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

(An Autonomous Institution affiliated to VTU, Belgaum)

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

Semester End Examination; June - 2016

Computer Networks

Time: 3 hrs

Max. Marks: 100

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

UNIT - I

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| 1 a. Discuss any five standards creation committees. | 10 |
| b. Discuss the functionalities of each layer in the TCP / IP protocol suite in detail. | 10 |
| 2 a. Differentiate between connectionless and connection oriented packet switched networks. | 10 |
| b. Explain the special IP addresses. | 10 |

UNIT - II

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| 3 a. With the format, Discuss the usage of ARP. | 10 |
| b. Explain the process of a mobile host communicating with a remote host. | 10 |
| 4 a. Discuss the link state routing algorithm. | 10 |
| b. What is IGMP used for? Explain the different IGMP messages. | 10 |

UNIT - III

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| 5 a. Discuss the services provided by transport layer. | 10 |
| b. What is pseudo header? What is it used for? Explain with an example how UDP uses pseudo headers. | 10 |
| 6 a. Discuss the process of connection establishment in TCP. | 10 |
| b. What are the differences between the acknowledgements of TCP and SCTP? | 4 |
| c. Briefly explain the association establishment in SCTP. | 6 |

UNIT - IV

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| 7 a. Explain how DHCP operates, considering the client server in same network and also on different network. | 10 |
| b. Define the following with examples : | |
| i) FQDN ii) PQDN iii) Flat name | 10 |
| iv) Hierarchical name space v) Domain. | |
| 8 a. Explain the following with respect to FTP : | |
| i) Data connection | |
| ii) Communication over control connection | 10 |
| iii) Communication over data connection. | |
| iv) Control connection. | |

Contd...2

- b. With the format of an E-mail, explain the process of sending mail and receiving mail. 10

UNIT - V

- 9 a. Find the correct address : 3
 - 1D : FF :: A : 0B
- b. Explain the following IPV6,
 - i) Unspecified address
 - ii) Loop back address 7
 - iii) Compatible address
 - iv) Mapped address.
- c. Explain the methods of transition from IPV4 to IPV6. 10
- 10 a. Discuss the security attacks related to threat to integrity. 10
 - b. Discuss how MAC is used in providing the security. 10

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