

[Time:2.30 Hrs]

[Marks:75]

Please check whether you have got the right question paper.

N.B:

1. All question are compulsory.
2. Figures to the right indicate full marks.
3. Students answering in the regional language should refer in case of doubt to the main text of the paper in English.

Q.1	Attempt the following (Any 3)	15M
	a. What is object oriented programming? State any three advantage and its applications b. Explain relationship between objects and classes c. Give comparison between object oriented and procedure oriented programming d. Explain debugging with types of error e. Explain themes of OOPS f. Write a short note on message passing.	
Q.2	Attempt the following (Any 3)	15M
	a. What is constructor? List various type of constructor and explain default constructor b. What is class? How a class can be defined ? Discuss various ways of defining member functions of a class c. Explain friend function with programming example. List advantages and disadvantages. d. Explain process of memory allocation for objects . e. Write C++ program to create class Bank with (acno, custname, bal) as its attribute and implement the methods withdraw(), deposit(), showbalance() f. What is destructor ? Write a program to destroy the object using destructor ?	
Q.3	Attempt the following (Any 3)	15M
	a. Explain function overloading with example b. What is pure virtual functions? Explain how it is implemented c. Write a C++ program to overload binary (++) operator d. What is operator overloading ? State rules for operator overloading. List the operators that cannot be overloaded e. Explain Static functions f. Explain abstract class and pure virtual function with example.	
Q.4	Attempt the following (Any 3)	15M
	a. Can private member of a base class are inheritable? Justify b. What is inheritance? Discuss various form of inheritances c. Write a C++ program to implement following hierarchy of inheritance and analyze the pattern <div style="text-align: center;"> <pre> graph TD Polygon --> triangle triangle --> Output </pre> </div>	

	d. Explain multilevel inheritance with example e. Write a C++ program to handle various exceptions ? f. Explain the use of throw and catch keywords with proper syntax.	
Q.5	Attempt the following (Any 3)	15M
	a. What is generic programming? Explain the use of generic programming b. Write a program to read a file from C++ program. c. What is Input and Output Streams d. What is file? Write down the steps for manipulating files in C++ e. What are different methods of opening a file? Write a program to open a file "FYIT" and "FYCS", write student details into file using any methods. Implement the following code f. Explain different exception and error handling during file operation	
