

Roll No.

97669

**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