Roll No.

Total No. of Questions: 07   Total No. of Pages: 01

BCA (Sem. 4)
OPERATING SYSTEMS
Subject Code: BSBC-403
Paper ID: B0242

Time: 3 Hrs.   Max. Marks: 60

INSTRUCTIONS TO CANDIDATES:

1. **Section A is COMPULSORY consisting of TEN questions carrying TWO marks each.**

2. **Section B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.**

SECTION A

1. **Explain Briefly:**

   a) What are the different operating systems?

   b) What is kernel?

   c) What is dead lock?

   d) What is a process?

   e) What are the states of a process?

   f) What is starvation and aging?

   g) What is semaphore?

   h) What is context switching?

   i) What is a thread?

   j) What is process synchronization?

SECTION B

2. What are the various deadlock conditions? Explain in detail. Also write banker algorithm.

3. Explain demand paged memory management in detail.

4. What are semaphores? How are they implemented?

5. Discuss in detail internal and external fragmentation.

6. What is the Algorithm to avoid deadlock? Discuss with Example.

7. Write short note on following:
   a) Swapping
   b) Security of file systems