

Code No: 156CA

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech III Year II Semester Examinations, July - 2023****NETWORK PROGRAMMING****(Computer Science and Engineering – Networks)****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) List any three standard internet services. [2]
- b) Describe the syntax and purpose of socket close function. [3]
- c) Define I/O Multiplexing. [2]
- d) Brief the main function of UDP Echo Client. [3]
- e) What is fcntl function? [2]
- f) Explain readv and writev functions. [3]
- g) Discuss Race Condition. [2]
- h) Differentiate between Unicasting and Broadcasting. [3]
- i) Explain Ping Program. [2]
- j) Write about UDP Checksum field. [3]

**PART – B****(50 Marks)**

2. Write in detail about the TCP connection establishment and termination with format. [10]

**OR**

3. Explain the following with suitable examples:
  - a) Value –Result Arguments
  - b) Byte ordering and manipulation functions. [5+5]

- 4.a) Explain POSIX Signal Handling and Termination of Server Process.
- b) Discuss the lack of flow control with UDP with a suitable example. [5+5]

**OR**

5. Discuss about the different types of I/O models provided by UNIX. [10]

6. Explain the IPv4 Socket Address Structure and IPv6 Socket Address Structure with suitable examples. [10]

**OR**

- 7.a) What are the three techniques to know how much data is queued on socket to read? Explain.
- b) Discuss the various uses of Ancillary Data. [6+4]

- 8.a) Explain the types of Resource records in Domain Name System. [5+5]  
b) Brief about Multicast Addresses.

**OR**

9. Discuss in detail about syslogd daemon and syslog function with an example. [10]

10. Explain the procedure of Raw Socket Creation, Input and Output in detail. [10]

**OR**

11. Write short notes on following:

- a) Packet Capture using BPF  
b) Remote Login Control Terminals. [5+5]

---ooOoo---

Used paper July/Aug-2023