## C.U.SHAH UNIVERSITY Summer Examination-2018

## Subject Name : Antennas & Wave Propagation

	Subject	Code : 4TI	E06AWP1	Branch: B.Tech	(EC)		
	Semester	r:6	Date : 22/10/2018	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)
	<ul> <li>a)</li> <li>b)</li> <li>c)</li> <li>d)</li> <li>e)</li> <li>f)</li> <li>g)</li> <li>h)</li> <li>i)</li> <li>j)</li> <li>k)</li> <li>l)</li> <li>m)</li> <li>n)</li> </ul>	What is R Define Ga What is y What is A What is S Give valu Define Ba Define: A Define: A What is n What is n What is A What doe Can static	-	n Antenna? onna bandwidth? ? dance of free space. tenna. on.	antenna?		
		-	ons from Q-2 to Q-8				(14)
Q-2	(a)	Sketch	all questions the helical geometry rence, spacing, turn lengt	with its associated h and pitch angle of helix.		showing	(14) 07
	(b)	Write a sl	nort note on (a) Binomial	Array (b) Phased array			07
Q-3	(a)	In far fiel	<b>all questions</b> d, for a small loop anten d radiation resistance equ	na derive field equations.	Also derive	radiated	(14) 09
	(b)	1	gram of Microstrip Patch			Dage 1 of	05



Q-4		Attempt all questions	(14)
	(a)	Explain different feeding methods in Microstrip patch antenna	07
	<b>(b)</b>	Explain Babinet's principle of slot antenna.	07
Q-5		Attempt all questions	(14)
	<b>(a)</b>	Describe Various types of horn used at microwave frequency.	07
	<b>(b)</b>	Explain Reflector Lens Antenna.	07
Q-6		Attempt all questions	(14)
	(a)	Write the equation of Scalar potential and vector potential for short dipole. Derive the equation of electric field components and magnetic field components.	07
	<b>(b</b> )	Explain the types of antenna measurements.	07
Q-7		Attempt all questions	(14)
	(a)	Describe Rician Fading.	07
	<b>(b)</b>	Draw diagram of log-periodic antenna	07
Q-8		Attempt all questions	(14)
	<b>(a)</b>	Describe Ground Wave Propagation	07
	<b>(b)</b>	Explain different layers of ionosphere.	07

