

Object oriented programming using C++**Subject Code: CS 252****B.Tech****Paper ID-A0304**

Time allowed: 03 Hours

Max. Marks: 60

Instruction to Candidates:

1. Section A is compulsory
2. Attempt any four questions from Section B
3. Attempt any two questions from Section C

SECTION A

1. Answer the following questions (10×2=20)
 - a. Define object.
 - b. What is function overloading?
 - c. Describe the importance of destructors.
 - d. What are the advantages of using new operator as compared to the function malloc()?
 - e. What is run time polymorphism?
 - f. What is function template?
 - g. What is output stream?
 - h. What is abstract class?
 - i. What is derived class?
 - j. Explain control structures.

SECTION B(4×5=20)

2. Distinguish between data abstraction and encapsulation.
3. What is constructor? Is it mandatory to use constructors in a class?
4. When do we make a virtual function "pure"? What are the implications of making a function a pure virtual function?
5. What is a file mode? Describe the various file mode options available.
6. What do you mean by information hiding? Explain with an example.

SECTION C(2×10=20)

7.
 - a. What are the different forms of inheritance? Give an example for each.
 - b. Create a base class named Rectangle that includes data members for the length and width of a Rectangle, as well as functions to assign and display those values. Derive a class named Block that contains an additional data member to store height and contains functions to assign and display the height. Write a main() function that demonstrates the classes by instantiating and displaying the values for both a Rectangle and a Block.
8. What is generic programming? Write a function template for finding the minimum value contained in an array.
9. Write a program that reads a text file and creates another file that is identical except that every sequence of consecutive blanks are replaced by a single space.