			E C AN			
	Enrollment No:	CIICIIAII				
	C.U.SHAH UNIVERSITY					
	Summer Examination-2018					
	Subject Name: Electricity and Magnetism					
	Subject Code: 4SC03ELM1		Branch: B.Sc. (All)			
	Semester: 3	Date: 04/04/2018	Time: 02:30 To 05:30	Marks: 70		
	 Instructions: (1) Use of Programmable calculator & any other electronic instrument is prohibited. (2) Instructions written on main answer book are strictly to be obeyed. (3) Draw neat diagrams and figures (if necessary) at right places. (4) Assume suitable data if needed. 					
Q-1	Attempt	the following questions:		(14)		
Atto	b) What is to c) Define the d) What is to e) What is to f) Define the g) What is to h) Differente i) The amoo j) What is to k) Electrome l) Give the m Explain to n) What is it in	tiate between electric and may unt of work done in charging the unit of magnetic pole streat agnets are manufactured by a example of diamagnetic mate the term "polarization". sotropic medium?	C, potential V and Charge Q.? gnetic flux? store by conductor, in which form? ngth? using soft iron, Why?			
Atte	mpt any tour que	stions from Q-2 to Q-8				
Q-2 Q-3	A Obtain re B Find the Attempt A State and	all questions elation between potential differential of charged sphere a all questions I prove the Gauss theorem. Hall effect.	erence and electric field intensity t outside the sphere.	(14) 7 7 (14) 7 7		



Attempt all questionsExplain the magnetic field due to current carrying conductor.
Describe magnetic field due to a solenoid.

Q-4

Q-5

A B

Attempt all questions

(14)

7

(14)

	\mathbf{A}	State Biot-Savart's law and using it find B for a current carrying straight conductor		
	В	Compare the properties of Para and Dia magnetic materials	7	
Q-6		Attempt all questions	(14)	
	\mathbf{A}	Explain in detail Ferro magnetic materials	7	
	В	Explain energy loss due to hysteresis.	7	
Q-7		Attempt all questions		
	\mathbf{A}	Write and explain the Equation of continuity of current.	7	
	В	Explain transverse nature of Electromagnetic waves.	7	
Q-8		Attempt all questions	(14)	
_	\mathbf{A}	Explain the term Poynting's Vector in detail	7	
	В	Explain the energy density in electromagnetic field.	3	
		Explain the Maxwell equation briefly	4	

