

R09**Code: 9A05501**

B.Tech III Year I Semester (R09) Supplementary Examinations December 2015

PRINCIPLES OF PROGRAMMING LANGUAGES

(Common to CSE & ECC)

Time: 3 hours

Max Marks: 70

Answer any FIVE questions

All questions carry equal marks

- 1 (a) Explain the fundamental features of object oriented programming languages.
(b) What do you mean by abstraction? Explain two different types of abstraction with examples.
- 2 (a) Compute the weakest precondition for each of the following assignment statements and their post conditions: (i) $a = 2 * (b - 1) - 1$ { $a > 0$ }
(ii) $b = (c + 10) / 3$ { $b > 6$ }
(b) Describe EBNF with examples.
- 3 Explain in detail about static type binding and dynamic type binding in various languages? What are the disadvantages of dynamic type binding?
- 4 Explain in detail about multiple selection constructs and their design issues.
- 5 (a) What are the design issues for functions?
(b) What are the two issues that arise when subprogram names are parameters?
(c) What are co-routines? In what ways co-routines different from conventional subprograms?
- 6 (a) What are two categories of concurrency? What is the need for studying concurrency?
(b) What is task synchronization? Explain in detail two kinds of task synchronization with examples.
- 7 (a) Discuss about standard functions in Prolog.
(b) Explain various design issues that are involved in exception handling.
- 8 (a) Give brief description about the pragmatics of the scripting languages.
(b) What is lazy evaluation? Explain it with an example.
