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JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST -2 EXAMINATIONS- 2026
B.Tech-VI Semester (CSE)

COURSE CODE (CREDITS):18B11CI612 (3) MAX MARKS: 25
COURSE NAME: Compiler Design
COURSE INSTRUCTOR: Pardeep, Ramesh, Nitika, Seema MAX. TIME: 1 Hour 30 Min

Note: (a) All questions are compulsory.
(b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems
(c) Use of calculator is not allowed
(d) Write step by step answer of each question

Q.No	Question	CO	Marks
Q1	Consider the grammar G with productions: E→TE' E'→*TE'/Є T→FT'/Є T'→Є/+FT' F→id/(E Find the first() and follow() sets of the given grammar. Note: E is the start symbol.	CO3	6
Q2	Consider the given grammar G: S→ (L)/a L→ SL' L'→Є/,SL' Construct the LL(1) parser for the above given grammar G. Does your constructed parser have any kind of conflicts? If yes, then name it. Note: S is the start symbol.	CO3	5+1
Q3	(a) Check whether the grammar A→A(A)/a is suitable for recursive descent parser? If not, then convert it into suitable representation. (b) Consider the grammar G: E→iE' E'→ +iE'/Є and the string i+i Write the recursive procedure function for different variables present in the grammar for the processing of given string. Note: E is the start symbol.	CO3	2+4
Q4	Consider the grammar G: S→Aa/bAc/Bc/bBa A→d B→d Construct the CLR parser for the given grammar G. Does your constructed CLR parser be converted into LALR parser? If yes, then construct it accordingly. Note: S is the start symbol.	CO4	5+2