**Asian School of Management and Technology**

(Affiliated to Tribhuvan University)

Gongabu, Kathmandu

**Full Marks: 60**

**Time: 3 Hrs.**

**SET B**

**Preboard Examination 2081**

**BIM / Fourth Semester / IT 220: Database Management System  
D**

***Candidates are required to answer the question in their own words as far as practicable.***

**Group “A”**

**Brief Answer Question**

**Attempt All Questions [10\*1=10]**

* 1. What do you mean by tuple?
  2. Define super key.
  3. What do you mean by database schema?
  4. What is metadata?
  5. Define natural join.
  6. What is on delete cascade?
  7. What is database buffer?
  8. Define Relational Calculus.
  9. Define NoSQL database.
  10. Define serialization.

**Group “B”**

**Short Answer Question**

**Attempt Any Five Questions [5\*3=15]**

1. Define is database? What are the advantages of file based system?
2. Explain any three operations in RA.
3. Explain physical and logical data independence with example.
4. What is concurrency control? Explain 2 phase locking protocol.
5. What do you mean by mapping cardinality? Explain with example.
6. Explain concept of Bigdata.

**Group “C”**

**Long Answer Questions**

**Attempt Any Three Questions [3\*5=15]**

1. Construct ER-diagram for online food ordering system.
2. Consider the following relational database

patient(pid, pname, paddress, gender disease)

doctor(did, dname, daddress, department, salary)

appoint(pid, did, time)

Write Relational Algebra and SQL queries

1. Insert new tuple in the relation patient.
2. Delete record of all doctors who works in Dental.
3. List all the patients who checked by doctors Rashmi or Ashok.
4. List name and id of doctors whose salary is less than 75000.
5. Increase salary of all by 5% who works in ENT department.
6. Define database recovery. Explain the concept of Shadow paging with diagram.
7. What is constraints in database? Explain assertion and trigger.

**Group “D”**

**Comprehensive Question**

**Attempt All Questions [2\*10=20]**

1. Define database language? What can we do in database by using DDL, DML and TCL Explain with suitable example?
2. What do you mean by Schema and instances? Describe System structure of database system.

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