**DBMS 28th May**

**s m sadman sakib sayor**

**all mcqs from github within that 20 mcqs(part-1)**

**part-2**

**1.Define functional dependencies. 1 7 points**

**list only armstrong axioms 3**

**and state the below statement : 3**

**.......................................................|= {A->E} i forgot this**

**2.Given the relational schema: 4 points**

**Jedi-Tamas (master, apprentice)**

**jedi(name,side,home-planet)**

**government(leader , planet, position)**

**inhabitants(specie, planet)**

**write and algebraic expression which will query(by listing their names) to find all “wookie” (which is a specie) jedi on the light side of the force!**

**[for half marks write an sql query]**

**3.From an SQL user’s perspective , does relational model provide logical and physical independence?why? 2 points**

**4. Consider a relation Movies\_Screened with attributes Theatre, Movie, Day, Time, and Certificate. Sample tuples are as follows:**

***Sathyam, 'Slumdog Millionaire', Wed, 18:00, 15***

***Sathyam, 'Slumdog Millionaire', Wed, 20:00, 15***

***PVR, 'Slumdog Millionaire', Wed, 20:30, 15***

***PVR, 'Vicky Christina Barcelona', Wed, 20:30, 12A***

**Each movie is assigned a certificate by the Indian Board of Film Certification; the certificate value 15 means that nobody younger than 15 years of age can see this movie in a cinema. The same theatre can show a movie on multiple times during a day, and may show different movies at the same time (on different screens).**

**a)Does this relation violate the second normal form requirements? Explain. 1 points**

**b) Give the functional dependencies. 2 points**

**(c) Decompose this relation into BCNF, and explain why the resulting relations are in BCNF. 4 points**

5.Design an E-R Diagram for a marketplace company (such as eBay) where individuals can sell and buy products. The E-R must be able to keep track of customers who sell items and customers who bought them; some customers may do both. Customer info must include street address, city, state, and zip code. Product info must include name, description, color, and size. Each product sold or for sale must be identifiable, so the E-R must be able to store the sale date if sold, and the current status of the sales process (available, ordered, shipped, delivered). Additionally, include the following entities: **Delivery** with attributes DeliveryID, DeliveryDate, Status, SaleID, and TransportID; **Transport** with attributes TransportID, TransportType, and TransportDetails; **Part** with attributes PartID, PartName, PartDescription, and ProductID; **Job** with attributes JobID, JobTitle, JobDescription, and CustomerID. Define entity sets that contain all data objects that you need. Define attributes and a primary key for each entity set. Define relationships between entities that reflect the requirements completely. Define total and partial participation in the relationships. Improve your design: eliminate redundancy, correct errors, etc.

a.Construct the ER diagram (you must include the bold words as entity)

you give use attribute indepdently (something similar to this) **10 points**

b. Convert into table of 3NF form. **8 points**