



K. K. Wagh Institute of Engineering Education & Research, Nashik
(An Autonomous Institute From A.Y. 2022-23)

	SUMMER-2023		
	Exam Seat No.:		
	Academic Year:2022-2023	Semester: II	
	Name of Programme: B.Tech	Pattern:2022	
	Name of Course: Programming in C++	Course Code: FYE221011	
	Max. Marks:60	Duration: 2.30 Hrs.	

Instructions: Candidates should read carefully the instructions printed on the Question Paper and on the cover page of the Answer Book, which is provided for their use.

1. This question paper contains 02 pages.
2. Answer to each new question is to be started on a new page.
3. Assume suitable data wherever required, but justify it.
4. Draw the neat labelled diagrams, wherever necessary.
5. The last columns indicates the Course Outcome and level of Blooms Taxonomy of the Question/sub-question

Question No. 1 Attempt following Question

1 a) Explain default constructor with the help of example. (3) CO1

1 b) Explain the following terms in brief related to OO paradigm: (3) CO2

1. Data Abstraction 2. Polymorphism 3. Encapsulation

Question No. 2 Attempt following Question

2 a) Explain ambiguity problem in multiple inheritance and how it is resolved? (3) CO2

2 b) Explain the constructor and destructor order of execution in inheritance. (3) CO2

Question No. 3 Attempt following Question

3 a) Explain pure virtual functions in C++. (4) CO3

OR

- 3 b) Differentiate between early binding and late binding. (4) CO3
- 3 c) Explain the call by value and call by address in C++. (6) CO3
- OR**
- 3 d) Explain virtual functions and its significance in C++. (6) CO3
- 3 e) Develop a C++ program to overload area() function to calculate area of square and triangle. (6) CO3
- OR**
- 3 f) Develop a C++ program to add two complex objects (complex number contains real and imaginary parts) by overloading + operator. (6) CO3

Question No. 4 Attempt following Question

- 4 a) Distinguish between function overloading and function templates. (4) CO4
- OR**
- 4 b) Explain generic programming? How it is implemented in C++? (4) CO4
- 4 c) Develop a C++ program for handling exception with multiple catch statements. (6) CO4
- OR**
- 4 d) Develop a C++ program using a try block to detect and throw an exception if the conditions divide-by-zero occurs. (6) CO4
- 4 e) Develop a C++ program using class template to find largest among two numbers. (6) CO4
- OR**
- 4 f) Develop a C++ program using function template to find minimum value contain in an array. (6) CO4

Question No. 5 Attempt following Question

- 5 a) Explain data hierarchy with example (4) CO5
- OR**
- 5 b) Explain various file opening modes in brief. (4) CO5
- 5 c) Explain the following stream classes: fstream, ofstream, ifstream. (6) CO5
- OR**
- 5 d) Explain seekp() and tellp() functions with suitable code. (6) CO5
- 5 e) Develop a C++ program to create file, read and write into it. Every record contains student name, roll number and department. Store and retrieve atleast 3 data. (6) CO5
- OR**
- 5 f) Develop a program using put() to write character to a file until user enters a dollar (\$) sign. (6) CO5