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VELALAR COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution, Affiliated to Anna University, Chennai)

Continuous Assessment Test - II				QP Set	1	Regulations-2018	
Programme	B.E-(Common to CSE &IT)	Semester:	4	Max. Marks:	60	Duration	2.0 Hrs
Course Code & Title:	21ITT41&Operating Systems						
Class:21CS4A&B, 21IT4A&B	**Date**:15.05.2023 (FN)			**Time**:10.30 am – 12.30 pm			

Knowledge Levels (KL)	K1 – Remembering	K3 – Applying	K5 – Evaluating
	K2 - Understanding	K4 – Analysing	K6 – Creating

Part A – 12x2 = 24 Marks

1.	Define page fault.	CO3	K1
2.	Highlight the purpose of virtual memory.	CO3	K2
3.	List out the attributes and operations of a file.	CO4	K1
4.	Differentiate rotational latency and seek time.	CO4	K4
5.	Point out the goals of file protection.	CO4	K2
6.	Name different types of Directory structure.	CO4	K1
7.	Justify. Page size is always power of 2.	CO4	K2
8.	Mention the advantages of contiguous allocation of disk space.	CO5	K2
9.	What are the features of swap space management?	CO5	K1
10.	Specify the need for disk scheduling.	CO5	K2
11.	Compare iOS and android OS.	CO5	K4
12.	Annotate SDK frame work.	CO5	K2

Part B – 3x12 = 36 Marks

No.			Question	Marks	CO	KL
13.	(a)	(i)	Describe demand paging with an neat diagram.	6	CO3	K2
		(ii)	What is thrashing? explain the methods to avoid thrash.	6	CO3	K2
			OR			
	(b)		Consider the following page reference string : 1, 2, 3, 4, 7, 1, 5, 2,3,6,4,5,2,4,1,4,6,7. How many page faults would occur for the FIFO, LRU, and Optimal page replacement algorithms assuming three, four and five frames.	12	CO3	K2
14.	(a)	(i)	Interpret different types of file access methods.	6	CO4	K2
		(ii)	Discuss the File sharing and protection.	6	CO4	K2
			OR			
	(b)	(i)	Explain the most common schemes for defining the logical structure of a directory.	12	CO4	K2
15.	(a)	(i)	Interpret various RAID levels with neat sketch.	12	CO5	K2
			OR			
	(b)	(i)	On a disk with 1000 cylinders, numbers 0 to 999, compute the number of tracks the disk arm must move	12	CO5	K2

to satisfy the entire request in the disk queue. Assume the last received was at track 345 and the head is moving towards track 0. The queue is FIFO order contains requests for the following tracks. 123,874, 692, 475, 105, and 376. Find the seek length for the following scheduling algorithms.

1) FCFS 2) SSTF 3) SCAN
4) CSCAN 5) LOOK 6) CLOOK