

**JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT**

**TEST -1 EXAMINATIONS-2022**

**B.Tech-III Semester (BI)**

**COURSE CODE (CREDITS): 20B11BI311 (4)**

**MAX. MARKS: 15**

**COURSE NAME: Bioinformatics Data Management**

**COURSE INSTRUCTORS: Dr. Shikha Mittal**

**MAX. TIME: 1 Hour**

*Note: All questions are compulsory. Marks are indicated against each question in square brackets.*

**Q1.** Define primary key, foreign key, candidate key, and super key with an example? [CO-2 & CO-3] (4 marks)

**Q2.** What are the different levels of abstraction in the DBMS? [CO-1] (2 marks)

**Q3.** Mention the issues with traditional file-based systems that make DBMS a better choice? [CO-1] (2 marks)

**Q4.** What is meant by an entity-relationship (E-R) model? Explain the terms Entity, Entity Type, and Entity Set in DBMS. [CO-3] (3 marks)

**Q5.** Explain different types of relationships amongst tables in a DBMS. [CO-2] (2 marks)

**Q6.** Consider the table to answer the following questions and also show the output – [CO-2] (2 marks)

**EMPLOYEE**

SSN	Name	DOB	Address	Gender	Salary	SuperSSN	DNo
1111	Divya	20-Feb-82	Malleswaram	M	22000	4444	1
2222	Scott	10-Dec-60	Rajajinagar	M	30000	4444	3
3333	Pooja	22-Jan-65	Indiranagar	F	18000	2222	2
4444	Prasad	11-Jan-57	Rajajinagar	M	32000	Null	3
5555	Reena	15-Jan-85	MG Road	F	8000	4444	3

(a) Find the employees whose salary is greater than Rs. 10000.

(b) Find the employees who work for department 3 and whose salary is greater than Rs. 30000.