Roll No. ………………..

24250

B. Tech. (5th Semester) (Information Technology) Examination – December, 2011

SYSTEM PROGRAMMING & SYSTEM ADMINISTRATION

Paper : IT- 303 - F

Time : Three hours]   *[Maximum Marks : 100*

Before answering the question, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt any *five* questions in all. Question No. **1** is **compulsory** and attempt *one* question from each Section.

1. (a) Explain the role of linker and loader in the execution of a program. $8 \times 2.5 = 20$

   (b) What are overlays ? Describe their significance.

   (c) What is a macro ?

   (d) Define the terms :- page, block, fragments.

   (e) Describe various file permission modes in unix.

(f) State the functions of relocating loader.

(g) Explain any five unix commands.

(h) What is a kernel ?

SECTION – A

2. What are the data structures required for a two pass assembler ? Explain the working of two pass assembler. 20

3. (a) Describe various loader schemes. 10

(b) List the advantages of binding at load time over binding at assembly time. List the three tasks of the lexical analysis phase. 10

SECTION – B

4. State and explain the basic tasks of macro processor. Draw flowchart for processing macro definitions in two pass macro processor. 20

5. Explain

(a) CPU scheduling

(b) demand paging in detail.   20

SECTION – C

6. How UNIX operating system is installed ? Explain the following events in Unix operating system :

    (a) User names and groups logging in   20

    (b) Unix documentation

    (c) Rearranging files

    (d) Basic file operations

7. What do you understand by text manipulation ? How it is related to the file system ? How the following task are performed in Unix environment :   20

    (a) Translating characters

    (b) Absolute and relating pathnames

    (c) Splitting files

SECTION – D

8. (a) Write a shell script to check if input string is palindrome.   10

    (b) Describe unix as system administration.   10

9. (a) What is shell ? Where is it present in UNIX environment ? How programming is performed in Borne and C-Shell ? 10

(b) Discuss basic feature of LINUX operating system. 10

———————