

BACHELOR OF TECHNOLOGY (CBCS) (2021-COURSE)
B. Tech. Sem - V Computer Science & Business Systems : SUMMER : 2025
SUBJECT: COMPILER DESIGN

Day : Wednesday
Date : 14/05/2025

S-24167-2025

Time : 10:00 AM-01:00 PM
Max. Marks : 60

N.B.

- 1) All questions are **COMPULSORY**.
- 2) Figures to the **RIGHT** indicate **FULL** marks.
- 3) Assume suitable data **WHEREVER** necessary.
- 4) Draw neat diagrams **WHEREVER** necessary.

Q.1 Explain Lexical Analyzer and Scanner generator in detail. (10)

OR

Q.1 Describe the role of input buffering technique in lexical analyzer with neat diagram. (10)

Q.2 Find first and follow of following grammar (10)

$S \rightarrow A$
 $A \rightarrow aB \mid Ad$
 $B \rightarrow b$
 $C \rightarrow g$

OR

Q.2 Construct predictive parsing table for (10)

$E \rightarrow E+T \mid T$
 $T \rightarrow T * F \mid F$
 $F \rightarrow (E) \mid id$

Q.3 Compare and contrast SLR and LALR parser with suitable example. (10)

OR

Q.3 Give types of LR parsers. Construct transition diagram for following grammar using LR(0). (10)

$S \rightarrow AA$
 $A \rightarrow aA \mid b$

Q.4 Explain in detail evaluation and flow of attribute in syntax tree. (10)

OR

Q.4 Give basic structure of symbol table along with its attributes. (10)

Q.5 What are different intermediate code forms? Explain in detail. (10)

OR

Q.5 Explain with suitable example various sources of loop optimization. (10)

Q.6 What are non-imperative programming languages? Explain any two in detail. (10)

OR

Q.6 Explain the concept of target code generator and instruction scheduling. (10)
