

2022/TDC/ODD/SEM/CSCDSC/ GE-301T/088

TDC (CBCS) Odd Semester Exam., 2022

COMPUTER SCIENCE (9)

id) What are the three stangents of OS?

(3rd Semester) Van rewenA .S.

Course No. : CSCDSC/GE-301T

(Operating System)

Full Marks: 70

Pass Marks: 28

Time: 3 hours

The figures in the margin indicate full marks for the questions

UNIT—I

1. Answer any *four* of the following questions:

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- (a) What is nucleus of an operating system?
 - (b) What are the four components of an OS?

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(Turn Over)



SE-101T/088

(c)	Mention	two multiuser	OS		
Audi	ox or and other	15 14 3 AT 8	J J .	14101	OCH

- What are the three elements of OS?
- What is RTOS?
- 2. Answer any one of the following questions:
 - (a) Write the differences between multiprocessing and multithreaded OS.
 - What are the drawbacks of real time system?
- 3. Answer any one of the following questions:
 - (a) Explain operating system architecture.
 - What is system call? What are different services provided by system call? Give example with respect to Windows and UNIX. 2+3+3=8

UNIT-II

4. Answer any four of the following questions:

 $1 \times 4 = 4$

- (a) What is thread?
- (b) What is scheduler?
 - Define context switching.

(Continued)

(3)

- Write the difference between suspend and wait in process states.
- What do you mean by average waiting time?
- 5. Answer any one of the following questions:
 - (a) Write the difference between preemptive and nonpreemptive scheduling.
 - (b) Write the advantages of thread own process.
- enolare in a Answer any one of the following questions:
 - What do you mean by process creation and process termination? What are the roles of fork() and exec()? Also draw the process hierarchy of a system. 3+2+3=8
 - Explain priority-based scheduling and round robin scheduling with example.

down one surel the following questions:

Unit—III

Sealor gives it mifW unit 7. Answer any four of the following questions:

What are the two types of processes (a) in OS?

that is improved that

Define starvation.

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J23/212



4)

	(a)	What is critical section.	
	(e)	What is busy waiting?	
g 8.	Ansv	wer any one of the following questions:	2
15	(a)	What is synchronous message passing?	
	<i>(</i> b)	What is circular wait in case of deadlock?	
9.		wer any <i>one</i> of the following questions :	8
	(a)	Explain process synchronization with a suitable example.	
	(b) 💀	Explain deadlock deduction and prevention mechanism in detail.	
Ь	eki K	UNIT—IV	
10.	Ansv	wer any <i>four</i> of the following questions :	
		1×4=	=4
3	(a)	What is swap space?	
i-sika J	(b)	algorithm?	
	(c)	What is TLB?	
(When does thrashing occur?	
((e)	What is fragmentation?	
J23/2	12	(Continued	i)

(c) What is bounded waiting?

(5)

11. Answer any one of the following questions:

	(a)	Write the advantages of demand paging.
	(b)	What is the structure of page table?
12.	Ans	wer any <i>one</i> of the following questions:
	(a)	Write short notes on the following: 4+4=8 (i) Memory compaction
		(ii) Logical and physical address
7.	(b)	(i) Explain paging with diagram. 4
		(ii) Write the difference between internal and external fragmentation.
		Unit-V
13.	Ans	wer any <i>four</i> of the following questions : 1×4=4
	(a)	What is mounting of file system?
	(b)	What is the function of file management?
	(c)	When will file system fragmentation occur?
	(d)	What is directory structure of file?
	(e)	What is the purpose of ATTRIB

J23/212

(Turn Over)

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14	. Ans	swer any one of the following questions:	2
12	(a)	Mention some key file attributes.	
	(b)	What are different file operations?	
15 .	. Ans	swer any one of the following questions:	2
	(a)	Discuss about policy mechanism in operating system.	
		Explain the linked allocation policy to allocate space for file.	
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	lama	day and writed begin *** ** and pro 17 for	
5		· . namedromport farmers file	
Same Jo	4	(3. At ever any four of the following question	
		(a) "Fast is mounting of file system?	
	Sirso	. the Valuat is the function of tile managen	
¥	node	id When will hir aystem fragadean occur?	

Seif to stations - valueatib at radii - (b)

(c) What is the purpose of ATTRIB

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