



B.Tech II Year II Semester Supplementary Examinations, July 2022
Operating Systems
(CSE)

Maximum Marks: 70

Date:26.07.2022 Duration: 3 hours

- Note:**
1. This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks

(10x2M=20 Marks)

- 1 Define an operating system.
- 2 Define system call.
- 3 Define short term scheduler.
- 4 Define semaphore.
- 5 Define segmentation.
- 6 Define page frame.
- 7 What are different ways of handling deadlocks?
- 8 Define deadlock.
- 9 Define paging.
- 10 Write access matrix in few words.

Part-B

Answer All the following questions.

(10M X 5=50Marks)

- 11 a) Define an operating system? State and explain the basic functions or services of an operating system?
b) Explain the differences between multiprogramming and time-sharing systems? [5+5]
OR
- 12 Explain about computer system architecture. [10]
- 13 Explain the following: [10]
a) Scheduling Queues b) Context switching
OR
- 14 a) Discuss inter process communication with the help of communication models.
b) Discuss about classical problems of synchronization. [5+5]
- 15 a) Explain in detail about resource allocation graph with example
b) Describe about deadlock prevention. [5+5]
OR
- 16 write a short note on a) hierarchical paging b) hashed page table [5+5]

- 17 Consider the following page reference string. [10]
7,0,2,0,3,0,4,2,3,0,3,2,1,2,0,1,7,0
Assuming three frames, how many page faults would occur in each of the following cases?
i. FIFO
ii. Optimal
iii. LRU
Note that initially all frames are empty. OR
- 18 a) Illustrate the concept of copy on write.
b) Explain the concept of virtual memory on windows. [5+5]
- 19 a) Explain the access methods of files.
b) Briefly outline the directory overview. [5+5] OR
- 20 a) Give overview of mass storage structure in detail.
b) Describe about efficiency and performance of secondary storage. [5+5]