B.E.Third Semester (Computer Engineering) (C.B.S.)
Introduction to Computer Network

P. Pages : 2

Time : Three Hours

NKT/KS/17/7251

Max. Marks : 80

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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. Assume suitable data whenever necessary.
10. Illustrate your answers whenever necessary with the help of neat sketches.

1. a) What are the key design issues that are considered while designing the layered structure of computer network. **7**

   b) How network classification is done on the basis of transmission technology and scale? Discuss in detail. **6**

OR

2. a) Define network architecture and protocol state. **4**

   b) Write short notes on:
   i) OSI reference model. **5**

   ii) TCP/IP protocol suite. **4**

3. a) Define switching? Explain circuit switching network in detail. **7**

   b) What are the types of transmission media in physical layer. **6**

OR

4. a) Explain in detail datagram network. **7**

   b) What is difference between Digital transmission and analog transmission. **6**

5. a) Draw and discuss stop and wait ARQ protocol. **6**

   b) What is CSMA? Discuss the protocols related to CSMA. **6**

   c) What is framing? **2**

OR

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6.	a)	What is the basic difference in error detection and correction? Explain error correction with example.	6
	b)	Explain protocols for noiseless and noisy channels.	8
7.	a)	What does it mean by congestion? How is congestion controlled?	7
	b)	Why is routing of packets in network important? Also explain network layer services.	6

OR

8.	a)	Differentiate between open loop and closed loop.	5
	b)	How does distance vector routing algorithm works? Explain with example.	5
	c)	Explain the factors causing congestion.	3
9.	a)	Draw and explain TCP segment header.	7
	b)	What is traffic shaping? Explain leaky bucket algorithm.	7

OR

10.	a)	Explain with example how dynamic buffer allocation takes place in transport layer.	7
	b)	How is crash recovery handled in transport layer?	7
11.	a)	Discuss E-mail architecture.	6
	b)	Explain in detail Architecture of Browser.	7

OR

12.	a)	What are AAL services.	4
	b)	Write short notes on **any three.**	9

    i)   Link state Routing algorithm   ii)   X.25.
    iii) DNS   iv)   Digital signature

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