Roll No. | | | | | | | | | | | | | **Total No. of Pages : 02**

Total No. of Questions : 09

M.Sc.(Computer Science) (2016 & Onwards) (Sem.–1)

OPERATING SYSTEM

Subject Code : MSC-104

M.Code : 70890

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTIONS TO CANDIDATES :

1. **SECTIONS-A, B, C & D contains TWO questions each carrying TEN marks each and students have to attempt any ONE question from each SECTION.**
2. **SECTION-E is COMPULSORY consisting of TEN questions carrying TWENTY marks in all.**

SECTION-A

1) Discuss the role of the following operating systems :

   a) Multithreading

   b) Multi-user

2) Differentiate the following :

   a) Process and thread

   b) Ready state and blocked state of a process

SECTION-B

3) Describe the working of non-preemptive scheduling algorithms.

4) Differentiate the following :

   a) Multiprocessor scheduling and thread scheduling

   b) Round robin and SJF scheduling

SECTION-C

5) What is the concept of Segmentation? How segmentation is implemented? Explain.

6) Explain the following Concepts :

   a) Thrashing

   b) Demand paging

SECTION-D

7) Discuss the following security techniques :

   a) Access Control

   b) Authentication

8) Explain the working of remote file systems.

SECTION-E

9) Write briefly :

   a) What is the concept of address space?

   b) List the merits of time sharing.

   c) Write the purpose of context switching.

   d) Differentiate between program and process.

   e) Why virtual memory is required?

   f) How page replacement is carried out?

   g) Discuss the use of firewall.

   h) Explain the need of device driver.

   i) What is meant by relocation?

   j) Write short note on file protection.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.