

**322611(22)**

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

**(Old Scheme)**

**(Branch : CSE Br.)**

**COMPUTER NETWORKS**

***Time Allowed : Three hours***

***Maximum Marks : 80***

***Minimum Pass Marks : 28***

***Note : Attempt all questions. Part (a) is compulsory attempt any two from part (b), (c) and (d). The figure in the right hand margin indicate marks.***

**Unit - I**

1. (a) What is basic difference between N-ISDN and B-ISDN? 2

(b) Explain basic network topologies and give

[ 2 ]

advantages of each. Differentiate between half duplex and full duplex transmission mode. 7

(c) What are the services of physical layer? Also explain handward protocol for computer network. 7

(d) What is switching? Explain circuit switching, packet switching & message switching. 7

### Unit - II

2. (a) Write the number of bits used by MAC address with example. 2

(b) What is AJM reference model? Explain all the layers of ATM. 7

(c) What is ALOHA? Calculate the efficiency of pure ALOHA and slotted ALOHA along with graphs. 7

(d) Calculate the throughput for stop and wait flow control mechanism if the frame size is 4800 bits, bit rate is 9600 bps and distance between device is 2000 km, speed of propagation over the transmission is 200000 kms. 7

### Unit - III

3. (a) Which one of the seven layers is specially related to routing and what is its purpose? 2

322611(22)

[ 3 ]

(b) As IPv6 contain multiple header, how does it know where particular header ends and next item begins? 7

(c) Explain distance vector routing with neat diagram. Write the difference between distance vector routing & link state routing. 7

(d) How crash recovery is possible? Explain it with an example. 7

### Unit - IV

4. (a) What is remote file server? 2

(b) Which layer is responsible for end-point flow control? Explain the method adopted for controlling the flow in detail. 7

(c) Explain the working principle of DES. What are the advantages & disadvantages of triple DES over DES. 7

(d) Explain why modern block ciphers are designed as substitution cipher instead of transposition ciphers. 7

### Unit - V

322611(22)

PTO

5. (a) Explain attacks and counter attacks in network. 2
- (b) What is FDDI? What are differences between FDDI-I & FDDI-II? 7
- (c) What is SONET? What is the significance of sonnet? Explain the sonnet frame structure. 7
- (d) Write short technical notes on : 7
- (i) Congestion control
  - (ii) Repeaters & Routers

322611(22)

~~382652(17)~~