

BACHELOR OF TECHNOLOGY (CBCS) (2021-COURSE)
B. Tech. Sem - V Computer Science & Engineering AI & ML : WINTER : 2024
SUBJECT: COMPILER CONSTRUCTION

Day : Friday
Date : 06/12/2024

W-23962-2024

Time : 02:30 PM-05:30 PM
Max. Marks : 60

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat labelled diagrams **WHEREVER** necessary.

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- Q.1 Explain Lexical Analysis phase of compiler with suitable example. (10)
- OR
- Q.1 How to convert Regular Expression to DFA using direct method.
- Q.2 Classify Bottom -up Parser? Explain with example. (10)
- OR
- Q.2 Determine whether the given grammar is LL (1) or not. Draw the parse table and parse tree for same W =id + id *id\$ (10)
- $E \rightarrow TE'$
 $E' \rightarrow +TE' | \epsilon$
 $T \rightarrow FT'$
 $T' \rightarrow *FT' | \epsilon$
 $F \rightarrow (E) | id$
- Q.3 Define Syntax Directed Translation? Write down SDT for evaluation of the expression. (10)
- OR
- Q.3 Explain in detail implementation of L attributed SDD. (10)
- Q.4 Define the term Backpatching and Procedure Call in terms of ICG. (10)
- OR
- Q.4 Classify the 3AC? Explain in detail the representation of 3AC. (10)
- Q.5 Explain with example Peephole Optimization. (10)
- OR
- Q.5 Explain the Code Optimization. What are the Issues related to this? (10)
- Q.6 Explain Register allocation and assignment allocation with suitable example. (10)
- OR
- Q.6 Explain in detail algorithm for simple code generator. (10)

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