

Roll No.

Total No. of Pages : 02

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 :**

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**

**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.

## 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.