

B.C.A. (Part-II) Semester-III (Old) Examination
3ST4 : ADVANCED OPERATING SYSTEM

Time : Three Hours]

[Maximum Marks : 60]

Note :— (1) All questions carry equal marks.

(2) Draw neat sketches wherever necessary.

1. (A) Define Process and explain the process control block in detail. 6
(B) Explain Batch Operating System in detail. 6

OR

2. (A) Define Operating System and explain function of Operating System. 6
(B) Explain Process State Transitions diagram in detail. 6
3. (A) Explain the Peterson algorithm with example. 6
(B) Explain the parallel processors in detail. 6

OR

4. (A) Explain the control structure for indicating Parallelism-Parbegin/Parend. 6
(B) Explain N-Process Synchronization with the help of semaphore. 6
5. (A) What is deadlock and explain the deadlock necessary conditions. 6
(B) Explain deadlock recovery. 6

OR

6. (A) Explain Banker's algorithm with the help of a suitable example. 6
(B) Explain deadlock prevention in Operating System. 6
7. (A) Explain the architecture for paging mechanism. 6
(B) What is page fault and explain Most Recently Used (MRU) page replacement algorithm with suitable example. 6

OR

8. (A) Explain fixed and variable partition in multiprogramming. 6
(B) Explain in brief :
 (i) Demand paging
 (ii) Swapping
9. (A) Explain the Pre-emptive vs. Non-Pre-emptive scheduling HRN. 6
(B) Explain the case study on UNIX System. 6

OR

10. (A) Explain the scheduling levels in detail. 6
(B) State and explain multilevel feedback queues fair share scheduling. 6