Reg. No.:

Name :

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Term End Examinations – Dec 2024

Programme	**:**	**B.Tech.**	**Semester**	**:**	**Interim Semester 2024-2**
Course Name/ Course Code	**:**	**Theory Of Computation and Compiler Design/ CSE2004**	**Slot**	**:**	**A14+D11+D12**
Time	**:**	**1½ hours**	**Max. Marks**	**:**	**50**

Answer ALL the Questions

Q. No.		Question Description	Mar
		PART - A (30 Marks)	
1	(a)	Construct minimal DFA, which accept the set of all sting over the ∑={a,b}* such that (I) contains the sub string bb but not bbb. (II) first two and last two symbols are not same.	10
		OR	
	(b)	Write a CFG and create a PDA for the following language: L={a^n b^m | 2n≤m≤3n}	10
2	(a)	Consider the following grammar. S-> Aa | bAc | Bc | bBa A->d B->d Generate the SLR parsing table for given grammar.	10
		OR	
	(b)	Design a Turing machine that accepts the language L= {wvw: $w,v \in \{a,b\}^+ \|v\|=2$}.	10
3	(a)	Explain Halting Problem in Turing Machine with suitable example. Also design a Turing Machine for following function: $f(m) = \{ m-2, if\ m>2$ $1\ , otherwise\}$	10
		OR	
	(b)	Translate the expression [–(a+b)*(c+d)+(a+b+c)] into I. Quadruples II. Triples III. Indirect Triples	10
		PART - B (20 Marks)	
4		Find the regular expression for given DFA.	10

5 Construct the DAG for - 10

X= Y * Z
W= P + Y
Y = Y * Z
P = W - X

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