

G 1345

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Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, MAY 2016

Seventh Semester

Branch : Computer Science and Engineering

CS 010 705—PRINCIPLES OF PROGRAMMING LANGUAGES (CS)

(New Scheme—2010 Admission onwards)

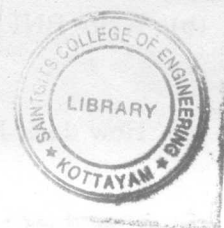
[Improvement/Supplementary]

Time : Three Hours

Maximum : 100 Marks

Part A

*Answer all questions.
Each question carries 3 marks.*



1. Explain the role of programming languages in computational science.
2. With an example, explain the concept of strong type checking.
3. Explain the Boolean concept in C programming language.
4. Explain design issues in local referencing environment.
5. Explain the differences between programming and scripting.

(5 × 3 = 15 marks)

Part B

*Answer all questions.
Each question carries 5 marks.*

6. With an example, explain the concept of binding.
7. With example, explain the implementation of scope of a variable.
8. Explain the implementation aspects of selection statement.
9. Explain the design issues of recursive functions in programming languages.
10. Explain the exception handing mechanism in C++.

(5 × 5 = 25 marks)

Part C

*Answer all questions.
Each full question carries 12 marks.*

11. (a) Explain the language evaluation criteria. (6 marks)
- (b) What are the advantages of learning different programming languages ? (6 marks)

Or

Turn over

12. (a) What do you mean by implementation of a programming language ? Explain. (6 marks)
 (b) Why do we require type declaration in compiled languages ? (6 marks)
13. (a) What is a user defined data type ? Explain how user defined data types are specified and implemented in programming languages. (6 marks)
 (b) Explain the concept of coercion and implementation strategies. (6 marks)

Or

14. (a) With a neat diagram, explain the heap storage management. (6 marks)
 (b) Explain the Pros and Cons of weak type checking. (6 marks)
15. (a) Explain the concept of guarded commands with an example. (6 marks)
 (b) Write BNF notation for *if else* statement in C. (6 marks)

Or

16. (a) How does Java support relational and Boolean expressions ? Explain with examples. (6 marks)
 (b) How does compilers handle arithmetic expressions in programming languages ? (6 marks)
17. (a) Explain user defined and overloaded operators. (6 marks)
 (b) Explain the implementation of parameter passing methods in C programming language. (6 marks)

Or

18. (a) What are the design issues for virtual functions in C++ ? (8 marks)
 (b) In what ways are coroutines different from conventional subprograms ? (4 marks)
19. (a) Explain the structure of activation records and the method of control transfer due to function calls. (6 marks)
 (b) Write a recursive program for computation of factorial and explicate the working by drawing activation records for calls. (6 marks)

Or

20. Write short note on following :—

- (a) Scripting ; (b) Logic programming ;
 (c) Compilers ; (d) LISP.

(4 × 3 = 12 marks)
 [5 × 12 = 60 marks]

