

## BHARATIYA VIDYA BHAVAN'S

## SARDAR PATEL INSTITUTE OF TECHNOLOGY

MUNSHI NAGAR, ANDHERI (WEST), MUMBAI – 400 058, India (Autonomous College Affiliated to University of Mumbai)

## RE\_Examination

Max. Marks: 60 Class: FYMCA Course Code: MCA21

Duration: 3 hr Semester: II Date:03/01/20 Time: 10 to 1

Subject: Operating System

Instructions: (1) All questions are compulsory.

(2) Use of scientific calculator is allowed.

(3) Assume any necessary data but justify the same.

Q. No.			Questions			Max. Mark	CO-BL PI
Q1	a) Illustrate	S					
		6	1-2-1.3.1				
	b) Explain o	6	22121				
Q2	a) Consider and priority	8	3-2-1.3.1 2-3-2.1.3				
		Process	Priority	AT	BT		
	DE CHINESE	P1	2(L)	0	4		
		P2	4	1	2		
		P3	6	2	3		
		P4	10	3	5		
		P5	8	4	1		
		P6	12(H)	5		es printegral	
			12(11)	3	4		
	Find Average preemptive p	P7	e and Average	6	6		
	a) Consider Scheduling a	P7  The waiting time oriority schedule the system with algorithm with the system with the syst	e and Average ling  OR  with 6 processes	Turn Around to	ime by using	8	2-3-2.1.3
	a) Consider Scheduling a	P7  The waiting time and Aven	e and Average ling  OR  with 6 processes A Time Quantum Time Quantum Time Time Time Time Time Time Time Tim	Turn Around to Salar Sal	ime by using	8	2-3-2.1.3
	a) Consider Scheduling a	P7  The waiting time oriority schedule the system with algorithm with the system with the syst	e and Average ling  OR  with 6 processes Quanturage Waiting Tire  Arrival	Turn Around to a s. Use Round am=2 to calculate?  Burst	ime by using	8	2-3-2.1.3
	a) Consider Scheduling a	P7  The waiting time and Aven	e and Average ling  OR  with 6 processes A Time Quantum Time Quantum Time Time Time Time Time Time Time Tim	Turn Around to Salar Sal	ime by using	8	2-3-2.1.3
	a) Consider Scheduling a	the system with algorithm with rime and Aven	e and Average ling  OR  with 6 processes Quanturage Waiting Tire  Arrival	Turn Around to a s. Use Round am=2 to calculate?  Burst	ime by using	8	2-3-2.1.3
	a) Consider Scheduling a	the system with rime and Aven  Process  P1	e and Average ling  OR  with 6 processes Quanturage Waiting Tire  Arrival	Turn Around to a s. Use Round am=2 to calculate?  Burst	ime by using	8	2-3-2.1.3
	a) Consider Scheduling a	the system with algorithm with Process  P1 P2	e and Average ling  OR  with 6 processes Quanturage Waiting Tire  Arrival	Turn Around to a s. Use Round am=2 to calculate?  Burst	ime by using	8	2-3-2.1.3
	a) Consider Scheduling a	the system with algorithm with Process  P1 P2 P3	e and Average ling  OR  with 6 processes Quanturage Waiting Tire  Arrival	Turn Around to San	ime by using	8	2-3-2.1.3
	a) Consider Scheduling a	the system with ime and Aven Process P1 P2 P3 P4	e and Average ling  OR  with 6 processes Quanturage Waiting Tire  Arrival	Turn Around to a s. Use Round am=2 to calculate?  Burst	ime by using	8	2-3-2.1.3

Q3		does comanhaus	1xxx						
	1. Reader W	does semaphores so riter Problem	ive:		4	2-2-1.3.			
	2. Producer	4	2-2-1.3.1						
			OR						
	a) Consider a	a system with 4 proces	esses and 2 masses	rce types: A,B and C					
		Allocation	esses and 3 resou	rce types: A,B and C	8	2-3-2.1.3			
			Max	Available					
	Process	A B C	A B C	A B C					
	PO	0 1 0	7.5.2						
	P1	2 0 0	7 5 3	3 3 2					
	P2	3 0 2				- 0			
	P3	2 1 1	9 0 2			- Mari			
	P4	0 0 2	2 2 2						
	17	002	4 3 3						
	Using Banker	r's Algorithm							
	1. Find the co	ontent of Need Matri							
	2. Is the syste	em in safe state? If so	Circa						
	- is the syste	in in sale state? If so	, Give safe seque	ence.					
	b) State the ne	ecessary conditions t	o solve oritical	otics 11					
	, and the m	conditions t	o solve critical se	ection problem	4	2-2-1.3.1			
					7	2-2-1.3.1			
	a) Explain Co	ontiguous memory all	location method i	a) Explain Contiguous memory allocation method in detail					
		0	1 1-1-1 1						
	1) 0				6	3-2-1.3.1			
	b) Consider a	reference string: 7,0	0.1.2.0.3.0.4.2.3.0						
	number of fra	mes in the memory 1	0,1,2,0,3,0,4,2,3,0 s 3	,3,2,1,2,0,1,7,0,1.the					
	Find out the n	umber of page faults	0,1,2,0,3,0,4,2,3,0 s 3. respective to:						
	Find out the n 1. Optimal Page	umber of page faults se Replacement Algo	0,1,2,0,3,0,4,2,3,0 s 3. respective to:						
	Find out the n 1.Optimal Pag 2. FIFO Page	umber of page faults ge Replacement Algo Replacement Algorit	0,1,2,0,3,0,4,2,3,0 s 3. respective to: orithm						
	Find out the n 1.Optimal Pag 2. FIFO Page	umber of page faults se Replacement Algo	0,1,2,0,3,0,4,2,3,0 s 3. respective to: orithm						
	Find out the n 1.Optimal Pag 2. FIFO Page	umber of page faults ge Replacement Algo Replacement Algorit	0,1,2,0,3,0,4,2,3,0 s 3. respective to: orithm						
	Find out the n 1.Optimal Pag 2. FIFO Page	umber of page faults ge Replacement Algorit Replacement Algorit Replacement Algorit	0,1,2,0,3,0,4,2,3,0 s 3. respective to: orithm						
	Find out the n 1.Optimal Page 2. FIFO Page 3. LRU Page I	umber of page faults ge Replacement Algorit Replacement Algorit Replacement Algorit	o,1,2,0,3,0,4,2,3,0 s 3. respective to: orithm thm	,3,2,1,2,0,1,7,0,1.the					
	Find out the n 1.Optimal Page 2. FIFO Page 3. LRU Page I	umber of page faults ge Replacement Algorit Replacement Algorit Replacement Algorit Replacement Algorit  e following disk requ	o,1,2,0,3,0,4,2,3,0 s 3. respective to: orithm thm thm OR	3,2,1,2,0,1,7,0,1.the		3-3-2.1.3			
	Find out the n 1.Optimal Page 2. FIFO Page 3. LRU Page I	e following disk requests, 132, 42, 187. Her	o,1,2,0,3,0,4,2,3,0 s 3. respective to: orithm thm thm OR	a disk with 200	6				
	Find out the n 1.Optimal Page 2. FIFO Page 3. LRU Page I b) Consider the cylinders. 23, a moving in left	e following disk requests, 132, 42, 187. Headirection. Find the n	o,1,2,0,3,0,4,2,3,0 s 3. respective to: orithm thm thm OR	a disk with 200	6	3-3-2.1.3			
	Find out the n 1.Optimal Page 2. FIFO Page 3. LRU Page I  b) Consider the cylinders. 23, a moving in left cylinders using	e following disk requests, 132, 42, 187. Headirection. Find the n	o,1,2,0,3,0,4,2,3,0 s 3. respective to: orithm thm thm OR	a disk with 200	6	3-3-2.1.3			
	b) Consider the cylinders. 23, a moving in left cylinders using 1. FCFS	e following disk requests, 132, 42, 187. Headirection. Find the n	o,1,2,0,3,0,4,2,3,0 s 3. respective to: orithm thm thm OR	a disk with 200	6	3-3-2.1.3			
	b) Consider the cylinders. 23, a moving in left cylinders using 1. FCFS 2. SSTF	e following disk requests, 132, 42, 187. Headirection. Find the n	o,1,2,0,3,0,4,2,3,0 s 3. respective to: orithm thm thm OR	a disk with 200	6	3-3-2.1.3			
	b) Consider the cylinders. 23, a moving in left cylinders using 1. FCFS	e following disk requests, 132, 42, 187. Headirection. Find the n	o,1,2,0,3,0,4,2,3,0 s 3. respective to: orithm thm thm OR	a disk with 200	6	3-3-2.1.3			
	b) Consider the cylinders. 23, a moving in left cylinders using 1. FCFS 2. SSTF 3. SCAN	e following disk requests, 132, 42, 187. Headirection. Find the negative of page faults are represented by the control of the second se	o,1,2,0,3,0,4,2,3,0 s 3. respective to: orithm thm thm or or dest sequence for ad pointer starting umber of head m	a disk with 200 g at 100 and ovements in	6	3-3-2.1.3			
	b) Consider the cylinders. 23, a moving in left cylinders using 1. FCFS 2. SSTF 3. SCAN	mes in the memory is number of page faults ge Replacement Algorite Replacement Replacem	o,1,2,0,3,0,4,2,3,0 is 3.  respective to:  orithm  thm  hm  OR  lest sequence for ad pointer starting umber of head m	a disk with 200 g at 100 and ovements in	6	3-3-2.1.3			
	b) Consider the cylinders. 23, a moving in left cylinders using 1. FCFS 2. SSTF 3. SCAN	e following disk requestion. Find the negative compare different F, advantages, and disk	o,1,2,0,3,0,4,2,3,0 s 3. respective to: orithm thm hm  OR  lest sequence for ad pointer starting umber of head m  file Allocation Me advantages)	a disk with 200 g at 100 and ovements in	6	3-3-2.1.3			
	b) Consider the cylinders. 23, a moving in left cylinders using 1. FCFS 2. SSTF 3. SCAN  a) Discuss and their technique	e following disk requested and the memory is tumber of page faults ge Replacement Algorite Replacement Replacem	o,1,2,0,3,0,4,2,3,0 is 3.  respective to:  orithm  thm  hm  OR  lest sequence for ad pointer starting umber of head m	a disk with 200 g at 100 and ovements in	6	3-3-2.1.3			
	b) Consider the cylinders. 23, a moving in left cylinders using 1. FCFS 2. SSTF 3. SCAN	e following disk requested and the memory is tumber of page faults ge Replacement Algorite Replacement Replacem	o,1,2,0,3,0,4,2,3,0 s 3. respective to: orithm thm hm  OR  lest sequence for ad pointer starting umber of head m  file Allocation Me advantages)	a disk with 200 g at 100 and ovements in	6	3-3-2.1.3			
	b) Consider the cylinders. 23, a moving in left cylinders using 1. FCFS 2. SSTF 3. SCAN  a) Discuss and their technique a) Explain RAI	e following disk requests direction. Find the negative of page faults are replacement Algorithms.  The following disk requests are replacement algorithms. The following disk requests are replacement and the negative of the following disk requests are replacement algorithms. The following disk requests are rep	ile Allocation Metadyantages)  Respective to:  orithm  thm  cad pointer starting tumber of head metadyantages)  Respective to:  orithm  thm  cadvantages)	a disk with 200 g at 100 and ovements in ethods (based on	6	3-3-2.1.3			
	b) Consider the cylinders. 23, a moving in left cylinders using 1. FCFS 2. SSTF 3. SCAN  a) Discuss and their technique a) Explain RAI	e following disk requested and the memory is tumber of page faults ge Replacement Algorite Replacement Replacem	ile Allocation Metadyantages)  Respective to:  orithm  thm  cad pointer starting tumber of head metadyantages)  Respective to:  orithm  thm  cadvantages)	a disk with 200 g at 100 and ovements in ethods (based on	6	3-3-2.1.3			