AB-3180
Third Year B. Sc. (Sem. - V) Examination
March/April – 2015
Computer Science : Paper-506
(Operating System-1)

Time : 2 Hours] [Total Marks : 50

Instruction :

1. Answer the question in short : 14

(1) What is starvation ? What is difference between starvation and deadlock ?

(2) Define Demand paging.

(3) Which information needs to be saved when context switching takes place ?

(4) Differentiate single user and multiuser operating system. Give example of each.

(5) Define non-primitive scheduling.

(6) What are the five major activities of an operating system in regards to process management ?

(7) Difference between single user and multiuser operating system. Give example of each.

2. Write detail note for the followings : 6+6

(1) Write detail note on evolution of operating system.

(2) Discuss operating system as Resource manager.

OR

(1) Differentiate contiguous versus non-contiguous memory management scheme.

(2) Which function operating system does as a process manager ?
3 Write detail note for the following: 6+6

(1) Explain banker's algorithm and its advantages.

(2) Describe multilevel paging techniques.

OR

(1) What do you understand by critical section problem? Discuss Paterson's policy to solve the critical section problem.

(2) Explain the multilevel feedback queue algorithm for process scheduling. How it differs from the multilevel queue scheduling?

4 Write answers for the followings: 6+6

(1) Explain demand paging in detail. Also write its advantages and disadvantages.

(2) List four necessary conditions to occur deadlock. Explain how can you prevent deadlock by breaking any one? (Exclude mutual exclusion.)

OR

(1) What is deadlock? What are necessary conditions for deadlocks to occur?

(2) Discuss producer/consumer problem using semaphores. Also write necessary code for implementing the solution.