Bachelor Level / second-semester / Science Full marks: 60 **Computer Science and Information Technology(CSC161)** Pass marks: 24 (Object Oriented Programming) Time: 3 hours Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

Group A

Long answer questions:

Attempt any Two questions:(2x10=20)

1. Write a program according to the specification given below:

   - Create a class Account with data members acc no, balance, and min_balance(static)

   - Include methods for reading and displaying values of objects

   - Define static member function to display min_balance

   -Create array of objects to store data of 5 accounts and read and display values of each object

2. What is meant by type conversion? Define two ways of converting one user defined data type (object) to another user defined object? Write a program that converts object of another distance class with data members feet and inch.(Assume 1m = 3.3 feet and 1cm = 0.4 inch)

3. How ambiguity arises in multipath inheritance? How can you remove this type of ambiguity? Explain with suitable

examples

. Group B

Short answer questions:

Attempt any Eight questions:(8x5=40)

4. What is structured programming? Discuss characteristics and problems associated with structured programming.

5. What is the use of get and getline functions? Explain with suitable examples.

6. What is meant by pass by reference? How can we pass arguments by reference by using a reference variable? Illustrate with examples.

7. What is a constructor? Explain the concept of default and default copy with suitable examples.

8. What is the concept of friend function? How does it violate the data hiding principle? Justify with an example.

9. What is an exception? Why is exception handling better to use? Explain exception handling with try..... catch by using suitable examples.

10. When are class templates useful? How can you define a class that can implement a stack with integers as well as sack of strings? Illustrate with examples.

11. What is meant by stream? Write a program that reads content of file data.txt and displays the content in the monitor.

12. Write short notes on:

   a. Manipulators

   b. Protected Access Specifier