic field**	
4	Lorentz force law relation is _____.	A	$\vec{F} = q(\vec{v} \times \vec{B})$	C
		B	$\vec{F} = qE + q(\vec{v} \times \vec{B})$	
		C	**Both a & b**	
		D	None of the above	
5	Biot-savart law applies to only _____.	A	**Steady current**	A
		B	Point charge	
		C	Voltage	
		D	Both a & b	
6	Magnetic field of any straight segment of wire is _____ to the distance from wire.	A	**Inversely**	A
		B	Directly	
		C	Very from point to point	
		D	Not say any thing	
7	Divergence of the magnetic field B is _____.	A	One	B
		B	**Always zero**	
		C	Change due to magnetic field	
		D	None of the above	
8	In electrostatic, electrostatic field intensity E derived from the _____.	A	∇V	B
		B	$-\nabla \boldsymbol{V}$	
		C	$\nabla \times \vec{V}$	
		D	$-\nabla \times \vec{V}$	

9	In electrostatic, $\overrightarrow{\nabla} \times \vec{B}$ = _____.	A	**$\mu_o J$**	A
		B	$\mu_o J da$	
		C	$\varepsilon \mu_o J$	
		D	0	
10	Ampere's law in intergral form is _____.	A	**$\oint \vec{B} \cdot \overrightarrow{dl} = \mu_o I_{enclosed}$**	A
		B	$\int \vec{B} \times \overrightarrow{dl} = \mu_o I$	
		C	$\int \vec{B} \times \overrightarrow{dl} = \int \mu o \, J \, da$	
		D	None of the above	
11	What is the magnetic field inside and outside the toroid coil?	A	1	B
		B	**0**	
		C	< 1	
		D	> 1	
12	What is the magnetic field within the core the toroidal coil?	A	0	D
		B	$\mu_o I / 2N\pi r$	
		A	$2\mu_o NI / \pi r$	
		D	**$\mu_o NI / 2\pi r$**	
13	The magnetic field line curls around a_____.	A	**current**	A
		B	Wire	
		C	Point charge	
		D	None of the above	
14	A wire of square shape of each side 10cm long is carrying a current of 2amp in the anti-clockwise direction. Calculate the magnetic field at it's center.	A	**2.260×10^{-5} tesla**	A
		B	2.260×10^{5} tesla /cm	
		C	2.260×10^{-10} tesla	
		D	2.260×10^{-5} Amp/ cm	
15	The unit of magnetic field is _____.	A	Newton / ampere-meter	D
		B	Tesla	
		C	Ampere-meter / newton	
		D	**Both a & b**	
16	Maxwell's eq. for electrostatic contain the same information as _____ law, in same way magnetostatic are equivalent to the _____ law.	A	**Coulomb's , Biot-savart**	A
		B	Biot-savart, Coulomb's	
		C	Coulomb's, Coulomb's	
		D	Biot-savart, Biot-savart	

ANSWER THE FOLLOWING QUESTIONS : 2 MARKS	
1	Derive the work done by a charge moving in a steady magnetic field.
2	Explain cyclotron motion.
3	What is the basic equation for steady currents ?
4	What is the divergence of magnetic field ?
5	State integral & differential form of Ampere's law.
6	What is bio savart's law?
ANSWER THE FOLLOWING QUESTIONS : 3 MARKS	
1	Explain lorentz force law.
2	Describe cycloid motion.
3	Derive vector potential.
4	Explain divergence of a magnetic field $\vec{B}$.
5	Expalin curl of magnetic field $\vec{B}$.
6	Derive equation of continuity.
7	Derive basic equation for steady curent.
ANSWER THE FOLLOWING QUESTIONS : 5 MARKS	
1	Discuss the bio savart's law.
2	Explain magnetic field of a steady current.
3	Define : magnetic field above a straight wire.
4	Explain straight line currents.
5	Describe magnetic field on the axis of a current carrying circular loop.
6	Explain : current with refrence to charge flows over a surface.

SEM 3, Unit 2, Electrostatics				
1	The value of permittivity is _____.	A	8.85×10^{-10}	C
		B	8.85×10^{12}	
		C	**8.85×10^{-12}**	
		D	8.85×10^{-15}	
2	The unit of surface charge density σ is _____.	A	**C/m^2**	A
		B	C/m	
		C	C/m^3	
		D	C/m	
3	Which are/is true the properties of electric field line?	A	There are repulsion	D
		B	Field line can never cross each other	
		C	Field line are parallel to each other	
		D	**All of the above**	
4	Electric flux is define as _____	A	**E.da**	A
		B	-E.da	
		C	E x da	
		D	None of the above	
5	Flux is _____ quantity.	A	**Scalar**	A
		B	Vectar	
		C	Only number	
		D	None of the above	
6	The unit of flux is _____.	A	**Nm^2/c**	A
		B	Vm	
		C	Both a & b	
		D	None of the above	

7	Flux is positive if θ = _____.	A	>90	B
		B	**<90**	
		C	= 90	
		D	0	
8	Flux is negative if θ = _____.	A	<90	B
		B	**>90**	
		C	= 90	
		D	0	
9	Flux is zero if θ = _____.	A	**90**	A
		B	0	
		C	270	
		D	None of the above	
10	The value of flux is positive if lines of force are_____	A	**Diverging**	A
		B	Converging	
		C	Strigh	
		D	Both a & b	
11	In coulomb's law force is inversely proportional to_____	A	r	B
		B	**r^2**	
		C	q	
		D	ε r^2	
12	The total flux of the electric field over a closed surface is _____ times the total charge enclosed by the surface.	A	$1/r^2$	D
		B	1/q	
		A	E	
		D	**$1/ \varepsilon_o$**	
13	Differential equation of gauss's law is_____.	A	**$\nabla.E = \varrho/ \varepsilon_o$**	A
		B	$\nabla.E = 1/ \varepsilon_o$	
		C	$\nabla \times E = \varrho/ \varepsilon_o$	
		D	$\nabla \times E = \varrho.\varepsilon_o$	
14	According to gauss's law net charge (Qenc) inside the surface is _____.	A	**Zero**	A
		B	Maximum	
		C	Minimum	
		D	Not equal	

15	The electric field in the spherical cell is _____	A	Minimum	C
		B	Not equal	
		C	**Zero**	
		D	Maximum	
16	$\nabla \times \vec{E}$ = _____.		**zero**	A
			1	
			ϱ/ ε_o	
			$\varrho\ \varepsilon_o$	
17	$\nabla^2 \times v = -- \varrho/ \varepsilon_o$		**Possion's equation**	A
			Laplace's equation	
			Gauss law	
			None of the above	

ANSWER THE FOLLOWING QUESTIONS : 2 MARKS	
1	Explain electric field.
2	Define : linear charge distribution.
3	Explain : gauss theorem in integral form.
4	Discuss divergence of $\vec{E}$
5	Discuss electric field around charges solid sphere.
6	find the $\vec{E} = -\nabla V$
ANSWER THE FOLLOWING QUESTIONS : 3 MARKS	
1	Explain electric field.
2	Discuss the properties of field lines.
3	Discuss curl of $\vec{E}$.
4	Derive the poison's equation and laplace equation.
5	Explain continous charge distribution of various type.
6	Derive the equation of electric field of plane charged sheet.
ANSWER THE FOLLOWING QUESTIONS : 5 MARKS	
1	Explain potential.
2	Derive the Gauss theorem in integral form.
3	Derive the equation of potential due to localizes charge.
4	Find the electric field around charges spherical shell. Also discuss in side the shell.
5	Explain work done to move charges.
6	Explain the energy of a point charge distribution.

SEM 3, Unit 1, Vector Analysis				
1	Vector means_____.	A	A directed line segment	C
		B	direction as well as magnitude	
		C	both a & b	
		D	none of the above	
2	in vector algebra i x i = _____.	A	0	A
		B	1	
		C	-1	
		D	none of the above	
3	vector product of two vectors b and c is a vector quantity this product (bxc)may by multiplied scalary or vectorially with a third vector a to give_____.	A	two triple products	A
		B	triple products	
		C	scalar triple products	
		D	vector triple products	
4	scalar triple product of three vector a,b,c represents the _____ of a parallelelopiped.	A	volume	A
		B	area	
		C	both a & b	
		D	none of the above	
5	In vector algebra I x j = ____.	A	k	A
		B	mines k	
		C	1	
		D	0	
6	In vector algebra k x j = ____.	A	mines i	A
		B	1	
		C	0	
		D	i	
7	_____ theorem gives the relationship between a surface integral to line integral.	A	gradient	C
		B	divergence	
		C	curl	
		D	fundamental	
8	The line integral or path integral along some selected curve of the gradient is given by difference of the calue of the function at the bondaries is	A	theorem for gradients	A
		B	theorem for divergences	
		C	theorem for curl	
		D	fundamental theorem	

9	_____ theorem gives the relationship volume integral to surface integral.	A	greens theorem	C
		B	divergences theorem	
		C	both a & b	
		D	stocke's theorem	
10	curl theorem is also called_____.	A	stocke's theorem	A
		B	greens theorem	
		C	divergences theorem	
		D	both a & b	
11	the divergence of a vector function v is itself a _____.	A	scalar	A
		B	vector	
		C	neither vector not scalar	
		D	none of the above	
12	Δ(A.B) = A X (Δ X B) + B X (Δ X A) +_____+_____.	A	(A X V)X B + (Δ.B)XA	B
		B	(A.Δ)B + (B.Δ)A	
		C	(A.Δ)X B + (ΔXB).A	
		D	none of the above	
13	Δ(A X B) =B.(ΔXA) __ A.(ΔXB)	A	-	A
		B	+	
		C	±	
		D	x	
14	there is a specific geometrical transformation law for converting vector components from one frams to other is knowm as _____.	A	vectors transform	A
		B	scalar transform	
		C	tensor	
		D	none of the above	
15	the operator ø turns vector A into vector A' is know as _____.	A	tensor	A
		B	vectors transform	
		C	curl	
		D	none of the above	

ANSWER THE FOLLOWING QUESTIONS : 2 MARKS	
1	Define : divergence.
2	What is called scalar triple product?
3	What is called vector triple product?
4	What is called vectors transform?
5	Write the product rules for gradients.
6	State the fundamental theorem for divergence.
7	What are the product rule for curls.
ANSWER THE FOLLOWING QUESTIONS : 3 MARKS	
1	Describe gradient of a scalar.
2	Find the angle between the body diagonal of cube.
3	Explain vector transform for two dimensional case.
4	Describe divergence of a vector.
5	Explain product of four vectors.
6	Explain fundamental theorem of calculus.
ANSWER THE FOLLOWING QUESTIONS : 5 MARKS	
1	Explain triple product.
2	Describe gradient and operator.
3	State and prove the product rules for gradients.
4	Describe fundamental theorems of divergence and gradients.
5	Discuss the divergence of a vector point function.