CS354: Problem Set 1

Deadline: 1st September 2020 Submission Filename: CS354_ps1.txt

Q1. What are the differences between cardinality and participation constraint? Which one is better (i.e. more powerful)? 1M

Q2. What are the differences between Primary key constraint and Unique constraint? 1M

Q3. Explain the concepts of a Primary key and Foreign Key. 1M

Q4. What integrity rules exist in the DBMS? 1M

Q5. A row in a table is also referred to as a _____. 1M

a) Attribute
b) Tuple
c) Field
d) Instance

Q6. The term attribute refers to a _____ of a table. 1M

a) Record
b) Column
c) Tuple
d) Key

Q7. For each attribute of a relation, there is a set of permitted values, called the _____ of that attribute. 1M

a) Domain
b) Relation
c) Set
d) Schema

Q8. A Database _____ is the logical design of the database, and the database _____ which is a snapshot of the data in the database at a given instant in time. 1M

a) Instance, Schema
b) Relation, Schema
c) Relation, Domain
d) Schema, Instance

Q9. Course (course_id, sec_id, semester) 1M

Here the course_id, sec_id and semester are _____ and Course is a _____

a) Relations, Attribute
b) Attributes, Relation
c) Tuple, Relation
d) Tuple, Attributes

Q10. The tuples of a relation can be of _____ order. 1M

a) Any
b) Same
c) Sorted
d) Constant

Q11. Explain 'Referential Integrity' with an example. 2+1 = 3M

Q12. During the decision of a logical schema, a user must be aware of the different underlying data structures used for the storage of the data. (True/False) 1M

Q13. Two entity sets cannot have multiple relationships, but any relationship set can have multiple attributes. (True/False) 1M

Q14. What are composite attributes? Give one example each of composite single values attributes and composite multi-valued attributes along with their sub attributes.
1+1+1=3M

Q15. What are Weak entity sets? How are they dependent on other entities in terms of attributes and key? 1+1=2M

Upload the file CS354_ps1.txt using the following link –

https://www.iitp.ac.in/~samrat/CS354_CS355/submission