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SF-6545

B. E. II (Sem. IV) (IT) Examination

May / June – 2011

Principles of Programming Language (IT 404 IT)

Time : **3** Hours] [Total Marks : **100**

Instructions :

(1)

નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fillup strictly the details of ☛ signs on your answer book.

Name of the Examination :

☛ B. E. 2 (SEM. 4) (IT)

Name of the Subject :

☛ PRINCIPLES OF PROGRAMMING LANGUAGE (IT 404 IT)

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

Seat No. :

Student's Signature

(2) Use separate answer sheet for separate section.
(3) Make assumption whenever required.
(4) Numbers on the right indicate marks.

SECTION - I

1 (a) Answer the following : **10**

(1) A data structure is _____ if all its components are of the same type.

(2) State True of False : Syntax refers to the meaning of the program.

(3) _____ form a way to transfer control from one segment of a program to another.

(4) A _____ is a translator whose object language is actual machine code and whose object language is close to the machine language of an actual computer.

(5) Imperative or _____ are command driven or statement oriented language.

(6) State True or False : Abstraction is part of inheritance.

(7) The term _____ refers to the attribute of being able to combine various features of a language in all possible combinations, with every combination being meaningful.

(8) A _____ is a sequence of statements that may be treated as a single statement in the construction of larger statement.

(9) A _____ is one with a single name but several different definitions, distributed by a different signature.

(10) State True or False : A literal is a data object with a name that is bound to a value permanently during its lifetime.

(b) Discuss Prime Programs. **10**

2 (a) Discuss methods for transmitting parameters. **8**

(b) Write about firmware computer. **7**

OR

2 (a) Write about exceptions and exception handlers. **8**

(b) Discuss referencing environments of subprogram. **7**

3 (a) Explain attributes of good language in detail. **9**

(b) Write about type conversion and coercion. **6**

OR

(b) Discuss storage management. **6**

SECTION - II

4 (a) State True or False : **10**

(1) C++ is a pure object oriented programming language.

(2) >> operator can be overloaded.

(3) Genetic class can be created using templates in C++.

(4) Destructor is called in reverse order of object creation.

(5) Inline function can speed up program's execution time.

(6) C++ cannot be used to make system programs.

(7) It is not possible to overload = operator.

(8) Containership is also called 'Has a' relationship.

(9) Static variables are used to maintain the value throughout a program.

(10) In function overloading, same function name are there in base and derived class.

(b) Explain generic function and generic class with code snippets. **10**

5 (a) Overload operators+, += and = = for a class coordinate containing x and y variables. **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) Write a program to explain containership. **7**

6 Answer any **three** : **15**

(1) With a program, explain the use of 'friend' function as a bridge between two classes.

(2) Explain exception handling with an example.

(3) Explain virtual function with an example.

(4) Write a short - note on C++.
