



**RM-6545**

**B. E. - II (I.T.) (Sem. IV) Examination**

**May / June - 2010**

**Principles of Programming Languages**

Time : 3 Hours]

[Total Marks : 100

**Instructions :**

(1)

नीचे दृश्यावलोकन निशानावाणी विगतो उत्तरवडी पर अवश्य लखवी.  
Fillup strictly the details of signs on your answer book.

Name of the Examination :  
B. E. - 2 (I.T.) (Sem. 4)

Name of the Subject :  
Principles of Programming Languages

Subject Code No. : 6 5 4 5 Section No. (1, 2,.....): 1&2

Seat No. :

Student's Signature

- (2) Use separate answer sheet for each section.  
(3) Make assumptions wherever required.  
(4) Numbers on the right side indicate marks.

**SECTION - I**

- 1 (a) Answer the following : 10
- (1) Define association.
  - (2) Type checking may be done at \_\_\_\_\_ time or at \_\_\_\_\_ time.
  - (3) If automatic conversion from short int-->long int is performed, such coercions are called \_\_\_\_\_ or \_\_\_\_\_.
  - (4) Define Garbage.
  - (5) A common alternative to the strict hardware realization of a computer is \_\_\_\_\_ (firmware computer).
  - (6) Define copy rule.
  - (7) If we can detect all type errors dynamically in a programm, it is said to be strongly typed.  
True/False
  - (8) Define aliases of data object.
  - (9) Define dangling references.
  - (10) \_\_\_\_\_ represents a container for data value.

- (b) Explain imperative languages and rule-based languages. 6
  - (c) Describe various reasons to study a programming language. 4
- 2 (a) Describe various parameter transmission mechanisms. 8
- (b) Explain stack-based storage management. 7

**OR**

- 2 (a) Explain simple call-return structure of subprograms. 8
- (b) Explain major run-time elements which require storage management. 7
- 3 Answer any three : 15
- (a) Explain prime program and composite program.
  - (b) Explain Implicit and Explicit sequence control.
  - (c) Write short note on : Coroutines.
  - (d) Explain Recursive subprograms.

### SECTION - II

- 4 (a) State True or False : 10
- (1) Java is a pure Object Oriented Programming language.
  - (2) >> operator can be overloaded.
  - (3) It is not possible to make user defined object in C++.
  - (4) Friend function is a member function of a class.
  - (5) Inline function can speed up program's execution time.
  - (6) Java is a portable language.
  - (7) It is not possible to overload = operator.
  - (8) Constructor is called in reverse order of object creation.
  - (9) Static variables are used to maintain the value throughout a program.
  - (10) It is possible to make generic class using template.
- (b) Explain Public and Private inheritance with code snippets. 10
- 5 (a) Write a program to explain generic class using template. 8
- (b) Using a code snippet, explain the use of static variable and static function. 7

**OR**

- 5 (a) Write a C++ program to create a class weight containing integers kg and Gms. Convert the weight object into total kg using 'operator'. 8
- (b) Using a code snippet explain virtual base class. 7
- 6 Answer any three : 15
- (1) With a program, explain the use of 'friend' function as a bridge between two classes.
  - (2) With command line arguments emulate DOS COPY command.
  - (3) Explain virtual function with an example.
  - (4) Write a short-note on Java.
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