

ANURAG Engineering College**(An Autonomous Institution)****III B.Tech II Semester Supplementary Examinations, Dec-2023/Jan-2024****COMPILER DESIGN****(COMPUTER SCIENCE AND ENGINEERING)****Time: 3 Hours****Max.Marks:75****Section – A (Short Answer type questions)****(25 Marks)****Answer All Questions**

	Course Outcome	B.T Level	Marks
1. What are the applications of Compiler Technology	CO1	L1	2M
2. What are the two parts of a compilation? Explain briefly	CO1	L1	3M
3. Define a context free grammar.	CO2	L1	2M
4. What are the features of a Lexical analyzer?	CO2	L1	3M
5. List the properties of LR parser.	CO3	L1	2M
6. Write the difference between Top-Down and Bottom-Up Parsing	CO3	L1	3M
7. What are the various types of intermediate code representation?	CO4	L1	2M
8. Explain 3-address code of the expression $D=A+B*C$	CO4	L2	3M
9. List the terminologies used in basic blocks.	CO5	L1	2M
10. What is a flow graph?	CO5	L1	3M

Section B (Essay Questions)**Answer all questions, each question carries equal marks.****(5 x 10M = 50M)**

11. A) Write about the following: i) Syntax-Directed Translation ii) Parsing.	CO1	L3	10M
OR			
B) Explain following i) Symbol Tables ii) Structure of a Compiler	CO1	L2	5M 5M
12. A) Explain in detail about the role of Lexical analyser with the possible error Recovery actions.	CO2	L2	10M
OR			
B) Define Compiler. Explain in brief about the LEX compiler.	CO2	L2	10M
13. A) Compare and contrast between SLR, LALR and LR parsers.	CO3	L2	10M
OR			
B) Construct SLR parsing table for the following grammar. $E \rightarrow E+T/T$ $T \rightarrow T*F/F$ $F \rightarrow (E)/id$	CO3	L3	10M
14. A) Explain about Syntax-Directed Translation Schemes.	CO4	L2	10M
OR			
B) How would you generate the intermediate code for the flow of control statements? Explain with examples.	CO4	L3	10M
15. A) Give an example to explain in detail about machine dependent code optimization.	CO5	L3	10M
OR			
B) Explain the principal sources of optimization in detail.	CO5	L2	10M