JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION- 2024

B.Tech-I Semester (CSE/IT/ECE/CE/BT/BI)

COURSE CODE (CREDITS): 10M11CI112 (3)

MAX. MARKS: 35

COURSE NAME: Advanced Computer Networks

COURSE INSTRUCTORS: Dr. Ramesh Narwal

MAX. TIME: 2 Hours

Note: *(a) All questions are compulsory.*

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

Q.No	Question	CO	Marks
Q1	Discuss how VPNs and IPsec are used to secure remote work environments. Provide real-life examples from the post-pandemic shift to work-from-home setups.		5
Q2	How does the Resource Reservation Protocol (RSVP) ensure end-to-end QoS in a network? Illustrate with an example of a real-time online gaming application.		5
Q3	Analyze how Real-Time Transport Protocol (RTP) manages QoS in VoIP applications. Discuss the challenges faced in maintaining QoS for such applications in congested networks.		5
Q4	Discuss the advantages and limitations of using UDP as a transport layer protocol in IoT applications, such as smart home systems.		5
Q5	Discuss the protocols used to support streaming media, such as HTTP adaptive streaming, and their impact on user experience during live sports streaming.		5
Q6	Explain how Quality of Service (QoS) parameters like latency, jitter, and packet loss affect video conferencing applications. Provide real-life examples to support your explanation.		5
Q7	Discuss the challenges of implementing Delay-Tolerant Networks (DTNs) in rural healthcare delivery systems and how they address connectivity issues.		5