TDC (CBCS) Odd Semester Exam., 2020
held in March, 2021

COMPUTER APPLICATION

(3rd Semester)

Course No. : BCACC–302T

(Operating System)

Full Marks : 50
Pass Marks : 20

Time : 3 hours

The figures in the margin indicate full marks for the questions

SECTION—A

1. Answer any *ten* of the following questions : 2×10=20

(a) What are process creation and process termination?

(b) What are the different modes of operation of operating system?

(c) What are system calls?

(d) What do you mean by multi-programming?

(e) Explain the concept of hierarchical paging.

(f) State the concept of scheduling.

(g) What do you mean by virtual memory?

(h) What is memory manager?

(i) Define and describe clock hardware.

(j) Explain briefly the clock software.

(k) What do you mean by interrupt?

(l) What is controller?

(m) Define the concept of symbolic links.

(n) Explain the concept of multi-level directory system.

(o) What do you mean by hierarchical directory system?

(p) What are the informations associated with an open file?

(q) Differentiate between sequential process and concurrent process.

(r) State and explain the race condition.

(Continued)

(s) Explain the concept of precedence graph.

(t) What do you mean by deadlock handling?

SECTION—B

Answer any *five* of the following questions : 6×5=30

2. Discuss the storage structure of a computer system.

3. Explain briefly the micro-kernel architecture.

4. Illustrate the following with example :

(a) RR scheduling algorithm

(b) FIFO scheduling algorithm

5. (a) What is fragmentation? Explain the different types of fragmentation.

(b) Describe memory management of multi-user operating system.

6. Explain the functions of I/O devices and controlled for the operation of a personal computer with a neat diagram.

(Turn Over)

7. *(a)* What is disk scheduling? Explain a disk scheduling technique.

   (b) What do you mean by device-independent I/O software?

8. Explain the technique of sharing of files among multiple users in multiple locations with appropriate protection and security.

9. Explain the following various contiguous memory allocations :

   (a) Single partition

   (b) Multiple partition

   (c) Partition selection algorithms

10. What is resource allocation graph? Explain with a suitable example.

11. What is critical section problem? Explain a method to solve the critical section problem.

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