T. E. Sem VI C.B.S.G.S. K-T.
(Comp) CBaS 23/11/16
SPACC

Dec - 16

Q.P. Code : 581502

(3 Hours) **[Total Marks : 80**

N.B. : (1) Question No. **1** is **compulsory**.
(2) Attempt any **three** from the remaining questions.
(3) Assume suitable **data** if **necessary**.
(4) **Figures** to the **right** indicate **full** marks.

1. (a) What is Handle pruning? **5**
   (b) What is role of finite automata in compiler theory? **5**
   (c) What are different type of attributes in SDD? Explain with examples. **5**
   (d) Backpatching with example. **5**

2. (a) Explain two pass macro processor with flowchart and databases. **10**
   (b) Explain various loop optimization techniques with example. **10**

3. (a) a) Construct SLR parsing table for following grammar. Show how parsing actions are done for the input string ( ) () S. Show stacks content , i/p buffer, action. **12**
   S -> (S)S
   S -> ε
   (b) What are various databases used in two pass assembler design. Explain with example. **8**

4. (a) Discuss various intermediate code forms in detail. **10**
   (b) What is Loader ? Explain functions of loader with examples. **10**

5. (a) For the given grammar below, constmct operator precedence relations matrix, assuming*. + are binary operators and id as terminal symbol and E as non terminal symbol. **10**
   E →E + E
   E →E * E
   E →id
   Apply operator precedence parsing algorithm to obtain skeletal syntax tree for the statement
   id + id * id
   (b) Explain Run time organization in detail. **10**

6. Write short notes.
   (a) LEX andY ACC **5**
   (b) Design of an Editor **5**
   (c) Syntax Directed Translation **5**
   (d) Recursive Descent parsing **5**