

SUBJECT : PAPER-305

OBJECT ORIENTED PROGRAMMING

SECOND YEAR B.C.A. (SEM. III) EXAMINATION

This pdf file contains 2013 to 2019 (Regular & ATKT) Years question Papers list of above subject.

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Second Year B.C.A. (Sem. III) Examination

October / November – 2013

Object Oriented Programming: Paper-305

[Time: 3 Hours]

[Total Marks: 70]

Instructions

(1)

<p>Fill up strictly the details of signs on your answer book</p> <p>Name of the Examination: <input type="checkbox"/> Second Year B.C.A. (Sem. III)</p> <p>Name of the Subject : <input type="checkbox"/> Object Oriented Programming: Paper-305</p> <p>Subject Code No: <input type="checkbox"/> 3 <input type="checkbox"/> 7 <input type="checkbox"/> 3 <input type="checkbox"/> 4</p>	<p>Seat No.:</p> <table border="1"><tr><td><input type="text"/></td><td><input type="text"/></td><td><input type="text"/></td><td><input type="text"/></td><td><input type="text"/></td><td><input type="text"/></td></tr></table> <p><input type="text"/></p> <p>Student's Signature</p>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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- (2) Give appropriate example, when require.
- (3) Do not change options.

Q.1. Answer any seven :

14

- (1) Explain each function for manipulation of file pointers.
- (2) Define the read() and write() function for reading binary file.
- (3) Which methods cannot call through an object ?
- (4) How getline () works.
- (5) What is dynamic constructor ?
- (6) What are the rules for Unary Operator Overloading Using Friend ?
- (7) When and how inline function can be used ?
- (8) How to print the trailing zeros using ios function and manipulators.

Q.2. Do as directed : **14**

(a) Explain pure virtual function? When it is necessary? **7**

Explain rules of pure virtual function.

(b) Explain the execution of base class constructors for **7**
multilevel and multiple Inheritance.

OR

(a) In which circumstances function can be made friend ? **7**

Write the advantage of friend function.

(b) What do you mean by overloading of an operator? How many arguments are **7**
needed for overloading unary operator and why ?

Q.3 Answer the following **14**

(a) What are the different methods on open a file ? Explain with proper example **5**

(b) Explain the different between call by value and call by reference. **5**

(c) Explain exception handling. **4**

OR

Q.3. (a) When we can we use virtual base class and how it is different **5**

From virtual function.

(b) Explain static data and static member function with proper example. **5**

(c) How do the properties of following class differ ? **4**

Class D1 : protected B, private C {}

Class D2 : private B, public C {}

Q.4 Do as directed : (any two) **14**

(a) Explain memory management operators. Point out reason

Why using new is better than using malloc().

- (b) Explain constructor? What is the significance of dynamic constructor?
- (c) Design the single manipulators to provide the following output specification for printing the float values
1. 11 column width
 2. 2 digit precision
 3. Left justified
 4. Filling Unused space with '+'
 5. Display the trailing zeroes & also + sign

Q.5. Answer any two :

14

- (a) Define a class to represent a bank account for handling for 10 Customers which consist of Name of depositor, account number. Type of account, balance amount. Write a program to perform The following operations.

- i. To assign initial values
- ii. Overload '+' operator to deposit an amount
- iii. Overload '-' operator to withdraw amount (after checking minimum balance)
- iv. To display all customer having balance $\geq 25,000$

- (b) Consider a class BCA which contain information about the entire Student (rollno, name, semester, total mark and percentage.) Transfer the records from this file to another file called SYBCA for the students having the semester field value 3 and display all the Records in the file SYBCA.

- (c) Write a program that consist of two classes time12 and time24. The First one maintenance time (hour and minute) on 12 hour basic, Whereas the other one maintains it on 24 hours basic. Provide Conversion functions to carry out the conversion from object of one Type to another.

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Q.1 Answer any seven :

14

1. Define this pointer.
2. Which operator cannot be overloaded as member and friend function ?
3. Explain any four manipulator function.
4. Differentiate between copy and parameterized function.
5. What is visibility modifier ?
6. Which are various methods which cannot call through the object and How to call those methods ?
7. How scope resolution operator used in different ways in object oriented programming ?
8. Define manipulators & which file to be including for it ?
9. Define destructors and when it is called.

1

- Q.2 Do as directed :** **14**
1. Write a program to overload + and == for string. 7
 2. Explain Exception handling with proper example. 7
- OR**
1. Write a program to overload >> and << 7
 2. What is file handling in C++ ? Explain the seekg(), seekp(), tellg() & tellp() with example. 7
- Q.3. Answer the following (Any Two)** **14**
1. List out the OOPS concepts. Explain the data abstraction and encapsulation with example.
 2. Write a program to convert time duration in terms of minutes to TIME class where TIME class contains hours and minutes.
 3. Which are the different types of constructor? Explain with example for multiple inheritance.
- Q.4. Answer the following (Any Two)** **14**
1. Explain compile time and runtime polymorphism.
 2. Explain object as function argument and returning object.
 3. Explain types of inheritance with example.
- Q.5 Answer any two :** **14**
1. Create binary file for class EMP whose data members are eid, name, & salary. Write a program to copy the contents of this file to another File where salary is greater than 5000.
 2. What do you meant by operator overloading. How many arguments Are needed for overloading unary operators & why ? Demonstrate One example of unary operator overloading.

3. Define the syntax for User Define manipulators and create for the Following for float value :
- 12 column width
 - 3 digit precision
 - Left justified
 - Filling unused space with '@'
 - Trailing zeroes shown

Second Year B.C.A. (Sem. III) Examination

October / November – 2015

Object Oriented Programming: Paper-305

(New & Old)

[Time: 3 Hours]

[Total Marks: 70]

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Object Oriented Programming: Paper-305

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Q.1 Answer the short :

10

1. What is the use of destructor? How is it created?
2. What is abstract class? What is use of it?
3. Give the difference between tellp() and tellg() function in random access file?
4. When to make function as inline?
5. What is the use of new operator?
6. What is containership?
7. Explain any two manipulator functions with example.
8. Which method cannot call through an object?
9. What are the advantages of cin and cout compared to printf and scanf?
10. What are the uses of scope resolution operator?

- Q.2 Do as directed :** **15**
- (A) List out the features of Object Oriented Programming. Explain any two of them. **8**
- (B) What do you mean by object as function argument? Explain pass by value and pass by reference with example **7**
- OR**
- (A) Explain constructor. Explain parameterized and default constructor with example. **8**
- (B) What is hybrid inheritance? How ambiguity in hybrid inheritance can be removed? **7**
- Q.3 Answer the following : (Any Two)** **15**
- (A) Explain exception handling with proper example.
- (B) Why we have to make the function as 'friend'? Write the advantages of friend function.
- (C) When we can use virtual base class? How is it different from virtual function?
- Q.4 Do as directed :** **14**
- (A) What are the different methods to open a file? Explain with proper example. **5**
- OR**
- (A) Explain READ() and Write() function with example. **5**
- (B) Write down the syntax for user defined manipulators. **5**
- Design a single manipulator to provide the following output specifications for printing float values :
1. 10 column width
 2. 2 digit precision
 3. Left justified
 4. Filling unused spaces with
 5. Trailing Zeros
- (C) Explain memory management operators with example. **5**

Q.5 Answer any two :

15

- (A) Write a menu driven program to Create class Employee containing member variables like eno, name, and salary.
- Save data into file
 - Retrieve data from file
 - Give increment to employee (Make use of Overload + operator)
- (B) Define a class to represent a bank account for handling for 10 customers which consist of Name of depositor, Account number, Type of account, Balance amount. Write a program to perform the following operations :
1. To assign initial values
 2. Overload '+' operator to deposit an amount
 3. Overload operator to withdraw amount (checking minimum balance)
 4. To display all customers having balance > 15000
- (C) Design two classes to support following type conversions :
- Rupee R;
Dollar D;
D = R; Converts Rupee to dollar
- Write a program to carry out this conversion.

Second Year B.C.A. (Sem. III) Examination

October / November – 2016

Object Oriented Programming: Paper-305

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Q.1 Answer any Ten :

10

1. What is dynamic binding ?
2. What is an abstract class ?
3. What is reference variable ?
4. The two major component of object are ____ and ____ .
5. List out the operators that cannot be overloaded.
6. What is the difference between private and protected visibility modes ?
7. What is stream ?
8. State the difference between ios::app and ios::ate mode.
9. Explain the limitation of inline function.
10. What is difference between 'delete a' and 'delete []a' ?
11. State difference between *showpos* and *showpoint*.

Q.2 Do as directed : **15**

- (A) Explain different visibility modes with example. 7.5
- (B) List Out basic concepts of OOP. Explain two in brief. 7.5

OR

- (A) List out memory management operators. Point out reasons why Using new is better idea than using malloc() ? 7.5
- (B) Explain array of objects with example. 7.5

Q.3 Do as directed : **15**

- (A) What is conversion function ? Explain with example.
- (B) Define constructor. Explain parametrized constructor with example.

OR

- (A) In which circumstances function can be made as Friend ? Write the advantage of friend function. Demonstrate one example of friend function. 7.5
- (B) What is inheritance? Explain multilevel inheritance with example. 7.5

Q.4 Attempt any Two : **15**

- (A) Differentiate between unary and binary operator overloading.
- (B) Explain different file opening modes.
- (C) Define run time errors: Explain run time error in detail.
- (D) How runtime polymorphism is achieved in C++ ? Explain with example.

Q.5 Answer any two : **15**

- (A) Create a class with at least two data members. Write a program in C++ to overload >> and << operator.
- (B) Write a C++ program to consider Rollno, Name and Marks in C++ as data members. Take suitable member functions which provide functionality of input and display data. Class should capable to keep information for 5 students.

(C) Design single manipulators to provide the following output specification for printing float value :

1. 10 column width
2. 3 digit precision
3. Left justified
4. Filling unused space with '#'
5. Display the trailing zeros
6. Display sign of number.

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Q.1 Answer any seven :

10

1. Difference between private and protected access modifier.
2. Which operators are ad on only one operand.
3. Sharing of common information in OOP is achieved by the concept of _____ .
4. What is polymorphism?.
5. Explain pointer to object?.
6. What is the use of destructor? How is it created?.
7. Explain use of late binding.
8. Explain fill () function?.
9. What is the use of this pointer?
10. List out the disadvantages of in-line function.
11. List out the operators which are not overloaded;

Q.2 Do as directed : **15**

(A) What do you mean by constructors in derived classes? **8**

If constructor function in derived and base class, then which constructor function get executed explain with an example?

(B) What do you mean by containership? How it differ from inheritance? **7**

Explain with an proper example.

OR

(B) In which circumstances function can be made as friend? Write the advantage of friend function. Demonstrate one example of friend function. **7**

Q.3 Do as directed : **15**

(A) What do you mean by inheritance? List out the types of inheritance. **8**

Explain how to remove ambiguity in the case of hybrid inheritance?

(B) When we can use virtual base class? How different from virtual function? **7**

OR

(B) Explain compile time polymorphism with an example. **7**

Q.4 Attempt any Three : **15**

(A) Compare object oriented programming and procedure oriented programming.

(B) What do you mean by file mode? Explain various file modes in file handling.

(C) What are Manipulators? How you can create your own manipulator?

Explain with an example.

(D) Explain exception handling with an example.

Q.5 Answer any two :

15

- (A) Write a program to define String class use Overload == operator to two string.
Use + operator to concatenate two strings. Use = operator to copy one string to another string.
- (B) Explain different visibility modes with example.
- (C) Create a class EMP which contains data members Name of employees, Emp No. and Basic Salary. Take appropriate member function and get data into class then after write data into data file. All EMP INFO display the information of all employees of a file. Use read and write function for a file.
- (D) What is destructor? How destructor gets called? Also describe the importance of destructor.

Second Year B.C.A. (Sem. III) Examination

November / December – 2018

Object Oriented Programming: Paper-305

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- (2) Give appropriate example, when require.
- (3) Do not change options.

Q.1 Answer any Ten :

10

1. What do you mean by function overloading ?
2. List out the operators which are not overloaded during operator overloading.
3. List out the application of object oriented programming.
4. Define pure virtual function.
5. What is 'this' pointer?
6. State the difference between ios::app and ios::ate mode in data file.
7. What are the characteristic of static data member?
8. List out the advantages of binary file.
9. What are the advantage of cin and cout over scanf and printf respectively?
10. What do you mean by Exception?
11. What is the meaning of "IS-A" and "HAS-A" relationship?

Q.2 Do as directed : **15**

- (A) Explain Inline function. In which circumstances function can make inline? **8**
Explain with example. Discuss advantages and disadvantages of it.
- (B) What is constructor? Explain copy constructor with an example. **7**

OR

- (A) What is static keyword? Explain static data member & static member function. How static member functions are called? **8**
- (B) Explain visibility modifier with proper example **7**

Q.3 Do as directed : **15**

- (A) What is Inheritance? List out the types of Inheritance. Explain Multilevel inheritance with an example. **8**
- (B) What is operator overloading? Write any seven rules for operator overloading. Explain binary operator overloading with an example. **7**

OR

- (A) In which circumstances function can be made as friend? Write the advantage of friend function. Demonstrate one example of friend function. **8**
- (B) Explain class to another class type conversion with an example. **7**

Q.4 Do as directed : **15**

- (A) What do you mean by Exception handling? Explain Exception Handling Mechanism with example. **8**
- (B) What do you mean by polymorphism? Explain run time polymorphism with an example. **7**

OR

- (A) What is Object Oriented Programming? Write the difference between OOP and POP. **8**

- (B) What is manipulator? Explain inbuilt and user defined manipulators with example. 7

Q.5 Answer any two :

15

- (A) List out types of inheritance in C++. When ambiguity occur in inheritance. Demonstrate how ambiguity remove from inheritance.
- (B) Create a class EMP which contains a data members Name of employees, EmpNo and Basic Salary Take appropriate member function and getdata into class then after write data into data file. All EMP INFO display the information of all employees of a file. Use read and write function for a file.
- (C) Write a program to define String class use Overload == operator to compare two string. Use + operator to concate two string. Use = operator to copy one string to another string.
- (D) Explain pure virtual function with an example.

Second Year B.C.A. (Sem. III) Examination

October / November – 2019

Object Oriented Programming: Paper-305

[Time: 3 Hours]

[Total Marks: 70]

Instructions

Subject Code No: 1911000103050001

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Q.1 Answer in Short (Any Ten) :

10

- 1 List the operators which cannot be overloaded.
- 2 What is the use of 'this' pointer?
- 3 What is the use of 'Protected' over 'Private' modifier?
- 4 State the difference between ios::in and ios::out.
- 5 What is containership?
- 6 What is the use of 'new' operator.
- 7 List out the operator which cannot be overloaded using member function
- 8 What is the use of tellg() and tellp() in file handling.
- 9 What is the use of scope resolution operator.
- 10 What is the use of destructor and when it is called?

- Q.2 Do as directed :** **15**
- (A) Explain any three concepts of Object oriented programming in detail. **8**
- (B) Explain the procedure to handle the exceptions **7**
- OR**
- (A) What is Inheritance? Explain different types of inheritance in brief **8**
- (B) Explain copy constructor with proper example. **7**
- Q.3 Answer the following : (Any Two)** **15**
- (A) Write note on data abstraction and encapsulation.
- (B) What is the use of friend function? Write all rules with example.
- (C) Explain the use of static data members and static functions with example
- Q.4 Answer the following : (Any Two)** **15**
- (A) Explain different methods of opening a file during file handling.
- (B) Write down the syntax for user defined manipulators . . Write a single manipulator to provide the following output numeric values
1. 12 column width
 2. 2 digit precision
 3. Left alignment
 4. Filling unused spaces with '*'
 5. Display value in internal representation
- (C) What is dynamic binding? Explain it with proper example.

Q.5 Do as directed : (Any two)

15

- (A) Write a menu driven program in C++ to create a class "Emp" containing member variables like eno, name and salary and perform following action:
1. Save data into the file
 2. Retrieve data from the file
 3. Give increment to employee who has salary > 10000.
- (B) Create a class Hospital which holds data members like (Patient_id, Patient name, Doctor name, Room_no, Bed_no). Write a operator function '+' when patient admits and operator Function '-' when patient discharge.
- (C) Create two class Kilometer and Meter to support following type Conversion. Perform k=m which converts meter to kilometer. Write a program to carry out this conversion operation.

Jump2Learn

Second Year B.C.A. (Sem. III) Examination

March / April – 2013

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- (2) Give appropriate example, when require.
- (3) Do not change options.

Q.1 Answer any seven :

14

1. List types of inheritance.
2. What do you mean by pure virtual function ? When it is required ?
3. What is Constructor with default argument ?
4. What is the advantage of new over malloc () ?
5. What is function overriding ?
6. Explain tellg() and seekp ().
7. What is Dynamic Binding ? Advantage of it.
8. Explain Visibility modes.
9. What is an Exception ?

Q.2 Do as directed : 14

(A) List out features of object oriented programming. Explain any two of them. 7

(B) How many arguments are required in the definition of an overloaded unary operator ? Why ? 7

OR

(A) What do you mean by overloading of an operator ? Why it is necessary to overload an operator. 7

(B) How do the properties of following two derived class differ? 7

(i) Class D1 : private B, public C { }

(ii) Class D2 : Protected B, private C { }

Q.3 Do as directed : 14

(A) What is constructor ? Explain copy constructor and parameterized constructor. 7

(B) What is containership ? How it differs from inheritance? 7

OR

(B) List memory management operators. Explain them in brief. Why new is better than malloc () ? 7

Q.4 Do as directed : 14

(A) Differentiate between overloading and overriding. Explain the concept of overriding with example. 7

(B) What is inheritance ? Explain multiple and multilevel inheritance. 7

OR

Q.4 Do as directed : 14

(A) Write a note on data abstraction and encapsulation. 7

(B) What is ambiguity in hybrid inheritance ? How ambiguity remove from Compile time ? Explain with example. 7

Q.5 Answer any two :

14

- (A) Write down the syntax for user defined manipulators. Design a single manipulator to provide the following output specification to print float values in following format.
- (i) 8 column width
 - (ii) 3 digit precision
 - (iii) Right justified
 - (iv) Filling unused spaces with '+'
- (B) Design two classes to support following type conversion.
Rupee R;
Dollar D;
D = R; Converts Rupee to dollar
Write a program to carry out this conversion
- (C) What is file mode ? Describe the various file mode options available.

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March / April – 2014

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- (2) Give appropriate example, when require.
(3) Do not change options.

Q.1 Answer any seven :

14

1. What is the syntax of derived constructor?
2. What is abstract class & when it is used?
3. Which methods cannot call through an object?
4. List out the operators where friend cannot be used.
5. Explain copy constructor.
6. Explain default arguments with example.
7. What are the characteristic of static data member?
8. What are the rules for the Binary operator overloading using friend?

Q.2 Do as directed : **14**

- (A) What is file mode? Explain various file modes. 7
- (B) What is inheritance? Explain multilevel and multiple with example. 7

OR

- (A) List out the features of Object Oriented Programming. 7
Write a note on encapsulation and polymorphism.
- (B) What is constructor? Explain parameterized and copy constructor with proper example. 7

Q.3 Answer the following : **14**

- (A) What is type conversion? Explain basic to class type with proper example. 5
- (B) How to access the member if inheritance is private ? 5
- (C) Explain read() and write() function of binary file. 4

OR

Q.3 Answer the following : **14**

- (A) What is Polymorphism? Differentiate between Compile time and Runtime Polymorphism. 5
- (B) Explain try and catch block with proper example. 5
- (C) Explain following function with proper example width(), fill(), precision(), open() 4

Q.4 Do as directed : (Any two) **14**

- (A) What is containership? Explain how it is different from inheritance.
- (B) Explain static data and static member function with proper example.

(C) Design the single manipulators to provide the following output

specification for printing the float values:

- (i) 12 column width
- (ii) 2 digit precision
- (iii) Right justified
- (iv) Filling Unused space with '\$'
- (v) Display the trailing zeros and also + sign

Q.5 Answer the following : (Any two)

14

- (A) Create a binary file for some organization contain the information of Emp_id, name, Basic, HRA, DA, Net Salary. Write a program to copy the content of this file to another file where the Net Salary is greater than 10,000.
- (B) Write a program to overload the == and += operator (String object).
- (C) Create a class POUND that store that data in pound and class RUPEES that store the data in rupees. Perform the operation from pound to rupees.

Jump2Learn

Second Year B.C.A. (Sem. III) Examination

March / April – 2015

Object Oriented Programming: Paper-305

[Time: 3 Hours]

[Total Marks: 70]

Instructions

(1)

<p>Fill up strictly the details of signs on your answer book</p> <p>Name of the Examination: <input type="checkbox"/> Second Year B.C.A. (Sem. III)</p> <p>Name of the Subject : <input type="checkbox"/> Object Oriented Programming: Paper-305</p> <p>Subject Code No: <input type="text" value="3"/> <input type="text" value="7"/> <input type="text" value="3"/> <input type="text" value="4"/></p>	<p>Seat No.: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p><input type="text"/></p> <p>Student's Signature</p>
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Q.1 Answer any seven :

14

1. How scope resolution operator used in different ways in object oriented programming?
2. Which operator cannot be overloaded as member and friend function?
3. Which are the different methods to open the file?
4. Define static data member & function.
5. What is function overloading?
6. Which are the various methods which cannot call through the object and how to call those methods?
7. Differentiate between seekg() and seekp().
8. When to make function as inline?
9. How the constructor is called in multilevel inheritance?

Q.2 Do as directed : **14**

- (A) In which circumstances function can be made as friend? Write the advantage of friend function. Demonstrate example of friend function. 7
- (B) Differentiate between call by value and call by reference with example. 7

OR

Q.2 Do as directed : **14**

- (A) Explain exception handling mechanism. 7
- (B) Explain ambiguity for hybrid inheritance with example. 7

Q.3 Answer the following : (Any Two) **14**

- (A) What is constructor? Explain copy and parameterized constructor.
- (B) How do the properties of following two derived class differ:
- (i) Class D1 : private B, public C { };
 - (ii) Class D2 : protected B, private C { };
- (C) Write a program to convert time duration in terms of minutes to TIME class where TIME class contains hours and minutes.

Q.4 Do as directed : (Any two) **14**

- (A) Differentiate between multilevel and multiple Inheritance.
- (B) Explain object as function argument and returning object.
- (C) Differentiate between Unary and Binary operator overloading.

Q.5 Answer the following : (Any two)

14

Create binary file for class student whose data members are studies.

- (A) name, total and percentage write a program to copy the contents of this file to another file whose percentage is less than 50
- (B) Write a program to convert dollar to rupees using class to class conversion technique.
- (C) Define user define manipulator. Explain purpose of manipulators.

Create User Define Manipulators for the following

- 15 column width
- 4 digit precision Left justified
- Filling unused space with '+'
- Trailing zeros shown

Jump2Learn

Second Year B.C.A. (Sem. III) Examination

March / April – 2016

Object Oriented Programming: Paper-305

(NEW & OLD COURSE)

[Time: 3 Hours]

[Total Marks: 70]

Instructions

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Second Year B.C.A. (Sem. III)

Name of the Subject :

Object Oriented Programming: Paper-305

Subject Code No:

Seat No.:

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Student's Signature

Q.1 Answer in short :

10

- (1) Explain copy constructor.
- (2) Differentiate between seekp() and seekg().
- (3) Define static data member and function.
- (4) What is the advantage of new over malloc ?
- (5) What is manipulators ?
- (6) What is the use of 'protected' modifier ?
- (7) Explain different method to open a file.
- (8) What is the use of SHOWPOINTFLAG ?
- (9) What is the use of 'this' pointer ?
- (10) What is containership ?

- Q.2 Do as directed :** **15**
- (A) What is inheritance ? What is multiple and multilevel inheritance? **8**
Explain with example.
- (B) What is constructor? How do we call a constructor? **7**
- OR**
- Q.2 Do as directed :** **15**
- (A) What is object oriented programming ? How it is differ from procedure oriented programming ? **8**
- (B) What is containership ? How it is differ from inheritance ? **7**
Explain with example.
- Q.3 Answer the following : (Any Two)** **15**
- (A) What is visibility modifier? List them. Differentiate with proper example.
- (B) What is file mode ? Explain various file modes.
- (C) What is overloading of an operator ? When it is necessary to overload an operator ?
- Q.4 Do as directed :** **14**
- (A) Why do we have to make the function as 'friend' ? **5**
Write the advantages of friend function.
- OR**
- (A) Explain the difference between overloading and overriding. **5**
- (B) Explain inline function with example. **5**
- (C) What do you mean by default argument ? When it is useful ? **5**

Q.5 Answer the following : (Any two)

14

- (A) Create a class with at least two data members and overload <<and>> operator.
- (B) Write down the syntax for user defined manipulators. Design a single manipulator to provide the following output specification to print float values in following format.
- (i) 8 column width
 - (ii) 3 digit precision
 - (iii) flight justified
 - (iv) Filling unused spaces with '+'
- (C) Create a base class media, declare two data members title and price. Derive two class tape and book from media. Declare virtual function on display in base class media and display details of both books (title, price, page) and tape (title, price, play time) details.

Second Year B.C.A. (Sem. III) Examination

March / April – 2017

Object Oriented Programming: Paper-305

[Time: 3 Hours]

[Total Marks: 70]

Instructions

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Second Year B.C.A. (Sem. III)

Name of the Subject :

Object Oriented Programming: Paper-305

Subject Code No:

Seat No.:

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Student's Signature

Q.1 Answer in short :

10

1. What is static binding ?
2. What is the application of scope resolution operator (::) in C++ ?
3. How does a constant defined by 'const' differ from the constant defined by the preprocessor statement '#define' ?
4. What is Destructor ?
5. List out the operators that cannot be overloaded.
6. What is pure virtual function ?
7. What is the advantage of new over malloc () ?
8. What is the difference between private and protected visibility modes ?
9. What is stream ?
10. State the difference between ios::app and ios::ate mode.
11. What is constructor with default argument ?

Q.2 Do as directed : **15**

(A) Explain function overloading with example. **7.5**

(B) Explain any three concepts of OOP. **7.5**

OR

(A) What is the major use of data members and member functions as static ? Explain it with example. **7.5**

(B) Explain reference variable. Give its application with example. **7.5**

Q.3 Do as directed **15**

(A) Explain constructor with example.

(B) Explain operator overloading with example.

OR

Q.3 Do as directed **15**

(A) What is inheritance ? Explain multiple inheritance example.

(B) What is containership ? How does it differ from Inheritance ? Give example

Q.4 Attempt any two : **15**

(A) Explain Exception handling in C++ with example.

(B) Explain virtual base class with example.

(C) Write a note on data abstraction and encapsulation

(D) Demonstrate virtual base class with example

Q.5 Attempt any two :

15

- (A) Design a classes Rupee and Pound such that they support the followings :
- Rupee R1, R2;
 - Pound P1, P2;
 - P1 = R1 - Converts Rupee to Pound
 - R2 = P2 Converts Pound to Rupee
- Write a program in C++ which carries out conversion operation.
- (B) WAP to maintain telephone directory using Array of objects. Program should provide menu like
1. Entry (Enter a new record)
 2. Search (Search the contact no. of given name, if exists)
 3. Display all entry
 4. Exit
- (C) Design single manipulators to provide the following output specification for printing float value.
1. 15 column width
 2. 4 digit precision
 3. Left justified
 4. Filling unused space with '#'
 5. Display the trailing zeros

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Second Year B.C.A. (Sem. III) Examination

March / April – 2018

Object Oriented Programming: Paper-305

[Time: 3 Hours]

[Total Marks: 70]

Instructions

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Q.1 Answer any seven :

10

- (1) Explain seekg () function with an example
- (2) What is object ? Give one example of it.
- (3) State the difference between ios::app and ios::ate mode.
- (4) What is abstract class ? What is use of it ?
- (5) Which method cannot call through an object ?
- (6) What is the use of destructor ? How is it created ?
- (7) Explain pure virtual function.
- (8) What is containership ?
- (9) What is the difference between private and protected visibility modes ?
- (10) List out the advantages of inline function.
- (11) List out the application of object oriented programming.

- Q.2 Do as directed :** **15**
- (A) List out memory management operators. Point out the reason why using new is better idea than using malloc (). **8**
- (B) Explain different visibility modes with example. **7**
- OR**
- (B) In which circumstances function can be made as friend? Write the advantage of friend function . Demonstrate one example of friend function. **7**
- Q.3 Do as directed :** **15**
- (A) What do you mean by hybrid inheritance ? Explain how to remove ambiguity in the case of hybrid inheritance ? **8**
- (B) When we can use virtual base class? How it is different from virtual function ? **7**
- OR**
- (B) Differentiate between unary and binary operator overloading. **7**
- Q.4 Do as directed : (Any three)** **15**
- (A) Explain exception handling with an example.
- (B) What are the different methods to open a file? Explain with proper example.
- (C) What is Manipulators ? Explain setprecision() and setiosflags().
- (D) What do you mean by constructor ? Explain parameterized constructor with an example.

Q.5 Answer the following : (any two)

15

- (A) Design a Program to create a class student stores the roll no, class test stores the marks obtained in two subjects and class result contains the total marks obtained in the test. The class result can inherit the details of marks obtained in the test and the roll no of student class.
- (B) Differentiate between virtual base class and virtual function.
- (C) Write a program to create a file fruits and vegetable which stores the name Of the fruits and name of the vegetables file. Use get line function and Display the contents of both the file.
- (D) What is truly Object Oriented Programming ? Can we say C++ is truly Object Oriented Programming ? Justify your answer.

Second Year B.C.A. (Sem. III) Examination

March / April – 2019

Object Oriented Programming: Paper-305

[Time: 3 Hours]

[Total Marks: 70]

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Q.1 Answer any Ten :

10

1. Explain tellg() with an example.
2. Difference between binary and text files.
3. List out the operators that are not overloaded by friend function.
4. Explain scope resolution operator.
5. Explain data hiding concept in classes.
6. What is the meaning of "IS-A" and "HAS-A" relationship?
7. Which constructor is called while assigning some object with another?
8. Constructor can't have a return type. True/False
9. Difference between private and protected specifies.
10. Define class and object.
11. Explain seekg() with an example.

- Q.2 Do as directed :** **15**
- (A) List out features of object oriented programming. Explain polymorphism and encapsulation with an example. **8**
- (B) Explain class type to basic type conversion with an example. **7**
- OR**
- (A) How to remove ambiguity occurred in the case of hybrid inheritance? **8**
- (B) Explain memory management operator. Discuss advantages of new over malloc **7**
- Q.3 Do as directed** **15**
- (A) What is friend function? Why we need to write friend function? Explain with example. Discuss its advantages. **8**
- (B) What is destructor? How it is written in C++? When it is called? Differentiate between constructor and destructor with proper example. **7**
- OR**
- (A) Explain virtual base class. How it is differ from virtual function. Explain with proper example. **8**
- (B) Explain default argument and function prototyping with an example. **7**
- Q.4 Do as directed :** **15**
- (A) What do you mean by containership? Differentiate between containership and inheritance with an proper example. **8**
- (B) What is operator overloading? Write any seven rules for operator overloading. Explain unary operator overloading with an example. **7**
- OR**
- (A) What is constructor? Explain parameterized constructor with an example **8**
- (B) Explain read() and write() operation in file with an example **7**
- and also list out various file modes.

Q.5 Answer the following : (any two)

15

- (A) What do you mean by exception handling? Explain Exception Handling Mechanism with example.
- (B) Write a program to create a class student stores the roll_no, class test stores the mark obtained in two subjects and class result contains the total marks obtained the test. The class result can inherit the details of the marks obtained in the test and the roll_no of student class.
- (C) Write a program for creating a class figure & calculate the area of the circle ($\pi * r * r$) with the help of constructor. Get the details from the user & display it.
- (D) Explain the following manipulators with example.
(a) endl (b) setw (c) setprecision (d) setfill (e) setiosflag
