

# C1007

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## MIT (CS)-304

### Introduction to Operating System

M.Sc. Cyber Security (MSCCS-18/21)

3rd Semester Examination, 2022 (June)

**Time : 2 Hours]**

**Max. Marks : 80**

**Note :** This paper is of Eighty (80) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein.

### SECTION-A

#### (Long Answer Type Questions)

**Note :** Section 'A' contains Five (05) long answer type questions of Twenty (20) marks each. Learners are required to answer any Two (02) questions only.

(2×20=40)

1. What is an Operating System? Explain the types of Operating System.
2. What are the major functions performed by an operating system? Explain.

3. Explain the concept of virtual memory system.
4. What are the essential conditions for deadlock to occur? Explain with an example.
5. What is Inter Process Communication? Explain in detail.

## **SECTION-B**

### **(Short Answer Type Questions)**

**Note :** Section 'B' contains Eight (08) short answer type questions of Ten (10) marks each. Learners are required to answer any Four (04) questions only. (4×10=40)

1. What is the difference between process and thread?
2. Explain the concept of Virtual File System (VFS).
3. Explain the following terms in detail :
  - (a) Process Management.
  - (b) Linux Kernel.
4. Define semaphore with its operations. What are the two types of Semaphores? Explain.
5. Explain briefly any five services provided by an OS.

6. Explain the concept of paging.
  7. What is system call? Explain the various types of System calls with an example for each.
  8. Explain protection goals and principles of Operating System.
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