ANNA UNIVERSITY (University Departments)
B.E (Full Time) END SEMESTER EXAMINATIONS – Nov /Dec 2024
Computer Science and Engineering
CS6108 OPERATING SYSTEMS
(Regulation 2018 - RUSA)

Time: 3 Hours Max. Marks 100

CO 1	Articulate the main concepts, key ideas, strengths and limitations of Operating Systems
CO 2	Analyze the structure and basic architectural components of OS
CO 3	Elaborate and design various scheduling algorithms
CO 4	Discuss various memory management schemes and design them
CO 5	Point out the various aspects of storage management

BL – Bloom's Taxonomy Levels
(L1 - Remembering, L2 - Understanding, L3 - Applying, L4 - Analyzing, L5 - Evaluating, L6 -Creating)

PART- A (10 x 2 = 20 Marks)
(Answer all Questions)

Q. No.	Questions	Marks	CO	BL
1.	What are the three main purposes of an operating system?	2	1	L1
2.	Distinguish between internal vs external fragmentation	2	2	L3
3.	What is an atomic operation? What is indivisibility of an operation execution?	2	2	L2
4.	Define a system call.	5	1	L3
5.	What is cascading termination?	2	4	L2
6.	What is a process control block?	2	3	L3
7.	Which are the conditions that may lead a process to a deadlock state?	2	3	L1
8.	Define Thrashing.	2	5	L3
9.	List the various file attributes.	2	5	L3
10.	What is memory mapping of a file in Linux environment?	2	4	L2

PART- B (8 x 8 = 64 Marks)
Answer any **eight** questions

Q. No.	Questions	Marks	CO	BL
11.	Explain the different multithreading models used in operating systems. Discuss how these models handle the relationship between user threads and kernel threads.	8	1	L2
12.	Compare the Microkernel and Layered Approach system structures in operating systems. Discuss their key features, advantages, and disadvantages.	8	1	L1
13.	Describe the differences among short-term, medium-term, and long-term scheduling	8	2	L3
14.	How thread varies from process? Discuss the pros and cons of various thread models mapping.	8	2	L2
15.	Write shortly about the system calls- fork (), abort (), read (), write ()	8	3	L3