OBJECT ORIENTED PROGRAMMING

ADVANCED ENCAPSULATION MODULE

PRACTICE QUESTIONS

- 1. Create a class 'Person' with private data members name and age. Implement proper getters and setters with validation.
- 2. Create a class 'Product' and use the 'this' pointer to differentiate between data members and parameters.
- 3. Create a class 'Rectangle' with const member function area() that does not modify object data.
- 4. Create a class 'Counter' with a static data member to count how many objects are created.
- 5. Create a class with a const data member and initialize it using constructor initialization list.
- 6. Create a class 'Demo' that allocates dynamic memory in constructor and releases it in destructor.

ASSIGNMENT QUESTIONS

- 1. Design a class 'BankAccount' using proper encapsulation. Include getters, setters, validation, and destructor for dynamic memory handling.
- 2. Create a class 'StudentRecord' that demonstrates the Rule of Three (Destructor, Copy Constructor, Copy Assignment Operator).
- 3. Implement a class 'Company' that uses static members to count total employees created.
- 4. Design a class 'Car' and demonstrate composition by including an 'Engine' class inside it.
- 5. Create a class 'University' and demonstrate aggregation relationship with a 'Teacher' class.
- 6. Build a mini project 'LibrarySystem' where dynamic memory is used and properly managed using destructor and deep copy.