

**322651(22)**

**B. E. (Sixth Semester) Examination, 2020**

**(New Scheme)**

**(CSE Branch)**

**COMPUTER NETWORKS**

***Time Allowed : Three hours***

***Maximum Marks : 80***

***Minimum Pass Marks : 28***

***Note : Attempt all questions. Part (a) from each questions is compulsory. Solve any two parts from (b), (c) and (d).***

**Unit - I**

1. (a) Define computer network. 2
- (b) Design full ISO/OSI reference model. Explain the function of each layer. 7

- (c) Compare LAN, MAN & WAN. 7
- (d) What is ISDN? Explain Broadband ISDN with the help of block diagram. 7

**Unit - II**

- 2. (a) Define Checksum. 2
- (b) Explain stop & wait and sliding window protocol for flow control. 7
- (c) Write various features of HDLC. Clearly explain various response modes & station types. 7
- (d) Calculate the efficiency of pure Aloha and slotted Aloha. 7

**Unit - III**

- 3. (a) Define virtual circuit. 2
- (b) Compare IPv4 & IPv6 addressing scheme. 7
- (c) Explain distance vector routing protocol along with example. 7
- (d) Explain multi protocol label switching (MPLS) routing mechanism. 7

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**Unit - IV**

4. (a) Define multiplexing. 2
- (b) Write the differences between connection oriented & connectionless services. Explain TCP segment header format. 7
- (c) Discuss TCP connection management phases (Connection Setup, Data Transfer, Connection Tear Down) with example. 7
- (d) Explain transport layer congestion control policy. 7

**Unit - V**

5. (a) Define socket. 2
- (b) Write short notes on : 7
- (i) Domain Name Systems
- (ii) Electronic mail
- (c) Describe multimedia networking protocols RTP & RTCP in detail. 7
- (d) Define firewall. Explain different types of firewall. 7