Roll No. | | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 18

B.Tech.(CSE)(IT) (2011 Onwards) (Sem.–4)

OPERATING SYSTEMS

Subject Code : BTCS-401

Paper ID : [A1183]

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 FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

Answer briefly :

1. What is the Kernel in operating system?
2. Define operating system as resource manager.
3. What is CPU Scheduling Criteria?
4. What is meant by the state of the process?
5. What is the difference between preemptive and non preemptive scheduling?
6. How context switching is used in multiprogramming?
7. What is device management in operating system?
8. Define Starvation in deadlock.
9. What are the advantages of distributed systems?
10. Explain the Linux '**cd**' command options along with the description.

SECTION-B

11. Explain the Distributed Processing in Operating Systems. What are the necessary conditions for deadlock?

12. Consider the following four processes, with the length of the CPU burst time given in milliseconds.

Process	Arrival Time(ms)	Burst Time (ms)
P1	1	6
P2	1	5
P3	2	5
P4	2	3

Find Average Waiting Time and Turnaround time for given Process using FCFS and SCF Algorithms?

13. What is role of scheduler? What requirement is to be satisfied for a solution of a critical section problem?

14. Explain the use of I/O traffic controller in operating system.

15. Explain any two solutions of recovery from deadlock.

SECTION–C

16. Explain the security attacks on operating system. Write the steps to protect the computer system from various attacks.

17. What are device management policies for storing data in operating System?

18. a. What are the advantages and disadvantages of multiprocessor systems?

    b. What are the basic components of Linux?