

CR-2594

**M. Sc. (First Semester) Examination,
Nov.-Dec. 2018**

COMPUTER SCIENCE

Paper : Fourth

(Object Oriented Programming using C++)

Time Allowed : Three hours

Maximum Marks : 40

Note : Attempt questions of all two sections as directed. Distribution of marks is given with sections.

Section-'A'

(Short Answer Type Questions) 3×5=15

Note : Answer all questions with maximum 100 words.

Each question carries 3 marks.

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1. Define Encapsulation and data hiding with example.

Or

List out the applications of OOP.

2. Define the followings :

(i) Tolun

(ii) Identifier

(iii) Data abstraction

Or

Define constructor and list out the characteristics of constructor.

3. What do you understand by operator overloading? Describe the rules for operator overloading.

Or

What do you understand by type conversions and illustrate how the objects are initialized dynamically.

4. What do you understand by scope resolution operator and memory referencing operator. Illustrate with example.

Or

Describe the various types of constructors and what are the ways in which a constructor can be called.

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5. What is the need for template function in C++ and what are their advantages.

Or

What do you understand by object modelling and dynamic modelling? Illustrate with examples.

Section-‘B’

(Long Answer Type Questions) 5×5=25

Note : Answer all questions with maximum 800 words.

Each question carries 5 marks.

6. Explain the following with examples :
- (i) Class and object
 - (ii) State diagrams and Data flow diagrams

Or

Write a C++ program to illustrate static function and Inline function. <http://www.ujjainstudy.com>

7. Explain different types of polymorphism.

Or

Explain how to chains operator overloading through friend function.

8. Explain various types of Inheritance with example.

Or

Write a program in C++ to print the following pattern using for loop.

```
1
2 2
3 3 3
4 4 4 4
5 5 5 5 5
```

9. Explain the function template with example.

Or

Describe the pure virtual function with example.

10. Explain the copy constructor and paramitized constructor with example.

Or

Illustrate overriding a member function with an example.

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