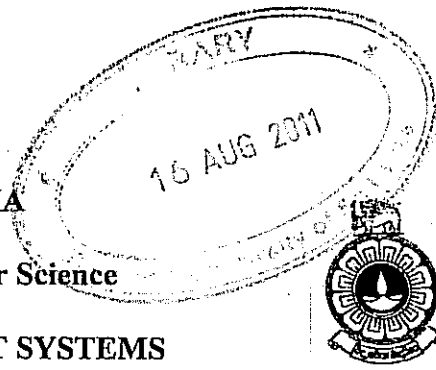


THE OPEN UNIVERSITY OF SRI LANKA
 B.Sc. Degree Programme : LEVEL 04
 Department of Mathematics and Computer Science
 CLOSE BOOK TEST 1 - 2010/2011
 CPU2241 – DATABASE MANAGEMENT SYSTEMS
 DURATION: One and Half hours



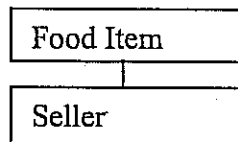
Date: 02/03/2011

Time: 4.00pm – 5.30pm

Answer All Questions

QUESTION 1

- 1.1) What is the difference between DATA and INFORMATION? Briefly explain using an example.
- 1.2) What is a Database Management System (DBMS)? Explain 3 functions of a DBMS.
- 1.3) Draw a suitable network database diagram using the example of multiple food items sold by multiple sellers. Use at least 4 food items and 3 sellers with food item as parent.



QUESTION 2

PRODUCT

PROD_CODE	PROD_DESCRIPT	PROD_PRICE	VEND_CODE
001278-AB	Claw hammer	1295	232
123-21UUY	chain saw	189.99	233
QER-34256	Sledge hammer	18.68	231
SRE-657UQ	Rat-tail file	2.99	232

VENDOR

VEND_CODE	VEND_CONTACT	VENDOR_NIC	VEND_PHONE
231	Amara Perera	811112615V	123-4536
232	Nayana Alwis	748141145V	224-2134
233	Chamarie Dias	797244225V	324-6567

Use the dataset above to answer question 2

- 2.1) Explain the terms RELATION, TUPLE, ATTRIBUTE in the context of relational data model. Take examples from the dataset above.
- 2.2) Give Examples for primary key, secondary key, foreign key, composite key based on the above data set.

QUESTION 3

A system is to be developed to record and monitor the activities of a sports club.

A sports club is providing playing court facilities to its members who like to play badminton, cricket, tennis and table tennis. Membership number, membership type (life, annual), name, address, date of birth, telephone and e-mail address are the basic information stored about a member of the club. One member can participate in a maximum of 3 sports. Members can form teams in order to play in sports tournaments.

Sports club is having five badminton courts, three tennis courts, two cricket practice courts, four table tennis courts. Members have to book the facilities in order to use them for practicing purposes. The booking date, required date and the time duration also need to be tracked. One member can book only one court at a time, where as a team of members can book up to 5 courts at a time.

Sport club organizes tournaments on badminton, tennis and table tennis (for members only). Each tournament consists of a group of matches which is played in all the relevant courts. The tournament information, match number, match status (single / double), match status (prelim /quarter final /semi final/ final), players and win/loss/draw information need to be recorded about a match.

- 3.1) Based on the above information list out the possible entities and relationships between them in the following tabular format or any other clear format.

Entity 1	Relationship (action verb)	Connectivity (1:1, 1:M)	Entity 2

- 3.2) Draw the attributes corresponding to each of the Entity using appropriate symbols.
- 3.3) Draw a Complete E-R Diagram for the above description showing all Entities, Relationships and types, Cardinalities. (Do not draw attributes in diagram)

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