

NR23: Principles of programming languages: 23CS508(Professional Elective- II)

Unit V : FUNCTIONAL PROGRAMMING

Multiple Choice Questions (MCQs)

1. Which programming paradigm treats computation as the evaluation of mathematical functions?
- A) Object-Oriented Programming
 - B) Functional Programming
 - C) Procedural Programming
 - D) Event-Driven Programming

Answer: B) Functional Programming

2. Which language is primarily associated with functional programming?
- A) COBOL
 - B) Pascal
 - C) LISP
 - D) FORTRAN

Answer: C) LISP

3. Which language is widely used for logic programming?
- A) Java
 - B) C++
 - C) Python
 - D) Prolog

Answer: D) Prolog

4. In functional programming, functions that take other functions as arguments are called:
- A) Recursive functions
 - B) Higher-order functions
 - C) Anonymous functions
 - D) Nested functions

Answer: B) Higher-order functions

5. Which concept is fundamental to logic programming?
- A) Inheritance
 - B) Unification
 - C) Encapsulation
 - D) Polymorphism

Answer: B) Unification

6. Which data structure is central to LISP?
- A) Array
 - B) Tree
 - C) Linked List
 - D) Queue

Answer: C) Linked List

7. In Prolog, a program consists mainly of:
- A) Classes and Objects
 - B) Functions and Variables
 - C) Facts and Rules

- D) Procedures and Modules

Answer: C) Facts and Rules

8. The process of finding values that satisfy logical goals is called:

- A) Compilation
- B) Evaluation
- C) Resolution
- D) Interpretation

Answer: C) Resolution

9. Which of the following is a key feature of functional programming?

- A) Mutable state
- B) Side effects
- C) Referential transparency
- D) Global variables

Answer: C) Referential transparency

10. Which symbol is commonly used to represent an anonymous function in many functional languages?

- A) #
- B) @
- C) λ (lambda)
- D) \$

Answer: C) λ (lambda)

Fill in the Blanks – Unit V

1. Functional programming emphasizes the use of _____.

Answer: functions

2. _____ is a logic programming language based on first-order predicate logic.

Answer: Prolog

3. In LISP, programs and data are represented using _____.

Answer: lists

4. A function that calls itself is called a _____ function.

Answer: recursive

5. The symbol used to represent anonymous functions is called _____.

Answer: lambda

6. In Prolog, knowledge is represented using facts and _____.

Answer: rules

7. The process of matching two logical expressions is called _____.

Answer: unification

8. Functional programming avoids changing program _____.

Answer: state

9. The execution mechanism used by Prolog to satisfy goals is called _____.

Answer: backtracking

10. _____ functions can accept other functions as arguments or return them as results.

Answer: Higher-order