

INDIRA UNIVERSITY, PUNE

SCHOOL OF INFORMATION TECHNOLOGY MSC CA

Term End Examination (2025 Pattern) April- May – 2026- Semester – II

Course Name: Advanced Operating System
Course Code: 25PCA202T

Max.Marks: 50
Time: 2 Hrs. 30 Minutes

Instructions

- All questions are compulsory.
- Figures to the right indicate full marks.
- Attempt questions as per instructions.

Q1.	Attempt any 5 out of 7. (2 mark each) a) Justify the following: No process can Pre-empt another process executing in Kernel b) Use any four features of Linux operating system. c) Demonstrate the History of Unix System. d) Illustrate the concept of Daemons. e) Utilize the different memory regions. f) Use the Orphan and zombie process. g) Demonstrate the stat(), fstat() system call.	(10 Marks)	CO3
Q2.	Attempt any 4 out of 6. (5 marks each) a) Examine the layered architecture of UNIX OS. b) Classify the process by using get and set priority(). c) Distinguish the structure for demand Paging. d) Differentiate the wait and waitpid. e) Examine the use of fork () and vfork() System call f) Analyze the memory allocation Mechanism and explain all.	(20 Marks)	CO4

Q.3	Attempt any 2 out of 3. (5 marks each) (10 Marks) a) Evaluate the process control block. b) Conclude structure of regular file with suitable diagram. c) Evaluate read(), write(),readv(), writev() functions in details.	CO5
Q.4	Compulsory Question (10 Marks) a) Under which circumstances, the process is swapped out. b) What are the five typical Scenarios that kernel may follow in getblk to allocate a buffer in the disk block.	CO6
