Code No.: 20-CS-PC-225

R20 H.T.No. | | | R | 0 | | | | | |

CMR INSTITUTE OF TECHNOLOGY: HYDERABAD

UGC AUTONOMOUS

II-B.Tech. II-Semester End Examinations (Regular) – JUNE/JULY – 2022

OPERATING SYSTEMS

(Common to CSE, CSD and CSM)

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

Answer Any **Five** Questions. Each Question Carries **14** Marks [5 x 14=70M]

S. No.	Question	BTL	CO	PO
1	i. Explain the Evolution of Operating Systems. ii. Illustrate the Operating System structure and services.	II II	1	1,2,12
2	i. Describe functions of the operating system. ii. Define System call. List and Explain types of system calls.	II II	1	1,2,12
3	i. Define Process. Explain the different types of process states with neat diagram. ii. Explain the different types of the process scheduling algorithms.	II II	2	1,2,12
4	i. Explain the Process Control Block with a diagram. ii. Illustrate the concept of Semaphores with an example.	II II	2	1,2,12
5	i. Explain the Necessary Conditions for a deadlock to occur ii. Explain how deadlocks can be avoided.	II II	3	1,2,12
6	i. Explain the concept of Virtual Memory. ii. Discuss about FIFO Page Replacement Algorithm with example.	II II	3	1,2,1
7	i. Explain about various File operations. ii. Illustrate the Allocation Methods for a File.	II II	4	1,2
8	i. Explain the OS Security issues. ii.Discuss about different types of disk scheduling algorithms.	II II	5	1,2

Code No.: 17CS2202PC

R17 H.T.No. | | | R | 0 | | | | | |

CMR INSTITUTE OF TECHNOLOGY: HYDERABAD

UGC AUTONOMOUS

II-B.Tech. II-Semester End Examinations (Supply) – JUNE/JULY – 2022

OPERATING SYSTEMS

(CSE)

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

Answer Any **Five** Questions. Each Question Carries **14** Marks

[5 x 14=70M]

S. No.	Question	BTL	CO	PO
1	a) Define the functions and objectives of operating system. (8M) b) What are the services provided by the operating systems? (6M)	I	CO1	3,2
2	Explain the structure of operating system with neat diagram. (14M)	II	CO1	3,2
3	Name different process states and write about each state with neat sketch. (14M)	I	CO2	3,2
4	Differentiate between semaphore and monitors in detail. (14M)	IV	CO2	3,2
5	Demonstrate in detail banker's algorithm. (14M)	II	CO3	3,2
6	Summarize the following: a) Demand Paging(7M) b) swapping(4M) c) virtual memory (3M)	II	CO3	3,2
7	a) Discuss the file accessing methods(7M) b) List the file implementation methods(7M)	VI I	CO4	3,2
8	Illustrate various disk scheduling algorithms with examples. (14M)	II	CO5	3,2

Code No.: CS-PCC-223

R18 H.T.No. | | | R | 0 | | | | | |

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OPERATING SYSTEMS

(CSE)

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

Answer Any **Five** Questions. Each Question Carries **14** Marks

[5 x 14=70M]

S. No.	Question	BTL	CO	PO
1	a) Define the functions and objectives of operating system. (8M) b) What are the services provided by the operating systems? (6M)	I	CO1	3,2
2	Explain the structure of operating system with neat diagram. (14M)	II	CO1	3,2
3	Name different process states and write about each state with neat sketch. (14M)	I	CO2	3,2
4	Differentiate between semaphore and monitors in detail. (14M)	IV	CO2	3,2
5	Demonstrate in detail banker's algorithm. (14M)	II	CO3	3,2
6	Summarize the following: a) Demand Paging(7M) b) swapping(4M) c) virtual memory (3M)	II	CO3	3,2
7	a) Discuss the file accessing methods(7M) b) List the file implementation methods(7M)	VI I	CO4	3,2
8	Illustrate various disk scheduling algorithms with examples. (14M)	II	CO5	3,2