53 (IT 404) SYPR

2017

SYSTEM PROGRAMMING

Paper : IT 404 (Back)

Full Marks : 100

Time : Three hours

The figures in the margin indicate full marks for the questions.

Answer **any five** *questions out of* **seven.**

1. (a) Define MACRO. Differentiate MACRO call and MACRO definition with example. 4+6

   (b) Define Compiler and explain various phases of compiler with an example. 10

2. (a) Explain various functions of loader. 5

   (b) Explain the following : 3×5

   (i) Assembler and Go loader

   (ii) Absolute loader

   (iii) Relocation loader.

3. (a) What is Shell in UNIX ? Write a shell script to print the first even and odd numbers less than 30.

4+6

(b) Explain brief functions of Pass-I and Pass-II of two pass assemblers and data structures used.

10

4. (a) Write various features of UNIX operating system and define various types of life permissions with examples.

4+6

(b) Write Unix Commands for the following :

5

(i) To count no. of lines, words and character in a file

(ii) Searching a pattern within a file

(iii) To create a directory

(iv) Print the name of the working directory

(v) Change the owner of a file.

(c) Write a Shell Program to find the factorial of any given number.

5

5. (a) Define both the Variants of Intermediate code generation with example.

10

(b) Define Keyword and Positional parameters with appropriate examples.

10

6. (a) Define CPU Scheduling and different types of CPU scheduling algorithms.

4+6

(b) Write the purpose of 8

(i) DC (ii) DS (iii) USING (iv) DROP.

(c) What is the use of Location Counter (LC) in assembler ? 2

7. Write short notes on : *(any four)*

4×5

(i) Race condition

(ii) AWK utility

(iii) Nested macro

(iv) Macro Expansion

(v) Demand Paging

(vi) Boot loader.