

**R16**

**Code No: 136FT**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**B. Tech III Year II Semester Examinations, February - 2023**

**PRINCIPLES OF COMPUTER COMMUNICATIONS AND NETWORKS**

**(Common to CE, EEE, CSE, IT)**

**Time: 3 Hours**

**Max. Marks: 75**

- Note:** i) Question paper consists of Part A, Part B.  
ii) Part A is compulsory, which carries 25 marks. In Part A, Answer all questions.  
iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

**PART - A**

**(25 Marks)**

- 1.a) Write a brief note on types of Computer Networks. [2]
- b) Discuss briefly about Network Standards. [3]
- c) List out various OSI Layers. [2]
- d) What is Analog Communication? [3]
- e) Write a brief note on SONET. [2]
- f) What is a T-Carrier System? [3]
- g) Write a short note on Radio Waves. [2]
- h) Discuss briefly about Infrared signals. [3]
- i) Write a short note on Routers. [2]
- j) Explain briefly about PC Cards. [3]

**PART - B**

**(50 Marks)**

- 2.a) Write a brief note on Computer Communications and Networking.
  - b) Discuss about Network Addressing. [5+5]
- OR**
- 3.a) Explain briefly about Interoperability and Security features.
  - b) What is Routing? Give an overview of routing techniques. [5+5]
- 4.a) Write a short note on speed and capacity of a Communication Channel.
  - b) Discuss in detail about Computer Applications and application protocols. [5+5]
- OR**
- 5.a) Discuss briefly about Multiplexing.
  - b) Write a brief note on Digital Communications. [5+5]
6. Write a detailed note on steps involved in converting Analog Data to Analog Signals and Digital Data to Analog Signals. [10]
- OR**
7. Explain in detail about Data Rate and Bandwidth Reduction. [10]

QA QA QA QA QA QA QA QA

8. Write a detailed note on Copper Media and its contents.

[10]

QA QA QA QA QA QA QA QA

9.a) List out the types of Satellites and their advantages and disadvantages.

[5+5]

b) Discuss in detail about Data Link Layer.

10.a) Explain in detail about Connectors and repeaters.

b) Discuss in detail about Bridges.

[6+4]

OR

QA QA QA QA QA QA QA QA

11.a) Explain in detail about Transreceivers and media convertors.

[6+4]

b) Discuss about Switches in detail.

---ooOoo---

QA QA QA QA QA QA QA QA

QA QA QA QA QA QA QA QA

QA QA QA QA QA QA QA QA

QA QA QA QA QA QA QA QA

QA QA QA QA QA QA QA QA