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Third Year (T.D.C.) Science Examination, 2017

COMPUTER SCIENCE

(Operating System)

Paper–III

Time Allowed : Three Hours

Maximum Marks : 50

PART–A [Marks : 10

Answer all questions (50 words each).

All questions carry equal marks.

PART–B [Marks : 25

Answer **five** questions (250 words each), selecting **one** from each Unit. All questions carry equal marks.

PART–C [Marks : 15

Answer any **two** questions (300 words each).

All questions carry equal marks.

PART–A

1. Answer the following questions :

   (i) Define distributed system.

   (ii) Write about protection system.

   (iii) Write about the process state.

   (iv) Define Preemptive scheduling.

   (v) Define critical section problem.

   (vi) Define deadlock condition.

   (vii) Define Demand paging.

   (viii) Write about thrashing.

   (ix) Define inter process communication.

   (x) Define Kernel in UNIX.

PART–B

UNIT–I

2. Explain Time sharing operating system.

3. Write the operating system services.

UNIT–II

4. What is process concept? Explain the process life cycle.

5. Explain shortest-Job-Next (SJN) scheduling algorithm.

UNIT–III

6. Differentiate between process and thread.

7. Explain the multithreading.

UNIT–IV

8. Explain the memory allocation mechanism.

9. Write the advantages and disadvantages of paging.

UNIT–V

10. Explain the Kernel modules briefly.

11. Describe Computer Security Classifications.

PART–C

12. Differentiate between Network operating system and Distributed operating system with suitable example.

13. What is scheduling? What are the different principles which must be considered while selection of a scheduling algorithm.

14. Explain the Necessary and sufficient Deadlock conditions with examples.

15. Explain the Page replacement algorithm with example.

16. Write the important features of Linux operating system. Describe the architecture of Linux operating system.

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