

Roll No. ....

Total No. of Questions : 9]  
(1109)

[Total No. of Printed Pages : 4

**BCA UG (CBCS) RUSA Vth Semester  
Examination**

**3605.**

**OPERATING SYSTEM**

**BCA-0501**

**Time : 3 Hours]**

**[Maximum Marks : 70**

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*Note* :- Question No. 1 Part A is compulsory. Select *one* question from each Part B, C, D and E.

**Part-A**

**(Compulsory Question)**

1. (A) (i) CPU scheduling is the basis of .....
- (a) Multiprocessor systems
  - (b) Multiprogramming operating systems
  - (c) Larger memory sized systems
  - (d) None of these

**C-745**

( 1 )

Turn Over



(ii) The processes that are residing in main memory and are ready and waiting to execute are kept on a list called :

- (a) Job queue
- (b) Process queue
- (c) Execution queue
- (d) Ready queue

(iii) Time quantum is defined in :

- (a) Round robin scheduling algorithm
- (b) Shortest job scheduling algorithm
- (c) Priority scheduling algorithm
- (d) Multilevel queue scheduling algorithm

(iv) By operating system, the resource management can be done via :

- (a) TDM
- (b) SDM
- (c) Both TDM and SDM
- (d) None of these

(v) Which one of the following is the deadlock avoidance algorithms ?

- (a) Round-robin
- (b) Karn's
- (c) Elevator
- (d) Banker's

(vi) Swap space exists in Secondary memory.  
(True/False)

(vii) In a single level directory all directories must have unique names. (True/False)

(viii) Name three major methods of allocating disk space.

(ix) The circular wait condition can be prevented by .....

(x) Operating system is a program that acts as an .....  
1×10=10

(B) Short answer type questions :

(i) Write short notes on simple monitor.

(ii) Discuss FCFS scheduling.

(iii) What are various information contained in PCB ?

(iv) Write short notes on simplest memory management scheme.

(v) Explain contiguous allocation.  
4×5=20

## Part-B

### Unit-I

2. What are timesharing systems ? Is it a logical extension to multiprogramming ? What are its advantages and disadvantages ?  
10

3. One of the drawbacks of early OS's was that user lost the ability to interact with their jobs. In what ways to modern operating system overcome this problem ?  
10



## Part-C

### Unit-II

4. Explain the term process states and transitions in details. 10
5. (a) Round Robin scheduling is the most common primitive scheduling algorithms why ?
- (b) What are various deadlock recovery techniques ? 5,5

## Part-D

### Unit-III

6. What is Paging ? Explain the role of Page Map Table in address translation. 10
7. What is virtual memory ? Which is the most widely used method for implementing it ? Also discuss its advantages. 10

## Part-E

### Unit-IV

8. What do you understand by file organisation ? Discuss index sequential file access method with its advantages and disadvantages. 5,5
9. (a) What is file protection ? Explain in detail.
- (b) Discuss single level directory structure with its advantages and disadvantages. 10