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Name..................................

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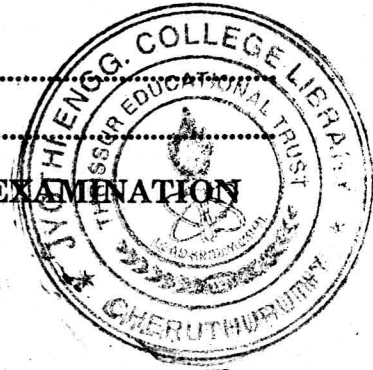
FOURTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION
MAY 2012

CS 09 405/PTCS 09 404—SYSTEMS PROGRAMMING

(2009 Admissions)

Time : Three Hours

Maximum : 70 Marks

Part A

Short answer questions.

1. List down the system software needed for the development and execution of programs written in (i) C or C++ (ii) Assembly Language program with macros.

2. What is Program relocation ?

3. Write the function of bootstrap loader.

4. How does mutliprogrammed system present an illusion that multiple programs are running on the machine simultaneously ?

5. Differentiate interrupts and exceptions.

(5 × 2 = 10 marks)

Part B

Analytical / Problem Solving questions.

1. List the main characteristics of VAX architecture.

2. Define Load on call. Give examples.

3. Differentiate positional parameter and keyword parameter with an example.

4. Explain briefly Timesharing and Real-time systems.

5. Write about the hardware protection in computer systems.

6. Explain the services provided by Unix operating system.

(4 × 5 = 20 marks)

Part-C

Descriptive / Analytical / Problem Solving questions.

1. Explain in detail the architecture of UltraSPARC machine.

2. Describe the algorithm of Pass 1 and Pass 2 of Simple SIC Assembler.

3. Discuss the design of an absolute loader.

4. Explain the algorithm for a one pass macroprocessor.

Turn over

5. Explain the structure of an operating system and its system calls.

6. Describe the services provided by an operating system in detail.

7. Describe the architecture of Unix operating system.

8. Explain in detail the File subsystem of Unix operating system.

(4 × 10 = 40 marks)