

Sub: ^{SPPCC} System Programming And ^{Q.P. Code : 581502} Compiler Construction ^{23/11/16}
(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 () () \$. 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 and YACC 5
(b) Design of an Editor 5
(c) Syntax Directed Translation 5
(d) Recursive Descent parsing 5