

Question Paper

Exam Date & Time: 29-Nov-2018 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SCHOOL OF INFORMATION SCIENCES

FIRST SEMESTER M.Sc. INFORMATION SCIENCE

Computer Networks [MIS 509]

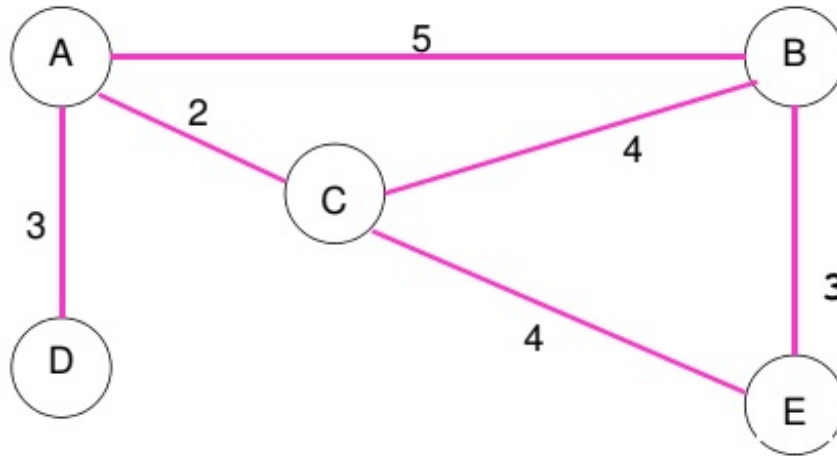
Marks: 100

Duration: 180 mins.

END SEMESTER DEGREE EXAMINATION NOVEMBER 2018

Answer all the questions.

- 1) Explain Circuit Switching and Packet Switching in Computer networks. (10)
- 2) Write a short note on Switches and Routers. (10)
- 3) Write a short note on the following routing techniques with suitable diagrams: (5+5) (10)
 - a. Network-Specific Routing Method
 - b. Host-Specific Routing Method
- 4) An ISP is granted a block of addresses starting with 173.200.0.0/16. The ISP needs to distribute these addresses to three groups of customers as follows: (10)
 - a. The first group has 64 customers; each need 256 addresses.
 - b. The second group has 128 customers; each need 128 addresses.
 - c. The third group has 128 customers; each need 64 addresses.Design the sub-blocks and find out how many addresses are still available after these allocations.
- 5) Explain Supernet and Supernet mask with suitable example? (10)
- 6) Explain the working of Link State Routing protocol for the following Network Topology. (10)



- 7) Write a note on the congestion prevention policies used in the computer networks. (10)
- 8) Write a note on the services offered by TCP to the processes at the application layer. (10)
- 9) For the given UDP header value in hexadecimal as: **06 32 00 0D 00 1C E2 17** (10)

What is the source port number (in decimal)?

What is the destination port number (in decimal)?

What is the length of data part (in decimal)?

Is the packet flowing from client to server or from server to client?
- 10) What is flow control? Explain how sliding window protocol accomplishes the flow control? (2+8) (10)

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