Code: 9A05504 **R9**

B.Tech III Year I Semester (R09) Supplementary Examinations, May 2013

COMPILER DESIGN

(Computer Science and Engineering)

Time: 3 hours Max Marks: 70

Answer any FIVE questions

All questions carry equal marks

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1 (a) What is compiler and what is cross computer?

(b) Define regular expression. Give examples of regular expressions.

2 Eliminate left recursion for the following grammar:

E→ E+T|T

T→ T*F|F

F→ (E)| id

3 Construct the GOTO graph whose states are canonical sets of LR(1) items for the following grammar:

S→CC

C→cC

C→d

4 (a) Explain about syntax directed definitions in detail.

(b) Explain in detail about the construction of syntax trees.

5 (a) Explain the term run time support and storage organization.

(b) What is activation record? Explain each of its fields.

6 (a) What is meant by loop optimization?

(b) What is peephole optimization? Discuss.

7 (a) What are dominators? Explain with example.

(b) Write the algorithm for code motion.

8 (a) Explain in detail about global register allocation.

(b) Differentiate among source code, intermediate code and target code.

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