

**PRINCIPLES OF PROGRAMMING LANGUAGES**

(Computer Science & Engineering)

Time: 3 hours

Max. Marks: 70

**PART - A**

(Compulsory Question)

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- 1 Answer the following: (10 X 02 = 20 Marks)
- (a) What are the objectives of principles of programming language?
  - (b) Write any two influences on language design.
  - (c) What is an elementary data type?
  - (d) Give an example for operation signature.
  - (e) What is the effect of a call statement?
  - (f) Write any two assumptions of subprograms.
  - (g) What is a race condition?
  - (h) List any two deficiencies of prolog.
  - (i) Define lazy evaluation.
  - (j) What for scripting languages are used?

**PART - B**

(Answer all five units, 5 X 10 = 50 Marks)

**UNIT - I**

- 2 What are the potential benefits of studying programming language concepts?

**OR**

- 3 (a) What do you mean by static semantics?  
(b) The levels of acceptance of any language depend on the language description. Comment on this.

**UNIT - II**

- 4 What are primitive and non primitive data types?

**OR**

- 5 Briefly explain about the records and the sets data structures.

**UNIT - III**

- 6 Explain the various parameter passing methods. Discuss their features.

**OR**

- 7 Discuss about genetic sub-routine and modules.

**UNIT - IV**

- 8 Define exception. How exception handler works? Explain with example.

**OR**

- 9 What is meant by control in prolog? Briefly explain.

**UNIT - V**

- 10 Define functional programming language. List the properties of functional programming languages and describe each of them briefly.

**OR**

- 11 (a) Explain early binding and late binding.  
(b) Write an essay that distinguishes scripting languages from dynamic language.

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