JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATIONS-FEBRUARY 2024

M.Tech-II Semester (ECE)

COURSE CODE (CREDITS): 21M11EC213 (3)   MAX. MARKS: 15

COURSE NAME: Network Security Protocols

COURSE INSTRUCTOR: Dr. Pardeep Garg   MAX. TIME: 1 Hour

Note: All questions are compulsory. Marks are indicated against each question in square brackets. The candidate is allowed to make suitable numeric assumptions wherever required for solving problems.

Q1. An agency has been assigned a task to lay down a network for an organization (for example: JUIT). Considering the advantages, disadvantages, and number of cable links required; discuss in detail the network topologies which can be employed by the agency to complete the networking aspect of the organization.   **[CO-1, 3 marks]**

Q2. The network-transmitting elements have to exchange data over the network. Which connection services are used to achieve this? Discuss in detail considering the protocols at Transport layer: TCP and UDP.   **[CO-1, 3 marks]**

Q3. Discuss the devices which are in use to connect the intranetworks (LANs) and internetworks.   **[CO-1, 3 marks]**

Q4. Elaborate the concept of security for a network by discussing its basic elements. When is a network said to be physically secured? To ensure that the physical security of a network is guaranteed, what are the important points which should be in place, discuss in detail?

[CO-1, 1+2=3 marks]

Q5. Describe the various system security services which can be used to prevent unauthorized access to system resources.   **[CO-1, 3 marks]**