Seat No.

Total No. of Pages: 3

MAR_APR 2025 SUMMER EXAMINATION

12329 Bachelor of Computer Application(BCAsci) NEP 2.0

Sub. Name: Operating System Sub. Code: 109900

Day and Date: JUNE ,11-06-2025

Total Marks: 40

Time: 10:30 AM To 12:00 PM

Instructions: 1. Figures to the right indicate full marks

Special Inst.: 1. Que.1 and Que.6 are compulsory.

Attempt any TWO questions from Que.No.2 to Que.No.5.

Q1) Solve following MCQ.

[10]

- i. Which of the following is used in mutual exclusion?
 - A. Signals
 - B. Buffers
 - C. Semaphores
 - D. Page Tables
- ii. Demand paging is based on:
 - A. Loading all pages at once
 - B. Keeping pages locked in memory
 - C. Loading pages only when required
 - D. Swapping pages periodically
- iii. The First-Come, First-Served (FCFS) scheduling algorithm is:
 - A. Preemptive
 - B. Non-preemptive
 - C. Round-based
 - D. Random
- iv. The primary goal of an operating system is to:
 - A. Provide user interface
 - B. Execute user applications applications and managed and managed
 - C. Manage system resources efficiently
 - D. Run in the background
- v. A process control block (PCB) does not contain:
 - A. Process state
 - B. Program counter
 - C. Register contents
 - D. Source code
- vi. Which of the following is NOT a scheduling criterion?

		A. GPO utilization	
		B. Throughput	Seal N
		C. Latency AND SERVING BEING SERVING SERVING	
		File size House Hage Tolugno to Toledos (1282)	
	vii.	Which of the following is true about segmentation?	
		A. Eliminates external fragmentation	
		D 11 5 1 1 1 1 1	
		C. Divides memory logically MY 00:ST OF MA 0E:01	
		D. Uses a single contiguous memory area	
	viii.	What is the purpose of system calls in an Operating System?	
		A. Compiling programs	
11		B. Allowing user-level processes to request services from the OS	
		C. Creating GUI	
		D. Formatting storage	
		D. To matting storage and land mid beau at particular after makely	
	ix.	Banker's algorithm is used for:	
		A. CPU scheduling	
		B. File handling	
		C. Deadlock avoidance	
		S Deadlock avoidance	
		D. Interrupt handling	
	~		
	х.	TWO T AND INTERESTED TO.	
		7. Of O soriedaining	
		3. Monory amodation	
		C. File system	
		D. Deadlocks	
		The First-Come, First-Served (FOFS) screens under	
Q2)	Wha	at is Operating System? Explain any two types of Operating Systems.	[10]
		y stems.	[10]
Q3)	Desc	cribe the life cycle of a process in an operating system with suitable diagram	m [10]
- ~		moonsh .Q	m. [10]
Q4)	Desc	cribe the concept of virtual memory. How is it implemented using paging	and EdO3
	seam	mentation?	and [10]
	9	A. Provide user interface	
Q5)	Expla	ain the Banker's Algorithm for deadlock avoidance in detail.	
,	LAPIC	an the Banker's Algorithm for deadlock avoidance in detail.	[10]
Q6)	Write		
40,	VVIILE	e notes on (Any TWO out of FOUR)	[10]
	2	Process Country I Dischiellars for such (COC) deviations	
	a.	Process Control Block 1903 on 3400 (809) Mobile Inflino 22500g A	
	h	A. Process state	
	b. :	System Calls neinuon mengox9 .8	
1		C. Register contents	
14	c.	Deadlock Detection and Recovery	
-1	d. 5	Swapping The following is NOT a scheduling office of the round of the following is not a scheduling of the scheduling of t	
		rol	