53 (CS 501) SYPR

2018

SYSTEM PROGRAMMING

Paper : CS 501

Full Marks : 100

Time : Three hours

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

*Answer **any five** questions.*

1. *(a)* Describe the assembly, machine and high level languages. 6

   (b) Explain assembly language with the specifications and also the assembly language instruction format in details. 8

   (c) What is the role of system programming ? 6

2. *(a)* Explain the specification and semantic gaps with diagrams. 8

(b) Explain the data structures related to searching and mention it also. 6

(c) Mention the fixed tables and non-fixed tables with their examples. 6

3. *(a)* Explain the concept of memory compaction with diagrams. 6

(b) What types of techniques are used for fresh allocation ? 6

(c) Define the relocation with used data structure and also the relocatable loader with two methods. 8

4. *(a)* What is the role of DS, DC and END in pass 1 ? 6

(b) What types of instructions are used in pass 2 ? 8

(c) Mention the pass for USING and DROP pseudo-ops. 6

5. *(a)* Mention the used tables in different passes with their roles also. 6

(b) Describe the file system of UNIX with diagram. 7

(c) Define the structure of UNIX system with a diagram. 7

6. Differentiate between : ***(any four)*** 4×5=20

(i) MOVER and MOVEM

(ii) Positional and Keyword argument

(iii) Syntax and Semantic analysis

(iv) Compiler and interpreter

(v) Assembler and Translator

(vi) Code generation and Code optimization.