Code No.: CS303PC | R20 | H.T.No. | | | 8 | R | | | | | |

CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
II–B.TECH–I–Semester End Examinations (Supply) - June- 2022
OPERATING SYSTEMS
(Common to CSE, IT, CSC, CSD & CSM)

[Time: 3 Hours] **[Max. Marks: 70]**

Note: 1. Answer *any FIVE questions. Each question carries 14 marks.*
2. All questions carry equal marks.
3. Illustrate your answers with NEAT sketches wherever necessary.

5X14=70

1.	a)	Define Operating systems and explain its services.	[7M]
	b)	Outline the components of operating systems.	[7M]
2.	a)	Elaborate inter process communication techniques.	[7M]
	b)	Describe process control block and list its attributes.	[7M]
3.	a)	What is semaphore? Explain its operations.	[7M]
	b)	Explain Deadlock prevention techniques.	[7M]
4.	a)	Identify memory allocation schemes and explain briefly.	[7M]
	b)	What is segmentation? Explain in detail.	[7M]
5.	a)	Define file system structure and explain briefly.	[7M]
	b)	Compare and contrast free space management techniques in files.	[7M]
6.	a)	List out and explain systems calls related to file management.	[7M]
	b)	Explain Real time systems and its advantages.	[7M]
7.	a)	Explain Round Robin CPU Scheduling algorithm with example.	[7M]
	b)	Analyze CPU scheduling criteria in detail.	[7M]
8.	a)	Determine the solution for Readers and writers problem using semaphore.	[7M]
	b)	What is Deadlock and discuss necessary conditions for deadlock.	[7M]

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