U.S.N

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; 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	Discuss the protocols and its standard organizations.	10
b.	Explain briefly the layered architecture and peer to peer processes in the OSI model with a neat diagram.	10
2 a.	Briefly explain the 8 x 8 banyan switch architecture for packet switching.	10
b.	Bring out any 5 classical differences between classful and classless addressing.	10

UNIT - II

3 a.	Explain with a neat diagram IPv4 header.	10
b.	Write a brief note on OSPF features and its operations.	10
4 a.	Discuss briefly the IGMP message format.	10
b.	Explain Link State Routing Algorithm with example.	10

UNIT - III

5 a.	Explain the concept of connection establishment using three way handshaking in TCP.	10
b.	What is pseudo header? What is it used for? Explain with an example how UDP uses pseudo headers.	10
6. a	How control and error control flow is handled in TCP?	10
b.	Explain neatly the features of TCP.	10

UNIT - IV

7. a	Explain how DHCP operates considering the client server in same network and also on different network.	10
b.	Explain with a neat figure the process of Hierarchy of name servers.	10
8 a.	Discuss with a neat diagram, the four scenarios in the design architecture of E-mail.	10
b.	Explain how a message access agent plays an important role in the mail delivery process.	10

UNIT - V

9 a.	With a neat diagram, discuss the categories and types of keys of cryptography.	10
b.	Explain the mode of operation for block ciphers neatly.	10
10 a.	Discuss all the key features briefly, involved in the process of message integrity.	10
b.	Which are the two security protocol that provides authentication and encryption for packets at the IP level?	10

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