

**BE - 205 (New)**  
**B.E. I & II Semester Examination, December 2013**  
**Basic Computer Engineering**

*Time : Three Hours*

*Maximum Marks : 70*

**Note:** i) Attempt one question from each unit. ii) All questions carry equal marks.

**Unit - I**

1. a) Describe the role of computers in the following fields:  
i) Bio-Informatics ii) Remote Sensing and GIS
- b) Define operating system? Describe the essential differences between the following types of operating systems:  
a) Batch b) Interactive c) Time-sharing d) Real-time

OR

2. a) Define a register. Write and explain the purpose of different types of registers.
- b) Explain about different types of buses and bus architecture.

**Unit - II**

3. a) What is a flowchart? Draw flowchart to display the greatest number from a given set of natural numbers.
- b) What are the salient features of Object Oriented Programming? Explain.

OR

4. a) What do you understand by Precedence and Associativity of operators? List the operators available in C++ with their associativity and order of preference.
- b) Compare the following:  
i) Procedure Oriented Programming Vs Object Oriented Programming  
ii) Program and function

**Unit - III**

5. a) What are classes and objects? Write a class specifier (along with its constructor) that creates a class student having two private data members: roll no and grade and two public functions init ( ) and display ( ). Write full definitions of member functions and constructor.
- b) What is a constructor? What does it do? Write and explain about different types of constructors with suitable examples.

OR

6. a) Explain the term function overloading. Write overloaded prototypes of volume ( ), a function that returns volumes of different structures. Write three versions; one for cube's volume that takes one float side of the cube, one for cylinder's volume that takes float radius and float height of the cylinder, and one rectangular box's volume that takes float length, float breadth and float height of the box.
- b) Explain the following terms with suitable examples. i) Friend function ii) Virtual function

**Unit - IV**

7. a) What are the goals and applications of computer network? Explain.
- b) Explain the working of following network devices. i) Router ii) Bridge

OR

8. a) Describe the following terms with their types. i) Virus ii) worm iii) Malware iv) Trojan
- b) Discuss the following terms:  
i) Interspace ii) Logic bombs iii) Email spoofing iv) Money laundering

**Unit - V**

9. a) Define DBMS. Compare file oriented approach and Database approach.
- b) Explain the following: i) Data independence ii) Architecture of Database system.

OR

10. a) Define the term 'Cloud Computing'. Also explain any one service delivery model.
- b) Describe different types of cloud and write the pros and cons of Cloud Computing.