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**Question Paper Code : 51462**

**B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2016**

**Sixth Semester**

**Electronics and Communication Engineering**

**EC 2352/EC 62/10144 EC 603/10144 BME 41 – COMPUTER NETWORKS**

**(Common to Seventh Semester Biomedical Engineering)**

**(Regulations 2008/2010)**

**(Also common to PTEC 2352 – Computer Networks for B.E. (Part-Time) Fifth Semester –  
Electronics and Communication Engineering – Regulations 2009)**

**Time : Three Hours**

**Maximum : 100 Marks**

**Answer ALL questions.**

**PART – A. (10 × 2 = 20 Marks)**

1. What is the role of DSL modem ?
2. What is a protocol ?
3. Mention the functions of Data link layer.
4. Calculate the load on the system with capacity 50 Kbps and link utilization 0.5.
5. Define ICMP.
6. Write the keys for understanding the distance vector routing.
7. What is meant by choke packet ? How it is use for congestion control ?
8. Define deadlock situation in congestion.
9. What kinds of file types can FTP transfer ?
10. Mention the significance of the digital signature.

**PART – B (5 × 16 = 80 marks)**

11. (a) Explain the layered architecture of a network and explain their roles in detail. (16)

**OR**

- (b) (i) Explain the various classes of IP addressing. (12)  
(ii) State the need for an IP address. (4)

12. (a) Discuss the architecture of WLAN. (16)

**OR**

- (b) (i) A network using CDMA/CD has a bandwidth of 10 Mbps. If the maximum propagation time including the delays in the devices and ignoring the time needed to send a jamming signal is 25.6  $\mu$  sec. What is the minimum size of the frame? (10)  
(ii) Highlight the salient feature of virtual circuit networks. (6)

13. (a) Write short notes on following terms :

- (i) ICMP  
(ii) RARP (16)

**OR**

- (b) Explain in detail about different Multicast forwarding algorithms for routing.

14. (a) Explain the congestion control technique in TCP. (16)

**OR**

- (b) Explain the segment formats for TCP and UDP. (16)

15. (a) (i) If TELNET is using the character mode, how many characters are sent back and forth between the client and server to copy a file named file 1 to another file named file 2 using the command *cp file 1 file 2*? (10)

- (ii) Why do we need POP3 or IMAP4 for electronic mail? (6)

**OR**

- (b) Discuss the various key generation algorithms and authentication protocols used to ensure security in computer network. (16)