

**B.Tech. IN COMPUTER SCIENCE AND
ENGINEERING (BTCSEVI)**

Term-End Examination

December, 2013

**BICS-015 : PRINCIPLES OF PROGRAMMING
LANGUAGES**

Time : 3 hours

Maximum Marks : 70

*Note : Attempt any seven questions from the following.
Each question carries equal marks.*

1. (a) Explain the concept of control structures with example. **5x2=10**
(b) Differentiate between data abstraction and data encapsulation.

2. Write a program to find all the prime numbers below 100 by using only for loop. Create another version that only uses while loop. **10**

3. (a) Explain the concept of object oriented programming. **5x2=10**
(b) How is dynamic binding useful in object oriented programming ?

4. (a) What is the concept of operator overloading ? Explain with example. **5x2=10**
(b) Discuss class hierarchy and explain different types of classes.

5. Write short notes on **any two** from the following : 5x2=10
- (a) Recursion in PROLOG
 - (b) Arrays in Java
 - (c) File merging in COBOL
6. Explain the concept of polymorphism and its classification with example. 10
7. (a) What are the key issues with multiple inheritance ? 5x2=10
- (b) Explain the concept of functions in C++.
8. (a) Explain loop type statements in COBOL.
- (b) Explain various types of classes. 5x2=10
9. (a) Explain control structures used in PROLOG.
- (b) Give a brief overview of applicative languages. 5x2=10
10. Write short notes on **any two** from the following : 5x2=10
- (a) Private class vs. protected class.
 - (b) Parameter passing mechanism.
 - (c) Macro expansion in LISP.
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