BCA (CBCS) RUSA Vth Semester Examination

4047

OPERATING SYSTEM
BCA–0501

Time : 3 Hours]   [Maximum Marks : 70

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) To access the services of operating system, the interface is provided by the :

   (a) System calls

   (b) API

   (c) Library

   (d) Assembly instructions

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

(a) Physical address

(b) Absolute address

(c) Logical address

(d) None of the mentioned

(iii) Which one of the following is a visual way to determine the deadlock occurrence ?

(a) Resource allocation graph

(b) Starvation graph

(c) Inversion graph

(d) None of the mentioned

(iv) In the single level directory ?

(a) All directories must have unique names

(b) All files must have unique names

(c) All files must have unique owners

(d) All of the mentioned

(v) The address of a page table in memory is pointed by :

(a) Page register

(b) Page table base register

(c) Program counter

(d) Stack pointer

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

(vii) Round robin scheduling falls under the category of ....

(viii) Each entry in a segment table has a segment base. (True/False)

(ix) Password is not a least secure method of authentication. (True/False)

(x) Dispatcher module gives control of the CPU to the process selected by short-term scheduler. (True/False)

$1 \times 10 = 10$

(B) Short Answer Type Question :

(i) Discuss Batch Processing Operating System.

(ii) Explain scheduling criteria.

(iii) What is RAG ? Explain.

(iv) What is role of memory management in a computer system ?

$4 \times 5 = 20$

(v) Explain chained allocation.

C–594 (2)

C–594 (3)

Turn Over

Part–B (Unit–I)

10

2. What do you mean by Operating System ? What are its main objectives and functions ?

3. Why is spooling necessary for batch programming ? Is it needed for a time shared systems ?

Part–C (Unit–II)

10 each

4. What are various deadlock detection methods ? Discuss in detail.

5. (a) What are various operation on a process ?

   (b) Discuss priority scheduling with suitable example.

Part–D (Unit–III)

10 each

6. What is Segmentation ? Explain how address translation is done with a suitable example.

7. What is Demand Paging ? What are its advantages and disadvantages ?

Part–E (Unit–IV)

10 each

8. What is File Management ? Discuss its attributes and operations in detail.

9. Discuss two level directory structure with its relative advantages and disadvantages.

C–594

(4)