

ED-323

M.Sc. 1st Semester Examination, March-April 2021

COMPUTER SCIENCE

Paper - II

Advanced Operating System

Time: Three Hours] [Maximum Marks: 100 [Minimum Pass Marks: 40]

Note: Answer any two parts from each question. All questions carry equal marks.

Unit-I

- (a) Why operating system is called resource manager? Explain the functions of all resources of computer.
 - (b) What is operating system services? Explain any two types of operating system.
 - (c) Write short notes on the following:
 - (i) Job control language
 - (ii) Supervisor service control

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(Turn Over)

(2)

Unit-II

- **2.** (*a*) Discuss client server architecture with suitable example.
 - (b) Explain preemptive and non-preemptive scheduling with example.
 - (c) Write short notes on the following:
 - (i) JVM and 8086 mode
 - (ii) Inter process communication

Unit-III

- **3.** (a) What is virtual memory? Explain implementation of virtual memory.
 - (b) Discuss the implementation of file mapping.
 - (c) Write short notes on the following:
 - (i) TLB
 - (ii) Swap space

Unit-IV

- **4.** (*a*) What is Deadlock? Write the characterization of deadlock.
 - (b) Describe deadlock avoidance and deadlock recovery.
 - (c) What is safe state? Explain Banker's algorithm using an example.

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Unit-V

- (a) Explain virtual file system.
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