



**RC-3734**  
**Second Year B. C. A. (Sem. III) Examination**  
**March / April - 2017**  
**305 : Object Oriented Programming**

Time : Hours]

[Total Marks : 70

**Instructions :**

(1)

<p>નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી. Fillup strictly the details of signs on your answer book.</p> <p>Name of the Examination : <b>SECOND YEAR B. C. A. (SEM. 3)</b></p> <p>Name of the Subject : <b>305 : OBJECT ORIENTED PROGRAMMING</b></p> <p>Subject Code No. : <b>3 7 3 4</b> Section No. (1, 2,.....) : <b>Nil</b></p>	<p>Seat No. : <div style="display: flex; justify-content: space-around; width: 100px;"><div style="border: 1px solid black; width: 20px; height: 20px;"></div><div style="border: 1px solid black; width: 20px; height: 20px;"></div><div style="border: 1px solid black; width: 20px; height: 20px;"></div><div style="border: 1px solid black; width: 20px; height: 20px;"></div><div style="border: 1px solid black; width: 20px; height: 20px;"></div><div style="border: 1px solid black; width: 20px; height: 20px;"></div></div><div style="border: 1px solid black; border-radius: 10px; height: 80px; margin-top: 10px; display: flex; align-items: center; justify-content: center; padding: 10px;">Student's Signature</div></p>
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- (2) All questions are **compulsory**.
- (3) Figures to the **right** indicate full marks.

1 Answer any ten. 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 ?

- 2** Do as directed : **15**
- (a) Explain function overloading with example. **7.5**
  - (b) Explain any three concepts of OOP. **7.5**

**OR**

- 2** (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**

- 3** Do as directed : **15**
- (a) Explain constructor with example.
  - (b) Explain operator overloading with example.

**OR**

- 3** (a) What is inheritance ? Explain multiple inheritance with example. **7.5**
- (b) What is containership ? How does it differ from Inheritance ? Give example. **7.5**

- 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.

- 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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