Roll No. | | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 18

B.Tech.(CSE) (2011 Onwards E-III) (Sem.–7,8)

COMPILER DESIGN

Subject Code : BTCS-913

M.Code : 71905

Time : 3 Hrs. Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.**

SECTION-A

Answer briefly :

1. How regular expressions are advantageous than regular grammar?
2. Eliminate Left Recursion from the grammar : A→Ac/Aad/bd/€
3. What do you mean by code optimization?
4. Define Handle Pruning.
5. What is symbol table? How it is useful?
6. Which scheme is useful quadruples or triples, and why?
7. Define the term Token and Lexeme.
8. What is the difference between syntax tree and parse tree?
9. What is the full form of LEX and YACC?
10. Discuss Left Factoring with an example.

SECTION-B

11. Describe the structure of LR parsers.

12. How is input buffering is implemented in Lexical Analysis?

13. a) Describe various types of three address statements.

    b) create three address statements for the following:

    (3.5) $a + a * (b - c) + (b - c) * d$

14. What is a Context Free Grammar? How does it define a language? How is it different from regular expressions?

15. Discuss cousins of compiler in detail.

SECTION-C

16. Write Syntax directed definition (SDD) for Boolean Expression involving AND, OR and NOT.

17. Define LALR parsers. Construct LALR parsing table for the following grammar :

    S' ~ S

    S ~ CC

    C ~ Cc

    C ~ d

18. Explain different Loop Optimization techniques in detail.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.