

Con. 5647-09.

T.E. (Comp) Sem VI

SP-8045

19/12/09

[ Total Marks : 100

2-30 to 5-30

( 3 Hours )

Systems Programming

- 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.  
 (4) Assume **suitable** data whenever **required** but **justify** the same.

1. (a) Explain with neat flow charts working of single pass assembler, with database used. 10  
 (b) Explain the LR parsers with suitable examples. 10
2. (a) What are the features provided by a macro? Explain with example. 10  
 (b) Explain various phases of compiler with suitable example. 10
3. (a) What is binding? Explain static and dynamic binding. 10  
 (b) Explain the design of two pass assembler with databases used. 10
4. (a) Construct the LALR parsing table for the following grammar :- 10  
 $S \rightarrow S$   
 $S \rightarrow CC$   
 $C \rightarrow cC/d$   
 (b) Explain the design of Direct Linking Loader. 10
5. (a) Explain with the help of memory, data formats, registers, instruction format, addressing modes of traditional CISC machines. 10  
 (b) Explain recursive descent parser with suitable example. 10
6. (a) Explain run time storage organization in detail. 10  
 (b) Explain design of absolute loader. 10
7. Write detailed notes on any **two** :- 20  
 (a) Macro assemblers  
 (b) LEX and YACC  
 (c) Dynamic Loading and Dynamic Linking.