PVP 14

Code: CS5T5

III B.Tech - I Semester – Regular/Supplementary Examinations
March- 2021

OPERATING SYSTEMS
(COMPUTER SCIENCE AND ENGINEERING)

Duration: 3 hours Max. Marks: 70

PART – A

Answer ***all*** the questions. All questions carry equal marks

11x 2 = 22 M

1.

a) What is meant by Batch Processing?
b) List out few advantages of Multiprogramming.
c) Mention the usage of Process States.
d) What is Meant by CPU-Bound Process?
e) What is meant by Binary Semaphore?
f) Mention few problems faced in the Implementation of Scheduling Algorithms.
g) What do you mean by Thrashing?
h) Mention few page replacement strategies.
i) What are different methods for allocation in a File System?
j) What are the algorithms to avoid Deadlock?
k) What is meant by Race Condition?

PART – B

Answer any ***THREE*** questions. All questions carry equal marks.

3 x 16 = 48 M

2. a) Illustrate the usage of Clustered Systems along with some examples? 8 M

   b) Describe the Importance of System Calls and relate the same with certain use cases? 8 M

3. a) Explain the Applicability of Inter-Process and Intra-Process Communication. 8 M

   b) Mention scheduling algorithm and Describe briefly about any two scheduling algorithms. 8 M

4. Analyze the steps followed while designing the Operating System to implement real time Applications to avoid the deadlocks? 16 M

5. Analyze the usage of FIFO page replacement algorithm and LRU by taking one example? Compare and Contrast the two algorithms. 16 M

6. a) Illustrate the Sequential and Direct access methods in the access of files? 8 M

   b) Analyze the characteristics of implementing the directory structure in acyclic graph and general graph directory in the design of Operating System? 8 M