

MAHATMA GANDHI UNIVERSITY

M.C.A DEGREE EXAMINATION

MODEL QUESTION PAPER

(2011 Revised Syllabi)

Second Semester

MCA 205 OBJECT ORIENTED PROGRAMMING WITH C++

Time: Three Hours
Marks

Maximum: 75

Part A

Answer any ten questions
All questions carry equal marks

- Summarize the concepts of Object Oriented programming.
- What are the applications of “this” pointer ?
- List out the access specifiers.
- Write notes on Copy constructors.
- Mention about pointer to functions.
- What are the various techniques for dynamic memory management?
- Summarize the base –class member accessibility in a derived class under various types of Inheritance.
- Highlight the difference between pure virtual functions and virtual function
- Draw a neat diagram showing the Stream-I/O template hierarchy which includes the file-processing templates.
- Describe the various file open modes.
- Mention about Nontype Parameters & Default types for Class Templates

- Give a diagrammatic representation of the standard Library Exception Hierarchy.

(10 * 3= 30 marks)

Part B

All questions carry equal marks.

- (a) Implement friend functions & friend classes. with an example.
Highlight the privileges enjoyed by friends

Or

- (b) Mention about (with example program)
 - (i). Static Member Functions
 - (ii). const Member Functions

- 14.(a) Illustrate with an example program, the order in which constructors & Destructors are called for global, local automatic and local static objects created inside main and sub functions.

Or

- (b) How is const used with pointers ?

- 15.(a) Describe in details the two methods of overloading operators (9 marks)

Or

- (b) Demonstrate unary and binary operator overloading (9 marks)

- 16.(a) Bring out the relationship between Base Classes & Derived Classes and also explain the working of constructors & Destructors in derived classes.

Or

- (b) Explain the working of virtual functions

17. (a) Write a program to
- Create a Random-Access File
 - Write data randomly to a Random-Access File
 - Read from a Random-Access File sequentially.

Or

(b) Give a detailed description of the concepts of exception handling with specific reference to the concepts of rethrowing an exception, exception specification etc.

(5 X 9 = 45 marks)