

Code No: **R42045** 

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Set No. 1

## IV B.Tech II Semester Regular/Supplementary Examinations, April/May - 2016 **OPERATING SYSTEMS** (Electronics and Communication Engineering) Time: 3 hours Max. Marks: 75 **Answer any FIVE Questions** All Questions carry equal marks \*\*\*\*\* 1 a) What is cache memory? Explain the cache read operation. [8] b) Explain the evolution of an operating system. [7] 2 What is thread? Explain the Life cycle of thread. [15] 3 a) What is monitor? What is purpose of the monitor? [8] b) What are the differences between competing process and co-operating process? [7] Explain about deadlock prevention methods. Write a short note on a) paging b) segmentation c) swapping 4 [15] 5 [15] 6 a) Explain about FCFS disk scheduling algorithms with an example. [8] b) Write a short note on Single Buffering. [7] 7 Explain different file allocation methods in detail. [15] 8 Explain in detail the different types of threats. [15]



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Co	de No: <b>R42045 R10</b>	Set No. 2	
IV B.Tech II Semester Regular/Supplementary Examinations, April/May - 2016 OPERATING SYSTEMS			
Time:	(Electronics and Communication Engineering) 3 hours Answer any FIVE Questions	Max. Marks: 75	
	All Questions carry equal marks *****		
1	Explain the different types of Interrupts.	[15]	
2	Write note on Process State Transition Diagram.	[15]	
3 a)	What is race condition? Explain.	[8]	
b)	What are the differences between binary and general semaphore.	[7]	
4	Explain the different deadlock recovery methods.	[15]	
5	Explain the following allocation algorithms a) First-fit b) Best-fit c) Worst-fit		
	c) Worst-fit	[15]	
6 a)	Explain about SSTF disk scheduling algorithms with an example.	[8]	
b)	Write a short note on Double Buffering.	[7]	
7	List and explain different file accessing methods.	[15]	
8	Write a short note on a) Intruders		
	<ul><li>b) Cryptography</li><li>c) Digital signatures</li></ul>	[15]	



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Coo	le No: <b>R42045 R10</b>	Set No. 3		
IV B.Tech II Semester Regular/Supplementary Examinations, April/May - 2016 OPERATING SYSTEMS				
Time	(Electronics and Communication Engineering) : 3 hours	Max. Marks: 75		
Answer any FIVE Questions All Questions carry equal marks *****				
1	Explain the different I/O Communication techniques.	[15]		
2	Write a detailed note on Process Structure.	[15]		
3 a)	List the requirements for mutual exclusion.	[8]		
b)	What are the differences between binary and general semaphore?	[7]		
4	Explain the various deadlock detection methods.	[15]		
5 a)	Explain the Belady's anamoly.	[8]		
b)	Consider the following page reference string, calculate the page the FIFO replacement algorithm. Assume that number of frames = 7,0,1,2,0,3,0,4,2,3,0,3,2,1,2,0,1,7,0,1.			
6 a)	Explain about SCAN disk scheduling algorithms with an example.	[8]		
b)	Write a short note on Circular Buffering.	[7]		
7	Explain different file accessing methods.	[15]		
8 a) b)	What are the distinctions among the terms public key, private key key? What are the fundamental requirements addressed by computer sec	[8]		



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Set No. 4

## IV B.Tech II Semester Regular/Supplementary Examinations, April/May - 2016 **OPERATING SYSTEMS** (Electronics and Communication Engineering) Time: 3 hours Max. Marks: 75 **Answer any FIVE Questions** All Questions carry equal marks \*\*\*\*\* 1 What are the key elements in the cache design? Explain. [15] 2 a) Explain about Process Control block. [8] b) Write a short note on Multithreading. [7] 3 a) What is Semaphore? What operations can be performed on a semaphore? [8] b) What are the differences between competing process and co-operating process? [7] 4 What is deadlock? What are the four necessary condition to deadlock occur? [15] 5 a) Explain the demand paging memory management scheme. [8] b) Consider the following page reference string, calculate the page fault rate for the LRU replacement algorithm. Assume that number of frames = 3. 7,0,1,2,0,3,0,4,2,3,0,3,2,1,2,0,1,7,0,1. [7] 6 a) Explain about C-SCAN disk scheduling algorithms with an example. [8] b) Write a short note on Single Buffering. [7] Explain different file allocation methods. 7 [15] 8 Write a short note on a) Intruders b) Trusted System c) public-key cryptography [15]