

**Code No: 136FT****JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech III Year II Semester Examinations, May - 2019****PRINCIPLES OF COMPUTER COMMUNICATIONS AND NETWORKS****(Common to CE, EEE, ME, CSE, IT)****Time: 3 hours****Max. Marks: 75****Note:** This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

**PART - A****(25 Marks)**

- |      |   |     |
|------|---|-----|
| 1.a) | What is computer communication system?                                | [2] |
| b)   | List the uses of computer in communication.                           | [3] |
| c)   | What are the advantages of multiplexing?                              | [2] |
| d)   | Give a note on application layer protocol.                            | [3] |
| e)   | How are analog signals transmitted?                                   | [2] |
| f)   | What is analog signal in data communication?                          | [3] |
| g)   | Write the main functions of the data link layer.                      | [2] |
| h)   | List the different types of wireless communication with applications. | [3] |
| i)   | What are connectors?  | [2] |
| j)   | Draw the bridge protocol architecture.                                | [3] |

**PART - B****(50 Marks)**

- |           |  |       |
|-----------|--|-------|
| 2.a)      | List and explain the types of computer networks.                       |       |
| b)        | Explain the telephone system and data communications.                  | [5+5] |
| <b>OR</b> |  |       |
| 3.a)      | Give a brief note on network standards.                                |       |
| b)        | Describe the applications of networks.                                 | [5+5] |
| 4.        | List and explain the OSI References models in detail.                  | [10]  |
| <b>OR</b> |  |       |
| 5.a)      | Explain the communication service methods and data transmission modes. |       |
| b)        | Discuss the analog and digital communications.                         | [5+5] |
| 6.        | List and explain the characteristics of analog signals.                | [10]  |
| <b>OR</b> |  |       |
| 7.a)      | Why are digital signals better than analog signals? Explain.           |       |
| b)        | How do you convert analog signal to digital signal? Discuss.           | [5+5] |

8. Explain the physical and electrical characteristics of wire. [10]

**OR**

9. Draw and explain the fiber optic media. [10]

10.a) Compare and contrast Switches Vs Routers.

b) Give a brief note on repeaters. [5+5]

**OR**

11. List and explain the types of In-Device and Inter-Device Connectors. [10]

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