

Code No: 125DT

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech III Year I Semester Examinations, January/February - 2023

COMPUTER NETWORKS

(Computer Science and Engineering)

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) What are the uses of Computer Network? [2]
- b) What is piggy backing technique? When and why is it used? [3]
- c) What is bit stuffing? Give an example. [2]
- d) What is the use of gateway and router? [3]
- e) What is optimality principle? [2]
- f) Write a brief note on store and forward packet switching. [3]
- g) What is tunneling? [2]
- h) Give a short note on IP addresses. [3]
- i) What is the function of transport layer? [2]
- j) What is the use of HTTP and FTP protocols? [3]

PART - B**(50 Marks)**

2. Explain various layers and their functions of TCP/IP reference model. [10]
OR
3. Explain the stop-and-wait protocol and selective repeat protocol. [10]
4. Explain the CSMA/CD protocol in detail. [10]
OR
5. Describe the need and use of various network devices. [10]
6. Explain the working principle of the Hierarchical routing protocol. [10]
OR
7. Explain the token bucket algorithm. Write down its advantages and disadvantages. [10]
8. Discuss IMCP and DHCP protocols in detail. [10]
OR
9. Explain the elements of transport protocol. [10]
- 10.a) Explain the TCP service model.
b) Draw the TCP header and explain various fields. [5+5]
OR
11. Explain the TELNET and DNS in detail. [10]

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