

### Module End Lab Exam C++ Programming

|                     |                 |                 |               |
|---------------------|-----------------|-----------------|---------------|
| <b>Course Name:</b> | PG – DAC        | <b>Batch :</b>  | Feb 25        |
| <b>Module Name:</b> | C++ Programming | <b>Date:</b>    | 07/ 03 / 2025 |
| <b>Max. Marks:</b>  | 40              | <b>Duration</b> | 2:00 Hours    |

#### Instructions :

1. Create new Project by the name CPP\_12\_digit\_PRN in your home directory.
2. After evaluation first compress/zip your folder (named CPP\_<12 digit PRN>) and upload it on EMIS.

#### Question

A Sports Management System helps to maintain players record and their type of sport they play .Additionally, the system manages players, allowing each player to participate in multiple sports.

- Create a Class Sports (Represents a sport) with data members as name, fees
- Class IndoorGame(Derived from Sport) with data member as venueType (e.g. Hall, Court, Table)
- Class OutdoorGame (Derived from Sport) with data member as groundType (e.g. Grass, Clay )
- Class Player (Represents a player) with data members as id (Unique Player ID), player\_name and List of sports they participate in

**Write a menu driven code which will have below menus**

1. Add New Player
2. Add new Sport
3. Enroll player into sport
4. display the players with indoor game
5. display the players with Outdoor game
6. Display all players with their registered Sport

**STL (vector) usage is allowed, and inheritance must be implemented.**

| Sr. No. | Points to cover                                     | Max Marks |
|---------|---|-----------|
| 1       | Class Player, Sport, IndoorGame, OutdoorGame        | 2+2+2+2   |
| 2       | Add New Player                                      | 5         |
| 3       | Enroll player into sport                            | 5         |
| 4       | Display the players with Indoor game                | 5         |
| 5       | Display the players with Outdoor game               | 5         |
| 6       | Display all players with their registered Sport     | 5         |
| 7       | Menu Driven Program + Naming Conventions + Comments | 3+2+2     |
|         | <b>Total :-</b>                                     | 40        |