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P.E.S. College of Engineering, Mandya - 571 401
 (An Autonomous Institution affiliated to VTU, Belagavi)
First Semester, M. Tech - Computer Science and Engineering (MCSE)
Semester End Examination; June - 2022
Network Programming

Time: 3 hrs

Max. Marks: 100

Course Outcome

The Students will be able to:

CO1: Understand client/server communication through transport layer protocols..

CO2: Develop applications that communicate with each other using TCP.

CO3: Develop applications that communicate with each other using SCTP.

CO4: Evaluate Socket Programming APIs.

CO5: Explain key management and routing sockets.

Note: I) Answer any **FIVE** full questions, selecting **ONE** full question from each unit.

II) Any **THREE** units will have internal choice and remaining **TWO** unit questions are compulsory.

III) Each unit carries 20 marks.

Q. No.	Questions	Marks	BLs	COs	POs
UNIT - I		20			
1 a.	Discuss the client and server on the same Ethernet communicating using TCP with the aid of diagram.	10	L2		
b.	Discuss the layers of OSI model and Internet protocol suite with relevant diagram.	10	L2		
UNIT - II		20			
2 a.	Illustrate the IPv4 socket address structure with proper explanations.	10	L2		
b.	What is byte ordering? Write a program to determine host byte order.	10	L2		
OR					
2 c.	Discuss the socket functions for SCTP one-to-many style with diagrammatic representation.	10	L2		
d.	Compare the various socket address structure with diagram.	10	L4		
UNIT - III		20			
3 a.	What are the applications of I/O multiplexing? Explain the blocking of I/O model.	10	L2		
b.	Explain its SCTP socket options of one-to-Many style streaming.	10	L2		
OR					
3 c.	Explain Head-of-Line blocking.	10	L2		
d.	Discuss the interface models.	10	L2		
UNIT - IV		20			
4 a.	What is a demon processes? Explain.	10	L2		
b.	Discuss the any two advanced I/O functions with example.	10	L2		

OR

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| 4 c. Explain the implementation of advanced polling. | 10 | L2 |
| d. Discuss the unit domain socket address structure. | 10 | L2 |

UNIT - V

20

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|--------------------------------------------------------------|----|----|
| 5 a. Explain ARP cache operations. | 10 | L2 |
| b. How to create a Static Security Association (SA)? Explain | 10 | L2 |

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