POKHARA UNIVERSITY

Level: Bachelor Semester: Fall Year : 2019
Programme: BE Full Marks: 100
Course: Network Programming Pass Marks: 45
Time : 3hrs.

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Attempt all the questions.

.	a)	What is network programming? Explain different communication protocols used in networking.	8
	b)	Explain the client/server mode of communication. Also draw the TCP state transition diagram.	7
2.	a)	Why do we need byte ordering in network programming? Differentiate little endian and big endian. Explain different address conversion function with prototype and return type of respective functions.	8
	b)	What is socket API? Explain socket address structure for IPv4 and IPv6.	7
3.	a)	Write outlines code to create listen descriptor and connected descriptor in case of TCP and explain their importance in program.	8
	b)	What is input/output model? Explain asynchronous model.	7
4.	a)	What are the major differences of wait () and waitpid ()? Explain the mechanism to handle multiple client in Unix network programing with suitable sample code (consider simple client server chat)	8
	b)	Compare **close()** function and **shutdown()** function with outline code.	7
5.	a)	Explain windows SOCKE library along with suitable diagram.	7
	b)	What are the differences between Unix socket and windows socket? Explain the significance of setup and cleanup functions in windows socket with function prototype and required structure definition.	8
6.	a)	What is overlapped IO? Explain different winsock functions that supports synchronous and asynchronous IO.	7
	b)	Compare static and dynamic link library in case of windows.	8
7.	Write short notes on: (**Any two**)		2×5
	a)	Telnet and rlogin	
	b)	ifconfig/ipconfig	
	c)	TFTP	