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# P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

Sixth Semester, B.E. - Information Science and Engineering

Semester End Examination; May/June - 2018

Communication Network - II

Time: 3 hrs

Max. Marks: 100

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

## UNIT - I

- 1 a. Differentiate between connectionless and connection-oriented packet switched networks, with examples. 10
- b. What are the different classes into which a classful address is divided? Explain in detail with the help of neat sketch. 10
- 2 a. Convert the following IP address from dotted decimal notation to binary notation : 10
- i) 128.11.3.31      ii) 129.14.6.8      iii) 224.34.54.2
- iv) 238.34.2.1      v) 192.54.16.30
- b. Discuss the IPV4 datagram format in detail. 10

## UNIT - II

- 3 a. Explain the three phase communication between a remote and a mobile host. 10
- b. Write and explain the Distance Vector routing algorithm for a node. 10
- 4 a. Describe briefly the IGMP message format. 10
- b. Explain the following briefly with respect to DVMRP : 10
- i) RPF      ii) RPB      iii) RPM

## UNIT - III

- 5 a. Explain how both flow and error control is achieved by the stop-and-wait protocol? 8
- b. Explain any four applications of UDP. 2
- c. Describe the TCP segment format with a neat diagram. 10
- 6 a. What is silly window syndrome? Explain the solutions for the same both at sender and receiver side. 10
- b. Explain how error control is achieved by SCTP at both sender and receiver side? 10

## UNIT - IV

- 7 a. Describe how DHCP operates, when both client and server are in the same network and also on different network? 10
- b. With the help of a neat diagram, explain the process of hierarchy of name server. 10
- 8 a. Explain the architecture of E-mail, by considering different scenarios. 10
- b. With the help of a neat sketch, Briefly describe the different components of SSH. 10

**UNIT - V**

- 9 a. Explain the different strategies devised for transition from IPV4 to IPV6. 12
- b. Explain the following with respect to IPV6 :
- i) Unspecified address
  - ii) Loop back address 8
  - iii) Compatible address
  - iv) Mapped address
- 10 a. Illustrate the technique of additive cipher, with key = 15 to encrypt and decrypt the message "hello". 10
- b. With the help of a neat sketch, explain the general idea of asymmetric-key cryptosystem. 10

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