

- N.B. :** (1) Question No. 1 Compulsory.  
(2) Attempt any **four** questions out of remaining **six** questions.  
(3) **Figures** to the **right** indicate **full** marks  
(4) **Assume** suitable data **if** necessary

1. (a) Explain with flow charts working of Two pass assembler, with database used. 10  
(b) Explain the working of single pass Microprocessor. 10
2. (a) Explain compile and go loader with advantages and disadvantages. 10  
(b) Explain various phases of compiler with example. 10
3. (a) Differentiate between Top-down and bottom up parsing. Explain with examples 10  
(b) Construct predictive parsing table for following grammar. 10  
S → A  
A → aB | Ad  
B → bBC | f  
c → g
4. (a) What is code optimization? Explain various strategies for code optimization. 10  
(b) Explain Run time storage organization in detail. 10
5. (a) Translate the expression  $(a+b)*(c+d)+(a+b+c)$  into 10  
(i) Quadruple  
(ii) Triples  
(iii) Indirect triples  
(b) Explain different types of text editors 10
6. (a) Explain JAVA compiler environment. 10  
(b) Construct NFA for following expression and convert NFA into DFA 10  
for the regular expression  $(0+1)^* 01$
7. Write notes on any **two**. 20  
(a) LEX and YACC  
(b) Operator precedence parsing  
(c) Macro assemblers.
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