

B.SC(IT) SEMESTER - 5 (NEP-2020) Examination**Oct/Nov - 2025****Computer Networks and Communication Protocols (Major-13)****Time: 2:00 Hours****Marks:50****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

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- Que.1 Attempt any two. (10)
- 1) Explain Network topologies.
 - 2) Write a note on Switch.
 - 3) Explain TCP and FTP.
 - 4) Explain OSI model.
- Que.2 Attempt any two. (10)
- 1) Differentiate UTP v/s STP.
 - 2) Discuss colour coding of cables.
 - 3) Write a note on TIA-568 standard.
 - 4) Discuss distance limitation of different cables.
- Que.3 Attempt any two. (10)
- 1) Differentiate IPv4 v/s IPv6.
 - 2) What is subnetting? Discuss subnetting in IPv4.
 - 3) Explain functionality of DNS.
 - 4) Write a note on firewall.
- Que.4 Attempt any two. (10)
- 1) Discuss frequency bands and channels in Wi-Fi.
 - 2) Explain how can we secure wireless network?
 - 3) Write a note on Wi-Fi sniffing.
 - 4) Explain VPNs.
- Que.5 Attempt any two. (10)
- 1) Differentiate LAN v/s Internet.
 - 2) Discuss RJ-45 pin configuration.
 - 3) Differentiate DHCP v/s static IP.
 - 4) Write steps to connect IOT devices to Wi-Fi.
