



**BHARATI VIDYAPEETH'S**

**INSTITUTE OF COMPUTER APPLICATIONS & MANAGEMENT (BVICAM)**

(Affiliated to Guru Gobind Singh Indraprastha University, Approved by AICTE, New Delhi)

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Course Code: MCA-108

Course Name: Database Management Systems

**Class Test 1**

Time: 1 Hour

Max Marks: 20

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**Note: All questions carry 5 marks.**

1. Suppose you are given the following requirements for a simple database for the National Hockey League (NHL):
  - The NHL has many teams,
  - Each team has a name, a city, a coach, a captain, and a set of players,
  - Each player belongs to only one team,
  - Each player has a name, a position (such as *left wing* or *goalie*), a skill level, and a set of injury records,
  - A team captain is also a player,
  - A game is played between two teams (referred to as *host\_team* and *guest\_team*). Construct a clean and concise ER diagram for the NHL database. List your assumptions and clearly indicate the cardinality mappings as well as any role indicators in your ER diagram
2. Explain what do you mean by roles in a relationship, with the help of an example.
3. Draw an EER diagram to capture the following:
  - Movies and TV shows are identified by a title, release year, and country.
  - Movies, TV shows, and actors may have won or been nominated for awards (with the name of the award, year, category, and result - win or loss - included).

Also discuss, is specialization appropriate here?

4. Choose correct answer
  - I. State true or false
    - i. A candidate key is a minimal super key.
    - ii. A candidate key can also refer to as surrogate key.
  - A). i-true, ii-false
  - B). i-false, ii-true
  - C). i-true, ii-true

D). i-false, ii-false

II. .... is the process of organizing data into related tables.

- A). Normalization
- B). Generalization
- C). Specialization
- D). None of the above

III. In ..... , we have a strict parent-child relationship only.

- A) Hierarchical database
- B) Network databases
- C) Object oriented databases
- D) Relational databases

IV. The candidate key is that you choose to identify each row uniquely is called .....

- A). Alternate Key
- B). Primary Key
- C). Foreign Key
- D). None of the above

V. In which of the following cases a DML statement is not executed?

- A). When existing rows are modified
- B). When some rows are deleted
- C). When a table is deleted
- D). All of the above