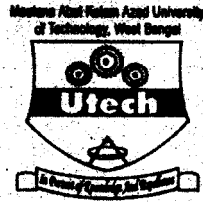


CS/BCA/EVEN/SEM-4/BCA-402/2015-16



**MAULANA ABUL KALAM AZAD UNIVERSITY OF
TECHNOLOGY, WEST BENGAL**

Paper Code : BCA-402

OBJECT ORIENTED PROGRAMMING WITH C++

Time Allotted : 3 Hours

Full Marks : 70

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own
words as far as practicable.*

GROUP - A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for the following :

10 × 1 = 10

- i) Reuse of function is also called
- a) Method overriding b) Function overloading
c) Function overriding d) None of these.
- ii) The argument of a copy constructor is passed by
- a) value b) reference
c) pointer d) both (a) and (b).
- iii) We can overload a destructor – it is
- a) true b) false
c) can't say d) none of these.

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- iv) which of the following operators can be overloaded ?
- a) . (dot) b) ::
c) % d) ? :
- v) A template provides a convenient way to make a family of
- a) variables b) function
c) classes d) programs.
- vi) A friend function can be called
- a) directly
b) like a general function
c) by using the object of the class
d) should not be called.
- vii) In an abstract class, we can create objects
- a) true b) can't say
c) false d) none of these.
- viii) Class A : public B, Public C
Is an example of what kind of inheritance ?
- a) Single b) Multiple
c) Hierarchical d) Multilevel.
- ix) A pure virtual function is a virtual function with which one of the following ?
- a) Complex structures b) No syntax error
c) No body d) None of these.
- x) Static members are initialized to
- a) 0 b) 1
c) garbage d) none of these.

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GROUP - B

(Short Answer Type Questions)

Answer any *three* of the following $3 \times 5 = 15$

2. When do we make a virtual function 'public' ? What are the implications of making a function pure virtual function ?
3. Bring out the difference between classes and structure in C++.
4. What is pointer arithmetic ? How is it performed ? Support your answer with an example.
5. Neatly explain constructor and destructor with suitable examples.
6. What is manipulator ? What do you mean by type cast operator ? What is copy constructor ?

GROUP - C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

7. a) What is operator overloading ?
b) Define a class string. Use overload + operator to concatenate two strings. $5 + 10$
8. a) What is Template ? What is function template ? Write a program showing the use of function template ?
b) What is pointer ?
9. a) What is static data member ? Explain with the help of an example.
b) What are the different forms of inheritance ? Give an example for each. $7 + 8$

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10. a) What is the difference between opening a file with a constructor function and opening a file with `open ()` ? When is one method preferred over the other ?
- b) Write a program that reads a text file and creates another file that is identical to it. 7 + 8

11. Write short notes on any *three* of the following :

3 × 5 = 15

- a) Scope resolution operator
 - b) Exception handling
 - c) Abstract class
 - d) Stream.
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