Graphic Era
HILL UNIVERSITY
Established by an Act of the State Legislature of Uttarakhand (Adhiniyam Sankhya 12 of 2011)
University under section 2(f) of UGC Act. 1956

Mid Term (Odd) Semester Examination October 2024

Roll no...............................

Name of the Course and semester: Master of Computer Applications and 1st semester
Name of the Paper: Computer Networks
Paper Code: TMC 102

Time: 1.5 hour   Maximum Marks: 50

Note:
- (i) Answer all the questions by choosing any one of the sub questions
- (ii) Each question carries 10 marks.
- (iii) Please specify COs against each question.

Q1.   (10 Marks)
a. Define data communication. What are the essential components involved in data communication? (CO1).

OR

b. Explain the client-server architecture. How does it differ from a peer-to-peer architecture?(CO2)

Q2.
a. Compare and contrast various network topologies (star, ring, bus, mesh) in terms of advantages and disadvantages.(CO1)

(10 Marks)

OR

b. What is the format of an HTTP message? Describe the components of both request and response messages.(CO2)

Q3.   (10 Marks)
a. Compare the OSI model with the TCP/IP protocol stack. What are the key differences (CO1)

OR

b. Describe the File Transfer Protocol (FTP). What are its primary commands, and how does it differ from HTTP? (CO2)

Q4.   (10 Marks)
a. Compare and contrast circuit switching and packet switching. What are the benefits and drawbacks of each? (CO1)

OR

b. Compare and contrast POP3 and IMAP. What are the advantages of each protocol for email retrieval?(CO2)

Q5.   (10 Marks)
a. Define the four types of delays in a network: processing, queuing, transmission, and propagation delays. How does each delay affect overall network performance? (CO1)

OR

b. What are the primary functions of the DNS? How does it resolve domain names to IP addresses.(CO2)