

Con/5275-07.

(REVISED COURSE)

CD-5562

(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 marks for **each** question.  
 (5) Assume **suitable** data wherever **required** but **justify** the same.

- Q. No.1 a) Explain design of direct linking loader. (10)  
 b) Describe various forms of intermediate code used by compiler. (10)
- Q.No.2 a) Give analysis and design of single pass assembler with respect to flow chart, data structures and algorithm. (10)  
 b) Construct predictive parsing table for following grammar. (10)  
 $S \rightarrow A$   
 $A \rightarrow aB \mid Ad$   
 $B \rightarrow bBC \mid f$   
 $C \rightarrow g$
- Q. No.3 a) Explain Recursive descent parser with suitable example (10)  
 b) Differentiate between linkage editor and linking loader. (10)
- Q. No.4 a) i) What is binding? Explain static and dynamic binding. (10)  
 ii) Write note on 'programming environment'  
 b) Explain single pass algorithm for macro definitions within macro. (10)
- Q. No.5 a) Explain with help of memory, data formats, registers, instruction formats, addressing modes of traditional CISC machines. (10)  
 b) Write short notes on (10)  
 i) SPARC Assembler.  
 ii) ANGL macro language.
- Q. No.6 a) Write sequence of steps involved in dynamic debugging of program. (10)  
 b) Explain with suitable example two pass algorithm for macroprocessor. (10)
- Q. No.7 a) Write short notes on any two: (10)  
 i) Macroassembler.  
 ii) Dynamic linking and dynamic loading.  
 iii) LEX and YACC.  
 b) Construct LL(1) parsing table for following grammar. (10)  
 $S \rightarrow aBDh$   
 $B \rightarrow cC$   
 $C \rightarrow bC \mid \epsilon$   
 $D \rightarrow EF$   
 $E \rightarrow g \mid \epsilon$   
 $F \rightarrow f \mid \epsilon$