POKHARA UNIVERSITY

Level: Bachelor   Semester: Spring   Year   : 2021
Programme: BE   Full Marks: 100
Course: Computer Network   Pass Marks: 45
                                          Time   : 3 hrs.

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Attempt all the questions.

1. a) Explain different topological model in computer network?   8
   b) What do you mean by network performance? Compare between TCP/IP and OSI.   7

2. a) What is client active network model? How client server architecture is more secure than peer to peer network?   8
   b) What are the functions of LLC and MAC sublayer? Explain about framing in detail.   7

3. a) Determine which bit is in error in the odd parity. Hamming code character is 1100111   8
   b) Illustrate the guided and unguided transmission media for the data communication? How Data flows on the physical layer?   7

4. a) Explain IPV4 header format. Differentiate between IPV4 and IPV6   8
   b) What is adaptive and Non-Adaptive Routing? Compare classful and classless routing.   7

5. a) What is socket programming? Differentiate between TCP and UDP with suitable diagram.   8
   b) Why congestion occurs in network? Explain leaky Bucket algorithm with suitable diagram   7

6. a) Define DHCP, SMTP, POP, and IMAP with their port number?   8
   b) Define types of encryptions used in security. Justify how firewalls can enhance network security.   7

7. Write short notes on: (**Any two**)   2×5
   a) Hub and Switch
   b) Frame Relay
   c) VPN