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Reg. No. :

Question Paper Code: 54204

B.E. / B.Tech. DEGREE EXAMINATION, APRIL 2019

Fourth Semester

Computer Science and Engineering

15UCS404- COMPUTER COMMUNICATION AND NETWORKS

(Regulation 2015)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 1 = 5 Marks)

1. Which one of the following task is not done by data link layer?   CO1- R

   (a) Framing   b) Error control   c) Flow control   (d) Channel coding

2. Cyclic codes are fast when these are implemented in   CO2- R

   (a) Software   (b) Hardware   (c) Local Area Network   (d) Both a and b

3. Which of the following technique starts transmission only after all the   CO3- R
   bits of the packets arrive?

   (a) Circuit switching   b) Message switching

   c) Store and forward switching   d) Packet switching

4. _____ is a packet routing method in which incoming packet is sent   CO4- R
   to every neighbor except where it came from.

   (a) Flooding   (b) Routing   (c) Forwarding   (d) Switching

5. User datagram protocol is called connectionless because   CO5- R

   (a) All UDP packets are treated independently by transport layer

   (b) It sends data as a stream of related packets

   (c) It is received in the same order as sent order

   (d) All UDP packets are treated independently by application layer

6. Summarize TCP/IP Protocol Suite.   CO1- U

7. A bit string, 0111101111101111110, needs to be transmitted at the data link   CO2- App
   layer. What is the string actually transmitted after bit stuffing?

8. Differentiate router and bridge.   CO3- U

9. State the purpose of ICMP redirect message.   CO4- R

10. The maximum payload of a TCP segment is 65,495 bytes. Why was such a   CO5- U
    strange number chosen?

PART – C (5 x 16= 80 Marks)

11. (a) Draw the OSI architecture and summarize the functionalities of   CO1- U   (16)
        each layer.

                              Or

   (b) Explain the different Transmission Medias.   CO1- U   (16)

12. (a) Discuss error detection and correction mechanisms with   CO2- U   (16)
        examples.

                              Or

    (b) Explain Ethernet in detail.   CO2- U   (16)

13. (a) Discuss ATM cell format, layers and its working principle with   CO3- U   (16)
        neat diagrams.

                              Or

    (b) Summarize Satellite Networks and its applications.   CO3- U   (16)

14. (a) Compare Distance Vector Routing and Link State Routing. Apply   CO4- App   (16)
        Distance Vector Routing and Link State Routing algorithms on
        the following graph. Source & Destination Nodes: A & G

                              Or

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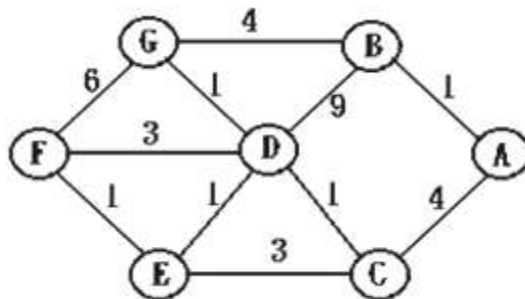
(b) In classful addressing how is an IP address in class A, Class B and Class C divided? Given the address 23.56.7.91 and the default class A mask, find the beginning address (network address).   CO4- App   (16)

15. (a) Explain the various fields of TCP header with the help of a neat diagram.   CO5- U   (16)

Or

(b) Summarize DNS.   CO5- U   (16)

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