

R18

Code No: 155CX

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech III Year I Semester Examinations, August - 2022

PRINCIPLES OF PROGRAMMING LANGUAGES

(Common to CSE, IT)

Time: 3 Hours

Max. Marks: 75

**Answer any five questions
All questions carry equal marks**

- 1.a) Describe the criteria of success for a good programming language.
- b) What is the difference between a phase and a pass of a compiler? Under what circumstances do a compiler have multiple phases? [7+8]
- 2.a) Exception handling is very important, but often neglected by programming languages. Comment on it.
- b) Give the attribute grammar for a simple assignment statement.
- c) Write a denotation semantics mapping function for “for” statement in Ada. [5+5+5]
- 3.a) Explain about static binding and dynamic binding with its relative merits and demerits.
- b) What are the design issues of logically controlled loop statements? Explain briefly. [8+7]
- 4.a) What is meant by type compatibility? Explain with an example.
- b) Discuss the design and implementation issues of pointer data types. [7+8]
- 5.a) Describe pass-by-value and pass-by-result parameter passing methods with examples.
- b) What are the distinct semantic models for formal parameters? Explain. [8+7]
6. List and explain various functional characteristics of OOP in Small Talk and C++. [15]
7. Explain exception propagation and exception handling in C++ with illustrative examples. [15]
- 8.a) Write down the applications of logic programming.
- b) Explain the pragmatics of scripting languages. [7+8]

---oo0oo---