



R18 Regulation

Subject code:2P6EA

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech VI Semester Supplementary Examinations, November 2025

COMPILER DESIGN

(CSE)

Maximum Marks: 70

Date: 11.11.2025

Duration: 3 hours

- Note:
1. This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks (10X2M=20 Marks)		Marks	CO	BTL
1	Differentiate token, pattern, lexeme.	2M	1	L1
2	Define Loader and Linker.	2M	1	L1
3	What is Handle Pruning?	2M	2	L1
4	What is an ambiguous grammar and give a suitable example for it.	2M	2	L1
5	Write is the need of syntax directed translation.	2M	3	L1
6	Give any two applications of syntax directed translation.	2M	3	L1
7	Define Loop Optimization.	2M	4	L1
8	Define Code Motion.	2M	4	L1
9	Describe peep hole optimization.	2M	5	L1
10	What is DAG representation?	2M	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	BTL
11	Explain the various the functionalities of a Lexical Analyzer.	10M	1	L2
OR				
12	Describe the optimization of DFA-Based Pattern Matchers.	10M	1	L2
13	Explain about operator precedence parsing algorithm.	10M	2	L2
OR				
14	Define LR(k) parser. Draw and explain model of LR parser.	10M	2	L2
15	Explain S attributed translation with an example.	10M	3	L2
OR				
16	Explain annotated parse tree and dependency graph with an example.	10M	3	L2
17	What are the various primary structure-Preserving transformations on basic blocks? Explain each of them in detail.	10M	4	L2
OR				
18	Explain the target language.	10M	4	L2
19	Describe various Register allocation optimization techniques with an example.	10M	5	L2
OR				
20	Explain data flow schema & Reaching definition and write its algorithm.	10M	5	L2