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B.C.A. 3rd Semester (New) Examination–November, 2014

INTRODUCTION TO OPERATING SYSTEM

Paper : BCA-201

Time : 3 hours   ***Max. Marks : 80***

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard will be entertained after the examination.

Note : There will be **Nine** questions. Question No. 1 will be **compulsory** which consists of 8 short answer type questions, each of 2 marks covering the entire syllabus. In addition to Question No. 1, student will have to attempt **four** more questions selecting **one** from each Unit.

1. (a) What is Timeshared ?   8×2=16

    (b) What is Threads ?

    (c) What is Inter process ?

(d) What is Swapping ?

(e) What is Thrashing ?

(f) What is Logical address ?

(g) What is C-Look ?

(h) What is Grouping ?

UNIT – I

2. (a) Define Operating System. What are various services provide to its user ? Explain.   8

(b) Why operating system is called an extended machine and resource manager ? Explain.   8

3. Explain the following terms :

(a) Process states   4

(b) Multi-Programming   4

(c) Co-operating processes   4

(d) Operation on process   4

UNIT – II

4. What do you mean by deadlock ? Explain deadlock prevention, avoidance and detection. 16

5. (a) Explain Banker's algorithm to deal with the problem of deadlocks. 6

   (b) There are five batch jobs A to E, arrive at a computer at the same time. They have the Burst Time 10, 29, 3, 7, 12 respectively. Determine which algorithm would give the minimum average waiting time. 10

   (a) FCFS

   (b) SJF

   (c) RR (quantum=10)

UNIT – III

6. (a) Explain the difference between paging and segmentation with example. 8

   (b) Explain the difference between external and internal fragmentation. 8

7. What is demand paging ? What are page replacement algorithms ? Explain any two page replacement algorithm with example.

16

UNIT – IV

8. What is disk-scheduling ? Discuss the following disk-scheduling methods with examples.

    (a) SSTF   4

    (b) FCFS   4

    (c) SCAN   4

    (d) Look   4

9. Discuss the following :

    (a) Contiguous allocation   6

    (b) Indexed allocation   5

    (c) Linked allocation   5