

C 15651

Name.....

Reg. No.....

**FOURTH SEMESTER B.TECH. (ENGINEERING) DEGREE  
EXAMINATION, JUNE 2011**

CS 09 405/PTCS 09 404 – SYSTEMS PROGRAMMING

(2009 Admissions)

Time : Three Hours

Maximum : 70 Marks

**Part A**

**(Short Answer Questions)**

1. Differentiate Format 3 and Format 4 Instruction of SIC-XE.
  2. Write the function of OPTAB and SYMTAB.
  3. What are the advantages and disadvantages of one-pass linkage loader?
  4. Write the difference between multiprogramming and multiprocessing operating system.
  5. When a process goes to sleep state in Unix Operating System?
- (5 × 2 = 10 marks)

**Part B**

**(Analytical/Problem Solving Questions)**

1. Explain briefly the addressing modes of PowerPC architecture.
  2. How are external references handled by automatic library search process in loaders?
  3. What are the factors based on which a programmer decide whether to use a macro or a subroutine to accomplish a given logical function?
  4. Explain briefly the parallel and distributed systems.
  5. Write about the services provided by operating system.
  6. Write about the processing environment of Unix Operating System.
- (4 × 5 = 20 marks)

**Part C**

**(Descriptive/Analytical/Problem Solving Questions)**

1. Explain in detail about VAX Architecture.
2. Describe the features of AIX assembler.
3. Write the algorithm for Pass2 of a Linkage Loader.
4. Explain the macroprocessor algorithm and data structures.
5. Describe the structure of a computer system, its operation and I/O structure.
6. Explain the structure of an operating system and its system calls.
7. Explain the stack and data structures implemented for Unix processes.
8. Describe the process states and its transitions in Unix.

(4 × 10 = 40 marks)