GALGOTIAS UNIVERSITY

ADMISSION NUMBER												

School of Engineering

B.TECH Electronics and Communication Engineering
Mid Term Examination - May 2024

Duration : 90 Minutes
Max Marks : 50

Sem IV - G2UA405T - Antenna and Wave Propagation

General Instructions
Answer to the specific question asked
Draw neat, labelled diagrams wherever necessary
Approved data hand books are allowed subject to verification by the Invigilator

1)	Explain the concept of polarization in the context of antennas.	K2	(2)
2)	What do you mean by the beamwidth of an antenna.	K1	(3)
3)	Explain the concept of the near field and far field in antenna radiation.	K2	(4)
4)	How does increasing the transmitter power impact the link budget, and what are the associated considerations?	K2	(6)
5)	How does the spacing between elements in a linear array affect the array factor and radiation pattern?	K3	(6)
6)	How would you obtain the half-power beamwidth of an antenna from its radiation pattern, demonstrate with an example.	K3	(9)
7)	Compare radian and Steradian. Also define Beam area or Beam solid angle.	K4	(8)
8)	Explain the reciprocity theorem of antenna by illustrating through an example. Also define Aperture efficiency of an antenna?	K4	(12)
	OR		
	Differentiate between isotropic, directional, and omnidirectional radiation patterns of an antenna.	K4	(12)