53 (CS 501) SYPR

2014

SYSTEM PROGRAMMING

Paper : CS 501

Full Marks : 100

Time : Three hours

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

Answer **question number 1** and **any five** from the rest.

1. Briefly answer the following questions :

$$10×2=20$$

(i) Define system software. Give examples.

(ii) Define macro.

(iii) What are different imperative statements ?

(iv) What is a literal ?

(v) What is the use of Location Counter in assembles ?

(vi) What are the basic assembler functions ?

(vii) What are the functions of debugger ?

(viii) What is forward reference ?

(ix) Define dynamic linking.

(x) What are the tasks performed by the document editing process ?

2. Explain in detail the functions of Pass-1 and Pass-2 of two pass assemblers and data structures used.   16

3. Explain in brief about :   4×4=16

   (a) Macro definition

   (b) Macro Call

   (c) Nested Macro Call

   (d) Macro Expansion.

4. Write algorithm and C program for Symbol Table Management.   16

5. Explain the following :   4×4=16

   (a) Functions of Loader

   (b) Assemble and Go Loader

   (c) Absolute Loader

   (d) Relocation Loader.

6. Explain in detail both the variants of intermediate code generation of an assembler with an example.
16

7. Define compiler and various phases of compiler with an example.   16

8. What are keyword and positional macro parameters ? Write a macro for incrementing memory value.   16

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