B.Sc.IT: Semester – III [Modern Operating System] Question Paper (Apr – 2014) [Revised Course]

- Kamal T.

Time: 3 Hours **Total Marks: 100**

N.B.: (1) All Questions are Compulsory.
(2) Question 1 – Solve any two questions.
(3) Draw diagrams whenever Necessary.
(4) Marks are mentioned to the right of each question.

Q.1 Attempt any two from the following: (10 Marks)

(A)	Write a short note on Critical-Section problem.	**(5)**
(B)	Explain in brief NFS.	**(5)**
(C)	Define and explain the following terms: – (i) Assembler (ii) Linker	
(D)	Explain in brief Access Matrix.	

Q.2 Attempt Any Three From The Following: (15 Marks)

(A)	Give the difference between Simple Batch and Multiprogrammed Batch System.	**(5)**
(B)	Write in short on Real Time System.	**(5)**
(C)	Explain in brief Time Sharing System.	**(5)**
(D)	Define and explain following terms: – (i) Compilers (ii) Interpreters	**(5)**

Q.3 Attempt Any Three From The Following: (15 Marks)

(A)	Define and explain system calls.	**(5)**
(B)	Write a short note on operating system structure.	**(5)**
(C)	Give different types of services provided by the operating system.	**(5)**
(D)	Explain in brief Virtual Machine.	**(5)**

Q.4 Answer the Questions: (15 Marks)

(A)	Explain in brief Multithreading Models.	**(10)**
(B)	Write a short note on Process Control Block.	**(5)**
	OR	
(C)	Write a short note on semaphores.	**(5)**

Q.5 Attempt Any Three From The Following: (15 Marks)

(A)	Explain in brief FCFS and priority scheduling algorithm with examples.	**(5)**
(B)	Write in short about Semaphores.	**(5)**
	OR	
(C)	Write a short note on External Fragmentation.	**(5)**

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Q.6	Attempt Any Three From The Following: (15 Marks)	
(A)	Write a short note on RAID.	(5)
(B)	Explain Deadlock Detection and Recovery.	(5)
(C)	Define file and gives its attributes.	(5)
(D)	Explain Disk Structure.	(5)

Q.7	Attempt Any Three From The Following: (15 Marks)	
(A)	Write in short on STREAMS.	(5)
(B)	Explain System and Network Threats.	(5)
(C)	Write in brief on Access Control.	(5)
(D)	What are the different principles of protection?	(5)

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