|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S.NO | TOPICS | SUBTOPICS | EXERICES | TIMING |
| 1 | OVERVIEW & OOP’S CONCEPT | 1. ENCAPSULATION 2. ABSTRACTION 3. POLYMORPHISM 4. INHERITANCE | 1.HIDING THE DATA AND ACHIEVE THE BASE CLASS PROPERTIES INTO DERIVED CLASS.  2. ACCESS BOTH BASE CLASS PROPERTIES AND DERIVED CLASS PROPERTIES IN ONE MECHANISM. | 3H |
| 2 | FRIEND CLASS &FRIEND FUNCTION |  | 1.ACCESS ENTIRE CLASS IN ANOTHER CLASS.  2.ACHIEVE MORE THEN ONE CLASS PROPRTIES IN ONE FUNCTION. | 2H |
| 3 | STORAGE CLASSES & CONSTANT | TYPES: STATIC, AUTO, EXTERN, REGISTER&MUTABLE | 1.CALL THE FUNCTION WITHOUT CREATING THE OBJ.  2.HOW TO MODIFY THE VARIABLE IN CONSTANT FUNCTIONS. | 2H |
| 4 | CONSTRUCTOR & DESTRUCTOR | TYPES | 1.COPYING DATA INTO ONE OBJ TO NEWLY CREATED OBJ.  2.TAKE REFERENCE TO VARIABLE AND MOVE THE DATA INTO ANOTHER OBJ. | 2H |
| 5 | DESIGN PATTERNS | 1. SINGLETON 2. FACTORY METHOD 3. OBSERVER | 1.ENSURE A CLASS HAS ONE INSTANCE AND PROVIDE GLOBAL ACCESS TO IT. | 2H |
| 6 | TEMPLATE CLASS&TEMPLATE FUNCTION&INLINE |  | 1.USING TEMPLATE CREATE CLASS & FUNCTION. | 2H |
| 7 | DATATYPES&MEMORY LEAKAGE | BOOLEAN&SMART POINTERS | 1.HOW TO AVOID THE MEMORY LEAKAGE | 2H |
| 8 | VIRTUAL CONCEPT | DIAMOND PROBLEM | 1.HOW TO RESOLVE THE DUPLICATION OF MEMORY | 3H |
| 9 | STLS | 1. VECTOR 2. MAP 3. LIST | 1.USING THESE THREE MECHANISMS ADDING ONE COMPONENT AND DELETING THE OTHER COMPONENTS. | 3H |
| 10 | EXCEPTION HANDLING | 1. TRY 2. CATCH 3. THROW | 1.USE THESE THREE KEYWORDS IN ONE PROGRAM. | 1H |
| 11 | ADVANCED KEYWORDS | 1. FINAL 2. AUTO 3. OVERRIDE | 1.ENSURE YOUR CLASS DOESN’T HAVE DERIVED CLASS. | 1H |
| 12 | OPERATOR OVERLOADING | 1. NEW AND DELETE 2. UNARY 3. BINARY | 1.SAMPLE PROGRAM FOR THESE. | 5H |
|  |  |  |  |  |
|  |  |  |  |  |