SHAHEED BHAGAT SINGH STATE TECHNICAL CAMPUS, FEROZEPUR

ROLL No: ☐☐☐☐☐☐☐☐☐☐☐ Total number of pages:[2]

Total number of questions:06

MCA 3rd Sem

Object Oriented Programming Using C++

Subject Code: MCAP1-314

Paper ID: (for office use)

Max Marks: 60

Time allowed: 3 Hrs

Important Instructions:

- All questions are compulsory
- Assume any missing data

PART A (2×10)

All COs

Q. 1. Short-Answer Questions:

(a) How object oriented programming languages are different from Procedural programming languages.

(b) Differentiate between class and structure.

(c) Differentiate between function overloading and function templates.

(d) Define pure virtual functions.

(e) Define Container class

(f) What are I/O manipulators?

(g) Define the term data hiding and polymorphism.

(h) Describe the importance of destructors.

(i) Define the terms-Input stream and Output Stream

(j) Define Nested class.

PART B (8×5)

Q. 2. What is data member and function of a class? Write programs for defining COa
functions inside and outside the class. How inline functions and static member
functions are different from normal member functions in a class.

OR

What is class? Differentiate between class and object. How memory is COa
allocated for static data member in object oriented programming language.
Explain with help of example.

Q. 3. How access specifier are used to provide security in a class. Write a program COb
to pass objects as arguments in a function.

OR

What is the use of friend keyword in object oriented Programming Language? COb
Explain with an example program.

Q. 4. What are constructor and destructor? Write down their properties. Explain COc
various types of constructors with examples.

OR

a) Explain Copy Constructor and parameterized Constructor with Examples. COc

b) What is virtual destructor? Why it is used.

Q. 5. What is inheritance? Discuss ambiguity problem in inheritance. How it can be removed. Explain it with help of an example. COd

OR

What is inheritance? Explain its types with examples. COd

Q. 6. a) What is an exception? Why it is necessary to handle an exception by special code? COe

b) What is a file mode? Describe the various file mode options available.

OR

a) What is generic functions. Write a program to swap two numbers of different data types. COe

b) Write a program to copy a file to another file using file streams.