SCHEME OF COURSE WORK

Department of Information Technology

Course Details:

COURSE TITLE	UNIX Network Programming Lab		
COURSE CODE	13IT1108	L T P C	0 0 3 2
PROGRAM	B.TECH		
SPECIALIZATION	IT		
SEMESTER	VII		
PRE REQUISITES	C , UNIX		
COURSES TO WHICH IT IS A PRE REQUISITE	N/A		

Course Outcomes (COs):

1	Create TCP Sockets for client server communication
2	Create UDP Sockets for client server communication
3	Apply I/O multiplexing programs to handle multiple clients
4	Implement different forms of IPC
5	Design programs using RPC

Course Outcome versus **Program Outcomes**

Course outcomes	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**
CO1	M	S	S	M	S	M	M				
CO2	M	S	S		M	M	M				
CO3			M	M	S	S	S				
CO4	M	M	M		M	S	S				
CO5	M	M	M	M	M		S				

S - Strongly correlated, *M* - *Moderately* correlated, *Blank* - *No correlation*

Assessment Methods	Internal -Test / Viva

PEO	Program Educational Objective (PEO)	Correlation
PEO1	Acquire the ability to learn independently by exhibiting effective scientific, technical, communication and project management skills and become a professional with in depth knowledge in the frontier areas of Software Engineering	M
PEO2	Demonstrate quantitative, analytical and appropriate research methodologies to solve problems relevant to the society.	S
PEO3	Participate in continuing education to expand the knowledge of contemporary professional issues to tackle inter-disciplinary problems upholding ethical practice.	

Teaching- Learning & Evaluation

Week	Topic/ Contents	Course Outcomes	Teaching learning strategy	Assessment method & schedule
1	Design TCP iterative Client and Echo server application to given input sentence	CO1	Programming	Viva-1 Lab Internal-1
2	Design TCP iterative Client and Echo server application to given input sentence	CO1	Programming	Viva-2 Lab Internal-1
3	Design TCP iterative Client and server application to reverse the given input sentence	CO1	Programming	Viva-3 Lab Internal-1
4	Design TCP client and server application to transfer file	CO1	Programming	Viva-4 Lab Internal-1
5	Design UDP Client and server application to reverse the given input sentence	CO2	Programming	Viva-5 Lab Internal-1
6	Design UDP Client server to transfer a file	CO2	Programming	Viva-6 Lab Internal-1
7	Design a TCP concurrent server to convert a given text into upper case using multiplexing system call “select”	CO3	Programming	Viva-7 Lab Internal-1
8	Design a TCP concurrent server to convert a given text into upper	CO3	Programming	Viva-8 Lab Internal-1

	case using multiplexing system call “select”			
9	Test-2			
10	Design a TCP concurrent server to echo given set of sentences using poll functions	CO3	Programming	Viva-10 Lab Internal-2
11	Implement the following forms of IPC. a) Pipes b) FIFO	CO4	Programming	Viva-11 Lab Internal-2
12	Implement file transfer using Message Queue form of IPC	CO4	Programming	Viva-12 Lab Internal-2
13	Write a programme to create an integer variable using shared memory concept and increment the variable simultaneously by two processes. Use semaphores to avoid race conditions	CO4	Programming	Viva-13 Lab Internal-2
14	Write a programme to create an integer variable using shared memory concept and increment the variable simultaneously by two processes. Use semaphores to avoid race conditions	CO4	Programming	Viva-14 Lab Internal-2
15	Design using poll client server application to multiplex TCP and UDP requests for converting a given text into upper case.	CO5	Programming	Viva-15 Lab Internal-2
16	Design using poll client server application to multiplex TCP and UDP requests for converting a given text into upper case.	CO5	Programming	Viva-16 Lab Internal-2
17	Program practice & Doubts	---	Programming	
18	Test-2			