

Roll No. 

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Total No. of Pages : 02

Total No. of Questions : 07

**BCA (2011 & Onward) (Sem.-4)**  
**OPERATING SYSTEM**  
Subject Code : BSBC-403  
Paper ID : [B0242]

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTION 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 a student has to attempt any **FOUR** questions.

**SECTION-A****1) Write briefly :**

- a) Define Process. What are different process states?
  - b) List the names of operating systems that support multithreading.
  - c) Differentiate between preemptive and non-preemptive scheduling.
  - d) Define critical section.
  - e) Explain dynamic loading.
  - f) Logical versus physical address space.
  - g) Why is file protection necessary?
  - h) What is firewall?
  - i) Explain the concept of thrashing.
  - j) Write short note on socket.
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## SECTION-B

- 2) a) What is Operating System? Explain various functions of operating system.  
b) Differentiate between multiprogramming and multiprocessing operating system.
- 3) Explain any two classical problems of synchronization.
- 4) What is CPU scheduling? Explain various scheduling algorithms with relevant example.
- 5) What is paging? How it is different from segmentation? Also explain hardware support for paging.
- 6) What is file? What are different types of file? Explain various file access methods.
- 7) Explain the following :
  - a) Virtual memory
  - b) Demand Paging

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