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

(An Autonomous Institution affiliated to VTU, Belagavi)

Sixth Semester, B.E., - Electronics and Communication Engineering

Semester End Examination; June - 2017

Computer Communication 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. | Explain the brief history of internet and discuss the architecture of ISP. | 10 |
| b. | Explain the different types of delays in packet switched network. | 10 |
| 2 a. | With a neat diagram, explain the interaction between layers in the OSI model. | 10 |
| b. | Compare circuit switched network and packet switched network. | 6 |
| c. | Briefly explain the concept of connection oriented and connectionless services. | 4 |

UNIT - II

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|------|--|----|
| 3 a. | Give the HTTP header format and explain request/response headers. | 10 |
| b. | Explain the FTP communication over data connection operation. | 10 |
| 4 a. | What is DNS? Explain name space and its name address resolution schemes. | 10 |
| b. | What is addressing? Briefly explain the classification of port numbers along with socket addressing. | 10 |

UNIT - III

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|------|---|----|
| 5 a. | Explain UDP. | 10 |
| b. | Explain TCP connection establishment by 3-way handshaking procedure. | 10 |
| 6 a. | With a neat diagram explain with TCP segment format. | 10 |
| b. | Explain the concept of process-to-process delivery by considering client/server paradigm. | 10 |

UNIT - IV

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|------|---|----|
| 7 a. | What is congestion in networking terminology? Explain two categories of congestion control routing. | 10 |
| b. | Explain the distance vector routing algorithm with an illustration. | 10 |
| 8 a. | Explain IPv4 addressing with the concept of classes (Classful addressing). | 10 |
| b. | With a neat diagram explain the router architecture. | 10 |

UNIT - V

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| 9 a. | What is multiplexing? List the techniques of multiplexing. Explain FDM. | 10 |
| b. | Explain in brief pure ALOHA scheme and show that its efficiency is 18%. | 10 |
| 10 a. | Explain PPP frame format. List the services provided by PPP. | 10 |
| b. | With a neat diagram, explain the responsibilities of data link layer. | 10 |