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# THIRD SEMESTER M.A./M.Sc./M.Com. DEGREE (REGULAR) EXAMINATION, NOVEMBER 2020

(CBCSS)

Computer Science

## CSS 3C 13—PRINCIPLES OF COMPILERS

(2019 Admissions)

Time: Three Hours

Maximum: 30 Weightage

## **General Instructions**

- 1. In cases where choices are provided, students can attend all questions in each Section/Part.
- 2. The minimum number of questions to be attended from the Section/Part shall remain same.
- 3. There will be an overall ceiling for each Section/Part that is equivalent to maximum weightage of the Section/Part.

### Section A

Answer any four questions. Each question carries 2 weightage.

- 1. Briefly explain about Interpreter.
- 2. What are the commonly used buffering methods?
- 3. Define Parser.
- 4. What is the significance of intermediate code?
- 5. Define Symbol table.
- 6. Mention the techniques in loop optimization.
- 7. What is Cross Compiler?

 $(4 \times 2 = 8 \text{ weightage})$ 

### Section B

Answer any four questions.

Each question carries 3 weightage.

- 8. What are the issues in lexical analysis?
- 9. How can you convert the 'Case Statements' into intermediate code? Give example.

Turn over

- 10. Explain the sequence of stack allocation processes for a function call.
- 11. Illustrate optimization basic blocks with examples.
- 12. Write detailed notes on parameter parsing.
- 13. Describe about region based analysis.
- 14. Write a note on shift reduce parsing.

 $(4 \times 3 = 12 \text{ weightage})$ 

#### Section C

Answer any two questions.

Each question carries 5 weightage.

- 15. Explain with an example conversion of NFA to DFA.
- 16. Write in detail about Predictive parsing and Bottom up parsing.
- 17. Explain about flow graphs with suitable example.
- 18. Give a detailed note on Storage allocation strategies.

 $(2 \times 5 = 10 \text{ weightage})$