**SQL Assignment (21st Nov)**

**Question 1**

**Ans->**

CREATE TABLE countries (

country\_id INT PRIMARY KEY, -- Primary key ensures no duplicates in country\_id

country\_name VARCHAR(100),

region\_id INT

);

**Question 2:**

**Ans->**

CREATE TABLE jobs (

JOB\_ID VARCHAR(10) PRIMARY KEY, -- job\_id as primary key to ensure uniqueness

JOB\_TITLE VARCHAR(35) NOT NULL, -- job title, cannot be NULL

MIN\_SALARY DECIMAL(6, 0), -- minimum salary, can be NULL

MAX\_SALARY DECIMAL(6, 0) -- maximum salary, can be NULL

);

CREATE TABLE job\_history (

employee\_id INT, -- Employee ID column, should be unique

start\_date DATE,

end\_date DATE,

job\_id VARCHAR(10), -- job\_id should exist in jobs table

department\_id INT,

PRIMARY KEY (employee\_id, start\_date), -- Composite primary key for uniqueness

FOREIGN KEY (job\_id) REFERENCES jobs(JOB\_ID) -- Foreign key constraint

);

**Question 3:**

**Ans->**

CREATE TABLE departments (

DEPARTMENT\_ID DECIMAL(4,0) NOT NULL, -- DEPARTMENT\_ID is a decimal (4 digits) and cannot be NULL

DEPARTMENT\_NAME VARCHAR(30) NOT NULL, -- DEPARTMENT\_NAME cannot be NULL and stores department name

MANAGER\_ID DECIMAL(6,0) NOT NULL, -- MANAGER\_ID is a decimal (6 digits) and cannot be NULL

LOCATION\_ID DECIMAL(4,0), -- LOCATION\_ID is optional, can be NULL

PRIMARY KEY (DEPARTMENT\_ID, MANAGER\_ID) -- Composite primary key (DEPARTMENT\_ID, MANAGER\_ID)

);

CREATE TABLE employees (

employee\_id DECIMAL(6,0) NOT NULL, -- employee\_id cannot be NULL

first\_name VARCHAR(50) NOT NULL, -- first\_name cannot be NULL

last\_name VARCHAR(50) NOT NULL, -- last\_name cannot be NULL

email VARCHAR(100) NOT NULL, -- email cannot be NULL

phone\_number VARCHAR(15), -- phone\_number can be NULL

hire\_date DATE NOT NULL, -- hire\_date cannot be NULL

job\_id VARCHAR(10) NOT NULL, -- job\_id cannot be NULL

salary DECIMAL(8,2), -- salary can be NULL

commission DECIMAL(8,2), -- commission can be NULL

manager\_id DECIMAL(6,0), -- manager\_id can be NULL

department\_id DECIMAL(4,0) NOT NULL, -- department\_id cannot be NULL

PRIMARY KEY (employee\_id), -- employee\_id is the primary key, ensuring uniqueness

FOREIGN KEY (department\_id, manager\_id) REFERENCES departments (DEPARTMENT\_ID, MANAGER\_ID) -- Foreign key constraint

);