

**Jaypee University of Engineering & Technology, Guna****T-1(Odd Semester 2023)****18B14CI541- COMPILER DESIGN**

Maximum Duration: 1 Hour

Maximum Marks: 15

**Notes:**

1. This question paper has three questions.
2. Write relevant answers only.
3. Do not write anything on question paper (Except your Er. No.).

- |  | <b>Marks</b> | <b>CO No.</b> |
|--|--------------|---------------|
| <b>Q1.</b> Compute the operator precedence relations of grammar G and prepare the parsing tree for input (id * id) ↑ id using operator precedence parser. Assume usual precedence /associativity of operators.<br>G: $E \rightarrow EAE \mid (E) \mid -E \mid id$<br>$A \rightarrow + \mid - \mid * \mid \uparrow$ | <b>[05]</b>  | <b>CO4</b>    |
| <b>Q2.</b> Consider the following grammar<br>G: $S \rightarrow Aa \mid b$<br>$A \rightarrow Ac \mid Sd \mid e$<br>Eliminate the left recursion.  | <b>[05]</b>  | <b>CO3</b>    |
| <b>Q3.</b> Construct the Predictive Parser for given grammar<br>G: $E \rightarrow TE'$<br>$E' \rightarrow \epsilon \mid E$<br>$T \rightarrow FT'$<br>$T' \rightarrow T \mid \epsilon$<br>$F \rightarrow PF'$<br>$F' \rightarrow F' \mid \epsilon$<br>$P \rightarrow (E) \mid a \mid b \mid \epsilon$               | <b>[05]</b>  | <b>CO4</b>    |