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Total No. of Pages : 02

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**B.Tech. (AI & DS / CSE / AI & ML /
(Internet of Things and Cyber Security including Block Chain
Technology / ECE / IT / ME) (Sem.-7,8)**

ROUTING AND SWITCHING

Subject Code : BTEC-905A-18

M.Code : 90691

Date of Examination : 03-01-2025

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY** consisting of TEN questions carrying TWO marks each.
2. **SECTION-B** contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. **SECTION-C** contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

1. Answer briefly :

- a) Define routing protocol.
- b) List three advantages of IPv6 routing over IPv4.
- c) What is ICMP used for?
- d) Write down any two differences between circuit switching and packet switching.
- e) What is multicast broadcast?
- f) What is the difference between dynamic IP and static IP addressing?
- g) What is distance vector Routing?
- h) What is ADSL Internet service?
- i) List the different network security techniques.
- j) Describe wireless LAN.

SECTION-B

2. Describe Flow Control and Buffering in Transport Layer.
3. Explain the term Authentication, Authorization and Accounting (AAA) used in network security.
4. Mention the advantages of RIP over OSPF.
5. Difference between host name and IP address.
6. What is Generic Routing Encapsulation? How does it work?

SECTION-C

7. What are some of the possible services that a link-layer protocol can offer to the network layer? Which of these link-layer services have corresponding services in IP?
8. What are the services provided by application layer? Explain FTP and SMTP application Layer protocol in detail.
9. **Explain any two:**
 - a) Link state Routing.
 - b) Generic Routing Encapsulation.
 - c) Bridging Enterprise Networks with Serial WAN Technology.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.