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# B.TECH. DEGREE EXAMINATION, MAY 2015

## Seventh Semester

Branch: Computer Science and Engineering

CS 010 702—COMPILER CONSTRUCTION (CS)

(New Scheme—2010 Admission onwards)

[Improvement/Supplementary]

Time: Three Hours

Maximum: 100 Marks

#### Part A

Answer all questions.
Each question carries 3 marks.

- 1. What is regular expressions?
- 2. What is symbol table?
- 3. Define symantic analysis.
- 4. Discuss the need for ICG-IC formats.
- 5. What is error handling?

 $(5 \times 3 = 15 \text{ marks})$ 

## Part B

Answer all questions.
Each question carries 5 marks.

- 6. Define lexical analyzer.
- 7. Explain LR-parsing.
- 8. What is the differences between dynamic memory management and static memory management.
- 9. Discuss triples.
- 10. Explain error handling types.

 $(5 \times 5 = 25 \text{ marks})$ 

## Part C

Answer all questions.
Each question carries 12 marks.

1. (a) Explain the phases of compiler.

(12 marks)

Or

- (b) Write a note on:
  - (i) finate automata;
  - (ii) tokens.

(6 + 6 = 12 marks)

Turn over

2. (a) Explain translation of expressions in detail.

(12 marks)

Or

(b) Discuss shift reduce parsing and syntax analyzer using YACC.

(12 marks)

3. (a) Discuss type system and type checking design strategy.

(12 marks

Or

- (b) Write a note on:
  - (i) access procedures;
  - (ii) parameter parsing methods.

(6 + 6 = 12 marks)

4. (a) Discuss ICG-IC formats 3 addressing code techniques.

(12 marks)

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(b) Write the differences between local arid global optimization.

(12 marks)

5. (a) Explain code generation and expression trees in detail.

(12 marks)

Or

- (b) Write a note on:
  - (i) error handling compilers;
  - (ii) Cousins of the compilers.

(6 + 6 = 12 marks)

 $[5 \times 12 = 60 \text{ marks}]$ 



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