Quality Checkers Only way to fulfill your dreams		XI-SCI : Physics Magnetism,		DATE:				
				TIME: 1 hour 30 minutes				
					MARKS: 25			
				SEAT NC				
Note:- 1. All Questions are compulsory. 2. Numbers on the right indicate full marks.								
Section A								
Q.1 Select and Write the correct answer. (4)								
1.	Magnetic meridian is the plane							
	<ul><li>A) perpendicular to the magnetic axis of Earth</li><li>B) perpendicular to geographic axis of Earth</li><li>C) passing through the magnetic axis of Earth</li><li>D) passing through the geographic axis</li></ul>							
2.	A place where are horizontal component of Earth's magnetic field is zero lies at							
	A) geographic equator B) geomagnetic equator							
	C) one of the geographic poles D) one of the geomagnetic poles							
3.	The horizontal and vertical component of magnetic field of Earth are same at some place on the surface of Earth. The magnetic dip angle at this place will be							
	A) 30°	B) 45°						
	C) 0°	D) 90°						
4.	Inside a bar r	Inside a bar magnet, the magnetic field lines						
	A) are not present		B) ar mag	B) are parallel to the cross sectional area of the magnet				
	C) are in the pole	direction from N pole to S	D) ai	re in the direction from S	pole to N pole			
Q.2 Answer the following. (3								
1.	State properties of magnetic lines of forces.							
2.	What is the unit of Magnetic Intensity?							
3.	Define : Axial	Point.						
Section B Attempt any Four								
Q.3	Explain magne	etic maps and isomagnetic charts.						
Q.4	Distinguish m	agnetic axis and magnetic equator.				(2)		
Q.5	What is a geog minimum?	is a geographic meridian. How does the declination vary with latitude? Where is it num?						
Q.6	What do you r	you mean by bar magnet? What is magnetic dipole moment?						
Q.7	Show that the the magnitude	ow that the magnitude of magnetic induction at the axial point of a short bar magnet is twice ( e magnitude of magnetic induction at a point on its equator at the same distance.						
Q.8	A rectangular coil of length 8 cm and breadth 5 cm has 200 turns of insulated wire. Find magnetic moment when, a current of 2 A flows through it.			ited wire. Find	(2)			

## Section C Attempt any Two

	Section D Attempt any One							
	current passing through the wire to produce a magnetic moment of 20 ${\sf Am}^2$							
Q.11	A rectangular coil of length 10 cm and breadth 4 cm has 200 turns of insulated wire. Find							
Q.10	Compare analogue between Electrostatics and Magnetism.							
Q.9	Explain the Gauss' law for magnetic fields.							

Q.12 State properties of magnet (Magnetic dipole).

A magnet makes an angle of 450 with the horizontal in a plane making an angle of 300 with the magnetic meridian. Find the true value of the dip angle at the place.

(4)

Q.13 Two small and similar bar magnets have magnetic dipole moment of 1.0 Am2 each. They are kept in a plane in such a way that their axes are perpendicular to each other. A line drawn through the axis of one magnet passes through the center of other magnet. If the distance between their centres is 2 m, find the magnitude of magnetic field at the mid point of the line joining their centers.