

**BACHELOR OF COMPUTER APPLICATIONS (Pre-revised)
(BCA)**

Term-End Practical Examination

December, 2017

00452

CS-72(P)/S4 : C++ AND OBJECT ORIENTED PROGRAMMING

Time : 2 Hours

Maximum Marks : 100

(Weightage : 15%)

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- Note :**
- (i) *There are two **compulsory** questions in this paper carrying 40 marks each. Rest 20 marks are for viva-voce.*
 - (ii) *You must write appropriate main() function and test your programs.*
 - (iii) *Write/print your programs, input and results on your answer-sheet.*
 - (iv) *Make and state suitable assumptions, if any.*
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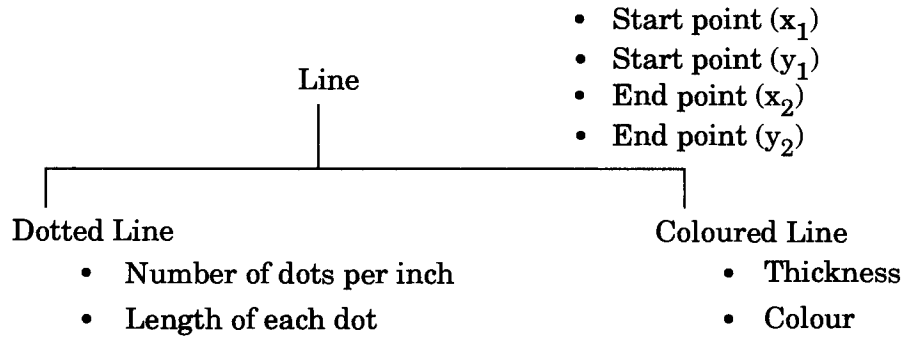
1. Design and implement a class "Cuboid" using C++. The class should have the following data members and member functions :
- The data members of the class should include :
 - Length
 - Width
 - Height
 - Member functions of the class should include :
 - (a) A member function that inputs values to the data members of an object.
 - (b) A member function that displays the values stored in the data members of an object.
 - (c) A member function that evaluates the volume of the cuboid and displays this information.

Write appropriate main() function which creates an array of three "Cuboid" objects. The main() function should demonstrate all the functions of the class.

You must enter meaningful data in the objects.

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2. Consider the following class hierarchy along with suggested data members :



Design and implement the classes in the hierarchy using C++. You may add more data members in the classes, if needed. You should include at least one constructor in each class. All the classes should have a member function `line_details()` which displays all the information of that object. You must demonstrate polymorphism using the `main()` and `line_details()` functions.

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