Reg. No. : | | | | | | | | | | | | |

Question Paper Code: U2208

B.E./B.Tech. DEGREE EXAMINATION, APRIL/ MAY 2025

Professional Elective

Computer Science Engineering

21CSV208– PRINCIPLES OF PROGRAMMING LANGUAGES

(Regulations 2021)

(Common to EEE, ECE,MECH, IT, AGRI, BME, AI&DS & CSE(AIML) branches)

Duration: Three hours | Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1.	Define Syntax and Semantics.	CO1- U
2.	Describe the operation of a general language generator.	CO1- U
3.	Define type error.	CO1- U
4.	What is a conditional expression?	CO1- U
5.	What are the three general characteristics of subprograms?	CO1- U
6.	Define shallow and deep binding for referencing environments of subprograms that have been passed as parameters.	CO1- U
7.	Differentiate process and thread.	CO1- U
8.	What is a Preprocessor directive?	CO1- U
9.	What is a curried function?	CO1- U
10.	What is the use of Suppress pragma in Ada?	CO1- U

PART – B (5 x 16= 80 Marks)

11.	(a)	Using the following grammar show a parse tree and leftmost derivation for the following statement: A=A*(B+(C*A)) <assign>→ <id>=<expr> <id>→ A|B|C expr>→ <id>+<expr> |<id>*<expr> |(<expr>) |<id>	CO2- App	(16)

Or

	(b)	Write a grammar for the language consisting of strings that have n copies of the letter a followed by the same number of copies of the letter b, where n>0. a. For example, the strings ab, aaaabbbb, and aaaaaaaabbbbbbbb are in the language but a, abb, ba, and aaabb are not. b. Draw parse trees for the sentence aabb and aaaabbbb, as derived from the grammar of the given question.	CO2- App	(16)
12.	(a)	Explain Arithmetic expression. Explain Relational and Boolean Expressions with example.	CO1- U	(16)
		Or		
	(b)	Explain the Process of creation, updation and accessing of Records data type in detail.	CO1- U	(16)
13.	(a)	Explain the types of parameter passing methods.	CO1- U	(16)
		Or		
	(b)	Explain about the types of Dynamic Scoping.	CO1- U	(16)
14.	(a)	Discuss the design issues of Exception Handling.	CO1- U	(16)
		Or		
	(b)	What is an event? How the events are handled in various OOP languages?	CO1- U	(16)
15.	(a)	Differentiate functional programming and object oriented programming	CO1- U	(16)
		Or		
	(b)	How ML is different from other functional programming languages?	CO1- U	(16)