C.U.SHAH UNIVERSITY Summer Examination-2018

Subject Name: Operating System

	Subject (Code: 4	TE04OPS1		Br	anch: B.Tech (CE, IT)		
	Semester Instructio	•: 4 ns:	Date: 0	5/05/2018	Tin	ne: 10:30 To 1	30	Marks: 70	
	(1) U (2) Ii (3) I (4) A	Jse of Panstruction Draw near Assume	rogrammab ons written at diagrams suitable dat	le calculator & on main answ and figures (i a if needed.	k any other er book ard f necessary	electronic inst estrictly to be c at right place	rument is pro beyed. s.	bhibited.	
Q-1		Attem	pt the follo	wing question	ns:				(14)
	1.	Which a) c)	among the Memory M Application	following is n Ianagement n Managemen	ot function b) Di at d) Vi	n of Operating S sk Managemen rus Protection	System? t		
	2.	Which a)	one of the FCFS	following are b) SRTN c	not types of solutions of the solution of the	of Scheduling A d) Ostrich Alg	lgorithm? orithm		
	3.	In proc a)	lucer-consu Producer	mer problem, b) Consumer	when buff c) Both	er is empty d) None	has to wa	it.	
	4.	Proces a)	s creation in New()	n UNIX is don b) Fork()	ne by c) Mak	e() d) Parent	.()		
	5.	Which a)	of the follo Ready b)	wing is not a Running	process sta c) New	te? d) Request			
	6.	The dia its exec a) c)	sadvantage cution is Low CPU Very high	of a process b utilization resource utili	eing alloca	b) Low reso d) None of	rces before to burce utilizat these	ion	
	7.	The tir known	ne disk con as Seek Time	troller takes fo _b) Rotation:	or the begin	nning of the sec	tor to reach t	the head is	
	8.	Which	of the follo Name	wing are Attri b) Type	ibutes of F c) Size	ile? d) All of the a	bove		
	9.	What i a) c)	s the use of To Print W Prints Pas	PWD comma orking Direct	and in UNI cory b d	X?) Copies File) Prints Word F	ile		
	10.	Bringin a)	ng a page in Deadlock	to memory or b) Page Faul	nly when it t c) Dem	is needed is kn and Paging d	own as) Swapping		
	11.	What i a)] b)]	s the full fo Repeated A Redundant	rm of RAID? rray of Indepe Array of Indep	endent Disl pendent Di	cs sks			
					Page 1 3	3			



c) Re	edundant	Arrav	of In	dividu	al Disks
c_{j} in	Juanaunt	muy	or m	uiviuu	

- d) Repeated Array of Individual Disks
- 12. Saving the state of the old process and loading the saved state of the new process is called _____.
 - a) Aging b) Context Switch c) Swapping d) Paging
- 13. The part of the program where shared memory is accessed is called the

a)	Critical Region	b) Clever	Region	c)	Critical RAM	d) Clever RAM
***	C	• . • · · · · •		1		

- **14.** Wastage of memory within the partition is known as _____.
 - a) Internal fragmentation b) External fragmentation
 - c) Segmentation d) Paging

Attempt any four questions from Q-2 to Q-8

Q-2		Attempt all questions	
	a)	Write a short note on Batch Operating System	(04)
	b)	With the help of process state diagram explain different states of process.	(05)
	c)	Explain different Services provided by Operating System.	(05)
Q-3		Attempt all questions	
	a)	What is Mutual exclusion? Explain Peterson's solution for mutual exclusion problem.	(04)
	b)	What is Deadlock? Write & explain necessary condition for deadlock to occur.	(05)
	c)	Explain Round Robin Scheduling algorithm using example.	(05)
Q-4		Attempt all questions	
	a)	Explain segmentation with help of its significance.	(07)
	b)	Explain Demand Paging with the use of diagram.	(07)
Q-5		Attempt all questions	
-	a)	Give differences between Internal & External Fragmentation	(04)
	b)	Write a short note on Inode	(05)
	c)	Explain various file operations.	(05)
Q-6		Attempt all questions	
	a)	Consider the following page reference string:	(07)
		a, b, c, d, c, a, d, b, e, b, a, b, c, d	
		Assuming four empty frames, how many Page Faults would occur for the	
		following Page Replacement Algorithms:	
		FIFO Page Replacement	
		LRU Page Replacement	
	b)	Describe RAID Levels.	(07)
Q-7		Attempt all questions	
	a)	Explain any two Disk Arm Scheduling algorithms with suitable	(07)
	b)	Explain Directory Structure	(07)



Q-8		Attempt all questions					
	a)	Write a short note on Access Matrix.	(05)				
	b)	Write a shell script to print largest number from given three numbers.	(05)				
	c)	Explain following unix commands.	(04)				
		1. grep 2. Cat					

