

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2026

B.Tech-VI Semester (ECE)

COURSE CODE (CREDITS): 18B1WEC850 (03)

MAX. MARKS: 15

COURSE NAME: FAULT TOLERANT COMMUNICATION SYSTEMS

COURSE INSTRUCTOR: Dr Rajiv Kumar

MAX. TIME: 1 Hour

Note: (a) All questions are compulsory.

(b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

(c) Use of scientific calculator is allowed

Q.No	Question	CO	Marks
Q1	Explain the three performance characteristics of a network: capacity, delay, and Reliability.	CO-1	02
Q2	What is requirements analysis? Explain the need for requirements analysis in network design.	CO-1	02
Q3	Differentiate between Fault, Failure, and Error in a computer network with example of each.	CO-2	03
Q4	(A) A network has an MTBF of 5,000 hours and an MTTR of 10 hours. Calculate the availability of the network (B) A network connection experiences an average delay of 25 ms for each packet. If 120 packets are transmitted sequentially, calculate the total transmission delay, assuming the delays are additive.	CO-1	2+2=4
Q5	(A) Explain the historical perspective of computer networks and discuss the evolution of network service models. (B) Differentiate between best-effort service and guaranteed service. Explain the role of Quality of Service (QoS) in modern computer networks.	CO-2	2+2=4