

D 11626

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Name.....

Reg. No.....

**THIRD SEMESTER M.Sc. DEGREE (REGULAR/SUPPLEMENTARY)
EXAMINATION, NOVEMBER 2021**

(CBCSS)

Computer Science

CSS 3C 13—PRINCIPLES OF COMPILERS

(2019 Admission onwards)

Time : Three Hours

Maximum : 30 Weightage

General Instructions

1. In cases where choices are provided, students can attend **all** questions in each section.
2. The minimum number of questions to be attended from the Section / Part shall remain the same.
3. The instruction if any, to attend a minimum number of questions from each sub section / sub part / sub division may be ignored.
4. There will be an overall ceiling for each Section / Part that is equivalent to the maximum weightage of the Section / Part.

Section AAnswer any **four** questions.

Each question carries 2 weightage.

1. What is finite automaton ?
2. Write about ambiguous grammar ? Give an example.
3. Mention the role of Lexical analyzer.
4. List out the various storage allocation strategies.
5. Give syntax - Directed translation for case statement.
6. Differentiate basic block and flow graph.
7. What is global data flow analysis ?

(4 × 2 = 8 weightage)

Turn over

Section B

Answer any **four** questions.

Each question carries 3 weightage.

8. Define the terms : Compiler, Interpreter and Translator.
9. How can you convert assignment statements into intermediate code ? Give example.
10. Write notes on Back patching.
11. Explain Peephole optimization and various code improving transformations.
12. Explain Register allocation and assignment with suitable example.
13. Describe the Need for Grouping of phases of compiler.
14. Elaborate about Generating code from DAG with suitable example.

(4 × 3 = 12 weightage)

Section C

Answer any **two** questions.

Each question carries 5 weightage.

15. Write in detail about Compiler construction tools.
16. Explain Canonical LR parsers and LALR parsers.
17. Explain about Basic blocks with suitable example.
18. Give a detailed note on Boolean Expression.

(2 × 5 = 10 weightage)