Total No. of Questions: 07

BCA (2013 & Onward) (Sem.-4)
OPERATING SYSTEMS
Subject Code: BSBC-403
Paper ID: [B0242]

Time: 3 Hrs. Max. Marks: 60

## **INSTRUCTION TO CANDIDATES:**

- 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**

## Q1. Answer briefly:

- a) Differentiate multiprogramming and multiprocessing Operating system.
- b) What are the applications of threads?
- c) How pre-emptive scheduling works? Briefly explain.
- d) List the differences between a process and a program,
- e) Why address binding is required?
- f) How concept of thrashing is useful?
- g) Briefly list the role of device controllers.
- h) How page replacement is used?
- i) Write a short note on denial of service.
- j) Write a short note on firewall.

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## **SECTION-B**

- Q2. Discuss the features of following types of operating system:
  - a) Time Sharing
  - b) Multiuser
- Q3. Explain the following CPU scheduling algorithm:
  - a) FCFS
  - b) Round Robin
- Q4. How virtual memory is implemented? Discuss demand paging in detail.
- Q5. Describe the procedure of file protection using access control and authentication.
- Q6. How Operating system carries out in I/O device management? Explain.
- Q7. Differentiate the following:
  - a) Process scheduling and thread scheduling.
  - b) Optimal and LRU Page replacement algorithm.

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