Roll No. .....

C

CBB-2946-T

M. C. A. Second Semester

(End Semester)

Examination, 2019

COMPUTER SCIENCE AND APPLICATION

Paper - CSA-CC-223

(Object Oriented Programming Using C++)

Time : Three Hours] [Maximum Marks : 60

Note :– Attempt all sections **A**, **B** and **C**. Follow instructions as given in each section.

SECTION-A
(Objective Type Questions) 10×1=10

Note :– Choose the correct options. All questions carry equal marks.

1. Which of the following are essential features of an object. Oriented programming languages :

   (a) Abstraction and encapsulation

   (b) Strictly-typedness

   (c) Type-safe property coupled with sub-type rule

   (d) Polymorphism in the presence of inheritance :

   (i) (a), (b)

   (ii) (a), (d)

   (iii) (a), (c) and (d)

   (iv) None of these

2. What are mandatory parts in the function declaration :

   (a) Return type, function name

   (b) Parameters, function name

   (c) Parameters, function name, return type

   (d) None of these

3. What does a class in C++ holds :

   (a) Data

   (b) Functions

   (c) Both data and functions

   (d) None of these

4. Which of the following keywords is used to control access to a class member :

   (a) Public

   (b) Break

   (c) Protected

   (d) None of these

5. A constructor that accepts.....parameters is called the default constructor :

   (a) Three

   (b) No

(c) One

(d) None of these

6. Pointers are variables that contain.....as their values :

(a) Memory

(b) Memory addresses

(c) Directions

(d) None of these

7. When a virtual function is redefined by the derived class, it is called :

(a) Overloading

(b) Rewriting

(c) Overriding

(d) None of these

8. Which concept is not available in C++ :

(a) Virtual constructor

(b) Virtual destructor

(c) Virtual function

(d) None of these

9. Why do we need to handle exceptions :

(a) To prevent abnormal termination of program

(b) To avoid syntax errors

(c) To save memory

(d) None of these

10. Which is the most significant feature that arises by using template classes :

(a) Modularity in code

(b) Code reusability

(c) Code readability

(d) None of these

SECTION-B

(Short Answer Type Questions) 5×4=20

Note :– Attempt any **four** questions. Each question carries **five** marks.

1. Why object oriented programming is required? Justify your answer.

2. What is a class? How objects of a class are created?

3. What is a constructor? Explain the advantages of a constructor with the help of an example.

4. What is inheritance? Explain different types of inheritance supported by C++.

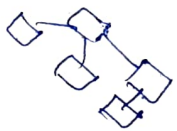
5. Explain mechanism of exception handling.

6. What is function? What is the purpose of using functions in C++ language? List different types of function.

SECTION - C
(Long Answer Type Questions) 3×10=30

Note :– Attempt any **three** questions. Each question carries **ten** marks.

1. Explain the basic concepts of object oriented programming.



2. Explain the following with examples :

   (a) Nested classes

   (b) Abstract class

3. What are static and dynamic memory allocation? Explain dynamic memory management using new and delete operators.

4. Define operator overloading? Explain how to overload unary operator and binary operator.

5. Explain following with examples :

   (a) Function templates

   (b) Class templates