B.E. (Computer Science Engineering) Sixth Semester (C.B.S.)

Computer Networks

P. Pages : 2 **NJR/KS/18/4548**

Time : Three Hours * 0 5 9 0 * Max. Marks : 80

Notes :
1. All questions carry marks as indicated.
2. Solve Question 1 OR Questions No. 2.
3. Solve Question 3 OR Questions No. 4.
4. Solve Question 5 OR Questions No. 6.
5. Solve Question 7 OR Questions No. 8.
6. Solve Question 9 OR Questions No. 10.
7. Solve Question 11 OR Questions No. 12.
8. Due credit will be given to neatness and adequate dimensions.
9. Illustrate your answers whenever necessary with the help of neat sketches.

1. a) What are different types of service primitives? Explain with example? **5**

b) List two ways in which OSI Reference model and TCP/IP reference models are same. Now list two ways in which they differ. **9**

OR

2. a) Match the following to one or many layers of OSI model. **10**
- i) Communication directly with user application.
- ii) Route Determination.
- iii) Interface to Transmission Media.
- iv) Carrying frames between adjacent nodes.
- v) Process to process delivery.
- vi) Error correction and retransmission.
- vii) Mechanical, Electrical and Function interface.
- viii) Login and log out procedure.
- ix) Provide access to end user.
- x) Provide user services such as email and file transfer.

b) Differentiate between computer Networks and distributed system. **4**

3. a) Explain STOP and WAIT ARQ. **6**

b) What are the 3 kinds of frames in HDLC Protocol? Explain each one in detail. **7**

OR

4. a) A bit stream 10011101 is transmitted using the standard CRC method. The generator polynomial is x^3+1. Show the actual bit string transmitted, suppose the third bit from the left is inverted during transmission. Show that this error is detected at the receiver's end. **8**

b) Explain sliding window protocol in detail. **5**

5. a) Explain CSMA/CD protocol. **7**

	b)	Discuss the channel allocation issue. How is it resolved.	**6**

OR

6.	a)	Differentiate between Pure ALOHA and slotted ALOHA.	**7**
	b)	Explain PPP and LCP.	**6**
7.	a)	Explain about distance vector routing.	**7**
	b)	Explain Dijkstra's shortest path algorithm.	**6**

OR

8.	a)	Explain and differentiate between static and Dynamic Routing.	**7**
	b)	What routing technique is applied in flooding? How flooding affect network performance?	**6**
9	a)	Write short notes on Internet Protocol (IP).	**6**
	b)	Explain Leaky bucket and Token bucket algorithm.	**8**

OR

10.	a)	Compare between IPv4 and IPv6.	**4**
	b)	What do you mean by congestion? How clock packet algorithm helps in congestion control?	**6**
	c)	Write short notes on ARP.	**4**
11.	a)	Write short notes on ATM Layers.	**5**
	b)	Discuss in brief different quality of service (QOS) parameters used in transport layer.	**5**
	c)	Write short notes on Bluetooth.	**3**

OR

12.	a)	Write short notes on wireless & ANS IEEE 802.11.	**6**
	b)	Draw and explain ISDN system Architecture.	**4**
	c)	Explain in brief satellite Network.	**3**

****