11. What do you mean by inheritance ? Give the types of inheritance supported in C++. Write a program in C++ that showing the use of single inheritance. 2½+2½+10

12. Discuss formatted and unformatted I/O operations in stream classes.

13. Write short notes on any two of the following :
    (i) Scope resolution operator
    (ii) Manipulators
    (iii) Generic Classes.

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(21216)   Roll No. ....

B. C. A.-III Sem.

18011

B. C. A. Examination, Dec. 2016

Object Oriented Programming Using C++

(BCA-301)

(New Course)

Time : Three Hours]   *[Maximum Marks : 75*

Note : Attempt questions from all Sections as per instructions.

Section-A

(Very Short Answer Questions)

Answer all the *five* questions. Each question carries 3 marks. Very short answer is required not exceeding 75 words.   3×5=15

1. Explain the terms :
   Class, Exception handling, Call by value.

2. What is the role of friend function in C++ ? Justify your answer with example.

3. What do you mean by encapsulation and how is it implemented in C++ ?

4. Differentiate between Object oriented and Object based programming languages.

5. Name any three library functions and any three preprocessor directives in C++.

Section-B

(Short Answer Questions)

Answer any *two* questions out of the following three questions. Each question carries 7½ marks. Short answer is required not exceeding 200 words. 7½×2=15

6. Describe the different access specifiers in class. Why do we need different access specifiers in class ? 5+2½

7. (a) Write a program in C++ to calculate and display area A and perimeter P of a rectangle R using classes. Given that for a rectangle R of length l and breadth b, area $A= l \times b$ and perimeter $P=2+(l+b)$. 5

   (b) What is static data class ? Explain with example. 2½

8. Explain **for** loop in C++ give the flow diagram, syntax and one example.

Section-C

(Detailed Answer Questions)

Answer any *three* questions out the following five questions. Each question carrie marks. Answer is required in detail. 15×3=45

9. (a) Describe memory manag ent operators **new** and **delete** in C++.

   (b) Two single dimensional a ys A and B contain the elements as follows :

   A[9]=2, 4, 8, 32, 16, 70, 89, 98

   B[6]=3, 7, 9, 30, 35,

   Write a C++ program tha erges A and B and gives a third array C as foll s :

   C [15] = 2,3,4,7,8,9,32,30 35,60,24,70,89, 98

10. (a) Explain the use of constr ors and destructors in C++ with the help of an mple.

    (b) Write a C++ class nar l calculation that initializes two integers 5 nd 25 to variables First _ Val and Second _ V nd prints the result after addition, subtractio multiplication and division operations.

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B.C.A. III Sem.

18011
B.C.A. Examination, Dec.-2017
Object Oriented Programming Using C++
BCA-301
(New)

Time : Three Hours]   *[Maximum Marks : 75*

Note : Attempt **all** questions as per instructions.

Section-A

(Very Short Answer Questions)

Note : Attempt all **five** questions. Each question carries 3 marks. Very short answer is required not exceeding 75 words.

1.   Explain the term Class, Object and Abstraction.

2.   List the basic difference in C and C++.

3.   What is a constructor?

4.   Define Overriding.

5.   What is Exception handling?

Section-B

(Short Answer Questions)

Note : Attempt any **two** out of the following 3 questions. Each question carries 7.5 marks. Short answer is required not exceeding 200 words.

6. Write a sample code to show the structure of C++ program code.

7. Explain different types of inheritance with the help of a sample program.

8. Write a program to overload + operator.

Section-C

(Detailed Answer Questions)

Note : Attempt any **three** questions out of the following 5 questions. Each question carries 15 marks. Answer is required in detail.

9. (a) What are different types of header files, data types, operators available in C++.

(b) Write a program that does dynamic memory allocation and then free the memory space for any variable.

10. Write a program to show the working of constructors along in inherited classes.

11. (a) Write a program to overload unary addition operator.

(b) Differentiate between operator overloading and operator overriding.

12. Write a program to show the use of friend functions.

13. Write short notes on the following:

(i) Parametric Polymorphism

(ii) Garbage collection

(iii) Exception Handling

(iv) Generic Classes

13. What do you mean by Exception Handling ? Write a program to show how it is achieved in C++.

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BCA- III Sem.

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B. C. A. Examination, D c. 2018

Object Oriented Progra ming

Using C⁺⁺

(BCA-301)

Time : Three Hours] [ximum Marks : 75

Note : Attempt questions from all Sections as per instructions.

Section-A

(Very Short Answer Que ons)

Answer all the *five* questions. E h question carries 3 marks. Very short answer is req ed.   3×5=15

1. Define the terms Object, Class.

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2. What do you mean by Inheritance ?

3. What is data hiding ?

4. Differentiate between call by value and call by reference.

5. What is aggregation ?

Section-B

(Short Answer Questions)

Answer any *two* questions out of the following three questions. Each question carries 7½ marks. Short answer is required.   7½×2=15

6. Write a sample code to show the difference between C and C++.

7. Write a code to compute factorial of a number, use of constructors shall be done.

8. What is polymorphism ? Write a code to show the use of polymorphism.

Section-C

(Detailed Answer Questions)

Answer any *three* questions out of the following five questions. Each question carries 15 marks. Answer is required in detail.   15×3=45

9. Write a program in C++ to compute the average marks of 50 students in the class. Take necessary assumptions.

10. What are constructors ? Write sample code to show the working of constructors with inheritance.

11. What is the difference between Operator Overloading and Operator Overriding ? Write a code to show how overriding is achieved.

12. Write a program to overload unary + and unary − operator.

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B.C.A. Examination, November-2019
OBJECT ORIENTED PROGRAMMING
Using C++
(BCA-301)

Time : Three Hours]   *[Maximum Marks : 75*

Note : Attempt questions from *all* sections as per instructions.

Section–A

(Very Short Answer Questions)

Note : Attempt all the *five* questions. Each question carries 3 marks. Very short answer is required.

$5 \times 3 = 15$

1. What is destructors ? Give example.   3

2. Give the significance of 'Protected' access specifiers.   3

3. How the ambiguity in multiple inheritance can be resolved ?   3

4. What are default arguments. 3

5. Explain the term data hiding. 3

Section–B
(Short Answer Questions)

Note: Answer any *two* questions out of the following three questions. Each question carries 7½ marks. Short answer is required not exceeding 200 words.

2×7½=15

6. What are inline functions ? How are they useful ?

7½

7. Explain : Overloading *Vs.* Overriding. 7½

8. Explain the concept of abstract classes and virtual base classes with a suitable example. 7½

Section–C
(Detailed Answer Questions)

Note: Attempt any *three* questions out of the following five questions. Each question carries 15 marks. Answer is required in detail. 3×15=45

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9. What do you mean by exception handling ? How exceptions are handling is done in C++. Illustrate with example. 15

10. In what ways object oriented paradigm is better than structured programming paradigm ? Explain the features of oops. 15

11. What do you mean by Polymorphism ? Explain with the help of example how polymorphism is achieved at (i) compile time (ii) run time. 15

12. Explain

(i) Constructors 5

(ii) Inheritance 5

(iii) Aggregation 5

13. What is pointer variable ? What are the applications of Pointer variable ? What are its advantages and disadvantages ? What operations can be performed on the pointer variables ? What are basic data and derived data types which can be expressed in pointer variables ? 15

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3. How do you define member function out side the class? Give example. 3

4. What is abstract class. 3

5. Explain the basic data types in C++ with example. 3

Section-B

(Short Answer Questions)

Note : Attempt any **two** questions.

$$2 \times 7\frac{1}{2}=15$$

6. What do you mean by nesting of classes? Also explain how friend function is important in C++? 7½

7. Explain static data member & Staic data member functions with example. 7½

8. Define polymorphism. What are different methods of implementating polymorphism in C++. 7½

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Section-C

(Detailed Answer Questions)

Note : Attempt any **three** questions.

$$3 \times 15=45$$

9. (a) Define Inheritance. What are the various types of inheritance? Explain with suitable example. 10

(b) Give the General form of derived class. 5

10. (a) What is File? Write a program to update the contents using random access. 8

(b) Explain the concept of reusability with example. 7

11. Define Functions. What are the advantages of using functions? What are the various methods of parameter passing to the functions? Explain. 15

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P.T.O.

9. (a) What is Constructor? Explain various types of constructor with examples.

(b) Explain the concept of reusability with example.

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A   (Printed Pages 4)

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BCA-III Sem.

18011 (CV-III)

B.C.A. Examination, Dec.-2021

Object Oriented Programming

Using C++

(BCA-301)

Time : 1½ Hours]   [Maximum Marks : 75

Note : Attempt questions from **all** Sections as per instructions.

Section-A

Note : Attempt any **two** parts. Each part carries 7.5 marks.   2×7.5=15

1. (a) Differentiate between << & >> operators.

(b) What is the difference between structured and an object-oriented language?

3

3

(c) What is the difference between high level and a low-level language?

(d) What is a class?

(e) What is the syntax of it statement?

Section-B

Note : Attempt any **one** question. Each question carries 15 marks. 1×15=15

2. Define classes and objects. Explain the concept of base and derived class using an example.

3. Explain various Data Types used in C?

4. To check a number or a string is palindrome or not.

Section-C

Note : Attempt any **two** questions. Each question carries 22.5 marks.

$$2 \times 22.5 = 45$$

5. (a) Define Array and its types. Explain one dimensional Array?

(b) WAP to compare two strings.

6. WAP to print the following pattern:

```
******
*****
****
**
*
```

7. Define algorithm and flowchart. Write an algorithm to check whether a given number is prime or not? Draw its flowchart as well.

8. (a) Define user defined functions and write the benefits of using user defined functions.

(b) Write a program in C to find the sum of the series 1+2+3+4.........n terms?