

Roll No.

**3rd Semester,
Examination-2014**

MCA-11 / MSc (IT) 12
(Master of Computer Application
/Master of Science in Information Technology)

MCA-11 / MSc. (IT)-11

Operating System

Time : 3 Hours

Maximum Marks : 60

**Note : The question paper is divided into three sections
A, B and C. Give the answer according to the
directions given in each section.**

Section-A

(Long Answer Type Questions)

Note : Answer any two questions. Each question carries 15 Marks.

(2×15=30)

1. What is Deadlock? Describe four conditions for deadlocking.
2. Explain demand paging in detail. Discuss the steps involved in handling a page fault.

3. Explain the concept of Virtual Memory with suitable example.
4. Explain the following terms with example:
 - (i) Multiprogramming
 - (ii) Multitasking

Section-B

(Short Answer Type Questions)

Note : Answer any four questions. Each question carries 5 Marks.

(4 × 5 = 20)

1. Define Process.
2. What is system call? Explain use of any two categories of system call.
3. Explain the difference between internal and external fragmentation.
4. What are the objectives of an operating system? Discuss.
5. What are the major functions performed by an operating system? Explain.
6. What is a real time system? How is it different from other types of operating systems? Explain.
7. Differentiate between pre-emptive and non-pre-emptive scheduling.
8. Differentiate between short-term and long-term scheduler.

≠

Section-C

Objective Type Questions (Compulsory)

Note : Answer all questions. Each question carries 1 Mark.

(10 × 1 = 10)

1. The operating system manages :
(A) Memory (B) Processor
(C) Disk & I/O devices (D) All of the above
2. Process State is a part of :
(A) Process Control Block (B) Inode
(C) File Allocation Table (D) None of the above
3. Virtual memory is commonly implemented by :
(A) Segmentation (B) Swapping
(C) Demand Paging (D) None of the above
4. A program at the time of execution is called :
(A) Dynamic program (B) Static program
(C) Process (D) None of the above
5. The term “Operating System” means :
(A) A set of programs which controls computer working.
(B) The way a computer operator works
(C) Conversion of high-level language into machine language
(D) None of the above

6. The operating system of a computer server as a software interface between the user and the :
- (A) Hardware (B) Peripheral
(C) Memory (D) None of the above
7. What is Windows ?
- (A) Program for designing windows
(B) An Operating System
(C) An application program
(D) None of the above
8. The deadlock conditions can be modeled using a directed graph called a :
- (A) Resource allocation graph
(B) Resource allow graph
(C) Recursion allocation graph
(D) None of the above
9. A resource allocation graph is a :
- (A) Complete Graph (B) Directed Graph
(C) Tree Graph (D) None of the above
10. Which of the following loader is executed when a system is first turned on or restarted :
- (A) Boot loader (B) Compile and Go loader
(C) Bootstrap loader (D) Relating loader