

[No. of Printed Pages – 3]

CSIT123

Enrol. No.

[ET]

END SEMESTER EXAMINATION : JUNE, 2018

OPERATING SYSTEM CONCEPTS

Time : 3 Hrs.

Maximum Marks : 70

Note: Attempt questions from all sections as directed.

SECTION – A (30 Marks)

Attempt any five questions out of six.

Each question carries 06 marks.

1. Differentiate between Hard Real Time System and Soft Real time System.
2. Discuss Linked allocation of disk space with the help of a diagram.
3. What is the goal of protection in Operating System? What is the role of Domain of Protection in Operating System? (2+4)
4. Describe the usage of the following commands in UNIX:
1. rm, 2. cp, 3. mkdir, 4. rmdir, 5. cat, 6. ls (1*6)

(R122)

P.T.O.

CSIT123

2

5. What do you mean by Process? Discuss Process Lifecycle with the help of a diagram. (2+4)
6. Write down the advantages and disadvantages of fixed partitioning of memory.

SECTION - B (20 Marks)

*Attempt any two questions out of three
Each question carries 10 marks.*

7. Discuss Index allocation of disk space with the help of a diagram. List the advantage and disadvantages of the same.
8. Describe FIFO page replacement algorithm for memory with three frames with the help of an example.
9. Estimate average waiting time and average turnaround time for the following processes using FIFO CPU scheduling algorithm (make necessary assumptions, if any):

<u>Process ID</u>	<u>CPU Burst</u>
P2	4
P4	3
P1	5
P3	2

(R122)

CSIT123

3

SECTION - C (20 Marks)
(Compulsory)

10. (a) What are the necessary conditions to have deadlock in the system? Discuss all of them. What are the mechanisms available to handle deadlock? Discuss very briefly about all of them. (1+4+1+4)

- (b) Differentiate between contiguous and non-contiguous memory allocation. Describe the principle of operation of Dynamic Partition Allocation of memory with a diagram. (3+7)

(R122)

(100)