

(Time:3 Hours)

TotalMarks:80

N.B: (1) Question No. 1 is compulsory

(2) Attempt any three questions out of remaining five questions

- Q1 (a) What is loader? Explain four functions of Loader (5)
 (b) Differentiate between System Software and Application Software. (5)
 (c) Explain the different ways of parameter passing in macros (5)
 (d) Explain the role of Finite automata in compiler design (5)
- Q2 (a) Explain the design of dynamic linking loader with example. (10)
 (b) What are the different phases of compiler? Explain the working for given expression with suitable diagram (10)

$$\text{position} = \text{initial} + \text{rate} * 60$$
- Q3 (a) With reference to Assembler explain following tables with suitable example. (10)
 (i) POT
 (ii) MOT
 (iii) ST
 (iv) LT
 (b) What are the different issues in design of Code Generator? Explain with an example (10)
- Q4 (a) Explain working of Direct Linking loader with example showing entries in different database built by DLL (10)
 (b) What is the need of Intermediate Code Generation? Explain any 2 intermediate code generation forms with example (10)
- Q5 (a) Explain Operator precedence parser with example (10)
 (b) Explain the design of Single Pass Macro Processor in detail (10)
- Q6 Write short note on: (20)
 i) Inherited & Synthesized attributes
 ii) Context Free Grammar
 iii) LEX & YACC
 iv) Forward Reference problem and solution