



UTTARAKHAND OPEN UNIVERSITY, HALDWANI (NAINITAL)
उत्तराखण्ड मुक्त विश्वविद्यालय, हल्द्वानी (नैनीताल)

MCA 2ND YEAR 3RD SEMESTER ASSIGNMENT

Last Date of Submission: 15/01/2016

Course Title: Operating System

Course Code: MCA-11

Year: 2015-16

Maximum Marks: 40

Section 'A' contains 08 short answer type questions of 5 marks each. Learners are required to answers 4 questions only. Answers of short answer-type questions must be restricted to 250 words approximately.

1. Explain the main techniques to handle threats
2. What is the difference between symmetric and symmetric multiprocessing?
3. What is the difference between a loosely coupled system and a tightly coupled system? Give examples.
4. Explain the basic functions of the device-independent I/O software.
5. What do you understand by file type? Compare and contrast directory, regular and device files.
6. What is the differences between *Not Recently Used* and *Least Recently Used* page replacement algorithms?
7. What is virtual memory? Explain.
8. Explain the difference between multi-programming systems and time-sharing systems.

Section 'B' contains 04 long answer-type questions of 10 marks each. Learners are required to answers 02 questions only.

1. Answer the following:
 - a. Explain how a distributed algorithm is different from general algorithm?
 - b. Discuss the Consensus algorithm.
2. Answer the following:
 - a. What are processes and the different state of a process?
 - b. What are threads and explain the differences between threads and multi-threads?

3. Answer the following:
 - a. What is race condition?
 - b. Discuss critical section.
 - c. What are the disadvantages of Disabling Interrupt?
4. Explain the FCFS algorithm and the SJF algorithm. Compare the average waiting time of both the algorithms.

