

BCA-07

December - Examination 2015

BCA Part II Examination**Operating System - I****Paper - BCA-07****Time : 3 Hours]****[Max. Marks :- 100**

Note: The question paper is divided into three sections A, B and C. Write answers as per given instructions.

Section - A

10 x 2 = 20

(Very Short Answer Questions)

Note: Answer all questions. As per the nature of the question delimit your answer in one word, one sentence or maximum upto 30 words. Each question carries 2 marks.

- 1) (i) What is critical section?
- (ii) Differentiate between time sharing and real time operation system.
- (iii) What is Multi programming?
- (iv) What is preemptive and non preemptive scheduling?
- (v) What is Thrashing?
- (vi) What is Deadlock?
- (vii) What is starvations?

- (viii) What is compaction?
- (ix) What are different types of user interface?
- (x) What is disk scheduling?

Section - B

4 x 10 = 40

(Short Answer Questions)

Note: Answer any four questions. Each answer should not exceed 200 words. Each question carries 10 marks.

- 2) Explain the life cycle of process with the help of diagram.
- 3) Explain how “threads” approach improves performance of operating system.
- 4) Explain dining philosopher’s problem? Suggest a solution.
- 5) In connection with Inter Process Communication (IPC). Explain the following:
 - (i) Race Conditions
 - (ii) Critical Section
 - (iii) Sleep and Wakeup
- 6) What is the difference between Deadlock Avoidance and Deadlock prevention?
- 7) With the help of example, explain race condition.
- 8) What is critical region, mutual exclusion and busy waiting?
- 9) What is scheduler. Explain different type of scheduler.

Section - C

2 x 20 = 40

(Long Answer Questions)

Note: Answer any two questions. You have to delimit your each answer maximum upto 500 words. Each question carries 20 marks.

- 10) What is difference between paging and segmented memory management?
 - 11) What is fragmentation? What are different type of fragmentation.
 - 12) What is Page Fault? How can it be overcome? Explain any to page replacement algorithm.
 - 13) Write merits and demerits of the following scheduling policies:
 - (i) First Come-First Serve (FCFS) scheduling
 - (ii) Round Robin scheduling
 - (iii) Shortest Job First (SJF) scheduling
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