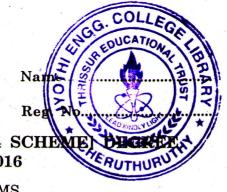
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# FIFTH SEMESTER B.TECH. (ENGINEERING) [14 SCHEME EXAMINATION, NOVEMBER 2016

CS/IT 14 503—OPERATING SYSTEMS

#### **Time : Three Hours**

Maximum : 100 Marks

## Part A (Short Questions)

1. Differentiate the working of the pre-emptive and non pre-emptive processes.

2. Write short notes on operating system services.

3. Discuss in detail about system programs.

4. List the features of process scheduling in multiprogramming scheduler.

- 5. What are the criteria recommended for evaluating CPU scheduling algorithms ?
- 6. Define the difference between pre-emptive and non-preemptive scheduling.
- 7. Distinguish between internal and external fragmentation.
- 8. Mention the various criteria of disk scheduling.
- 9. What is the need for disk scheduling ? What are the advantages of multiprocessor system ?
- 10. Write short notes on Principles of Protection.

 $(8 \times 5 = 40 \text{ marks})$ 

## Part B (Descriptive)

11. Describe about Distributed Systems and Special-Purpose Systems.

### Or

- 12. Discuss in detail about Memory Management and Storage Management.
- 13. Explain the various process scheduling algorithms used with appropriate examples.

#### Or

- 14. Discuss the concept of semaphores with an example.
- 15. Discuss in detail about file system structure and file system implementation.

Or

- 16. Write in detail about the working of Virtual memory.
- 17. State the different disk scheduling algorithms and describe it in detail with examples.

Or

18. Discuss in detail about Fire-walling to Protect Systems and Networks.

 $(4 \times 15 = 60 \text{ marks})$