

AP – 551

Third Semester B.C.A. (Part - II) Examination

ADVANCE OPERATING SYSTEM

3 ST 4

P. Pages : 3

Time : Three Hours]

[Max. Marks : 60

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- Note :** (1) All questions are compulsory.
(2) Assume suitable data wherever necessary.

1. (a) Explain the process state transition. 6
(b) Explain the terms suspend and reserve in detail. 6

OR

2. (a) What is operating system ? Explain the role of operating system in computer system 6
(b) What is process ? Explain various process states. 6

3. (a) Explain the following terms :—
(1) Message passing in concurrent programming

(2) Critical Region. 6

(b) Explain the concept of semaphore mechanism. 6

OR

4. (a) State and explain the peterson's algorithm. 6

(b) Differentiate the semaphores p and semaphores V. 6

5. (a) Explain the preemptible and non preemptible resources. 6

(b) State and explain Banker's algorithm. 6

OR

6. (a) What is deadlock prevention ? Explain. 6

(b) Define deadlock detection. Explain resource allocation. 6

7. (a) Explain the storage hierarchy in storage management. 6

(b) Explain the procedure for handling page fault with respect to demand paging. 6

OR

8. (a) Explain the various storage allocation technique in detail. 6

(b) Explain the following terms :—

(1) Page replacement strategies.

(2) Working set. 6

9. (a) Explain the different objectives and criteria of scheduling. 6

(b) Explain the following :—

(1) HRN.

(2) Fair share scheduling. 6

OR

10. (a) Compare and contrast between preemptive and non preemptive scheduling. 6

(b) Explain different scheduling levels. 6

