Roll No. ☐☐☐☐☐☐☐☐☐☐☐☐☐   Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (CSE)   (Sem.–5)

COMPUTER NETWORKS

Subject Code : BTCS-504-18
M.Code : 78323
Date of Examination : 28-01-23

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. **Write briefly :**

   a) Define Bandwidth and Bandwidth Utilization for a communication channel.

   b) What is piggybacking in sliding window?

   c) What is wireless LAN? Which IEEE standard governs it?

   d) What is the difference between collision detection and collision avoidance?

   e) Define various transmission impairments and the way to measure them.

   f) What are the components of Data link layer and their respective roles?

   g) Discuss various types of Framing techniques.

   h) Define Distance vector routing strategy.

   i) What factors lead to congestion in a network?

   j) Which protocol is used for multimedia transmission? Give its frame structure.

SECTION-B

2. What issues of OSI model led towards TCP/IP model development?

3. Compare and contrast various multiplexing techniques.

4. What do you mean by Network security? What is the role of Firewall in it? Discuss its type.

5. What shortfalls of Pure ALOHA are improved in Slotted ALOHA? How?

6. Compare UDP and TCP protocol giving their Frame structure.

SECTION-C

7. **Write Short notes on :**

   i) DNS

   ii) SNMP

   iii) WWW

8. Using suitable examples discuss two error correction techniques in data transmission?

9. What are the advantages of IPV6 addressing? Give frame structure of IPV6 header. Explain which network layer protocol is responsible for address resolution?

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.