JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATIONS-APRIL 2025

M.Tech-II Semester (ECE)

COURSE CODE (CREDITS): 21M11EC213 (3)   MAX. MARKS: 25

COURSE NAME: Network Security Protocols

COURSE INSTRUCTOR: Dr. Pardeep Garg   MAX. TIME: 1.5 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	Although security threats can originate from natural disasters and unintentional human activities, still there exist various motives behind such security threats. Discuss these security threat motives.	CO-2	4
Q2	A company's web servers experience an unusual surge in traffic, causing legitimate users to be unable to access the services. Upon investigation, security analysts determine that a large volume of requests is being sent from multiple sources worldwide. (a) Identify and explain the type of cyber attack taking place along with its types. (b) Propose some defense mechanisms that organizations can implement to mitigate the risks of such attacks.	CO-2	2+2=4
Q3	The network administrators face threats from two fronts: the external Internet and the internal users within the organization network. So, how do the network system administrators ensure the restrict access to the network or sections of the network from both the 'bad Internet' and from unscrupulous inside users. Discuss in detail such security mechanisms along with types of the same.	CO-2	5
Q4	What is meant by Intrusion? In how many ways, Intrusion can be divided? Discuss the Intrusion Detection system also.	CO-2	1+2+2=5
Q5	Internet Protocol Security (IPSec) is a suit of authentication and encryption protocols developed by the Internet Engineering task Force (IETF) and designed to address the inherent lack of security for IP-based networks, justify this statement with technical description of IPSec along with the protocols which are essentially required in it.	CO-2	4
Q6	Write a short note on the two modes of operation of IPSec.	CO-3	1.5+1.5=3