B.E. (Information Technology) Sixth Semester (C.B.S.)

# Computer Networks

P. Pages : 2 **AHK/KW/19/2259**

Time : Three Hours * 1088 * 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) Explain about Infrared transmission. **5**

b) Explain the following with example. **8**
i) Reliability ii) Packet loss rate
iii) Jitter iv) Throughput

**OR**

**2.** a) Explain 802.11 standards in brief. **3**

b) Describe following transmission medium. **4**
1) Infrared transmission. 2) Radio Transmission

c) Differentiate between :- **6**
1) Service & protocol 2) Bluetooth & wiMAX

**3.** a) Write a short note on 1 – bit sliding window protocol. **7**

b) Explain about selective repeat ARQ with its working. **7**

**OR**

**4.** a) Explain 1 – persistence, non – persistence & P-Persistence CSMA protocol. **6**

b) With respect to data link – layer what is the meaning of following term. **8**
i) Framing ii) Pipe lining
iii) Piggybacking iv) Virtual bit pipe

**5.** a) Explain classful addressing method. Also find the class of each address given below. **7**
i) 00000001 00001011 00001011 11101111
ii) 193.14.56.22
iii) 14.23.120.8
iv) 11110011 10011011 11111011 00001111

b) Explain Distance vector Routing algorithm with example. **6**

**OR**

| | | | |
|---|---|---|---|
| **6.** | a) | Explain the method of choke-packets used for congestion control. | **7** |
| | b) | Explain hierarchical routing algorithm in detail. | **6** |
| **7.** | a) | Explain different quality of services of transport layer. | **8** |
| | b) | Explain flow control and buffering. | **6** |

**OR**

| | | | |
|---|---|---|---|
| **8.** | a) | What is socket? Explain different socket system calls. | **6** |
| | b) | Write short notes on:- **any two.** | **8** |
| | | i) Concurrency | |
| | | ii) Crash recovery | |
| | | iii) Multiplexing | |
| **9.** | a) | Differentiate between:- | **8** |
| | | i) BOOTP and DHCP | |
| | | ii) FTP and TFTP | |
| | b) | What do you mean by DNS? How does it work? | **5** |

**OR**

| | | | |
|---|---|---|---|
| **10.** | a) | Explain file transfer in TFTP in details. | **7** |
| | b) | Differentiate FQDN & PQDN. | **6** |
| **11.** | a) | Explain SSL Architecture in Transport layer security. | **7** |
| | b) | Explain mobile IP architecture in detail. | **6** |

**OR**

| | | | |
|---|---|---|---|
| **12.** | a) | Write short notes on: **any three.** | **13** |
| | | i) IP sec. | |
| | | ii) Digital Signature. | |
| | | iii) Real time traffic over Internet. | |
| | | iv) Application Layer security. | |

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