



NP – 278

26

IV Semester B.Sc. Examination, July/August 2024
(NEP Scheme)

COMPUTER SCIENCE
CSC 7T : Operating Systems

Time : 2½ Hours

Max. Marks : 60

Instruction : Answer **any four** questions from **each** Part.

PART – A

I. Answer **any four** questions. **Each** question carries **two** marks. **(4×2=8)**

- 1) Write layers of operating system.
- 2) Differentiate program and process.
- 3) Mention the conditions for deadlock.
- 4) What is semaphore ?
- 5) What is page fault ?
- 6) List file allocation methods.

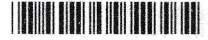


PART – B

II. Answer **any four** questions. **Each** question carries **five** marks. **(4×5=20)**

- 7) Explain operating system services.
- 8) Explain multi-processor system.
- 9) Explain Bankers' Algorithm with example.
- 10) Explain demand paging with example.
- 11) Explain free space management.
- 12) Explain protection principles.

P.T.O.



PART – C

III. Answer **any four** questions. **Each** question carries **eight** marks. **(4×8=32)**

- 13) a) Explain system components. **4**
 b) Explain system calls. **4**
- 14) a) Explain semaphores. **4**
 b) Explain resource allocation graph with an example. **4**
- 15) Apply FCFS and SJF algorithm for given data and compute average waiting time. **8**

Process	CPU burst time
P1	5
P2	3
P3	6
P4	4

- 16) a) Explain virtual memory management. **5**
 b) Explain overlays in memory management. **3**
- 17) Explain different file allocation methods. **8**
- 18) a) Explain network systems. **4**
 b) Explain distributed file system. **4**