

**5635131**

B.Tech. DEGREE EXAMINATION,  
NOVEMBER/DECEMBER 2016.

Fifth Semester

Computer Science and Engineering

COMPUTER NETWORKS

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Differentiate guided and unguided transmission medium.
2. What is the purpose of network interface card?
3. Write the importance of CRC in the network.
4. Differentiate between hubs and switches.
5. State the difference between classless and classful addressing.
6. Find the error, if any in the following IP addresses.
  - (a) 111.56.045.78
  - (b) 75.45.301.14.

7. What is traffic shaping? Name any two methods.
8. What are the two multiplexing strategies used in transport layer?
9. List any two types of DNS messages.
10. What is symmetry key algorithm?

PART B — (5 × 11 = 55 marks)

Answer ALL questions.

11. Describe briefly the various layers and functions of OSI model.

Or

12. Explain in details the different topologies of networks with examples.
13. Explain MAC sub layer protocol and frame structure of IEEE 802.11.

Or

14. Write short notes on :
  - (a) Go Back N-ARQ
  - (b) Selective Repeat ARQ.

15. (a) Explain in detail about IPV6 and compare with IPV4.  
(b) State the major difference between Vector Routing and Link State Routing.

Or

16. Explain the following internet control protocols.  
(a) OSPF (b) BGP.
17. Explain in detail the mechanism in transport layer for controlling congestion.

Or

18. (a) Explain the connection release process at transport layer.  
(b) Explain TCP timer management.
19. Explain in detail the Authentication protocols.

Or

20. (a) Write a note on transposition ciphers.  
(b) Explain RSA algorithm in detail.