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P118-132 (T1)

OCTOBER 2018 / IN - SEM (T1)

F. Y. M. TECH. (COMPUTER ENGINEERING) (SEMESTER -I)

COURSE NAME: OPERATING SYSTEM DESIGN

**COURSE CODE: CSPA11182
(PATTERN 2018)**

Time: [1 Hour]

[Max. Marks: 20]

Instructions to candidates:

- 1) Answer Q.1 OR Q.2, Q.3 OR Q.4
- 2) Figures to the right indicate full marks.
- 3) Use of scientific calculator is allowed
- 4) Use suitable data wherever required

Q.1)	Explain the difference between sharing the resource and multiplexing a resource?	[6]
a.		
b.	Why can't you mask off the system call and program error interrupts?	[4]
	OR	
Q.2)	Suppose you wanted to write a program that could take input from one to two possible sources and count the length of the input. The two input are either: i. A pipe or a file ii. A message queue or a file Discuss which of the program would be easier to write.	[6]
a.		
b.	Why can't you change the control registers in user mode ?	[4]
Q3)	In C++ argument passing here is a variable <i>argc</i> . What is <i>argc</i> used for and why can it not be 0?	[6]
a.		
b.	Explain how pipes allow you to use variable sized messages.	[4]
	OR	
Q.4)	Explain the relationship between signaling, rendezvous and the producer-consumer patterns?	[6]
a.		
b.	What is the basic idea of mutual exclusion IPC pattern.	[4]