Con. 3084-09.

Systems Programming

3 p.m. to 6 p.m

(REVISED COURSE)

VR-5325

(LiG)

(3 Hours) [Total Marks : 100]

N.B. : (1) Question No. **1** is **compulsory**.
    (2) Attempt any **four** questions out of remaining **six** questions.
    (3) **Figures** to the **right** indicate **full** marks.

1. (a) Explain with neat flow charts working of single pass assembler with database used. 10

   (b) What are the features provided by a macro ? Explain with example. 10

2. (a) Construct the LALR parsing table for the following grammar. 10
      $S \rightarrow S$
      $S \rightarrow CC$
      $C \rightarrow cC \mid d$

   (b) Differentiate between linkage editor and linking loader. 10

3. (a) Explain storage allocation and error handling phase of a compiler. 10

   (b) Explain the design of Direct Linking Loader. 10

4. (a) Describe the various forms of intermediate code used by compilers. 10

   (b) What is binding ? Explain static and dynamic binding. 10

5. (a) Write short notes on :— 10
     (i) SPARC Assembler
     (ii) Text Editors.

   (b) Explain with the help of memory, data formats, registers, instruction format, 10
     addressing modes of traditional CISC machines.

6. (a) Explain the LR parsers with suitable examples. 10

   (b) Explain with syntax directed translation. 10

7. Write notes on any **two** :— 20
     (i) LEX and Y ACC
     (ii) Operator precedence parsing
     (iii) Macro assemblers.