

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Scheme for Valuation/Answer Key

Scheme of evaluation (marks in brackets) and answers of problems/key

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) Brief description of any three physical topologies with the advantage and disadvantage of each (4 marks) and figures (3 marks) | (7) |
| | b) Four major differences of the two models (2 marks for each) | (8) |
| 2 | a) 802.3 MAC frame format (2 marks)
Restrictions imposed on minimum and maximum lengths of 802.3 frame (4 marks) | (6) |
| | b) (i) 3 marks
(ii) 3 marks
(iii) 3 marks | (9) |
| 3 | a) List the different framing methods like character count, byte stuffing, bit stuffing, encoding violations (4 marks)
Compare and contrast bit stuffing and byte stuffing with frame structures (4 marks) | (8) |
| | b) Explanation of CSMA method (2 marks) with flow diagram (2 marks).
Compare and contrast CSMA/CD with CSMA/CA (3 marks). | (7) |

PART B

Answer any two full questions, each carries 15 marks.

- | | | |
|---|--|------|
| 4 | a) Explanation of subnetting and supernetting (3+3= 6 marks)
How do the subnet mask and supernet mask differ from a default mask in classful addressing? (2+2 = 4 marks)
In subnetting, a large address block could be divided into several contiguous groups and each group be assigned to smaller networks called subnets. In supernetting, several small address blocks can be combined to create a larger range of addresses. The new set of addresses can be assigned to a large network called a supernet. A subnet mask has more consecutive 1s than the corresponding default mask. A supernet mask has less consecutive 1s than the | (10) |
|---|--|------|

corresponding default mask.

- b) Explanation of IPv4 and IPv6 datagram formats with figures (5)
- 5 a) Explanation of RARP (3 marks) and its packet format (2 marks). (5)
- b) List the classes in classful addressing and give examples for each class. (4 (10 marks)
- a) 1+1 = 2 marks
- b) 1+1 = 2 marks
- c) 1+1 = 2 marks
- 6 a) List the differences between distance vector and link state routing protocols. (5)
- b) Preparation of routing table using the distance vector algorithm to the (10 destination T (6 marks)
- Update the table for the link breakage between B and D (4 marks)

PART C

Answer any two full questions, each carries 20 marks.

- 7 a) Explanation of TCP as a connection oriented reliable transport layer protocol. (6)
- b) Differences between the services provided by TCP and UDP (2 marks) with the (6 header format of both (4 marks)
- c) Explanation of the different congestion control measures used in the transport (8 layer
- 8 a) Explanation of various functions of transport layer like error control, flow (7 control, port addressing, that takes care of the limitations of the network layer.
- b) With diagrams, explain the various scheduling methods to improve the QoS in a (7 network.
- c) (i) 3 marks (6)
- (ii) 3 marks
- 9 a) Discuss in detail the different attacks in data networks (2 marks each for at least (8 three attacks).
- b) Explanation of the various security services provided on the network (8)
- c) Explanation of SSL protocol. (4)
