VIT
Vellore Institute of Technology

Reg. Number:	

Continuous Assessment Test (CAT) – I - August 2024

Programme	:	B.Tech CSE, AI ML, CPS,AIR, ECM	Semester	:	Fall Semester 2024-2025
Course Code	:	BCSE307L	Class Nos:	:	CH2024250101291
Course Title:	:	Compiler Design		:	CH2024250101290 CH2024250101293
Faculty(s)	:	Dr. WI. Sureshkumar Dr. S. V. Nagaraj Dr. R. Sivakami	Slot	:	G1+TG1
Time	:	90 Minutes	Max. Marks	:	**50**

Answer all the Questions

General Instructions:

- Write only your registration number on the question paper in the box provided and do not write other information.
- Use statistical tables supplied from the exam cell as necessary
- Use graph sheets supplied from the exam cell as necessary
- Only non-programmable calculator without storage is permitted

Q. No.	Sub-division	Question Text	Marks
1.	a)	Use the given expression to illustrate the outcome at each stage of compilation process: a=a+(-b)*(-c) (7marks)	15
	b)	Construct an Nondetrministic Finite Automata(NFA) for the following expression (0|1)*11(0|1)01(0|1)* (8marks)	
2.		Construct a minimized Deterministic Finite Automata using the direct method for the given Regular Expression: (xy|z)|(yz)*(y|xz)yzx Show each steps with appropriate explanation during the conversion process.	10
3.		Consider the following grammar: E → E + T | T T → T * V | V V → ***a*** | ***b*** | ***c*** | ***d*** With the help of the above grammar, parse the input string "***a+b*c*d***" based on operator precedence parsing technique.	15
4.		Construct an LL(1) parsing table for the given grammar : G: S - > ACB | C***b***B | B***a*** A - > ***da*** | BC B - > ***g*** | ε C - > ***h***S | ε Check whether the given input string '***hdabg***' is acceptable or not by using the constructed LL(1) parsing table.	10