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APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

SECOND SEMESTER M.TECH DEGREE EXAMINATION, APRIL/MAY 2018

Branch: ***Computer Science and Engineering***

Stream: ***Computer Science and Engineering***

Course Code & Course Name

01CS6104 Operating System Design

Answer *any two full* questions from *each* part.

Limit answers to the required points.

Max. Marks: 60 Duration: 3 hours

PART A

1.	a.	Write detailed notes on Kernel Threads.	(4.5)
	b.	Mention how Disabling and Enabling Interrupts takes place.	(2.5)
	c.	Explain how Tasklets are declared.	(2)
2.	a.	Account for the various Real Time Scheduling Policies available.	(4.5)
	b.	Mention the ways in which New Work Queues are created.	(2)
	c.	List out the salient features of Bottom Halves.	(2.5)
3.	a.	Mention why System Call Numbers are important.	(4.5)
	b.	Mention the various aspects of Interrupt Context.	(4.5)

PART B

4.	a.	List out the various aspects of Contention and Scalability.	(6)
	b.	Write notes on Busy Looping.	(2.5)
	c.	Illustrate the importance of Zones in Memory Management.	(2)
5.	a.	Mention the importance of Sequential Locks.	(6)
	b.	Specify the context in which kfree() is needed.	(4.5)
6.	a.	What all are the advantages of Pre-emption Disabling.	(6)
	b.	Write relevant notes on Virtual File system.	(2.5)
	c.	Describe on the Design of Slab Layer.	(2)

PART C

7.	a.	Mention the various types of I/O Schedulers.	(4.5)
	b.	Specify the importance of Clusters in Distributed Processing.	(6)
8.	a.	Give some descriptions on Opaque Types.	(4.5)
	b.	Write notes on Distributed Global States.	(3)
	c.	Explain on Distributed Process Management.	(3)
9.	a.	Mention on the importance of Data Alignment.	(2.5)
	b.	Give a short description on Anticipatory I/O Scheduler.	(2)
	c.	Write the relevance of Client / Server Systems in Distributed Processing.	(6)