

Roll No.

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Total No. of Pages : 02

Total No. of Questions : 07

B.Sc.(IT) (2015 & Onwards) (Sem.-3)

OPERATING SYSTEMS

Subject Code : BSIT-303

Paper ID : [74061]

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**Q1. Answer briefly :**

- a) What are the main functions of an operating system?
- b) What is multi-threading?
- c) What are the states of a process?
- d) Define context switching.
- e) What do you mean by logical address space?
- f) Differentiate between pre-emptive and non-pre-emptive scheduling.
- g) What is the difference between I/O burst and CPU burst jobs?
- h) What is a device driver?
- i) What is a directory? How is a directory implemented?
- j) What is a Firewall? How does it work?

SECTION-B

- Q2. What is an Operating System? Elaborate in detail the classification of operating systems and discuss each.
- Q3. What is a Thread? What are the applications of threads? Explain threads management in detail.
- Q4. Discuss the following in the context of inter-process communication:
- (a) Message passing
 - (b) Socket
 - (c) Pipe
- Q5. Discuss Segmentation technique of memory management.
- Q6. Explain the various page replacement algorithms in detail.
- Q7. Define the concepts of file. What are the attributes of a file? What operations are performed on file?