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[Time: Three Hours]

[Max. Marks:70]

Student's Signature

Q.1 Answer the following question in short. (Any Seven)

[14]

1. List out the operators that cannot be overloaded.
2. What is the difference between private and protected visibility mode?
3. What is static binding?
4. What is the advantage of new operator over malloc()?
5. What is manipulator? Give example of it.
6. What is data structure? Differentiate between linear and non-linear data structure.
7. What is stack? List out application of stack.
8. Write a condition for circular queue overflow.
9. What is top pointer in stack? What is its significance?
10. Differentiate between overloading and overriding.

Q.2 Answer the following question. (Any Two)

[14]

1. Explain copy constructor with proper example.
2. Explain any three concepts of object oriented programming in detail.
3. Explain the concept of default argument with an example.

Q.3 Answer the following question. (Any Two)

[14]

1. Explain in detail the concept of friend function.
2. What is operator overloading? Write different rules to overload operators. Also, explain operator overloading with an example.
3. Explain Hybrid Inheritance and how we can remove the ambiguity occurred while implementing hybrid inheritance.

Q.4 Answer the following question. (Any Two)

[14]

1. Explain Circular Queue with proper example. Discuss advantages of Circular Queue over simple queue.
2. Write an algorithm to insert and delete element in a stack.
3. Explain input and output restricted queue with proper example.

Q.5 Answer the following question. (Any Two)

[14]

1. Write a program to convert the distance in kilometer to meter using the concept of OOPs.
2. Explain the following manipulators with example.
(a) endl (b) setw (c) setprecision (d) setfill (e) setiosflag
3. Write an algorithm to convert infix expression into postfix form.