

OPERATING SYSTEM

(ECE)

Date:25.05.2025

Duration: 3 hours

Maximum Marks: 70

- Note: 1. This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit.
 4. Each question carries 10 marks and may have a, b, c, d sub-questions.

Part-A

All the following questions carry equal marks

(10x20=20 Marks)

Q.No	Question	Marks	CO	BT/L
1	What is an operating system?	2M	1	L1
2	What do you mean by a system call?	2M	1	L1
3	What is a process?	2M	2	L1
4	What is the role of the scheduler?	2M	2	L1
5	Differentiate between local virtual and physical address.	2M	3	L1
6	What do you mean by Best fit?	2M	3	L1
7	What are the operations that can be performed on a device?	2M	4	L1
8	What is a file?	2M	4	L1
9	What is deadlock? What is starvation? How do they differ from each other?	2M	5	L1
10	Write about calls of attention?	2M	5	L1

Part-B

Answer All the following questions.

(5x10=50 Marks)

Q.No	Question	Marks	CO	BT/L
11	What is the need for system calls? Explain the types of system calls provided to an operating system with an example.	10M	1	L2
	OR			
12	Explain about operating system structure?	10M	1	L2
13	What is a process? Draw and explain process state with diagram.	10M	2	L2
	OR			
14	What is a semaphore? Explain how producer-consumer problem is solved using semaphore.	10M	2	L2
15	What is the need of demand paging? Explain briefly.	10M	3	L2
	OR			
16	Explain in detail about synchronization with an example.	10M	3	L2
17	Explain briefly about the various causes of deadlock.	10M	4	L2
	OR			
18	Explain about direct addressing in the instruction.	10M	4	L2
19	How can deadlock be detected and recovered? Explain in detail with relevant example.	10M	5	L2
	OR			
20	Explain about the initialization of access matrix?	10M	5	L2