

F.Y. B.Sc.(IT) : Sem. II
Object Oriented Programming
Prelim Question Paper



Time : 2½ Hrs.]

[Marks : 75

- N.B.:** (1) All questions are compulsory.
(2) **Make suitable assumptions** wherever necessary and state the assumptions made.
(3) **Answer** to the same questions must be written together.
(4) **Numbers** to the right indicate marks.
(5) Draw **neat** labeled diagrams wherever necessary.
(6) Use of **Non-programmable** calculators is allowed.

1. Attempt the following (any **THREE**) [15]
(a) Explain encapsulation?
(b) List advantages of oop?
(c) Explain principles of oops.
(d) Explain disadvantages of procedure oriented programming.
(e) Explain data abstraction.
(f) List applications of oops
2. Attempt the following (any **THREE**) [15]
(a) Explain internally defined member function with an example.
(b) Explain externally defined member function with an example.
(c) Write a program to add two complex numbers using friend function.
(d) Explain default constructor with a program example.
(e) Explain inline function.
(f) Explain parameterized constructor with program example.
3. Attempt the following (any **THREE**) : [15]
(a) Write a program to calculate the area of rectangle, triangle, circle using function overloading.
(b) Explain operator overloading? Write the rules of operator overloading.
(c) Write a program to negate the values of two variables contained in the object.
(d) Explain pure virtual function.
(e) Explain polymorphism and its types.
(f) Explain static function.
4. Attempt the following (any **THREE**) [15]
(a) Write a note on different access specifiers in C++
(b) Explain inheritance with its advantages.
(c) Explain exception handling mechanism.
(d) What is single inheritance and explain it with program example.
(e) What are the issues in hybrid and multiple inheritance? How are they resolved? Explain with a program example.
(f) Write a program to calculate the volume of the sphere using multilevel inheritance. The base class will accept the radius from the user a class will be derived from the above mentioned class that will have the function to find the area of the sphere and another class derived will have the functions to calculate and display the volume.
5. Attempt the following (any **THREE**) [15]
(a) What is a template?
(b) Write a c++ program to read any five parameterized data type such as float, integer and print the average.
(c) Explain how to access a file in c++ ? Explain file stream classes.
(d) Explain standard template library.
(e) Explain overloading a template function using a non template function with a program example.
(f) Write a program to write and read string, integer and float from to a file.

Paper Discussion Schedule for all Subjects: F.Y.B.Sc.IT (Sem. II)

Date	Day	Timing	Centre
11 April. 2017	Tuesday	9.00 a.m. to 11.00 a.m.	Dadar
11 April. 2017	Tuesday	12.00 p.m. to 2.00 p.m.	Andheri
12 April.2017	Wednesday	9.00 a.m. to 11.00 a.m.	Thane
12 April.2017	Wednesday	12.00 p.m. to 2.00 p.m.	Ghatkopar
13 April.2017	Thursday	3.00 p.m. to 5.00 p.m.	Kalyan

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