

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  
SEVENTH SEMESTER B.TECH DEGREE EXAMINATION, DECEMBER 2018

**Course Code: EC407**

**Course Name: COMPUTER COMMUNICATION**

Max. Marks: 100

Duration: 3 Hours

**PART A**

*Answer any two full questions, each carries 15 marks.*

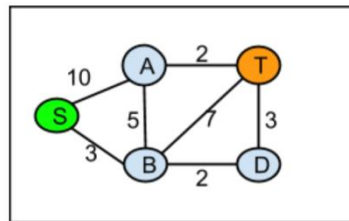
Marks

- |   |                                                                                                                       |       |
|---|-----------------------------------------------------------------------------------------------------------------------|-------|
| 1 | a) Compare any three physical topologies used in computer networks.                                                   | (7)   |
|   | b) What is the difference between OSI and TCP/IP models?                                                              | (8)   |
| 2 | a) Discuss 802.3 MAC frame format. Mention the restrictions imposed on minimum and maximum lengths of 802.3 frame.    | (2+4) |
|   | b) Explain in details i) stop and wait ARQ                                                                            | (9)   |
|   | ii) Go – back – N ARQ                                                                                                 |       |
|   | iii) Selective repeat protocol                                                                                        |       |
| 3 | a) What are the different framing methods? Compare and contrast bit stuffing and byte stuffing with frame structures. | (4+4) |
|   | b) Explain with flow diagram how collision is avoided in CSMA method. Compare and contrast CSMA/CD with CSMA/CA.      | (7)   |

**PART B**

*Answer any two full questions, each carries 15 marks.*

- |   |                                                                                                                                     |       |
|---|-------------------------------------------------------------------------------------------------------------------------------------|-------|
| 4 | a) Explain subnetting and supernetting. How do the subnet mask and supernet mask differ from a default mask in classful addressing? | (10)  |
|   | b) Explain IPv4 and IPv6 datagram formats                                                                                           | (5)   |
| 5 | a) Explain RARP and its packet format.                                                                                              | (5)   |
|   | b) List the classes in classful addressing and give examples for each class.                                                        | (4+6) |
|   | Also find the netid and the hostid of the following IP addresses:                                                                   |       |
|   | a. 114.34.2.8                                                                                                                       |       |
|   | b. 132.56.8.6                                                                                                                       |       |
|   | c. 208.34.54.12                                                                                                                     |       |
| 6 | a) List the differences between distance vector and link state routing protocols.                                                   | (5)   |
|   | b) Prepare a routing table using the distance vector algorithm to the destination T.                                                | (10)  |
|   | Also update the table for the link breakage between B and D as shown in figure.                                                     |       |



### PART C

*Answer any two full questions, each carries 20 marks.*

- 7 a) Why TCP is called as connection oriented reliable transport layer protocol? (6)  
Discuss.
- b) What are the differences between the services provided by TCP and UDP? (6)
- c) Explain congestion control measures used in the transport layer. (8)
- 8 a) Explain the various methods used in transport layer to overcome the limitations of the network layer. (7)
- b) With the help of diagrams, explain the various scheduling methods to improve the QoS in a network. (7)
- c) Write short notes on i)SNMP ii)POP3 (6)
- 9 a) Discuss in detail the different attacks in data networks. (8)
- b) Explain the various security services provided on the network? (8)
- c) Explain the services provided by SSL protocol. (4)

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