

Sem-VI - (Comp)(OLD).

7/12/16.

System Prog. & Compiler
Construction.

Q.P. Code : 580801

(3 Hours)

[Total Marks : 100

- N.B. :** (1) Question No. 1 is **compulsory**.
(2) Attempt any **FOUR** questions from remaining questions.
(3) Assume suitable data if necessary.

1. (a) Differentiate between application program and system program. Indicate the order in which following system programs are used from developing program up to its execution. Assembler, Loader, Linker, Macro Processor, Compiler, Editor. 5
(b) Draw the diagram of general activation record and explain the purpose of different fields of an activation record. 5
(c) What are the different functions of loader. Explain in brief. 5
(d) With reference to assembler explain the following tables with suitable examples. POT, MOT, ST,LT. 5
2. (a) Explain the working of a direct linking loader with a proper example. Clearly show the entries in the different databases built by the direct linking loader. 10
(b) Explain the role of code optimization in compiler designing with suitable example. 10
3. (a) With reference to stack allocation and heap allocation explain run time storage organization. 10
(b) Explain synthesized and inherited attributes used in syntax directed definition. 10
4. (a) Explain with the help of flow chart the working of two pass assembler along with data bases used. 10
(b) Explain the different error recovery techniques used in compilers. 10
5. (a) Explain the different features used in macro processing. 10
(b) Explain the working of recursive Descent parser and operator precedence parser with examples. 10
6. (a) Explain with the flow chart the working of two pass macro processor and the data bases used. 10
(b) What are the different types of intermediate codes? Explain their implementation techniques. 10
7. (a) Distinguish between Syntax tree and parse tree. 5
(b) Distinguish between LL Parser and LR parser. 5
(c) Write note on syntax directed translation 5
(d) Write short note on macro assembler. 5