K25U 0127

Reg. No. : .....

Name : .....

Sixth Semester B.Sc. Degree (C.B.C.S.S.-OBE – Regular/Supplementary/ Improvement) Examination, April 2025
(2019 to 2022 Admissions)
CORE COURSE IN COMPUTER SCIENCE
6B13CSC : COMPILER DESIGN

Time : 3 Hours Max. Marks : 40

PART – A

Answer **all** questions. **(6×1=6)**

1. What is the primary function of a compiler ?
2. Which are the cousins of a compiler ?
3. What is a symbol table ?
4. What is peep-hole optimization ?
5. What do you mean by intermediate languages in code generation ?
6. What is a predictive parser ?

PART – B

Answer **any 6** questions. **(6×2=12)**

7. Explain different phases of a compiler.
8. Explain lexical analysis.
9. What is a parse tree ? How is it constructed during parsing ?
10. What do you mean by token in compiler design ? Provide an example.
11. Explain the concept of finite automata.

12. Differentiate static and dynamic type checking.

13. What are control flow graphs ?

14. What do you mean by semantic analysis ?

PART – C

Answer **any 4** questions. **(4×3=12)**

15. Explain intermediate code generation.

16. Explain recursive descent parsing.

17. Explain the optimization techniques used in code generation.

18. Explain the importance of error handling in compilers.

19. Explain the features of compiler construction tool Lex.

20. Explain dead code elimination. How does it improve program efficiency ?

PART – D

Answer **any 2** questions. **(2×5=10)**

21. Explain Context Free Grammars (CFG) in detail. Discuss their structure, components and significance in syntax analysis.

22. Explain top-down and bottom-up parsing techniques. Discuss with examples.

23. Explain how LL(1) parsers are constructed. Explain the significance of look ahead symbols in predictive parsing.

24. How do input buffering techniques enhance the efficiency of token recognition in lexical analysis ?

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