T.E. sem 6 (Rev.) Comp.   Systems Programming   02/6/08.

602 : E-1stHf08.

Con. 2719-08.   (REVISED COURSE)   **CO-2893**

(3 Hours)   **[Total Marks : 100**

N.B. (1) Question No. **1** is **compulsory**.
(2) Attempt any **four** questions out of remaining **six** questions.
(3) Assumptions made should be **clearly** stated.
(4) **Figures** to the **right** indicate **full** marks.
(5) Assume **suitable** data wherever **required** but **justify** the **same**.

1. (a) Explain with the help of flowchart and databases, working of two pass assembler.   10
   (b) Explain operator precedence parser with suitable example.   10

2. (a) Explain different features of macro facility.   10
   (b) (i) Consider the following grammar and show the handle of each right sentential   10
         form for string (a,(a,a)).

   $$S \rightarrow (L) \mid a$$
   $$L \rightarrow L, S \mid S$$

   (ii) Write note on 'MS-DOS linker'.

3. (a) Explain the features of SunOS SPARC assembler.   10
   (b) Explain single pass algorithm for macro definitions within macro.   10

4. (a) Explain syntax directed translation. Give syntax directed definition to translate infix   10
      expressions to postfix expressions.
   (b) Explain design of absolute loader.   10

5. (a) Explain the design of direct linking loader.   10
   (b) Explain run time storage organization in detail.   10

6. (a) Consider the following grammar and construct the LALR parsing table.   10
      $$S \rightarrow AA$$
      $$A \rightarrow aA \mid b$$

   (b) Explain different types of text editors.   10

7. Write detailed notes on any **two** :—   20
   (a) Dynamic loading and dynamic linking
   (b) Macro assemblers
   (c) LEX and YACC.