Reg. No. : ....

Name : ....

VI Semester B.C.A. Degree (CBCSS – OBE – Regular/Supplementary/ Improvement) Examination, April 2023
(2019 and 2020 Admissions)
Core Course
6B18BCA : INTRODUCTION TO COMPILER

Time : 3 Hours

Max. Marks : 40

SECTION – A
(Very Short Answer)

Answer **all** the questions.

(6×1=6)

1. What are the outputs of front-end processing ?

2. Which are the three types of parsers ?

3. What is panic mode recovery ?

4. Give an account on Finite Automata.

5. What is garbage collection ?

6. State the problem of left recursion and provide a solution.

SECTION – B
(Short Answers)

Write short notes on **any six** of the following questions.

(6×2=12)

7. Explain the concept of buffer pairs in recognising tokens.

8. What are the rules to calculate the first of a set ?

9. Differentiate between SLR and Canonical LR parser.

10. Explain the concepts of address and instruction forms as the building block of three address codes.

11. Briefly narrate on Lexical Analysis.

12. What is the reason for separation of compiler to lexical analysis and syntax analysis ?

13. What is type checking ?

14. Explain the symbol table as a data structure.

SECTION – C
(Essay)

Answer **any four** of the following questions. (4×3=12)

15. Construct a DAG for a + b * (b − c) + (b − c) * d and explain it.

16. Explain one passcode generation with backpatching.

17. Write in your own words about ambiguous grammar with an example.

18. Compare static and dynamic storage allocation.

19. Analyse the relationship between Parsing and CFG.

20. Explain peephole optimisation.

SECTION – D
(Long Essay)

Write an essay on **any two** of the following questions. (5×2=10)

21. Explain various phases of compilers.

22. Explain top-down parsing. What is the problem of infinite looping in it ?

23. Describe activation trees and activation records.

24. Write an essay on the three primary tasks of a code generator with an illustration.