

Reg. No. :

**Question Paper Code : 10890**

M.C.A. DEGREE EXAMINATIONS, APRIL/MAY 2019.

Third Semester

MC 5302 — COMPUTER NETWORKS

(Regulation 2017)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks).

1. List some uses of computer networks.
2. Show the classification of various transmission media.
3. Name the services provided by IEEE 802.11 wireless LAN.
4. What do you mean by bridge?
5. Determine the use of Border Gateway Protocol (BGP).
6. Give some examples of ICMP error messages.
7. Identify some primitives for a simple transport service with their meanings.
8. Differentiate between error control and flow control.
9. Identify the two kinds of request messages supported by SNMP.
10. What do you mean by World Wide Web (WWW)?

PART B — (5 × 13 = 65 marks)

11. (a) (i) Differentiate the features of LAN and WAN. (6)  
(ii) Show the reference architecture of OSI seven layer model. (7)

Or

- (b) Analyze the various LAN topologies with neat sketches.

12. (a) Describe the approaches used for error correction in networking.  
Or  
(b) (i) Explain the Ethernet frame format. (7)  
(ii) Outline the importance of token ring. (6)
13. (a) (i) Compare datagram and virtual circuit networks. (6)  
(ii) Relate the various classes of IP addresses. (7)  
Or  
(b) Outline the function of Link state routing protocol with an example.
14. (a) (i) Show the three Network scenarios for establishing a TCP connection using a three-way handshake. (6)  
(ii) Explain the User Datagram Protocol (UDP) and its operations with its frame format. (7)  
Or  
(b) Outline the function of Real time transport protocol in detail.
15. (a) (i) What is DNS Name space? Show the categories of DNS name space. (6)  
(ii) State a RSA algorithm for key generation with an example. (7)  
Or  
(b) List and explain the various network security services.

PART C — (1 × 15 = 15 marks)

16. (a) For the network given in Figure 1, compute the global distance – vector tables when  
(i) Each node knows only the distances to its immediate neighbors. (5)  
(ii) Each node has reported the information it had in the preceding step to its immediate neighbors. (5)  
(iii) Step (ii) happens a second time. (5)

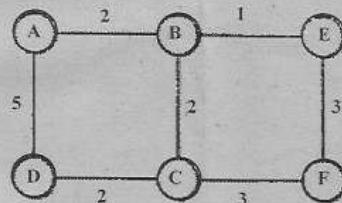


Figure 1

- Or  
(b) Summarize the various Congestion avoidance mechanisms used in TCP with neat diagram.

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