	Enrolln	nent No:		Exam Seat No:		
			C.U.SHAH	UNIVERSITY amination-2020		
	Subject	Name: I	Electricity and Magnetism			
	Subject Code: 4SC03ELM1		SC03ELM1	Branch: B.Sc. (Chemistry, Physics)		
	Semeste	er : 3	Date: 07/03/2020	Time: 02:30 To 05:30	Marks: 70	
	<ul> <li>Instructions:</li> <li>(1) Use of Programmable calculator &amp; any other electronic instrument is prohibited.</li> <li>(2) Instructions written on main answer book are strictly to be obeyed.</li> <li>(3) Draw neat diagrams and figures (if necessary) at right places.</li> <li>(4) Assume suitable data if needed.</li> </ul>					
Q-1		Attempt	the following questions:		(14	)
Atte	b) c) d) e) f) g) h) i) k) l) m n)	What is Define the What is Wha	Amperes Law? magnetic field? ne term hysteresis. Faraday law? permittivity? dielectric? e the amendments of ampere insulator? capacitor? the unit of capacitor? electromagnet? magnet? e magnetic materials? electric potential? estions from Q-2 to Q-8	current law?		
Q-2	,	(i) Expla	all questions in spherical and cylindrical co is Energy per unit volume in		(14 7 7	)
Q-3		Attempt (i)State a	and prove the Gauss theorem t is the Polarization phenome	in dielectric.	(14 7 7	)
Q-4		(i)What	all questions is solenoid? Explain solenoid ribe working of circular coil		(14 7 7	)



Q-5	Attempt all questions  (i)Explain the Biot-Savart's law and its applications-straight conductor.		
	(ii) Explain briefly Hall Voltage and Hall coefficient	7	
Q-6	Attempt all questions	(14)	
	(i)What are Paramagnetic materials? Explain with example.	7	
	(ii) What are diamagnetic materials? Explain with example	7	
Q-7	Attempt all questions	(14)	
	(i)Write and explain the phenomenon of magnetic induction.	7	
	(ii) State and explain Ampere's circuital law	7	
<b>Q-8</b>	Attempt all questions	(14)	
•	(i) What is Electromagnetic wave? Explain transverse nature of EM waves		
	(ii)What are Maxwell equations?	4	

