Code: R7320502

R07

B.Tech III Year II Semester (R07) Supplementary Examinations December/January 2015/2016
COMPILER DESIGN
(Computer Science and Engineering)
(For 2008 regular admitted batch only)

Time: 3 hours   Max Marks: 80

Answer any FIVE questions
All questions carry equal marks
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1   (a)   Explain with an example about the procedure of translation of a statement.
    (b)   Differentiate pass and phase in compiler.

2   Find the predictive parser for the following grammar and parse the sentence (a+b) *c
          E$\rightarrow$ E+T|T
          T$\rightarrow$ T*F|F
          F$\rightarrow$ (E)| id

3   (a)   Discuss in detail about viable prefixes.
    (b)   Explain in detail about operator precedence parsing.

4   (a)   Give examples of static checkers.
    (b)   Describe about type checking of expressions.

5   Write short notes on the following:
    (a)   Data structures for symbol table.
    (b)   Storage allocation.

6   (a)   What do you mean by DAG? Explain the algorithm for constructing a DAG with example.
    (b)   Why are quadruples preferred over triples in an optimizing compiler? Explain.

7   (a)   Differentiate between Local optimization and Global optimization.
    (b)   What is the meaning of Copy propagation? Explain it in detail with example.

8   (a)   Explain Code generation algorithm.
    (b)   Write a note on application of Directed Acyclic Graph in code generation.

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