# Previous Year (2017) Question Paper of Operating System

## B.C.A. UG (CBCS) RUSA Vth Semester Examination

# 3846

## OPERATING SYSTEM
## BCA-501

Time : 3 Hours]                              [Maximum Marks : 70

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

### Part–A

### (Compulsory Question)

1.  (A)  Objective Type Questions.

    (i)   Which of the following is not the state of a process ?

        (a)  New

        (b)  Old

        (c)  Waiting

        (d)  Running

(ii) With multiprogramming, .......... is used productively.

*(a) Time

*(b) Space

(c) Money

(d) All of these

(iii) Which of the following algorithms tends to minimize the process flow time ?

(a) First come First served

(b) Shortest Job First

(c) Earliest Deadline First

(d) Longest Job First

(iv) The circular wait condition can be prevented by :

• (a) Defining a linear ordering of resource types

(b) Using thread

(c) Using pipes

(d) All of the above

(v) Which one of the following is the address generated by CPU ?

- (a) Physical address

(b) Absolute address

.(c) Logical address

(d) None of the above

(vi) .................. is the concept in which a process is copied into main memory from the secondary memory according to the requirement.

(a) Paging

(b) Demand paging

(c) Segmentation

.(d) Swapping

(vii) To create a file :

(a) Allocate the space in file system

(b) Make an entry for new file in directory

•(c) Both (a) and (b)

(d) None of the above

(viii) CPU fetches the instruction from memory according to the value of :

•(a) Program counter

(b) Status register

(c) Instruction register

(d) Program status word

(ix) The number of processes completed per unit time is known as ................. .

(a) Output

(b) Throughput

(c) Efficiency

(d) Capacity

(x) Which module gives control of the CPU to the process selected by the short-term scheduler ?

•(a) Dispatcher

(b) Interrupt

(c) Scheduler

(d) None of these $1 \times 10 = 10$

(B) Short Answer Type Questions :

(i) Explain the concept of simple monitor.

(ii) Recovery from deadlock.

(iii) Round robin algorithm.

(iv) Difference between physical and logical address.

(v) Discuss file naming and its attributes. $4 \times 5 = 20$

## Part–B

### (Unit–I)

2. What is an operating system ? Discuss in detail how the operating system can be classified into different categories.

3. What are the main function and use of an operating system ? Explain in detail.                                                10

## Part–C

### (Unit–II)

4. (a) What is the function process control block ?

   (b) What is convoy effect ? Write the main scenario of it.

5. Explain about deadlock avoidance and write Banker's Algorithm.                                                                10

## Part–D

### (Unit–III)

6. Discuss the concept of paging by giving suitable example.

7. Write short notes on the following :

   (a) Virtual Memory

   (b) Demand Paging                                                                                                             10

## Part–E

### (Unit–IV)

8. Discuss in detail the various ways by which the information in the file can be accessed.

9. Explain the structure of directory and its implementation with the help of an example. 10