



SE – 538

IV Semester B.C.A. Examination, June/July 2026
(SEP 2024-25)
COMPUTER APPLICATION
24BCA41 : Computer Networks

Time : 3 Hours

Max. Marks : 80

Instruction : Answer *all* the Sections.

SECTION – A

I. Answer **any eight** questions. **Each** question carries **two** marks. **(8×2=16)**

- 1) What is Network Topology ? Mention any two topologies.
- 2) Classify transmission modes with respect to data flows between devices.
- 3) Define Bandwidth and Latency.
- 4) What is the use of CIDR notation ?
- 5) What is check sum in networking ?
- 6) Why Network Address Translation is important ?
- 7) State the process of TCP Handshake.
- 8) What is OSPF ?
- 9) Define VoIP.
- 10) What is IoT ?

SECTION – B

II. Answer **any four** questions. **Each** question carries **six** marks. **(4×6=24)**

- 11) Compare Physical vs Logical Topology.
- 12) Illustrate the working of Routers and Switches.

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- 13) Discuss the functions of Data Link Layer.
- 14) Explain the fields of Ethernet Frame Structure.
- 15) Explain flow control and error control mechanisms on the Data Link Layer.
- 16) Discuss congestion control in TCP.

SECTION – C

III. Answer **any five** questions. **Each** question carries **eight** marks. **(5×8=40)**

- 17) Discuss OSI Model and its layers and functions.
- 18) How Data Link Layer ensures efficiency and reliability of data transmission ?
- 19) Explain ARP in detail.
- 20) Briefly discuss the following Routing Protocols.4
 - i) RIP4
 - ii) OSPF.
- 21) Explain SDN, NFV, IoT with its application and advantages.
- 22) Explain firewall and describe its types, working and advantages.
- 23) Explain the features and working of HTTP and HTTPS.