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NARSIMHA REDDY ENGINEERING COLLEGE

UGC-AUTONOMOUS INSTITUTION

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Multiple Choice Questions (MCQs)

1. Functional programming is primarily based on:

- A) Objects
- B) Mathematical functions
- C) Procedures
- D) Classes

Answer: B) Mathematical functions

2. Which of the following is a functional programming language?

- A) C++
- B) Java
- C) LISP
- D) Ada

Answer: C) LISP

3. In functional programming, functions generally avoid:

- A) Parameters
- B) Return values
- C) Side effects
- D) Recursion

Answer: C) Side effects

4. Which concept is heavily used in functional programming?

- A) Recursion
- B) Goto statements
- C) Pointers
- D) Macros

Answer: A) Recursion

5. LISP stands for:

- A) List Processor
- B) Logical System Processor
- C) List Programming
- D) Linear System Programming

Answer: A) List Processor

6. Which of the following is a key advantage of functional programming?

- A) Easy reasoning about programs
- B) Extensive use of global variables
- C) Direct memory manipulation
- D) Complex syntax

Answer: A) Easy reasoning about programs

7. Logic programming is based on:

- A) Functions
- B) Facts and Rules
- C) Classes
- D) Objects

Answer: B) Facts and Rules

8. The most widely used logic programming language is:

- A) Python
- B) Java
- C) Prolog
- D) Ruby

Answer: C) Prolog

9. Prolog programs are composed of:

- A) Objects and Methods
- B) Facts and Rules
- C) Classes and Interfaces
- D) Variables and Constants

Answer: B) Facts and Rules

10. Which symbol is commonly used in Prolog to represent a rule?

- A) =>
- B) :=
- C) :-
- D) ==

Answer: C) :-

11. A major deficiency of Prolog is:

- A) Lack of recursion
- B) Inefficiency for numerical computation
- C) Lack of variables
- D) No support for rules

Answer: B) Inefficiency for numerical computation

12. Logic programming is widely used in:

- A) Artificial Intelligence
- B) Graphics Design
- C) Database Storage Only
- D) Networking Only

Answer: A) Artificial Intelligence

13. Python is categorized as a:

- A) Logic language
- B) Functional language only
- C) Scripting language
- D) Assembly language

Answer: C) Scripting language

14. Which of the following is a mutable Python data type?

- A) Tuple
- B) String
- C) List
- D) Frozen Set

Answer: C) List

15. The region of a program where a variable is accessible is called:

- A) Binding
- B) Scope
- C) Lifetime
- D) Storage

Answer: B) Scope

16. Binding refers to:

- A) Associating a variable with a value or object
- B) Deleting variables
- C) Importing modules

D) Creating functions

Answer: A) Associating a variable with a value or object

17. Procedural abstraction in Python is mainly achieved through:

A) Classes

B) Functions

C) Modules

D) Variables

Answer: B) Functions

18. Data abstraction is commonly implemented using:

A) Variables

B) Classes and Objects

C) Loops

D) Operators

Answer: B) Classes and Objects

19. Python modules support:

A) Separate Compilation and Code Reuse

B) Machine Language Generation

C) Hardware Design

D) Memory Allocation Only

Answer: A) Separate Compilation and Code Reuse

20. Which statement best distinguishes functional and imperative programming?

A) Functional programming emphasizes computation through functions; imperative programming emphasizes statements and state changes.

B) Both are identical.

C) Imperative programming uses no variables.

D) Functional programming uses only objects.

Answer: A)

Fill in the Blanks

1. Functional programming is based on _____ functions.

Answer: Mathematical

2. _____ is one of the earliest functional programming languages.

Answer: LISP

3. In functional programming, _____ is often used instead of loops.

Answer: Recursion

4. A function that produces no side effects is called a _____ function.

Answer: Pure

5. LISP primarily uses _____ as its basic data structure.

Answer: Lists

6. Logic programming is based on formal _____.

Answer: Logic

7. _____ is the most popular logic programming language.

Answer: Prolog

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

Answer: Rules

9. The Prolog operator used to define rules is _____.

Answer: :-

10. A query in Prolog is used to infer _____ from the knowledge base.

Answer: Information

11. One application area of logic programming is _____ Intelligence.

Answer: Artificial

12. Python is widely known as a _____ language.

Answer: Scripting

13. Every value in Python belongs to a specific _____.

Answer: Type

14. A name used to refer to a value in Python is called a _____.

Answer: Variable

15. The association between a variable and its value is called a _____.

Answer: Binding

16. The visibility region of a variable is known as its _____.

Answer: Scope

17. Functions provide _____ abstraction in Python.

Answer: Procedural

18.Classes support _____ abstraction.

Answer: Data

19.A collection of Python definitions stored in a file is called a _____.

Answer: Module

20.Functional programming generally minimizes changes to program _____.

Answer: State