



ST. JOSEPH'S UNIVERSITY, BENGALURU -27
M.Sc. (BIG DATA ANALYTICS) – I SEMESTER
SEMESTER EXAMINATION: OCTOBER 2023
(Examination Conducted in November/December 2023)
BDA1521 – DATABASE MANAGEMENT SYSTEM
(For current batch students only)

Time: 2 Hours

This paper contains TWO printed pages and THREE parts

Max Marks: 50

PART A**Answer All the questions****2 X 5 = 10**

- 1 Define schema and instance
- 2 What do you mean by Entity and Entity type? Give example
- 3 What do you mean by anomalies? Give an example for delete anomaly
- 4 Mention the wildcard characters used in MySql
- 5 Give an example for Recursive relation

PART B**Answer any FIVE questions****5 X 4 = 20**

- 6 Compare Alter table with Update Command
- 7 Write a short note on object oriented database
- 8 How a) multivalued attribute b) Weak entity c) derived attribute d) composite attribute can be represented in an ER diagram? Give example for each
- 9 Why do we decompose relations? Demonstrate with an example how lossy join is different from loseless join?
- 10 With a neat diagram explain 3 tier architecture.
- 11 Give the syntax and example for the following
 - a) CASE statement
 - b) Create a view to store specific information from table
- 12 Write the Armstrong's Axioms

PART C**Answer Any TWO questions****2 X 10 =20**

- 13 Answer the following queries
 Consider table
 STUDENT(regno,name,class,college,dept, dob)
 PROJECT(Pid,Pname,regno,duration)
 - i. Create STUDENT and PROJECT table
 - ii. Insert one record to each

- iii. Display the student's regnumber, name, class, pid and pname
 - iv. Display the names of student who has not registered for any projects
 - v. Display the age of students
 - vi. Update the student name to "Rahul" and department to "Advanced Computing" where the regnumber is "BDA123"
 - vii. Give an example for left join and right join
 - viii. Display the department where more than 1000 students have registered.
 - ix. Is it possible to delete the regno from student table without deleting data from PROJECT table? Justify your answer
- 14(a) Discuss the main characteristics of the database approach and how it differs from traditional file systems?
- (b) With an EER example Explain How generalization is different from specialization?
- 15 Define Normalization. With examples explain the difference between 1NF, 2NF and 3NF