

Enrolment Number: _____

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B.TECH MID SEM EXAMINATION WINTER 2022-23

SUBJECT NAME: Antenna & Propagations (203107427)

BRANCH: E&C

DATE: 04/08/2022

TIME: 10.30 A.M. TO 12.00 P.M

TOTAL MARKS: 40

Sf. No.		Marks
Q.1	(A) Write answer of MCQ	05
	1. The impedance at the center of the antenna is known as	
	a. Characteristic impedance	
	b. Radiation resistance	
	c. Transmission impedance	
	2. For ideal bidirectional radiation pattern FBR is _____	
	a. 0 db	
	b. 1 db	
	c. Infinite	
	3. The Polarization of EM is defined by the direction of	
	a. H field b. E field c. Propagation	
	4. If the signal level is 1 mW, Power gain is _____	
	a. 0 dbm b. 1 dbm c. Infinite	
	5. How many layers in Microstrip patch antenna?	
	a. 1 b.2 c.3	
	(B) Fill in the blanks	05
	1. Directivity of isotropic radiator is _____ db	
	2. The region furthest from the antenna is dominated by radiated electromagnetic fields and is called the _____	
	3. Aperture commonly define for _____ Antenna	
	4. Array of antenna is design to improve _____ parameter.	
	5. In broadside array, all the elements in the array should have similar _____ excitation along with similar amplitude excitation for maximum radiation	
Q.2	Attempt any four(Short Questions)	12
	(1) Define Gain and Directivity.	
	(2) Write different types of Array antenna with diagram	

- (3) How the antenna is transmitting?
- (4) What is aperture? Define aperture efficiency of antenna.
- (5) Discuss Schelkunoff polynomial method
- Q.3 Attempt any two 08
- (1) Give the advantages and disadvantages of Microstrip patch antenna
- (2) Explain application of pattern multiplication theorem with anyone example
- (3) Explain antenna field zones.
- Q.4 (A) Derive the expression for Two isotropic point sources of the same amplitude and same phase of feed currents. 05
- (B) Explain (i) Dipole (ii) Folded Dipole 05
- OR
- (B) Draw the explain construction of yagi-uda antenna. 05