Sardar Patel Institute of Technology

Bhavan's Campus, Munshi Nagar, Andheri (W), Mumbai: 400058, India

(An Empowered Autonomous College of Affiliated to University of Mumbai)

Mid Semester Examination

March 2024

Max Marks : 30 Duration : 1 hours

Class : T.E. Semester : VI

Course code: CE306 Branch :COMP

Name of the course : System Programing and Compiler Construction

Q No	Question	Max Marks	CO	BL
Q1	Given the CFG as shown below: S → UVW U → (S) | aSb | d V → aV | ε W → cW | ε a) Construct its a table-based LL(1) predictive parser; b) Give the parsing actions for the input string "(dc)ac".	10	CO2	3
Q2	Construct LALR Parser- 1. Canonical Form 2. Parsing Table S → L = R | R L → * R | **id** R → L **OR** Construct CLR Parser- 1. Canonical Form 2. Parsing Table Consider the following grammar S → aMd | bNd | aNe | bMe M → c N → c	10	CO2	2

P.T.O

Q3	Convert this regular expression to optimized DFA **(a | ε) b c * #**	08	CO1	3

Q4 A	Consider the following C program snippet:
	main ( ) {
	int z = 20;
	it z < 55;
	else p = 55;
	}
	How many lexical errors are present in the above program?
		01	CO1	5

Q4 B	The number of tokens in the following C code segment are:
	switch(inputvalue)
	{
	case 1 : b = c * d;
	break;
	default : b = b++;
	break;
	}
		01	CO1	5

– All the best –

P.T.O