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P.E.S. College of Engineering, Mandya - 571 401
(An Autonomous Institution affiliated to VTU, Belagavi)
Sixth Semester, B.E., - Computer Science and Engineering
Semester End Examination; June - 2017
Computer Networks

Time: 3 hrs   *Max. Marks: 100*

Note: Answer **FIVE** full questions, selecting **ONE** full question from each unit.

UNIT - I

1. a. An organization is granted a block of addresses with the beginning address 14.24.74.0/24 the organization needs to have 3 sub blocks of addresses to use in its 3 subnets; on sub block of 10 address, one sub block of 60 addresses, and one sub block of 120 addresses identify the sub blocks.   12

   b. Write General format of ICMPv4 error reporting and query message.   8

2. a. Explain with a neat diagram 3 phases involved in remote host and mobile host communication.   12

   b. Write the occupation of address space in classful addressing.   8

UNIT - II

3. a. Explain the problems in distance vector routing algorithm along with solutions to the problems.   10

   b. Describe source based tree approach and group based tree approach in multicast routing.   10

4. a. Explain the working of OSPF intra-domain routing protocol.   12

   b. Illustrate with a neat diagram IPv6 base header.   8

UNIT - III

5. a. Explain flow control and error control at transport layer.   10

   b. Write a note on UDP services.   10

6. a. Explain the working of Go-Back-N protocol.   10

   b. List any five features of TCP. With a neat diagram explain three way hands shaking.   10

UNIT - IV

7. a. How can a client and server find a pair of socket address for communication? Explain the steps.   10

   b. Explain two types of message formal defined by HTTP.   10

8. a. Write program in C to echo the string sent by client by the server using (iterative programming) UDP.   5

   b. Explain Persistent and non persistent connections under http.   5

   c. Define fault management. Explain some of the reactive fault management and proactive fault management systems.   10

UNIT - V

9 a. How quality of service is improved through scheduling technique? Explain any two techniques.　　10

　b. Explain the taxonomy of attacks with relation to security goals.　　10

10a. Illustrate with a neat diagram asymmetric key cryptosystem.　　10

　b. Explain the two different modes IPSec operates with necessary diagrams.　　10

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