

Q1) Create the following tables with their respective columns, data types and size.

Ans → CREATE TABLE Instructor (
ID NUMBER(5),
Name VARCHAR2(30),
Dept_name VARCHAR2(20),
Salary NUMBER(6)
);

CREATE TABLE Course (
Course_id VARCHAR2(10),
Title VARCHAR2(30),
Dept_name VARCHAR2(20),
Credits NUMBER(2)
);

CREATE TABLE Prereq (
Course_id VARCHAR2(10),
Prereq_id VARCHAR2(10)
);

CREATE TABLE Department (
Dept_name VARCHAR2(20),
Building VARCHAR2(20),
Budget NUMBER(10)
);

CREATE TABLE Teacher (
ID NUMBER(5),
Course_id VARCHAR2(10),
Sec_id NUMBER(2),
Semester VARCHAR2(10),
Year NUMBER(4)
);

2) Insert data into Instructor table with the data below:

Ans → INSERT INTO Instructor (CID, Name, Dept-name, Salary) VALUES
(10101, 'Srinivasan', 'Comp. Sci.', 65000),
(12121, 'Wu', 'Finance', 90000),
(15151, 'Mozart', 'Music', 40000),
(22222, 'Einstein', 'Physics', 95000),
(32343, 'El Said', 'History', 60000),
(33456, 'Gold', 'Physics', 87000),
(45565, 'Katz', 'Comp. Sci.', 75000),
(58583, 'Calitieri', 'History', 62000),
(76543, 'Singh', 'Finance', 80000),
(76766, 'Crick', 'Biology', 72000),
(83821, 'Brandt', 'Comp. Sci.', 92000),
(98345, 'Kim', 'Elec. Eng.', 80000);

3) Insert data into Course table with the data below.

Ans → INSERT INTO Course (Course-id, Title, Dept-name, Credits) VALUES
('BIO-101', 'Intro. to Biology', 'Biology', 4),
('BIO-301', 'Genetics', 'Biology', 4),
('BIO-399', 'Computational Biology', 'Biology', 3),
('CS-101', 'Intro. to Computer Science', 'Comp. Sci.', 4),
('CS-190', 'Game Design', 'Comp. Sci.', 4),
('CS-315', 'Robotics', 'Comp. Sci.', 3),
('CS-319', 'Image Processing', 'Comp. Sci.', 3),
('CS-347', 'Database System Concepts', 'Comp. Sci.', 3),
('EE-181', 'Intro. to Digital Systems', 'Elec. Eng.', 3),

('FIN-201', 'Investment Banking', 'Finance', 3),
('HIS-351', 'World History', 'History', 3),
('MU-199', 'Music Video Production', 'Music', 3),
('PHY-101', 'Physical Principles', 'Physics', 4);

4) Insert data into Prereq table with the data below.

Ans → INSERT INTO Prereq (course-id, prereq-id) VALUES

('BIO-301', 'BIO-101'),

('BIO-309', 'BIO-101'),

('CS-190', 'CS-101'),

('CS-315', 'CS-101'),

('CS-319', 'CS-101'),

('CS-347', 'CS-101'),

('EE-181', 'PHY-101');

5) Insert data into Department table with the data below:

Ans → INSERT INTO Department (dept-name, building, budget) VALUES

('Biology', 'Watson', 900000),

('Comp. Sci.', 'Taylor', 1000000),

('Elec. Eng.', 'Taylor', 850000),

('Finance', 'Painter', 1200000),

('History', 'Painter', 300000),

('Music', 'Packard', 800000),

('Physics', 'Watson', 700000);

6) Insert data into Teachers table with the data below.

Ans → INSERT INTO Teachers (CID, course id, sec id, semester, year) VALUES

(10101, 'CS-101', 1, 'Fall', 2009),

(10101, 'CS-315', 1, 'Spring', 2010),

(10101, 'CS-347', 1, 'Fall', 2009),

(12121, 'FIN-201', 1, 'Spring', 2010),

(15151, 'MU-199', 1, 'Spring', 2010),

(22222, 'PHY-101', 1, 'Fall', 2009),

(32343, 'HIS-351', 1, 'Spring', 2010),

(45565, 'CS-319', 1, 'Spring', 2010),

(76766, 'BIO-101', 1, 'Summer', 2009),

(76766, 'BIO-301', 1, 'Summer', 2010),

(83821, 'CS-190', 1, 'Spring', 2009),

(83821, 'CS-190', 2, 'Spring', 2009),

(83821, 'CS-319', 2, 'Spring', 2010),

(98345, 'EE-181', 1, 'Spring', 2009);