

Code No: 155CX**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech III Year I Semester Examinations, March - 2021****PRINCIPLES OF PROGRAMMING LANGUAGES****(Common to CSE, IT)****Time: 3 Hours****Max. Marks: 75**

Answer any five questions
All questions carry equal marks

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- 1.a) What are the various language evaluation criteria and the characteristics that affect them? Discuss.
- b) Explain about various programming domains and their features. [7+8]
- 2.a) Write BNF and EBNF versions of an expression grammar.
- b) Explain in detail about attribute grammars with examples. [8+7]
- 3.a) Distinguish between name type compatibility and structure type compatibility.
- b) Discuss the design issues of multiple selection constructs. [8+7]
- 4.a) What is a short-circuit evaluation? How does operand evaluation order interact with functional side effects?
- b) Explain the design issues of subprograms and operations. [7+8]
- 5.a) Write about parameterized abstract data types with an example in C++.
- b) What are the language design requirements for a language that supports abstract data types? [8+7]
- 6.a) Why were imperative features added to most dialects of LISP? Discuss.
- b) Explain in detail about exception handling in Ada. [7+8]
- 7.a) What are the applications of functional programming? Explain.
- b) What are the features of Prolog? Discuss the basic elements of Prolog. [7+8]
- 8.a) Write the key concepts of scripting languages and explain them.
- b) Differentiate between procedural abstraction and data abstraction with examples. [7+8]

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