AC.Yr.: 2024 – 2025

Learn Beyond

COURSE Code & Title

Year

COLAT

COURSE CODE

LEARN BEYOND

KPR Institute of Engineering and Technology
(Autonomous)

Avinashi Road, Arasur, Colmbatore - 641 407

Ac.Yr.: 2024 – 2025

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≥⊦		a Priority	In Round Robin scheduling, what dete	c First Come First Serve	a Round-robin	Which of the following is a non-preemptive scheduling algorithm?	c Bounded Waiting	a Mutual Exclusion	If Process P1 is executing in its critical section, then executed in critical sections. This Situation refers to	c Fetch, Decode, Execute and write	a Fetch,Read,Execute and write	The Four Stages involved in instruction execution are	c T1 <t2< th=""><th>a 11>12</th><th>is TRUE?</th><th>Let the time taken to switch between while the time taken to switch between</th><th>c MDR</th><th>a MAR</th><th>contains the memory add</th><th>Operating system, System c Programs, Application programs and Resources</th><th>a Application programs and users</th><th>Identify the four components of computer system from the given options</th><th>Section - / Answe</th></t2<>	a 11>12	is TRUE?	Let the time taken to switch between while the time taken to switch between	c MDR	a MAR	contains the memory add	Operating system, System c Programs, Application programs and Resources	a Application programs and users	Identify the four components of computer system from the given options	Section - / Answe
ime(TAT)?	d Burst Time	b Arrival time	In Round Robin scheduling, what determines the time each process gets on the CPU?	d Multilevel Feedback Queue	b Shortest Remaining Time First	ptive scheduling algorithm?	d Circular wait	b Progress	If Process P1 is executing in its critical section, then no other processes can be executed in critical sections. This Situation refers to	d Fetch, Compile, Execute and write	b Read, Execute, Compile and write	on execution are	d between T1>T2	ь Т1=Т2		Let the time taken to switch between the user and kernel modes execution be T1 while the time taken to switch between two processes be T2. Which of the following	d R	b PC	contains the memory address of the instruction to be executed inside	d Hardware, Operating system, Application programs and Resources	b Hardware, Software, Application programs and users	outer system from the given options.	Section - A (10X1=10 Marks) Answer All Questions
-		_			_			,	_		_	8		*	7		100				_		Marks
R		_	4.		R				C		R				C			R		K	C		ВТ
C02		02	}		C02				CO2		601				<u>0</u>			C01			6		60

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List out the different methods to handle the deadlock conditions.

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CO3

How does the Banker's Algorithm works?

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	18		17	16	15	14	13	12	11	Q.No		10		Commenses of the commen	al .	9	distance of the second as the second	
P3 2	Process Arrival time P1 4	Draw the Gantt chart using SJF(Non-preemptive) Scheduling Algorithm	What are the criteria used to evaluate CPU scheduling algorithms?	How does Round Robin (RR) schedu quantum?	Differentiate between Preemptive and non-preemptive scheduling	State the advantages of multiprocessor systems	What is meant by context Switching?	Mention the purpose of system calls.	Define Interrupts.	Section - E Answei	c Mutual Exclusion	a Resource preemption	Identify the deadlock recovery strategies from the given options	c Starvation	a Deadlock	Il Processes A,B and C are all reque allow to access R repeatedly while C refers to	c TAT=RT+BT	a TAT=CT-AT
9 0	Burst Time	preemptive) Scheduling Algorithm.	CPU scheduling algorithms?	How does Round Robin (RR) scheduling work, and what is the role of time quantum?	non-preemptive scheduling.	or systems.				Section - B (10X2=20 Marks) Answer All Questions	d Aging	b Selecting the victim	gies from the given options.	d Busy Waiting	b Aging	If Processes A,B and C are all requesting resource R, but the operating system allow to access R repeatedly while C continues to wait for R. This Situation is refers to	d Both (a) and (b)	b TAT=WT+BT
	2		2	2	2	2	2	2	2	Marks						_		
	AP		c	C	c	c	R	_	R	вт		_			-	A D		
	COX		COZ	CO2	C02	CO1	CO1	CO1	CO1	00		CO3			0	503		-

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Q.No		Section – C (1X6=6 Marks & 2X12=24 Marks) Answer All Questions	Marks BT		60
21 a)	Ϋ́	21 a) Explain the Banker algorithm for deadlock avoidance in detail.	6	C	соз
		(0r)			
21 b)	≣l	21 b) Illustrate about the safe and unsafe states in deadlocks.	6	С	CO3
22 a)		Illustrate memory hierarchy with suitable diagram.	6	c	C01
		Distinguish the following terminologies associated with the operating system and explain each of them in detail.			
	=	Multiprogramming systems	6	C	ဝ
		Multitasking systems			- Andrewson and an article of the last of

					(Or)	and the second second second second	And the same of th			
2 b)	Τi	Evolain	about the system	boot with	h an example.			6	U	CO1
	-	Explain	plain the types o	t auniam	calls provided	by an operating	system.	6	U	CO1
1	ii	Briefly ex	kplain the types o	or system			and the state of t			
	Co	nsider the	following set of p	processe	s with their arr	rival time and bu	rst time:			
	P	rocess	Arrival Tim	e I	Burst time			City.	r	
	P	Contract of the Contract of th	0	A THE REAL PROPERTY AND ADDRESS OF THE PARTY A	7	leave a				
	P		2		4			12	AP	CO2
3 a)	P	The second secon	4							
	P	And the last of th	5		4	3 3 3 3 3				
	-					- 10 m		5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
	Pre	e-emptive	age waiting time SJF Scheduling.		(1)	and the second				
	Cor	nsider the	following set of p	processe	(Or)	rival time and bu	rst time.			
	Sch	nedule the 1) Comp 2) Turna 3) Waitin 4) Avera	following set of p processes using letion Time round Time ig Time ge Turnaround ti ge Waiting Time	FCFS S	es with their arr	ival time and bu d Calculate:	rst time.			-
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b)	Sch	nedule the 1) Comp 2) Turna 3) Waitin 4) Avera 5) Avera	processes using letion Time round Time g Time ge Turnaround tige Waiting Time	ime	es with their arr Scheduling and	rival time and bu	rst time.	12	AP	CO2
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