

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST - 2 EXAMINATION - 2025

B.Tech-VIII Semester (ECE)

COURSE CODE(CREDITS): 18B1WEC845(3)

MAX. MARKS: 25

COURSE NAME: Satellite Communication

COURSE INSTRUCTORS: SRU

MAX. TIME: 1 Hour 30 Min

Note: (a) All questions are compulsory. (b) The candidate is allowed to make suitable numeric assumptions wherever required for solving problems. (c) Scientific Calculator is allowed.

Q.No	Question	CO	Marks
Q.1	What are the Orbital Elements/parameters needed to uniquely specify the location of an orbiting Satellite? Draw the diagram with proper designations.	CO-1	5
Q.2	Which are the different types of Orbits that are used based on application? Make a comparison listing advantages and disadvantage of one over the other.	CO-2	4
Q.3	What do you mean by retrograde and prograde orbits? How to analyse the effect of non-spherical nature of earth on a Satellite?	CO-2	4
Q.4	How do you categorize a satellite system based on or elements present in it? Explain each with its necessity.	CO-3	4
Q.5	With neat diagrams, explain the spin stabilization, 3-axis body stabilization of a satellite.	CO-3	4
Q.6	What are the different types of propulsion systems? What is the fundamental difference between rocket propulsion and jet propulsion systems?	CO-4	4