Hall Ticket No.: | | | | | | | | | | |

SRIT R19

SRINIVASA RAMANUJAN INSTITUTE OF TECHNOLOGY

(AUTONOMOUS)

III B. Tech I Sem – Semester End Examinations – Supplementary – Jul 2022

OPERATING SYSTEMS

[194GA05503]

(Computer Science & Engineering)

Time: 3 hours **Max. Marks: 70**

PART-A

(Compulsory Question)

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1 Answer the following: (10 X 02 = 20 Marks)

a) Define user interface.
b) Define distributed systems.
c) What is monitor?
d) Define mutual exclusion.
e) What is deadlock?
f) Define thrashing.
g) What are different file types?
h) List out file operations.
i) Define access matrix.
j) What is cryptography?

PART-B

(Answer all five units, 5 X 10 = 50 Marks)

UNIT-1

2 a) Define operating system and discuss its role from different perspectives. **[5M]**
b) List out different services of operating system and Explain. **[5M]**

(OR)

3 a) What are system calls? Explain different categories of system calls with example. **[5M]**
b) Explain the process management & memory management activities. **[5M]**

UNIT-2

4 a) What is a process? Explain Process states? **[5M]**
b) What is a semaphore? Explain its usage? **[5M]**

(OR)

5 a) Explain scheduling criteria used to compare scheduling algorithms. **[5M]**
b) What is critical section problem? Discuss Peterson's solution to the critical section problem. **[5M]**

UNIT-3

6 a) Describe structure of Paging Table. **[5M]**
b) Describe Page Replacement Algorithm LRU. **[5M]**

(OR)

7 a) Describe Deadlock System Models. **[5M]**
b) Explain Deadlock Avoidance Mechanism. **[5M]**

UNIT-4

8 Explain disk scheduling algorithms with examples. **[10M]**

(OR)

9 a) Explain the structure of Redundant Arrays of Independent Disks(RAID). **[5M]**
b) Define file. Explain file attributes and file operations. **[5M]**

UNIT-5

10	a)	Illustrate threats occur in operating system with suitable example.	**[6M]**
	b)	Describe goals of protection.	**[4M]**
		(OR)	
11	a)	Illustrate the implementation of access control using access matrix.	**[6M]**
	b)	Explain about system security.	**[4M]**

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