

Roll No.

Subject Code—681-X

M.C.A. (Fourth Year) EXAMINATION

(5 Years Integrated Course)

(Re-appear)

MCA-404

OPERATING SYSTEM-II

Time : 3 Hours

Maximum Marks : 100

Note : Attempt any *Five* questions. All questions carry equal marks.

1. (a) What are the main goals of an operating system ?
(b) What are the main advantages of multiprogramming ?
2. What is Thread ? Discuss user-level and kernel-level threads. Also explain multithreaded programming along with its benefits.

3. What is CPU scheduling ? What constitutes a good scheduling algorithm ? Describe and compare different scheduling algorithms in detail.
4. What do you mean by Disk scheduling ? Explain various disk scheduling algorithms with the help of examples.
5. (a) Write deadlock prevention and recovery techniques.
(b) Explain protection, security and encryption/decryption in O.S.
6. Explain mutual exclusion along with semaphores method to achieve mutual exclusion. Also write algorithm.
7. (a) Discuss the free space management techniques for files.
(b) Explain the various allocation methods for file management.

8. Write short notes on the following :

- (a) Distributed O.S.
- (b) Thrashing
- (c) Vi editor
- (d) Disk structure.