



National Institute of Technology, Hamirpur (H.P.)
End-Semester Theory Examination – DECEMBER-2020
Title of the Course: <Database Management System >
Class: M.Sc. (Mathematics and Computing)

Course Code: MA-731
Duration: 02:00 Hours

Semester: 3rd
Max. Marks: 50

Instructions:

- All Questions are compulsory.
- Marks are given against each question.

Q1. Define data and information. Show the relationship between these two with suitable example. [05 Marks]

Q2. Which are the three level of database of architecture? Explain each in detail with diagram. [05 Marks]

Q3. Give one examples of each of the following operators: [05 Marks]

- a) Is null [01 Mark]
- b) Between [01 Mark]
- c) Like [01 Mark]
- d) Exists [01 Mark]
- e) In [01 Mark]

Q4. Write syntax of INSERT, DELETE, and UPDATE statements with proper examples. [06 Marks]

Q5. Discuss the Second and Third normal forms with proper examples. [06 Marks]

Q6. Define the term of primary key, foreign key, and surrogate key with example. [06 Marks]

Q7. What is Collision? How to deal with Hashing Collision? [06 Marks]

Q8. Write a trigger that is fired after an insert statement is executed for the MARK table. The trigger writes the student's identification number, total, percentage, grade and status in the RESULT table. (Student's status is fail if he fails in any subject and pass if he gets more than 35 marks in each subject. Grade is A if percentage ≥ 70 , B if percentage ≥ 60 and percentage < 70 , C if percentage ≥ 50 and percentage < 60 , D if percentage ≥ 40 and percentage < 50 and E if percentage < 40 . [06 Marks]

Q9. What is a transaction? Explain it by giving an example. [05 Marks]

*******ALL THE BEST*******