

# Generated Question Set 2024

*SUBJECT: Compiler Design*

*SUBJECT CODE: CD101*

*MARKS: 30*

Question 1: 13 a) Derive LALR (1) parsing algorithm for following grammar  $S \rightarrow AS/b \quad A \rightarrow SA/a \quad b)$

Design a type checker for simple arithmetic operations.

Marks: 9

Question 2: 3 Consider the context free grammar  $S \rightarrow aSbS \mid bSaS \mid ?$  Check whether the grammar is ambiguous or not

Marks: 3

Question 3: 8 Explain the main actions in a shift reduce parser

Marks: 3

Question 4: 14 a) Explain the syntax directed definition of a simple desk calculator . Explain operator grammar and operator precedence parsing

Marks: 9

Question 5: 11 What are L-attributed definition s and S-attributed definition s in a syntax directed translation scheme?

Marks: 3

Question 6: 4 What is Recursive Descent parsing? List the problems faced in designing such a parser.

Marks: 3