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 (S), MAY 2019
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) List the seven layers, figure with interfaces, layering protocol, header and trailer   (10)
       encapsulation

   b) Any of the five differences given below: (5)

       1) circuit switching is connection oriented, Packet switching is
       connectionless.

       2) normally designed for voice communication, Packet switching for data
       transmission.

       3) circuit switching is inflexible, Packet switching is flexible.

       4) message is received in the order, sent by the source. Packet switching
       of a message is received out of order.

       5) circuit switching can be achieved using two technologies. Either SDS
       or TDS. Packet switching has two approaches datagram approach and
       virtual circuit approach.

       6) circuit switching is implemented in the physical layer. Packet switching
       is at network layer.

2 a) Figure and explanation (5+5)   (10)

   b) Datalink layer translates the physical layers raw bit stream into discrete units   (5)
       called frames. Any two types of framing   (byte stuffing and bit stuffing).

3 a) CRC error control explanation with an example.   (8)

   b) At least explain the stop and wait ARQ, Go Back N ARQ and Selective repeat   (7)
       ARQ.

PART B
Answer any two full questions, each carries 15 marks.

4 a) Explain classfull addressing with classes (2 Marks), Need for classless addressing   (5)
with explanation (3 marks)

   b) Any two function (4 marks). Packet format diagram (3 marks), explanation of   (10)
each field (3 marks)

5 a) Explanation of routing carries 2 marks and the different types (Static and   (5)
dynamic) carries 3 marks

   b) Complete the routing table using Dijkstra's algorithm for node S   (10)

6 a) Problem of Distance vector protocol (2 marks). 3 marks can be given to cases like   (5)
how link state protocol overcomes the issue of count to infinity problem

   b) 3marks + 3 marks + 4 marks   (10)

PART C
Answer any two full questions,each carries 20 marks.

7 a) TCP segment header format (3 marks), explanation of each field (4 marks)   (7)

   b) List the features (2 marks). Explanation (4 marks)   (6)

   c) Congestion control mechanisms in detail – at least two (7 marks)   (7)

8 a) List the services of TCP (2 marks), explanation (3 marks)   (5)

   b) Diagram carries 4 marks and explanation carries 4 marks   (8)

   c) Explanation of IDS as the second layer of defense (7 marks) with details on the   (7)
limitations of firewall.

9 a) 2 marks each for the sub sections   (6)

   b) SSL handshake protocol explanation (7 marks)   (7)

   c) 2 marks for IP Sec and 5 marks for explaining two modes of operation of IPSec.   (7)

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