



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

BCA-16/BCA-17 2ND YEAR 3RD SEMESTER ASSIGNMENT

Session - 2017-18, Summer Last Date of Submission: 31st October 2017
Session - 2017-18, Winter Last Date of Submission: 30th April 2018

Course Title: Operating System

Course Code: BCA-10

Maximum Marks: 30/20

Section 'A' contains 08 short answer type questions of 4/2.5 marks each. Learners are required to answer 4 questions only. Answers of short answer-type questions must be restricted to 250 words approximately.

1. What is thread? Explain any four benefits of multithreaded program.
2. Explain following :
 - a. Multilevel queue scheduling
 - b. Semaphores
3. Define following terms:
 - a. Buffering
 - b. Spooling
4. Give any two differences between logical and physical addresses.
5. Describe following allocation algorithm
 - a. First fit
 - b. Best fit
6. Explain critical selection problem.
7. What are the three main purposes of an operating system?
8. Define Process Control block. Explain with diagram.

Section 'B' contains 04 long answer-type questions of 7/5 marks each. Learners are required to answers 02 questions only.

1. What is an operating system? Explain client-server systems and multi-processor operating systems.
2. Explain the CPU-I/O burst cycle with diagram. Describe Round-Robin Scheduling algorithm.
3. What is page replacement scheme? Explain with diagram. Define LRU (least-recently used) algorithm with an example.
4. Is it possible to have a necessarily deadlock condition in a resource allocation graph with a cycle. Explain your answer. Define Banker's algorithm.

