THE OPEN UNIVERSITY OF SRI LANKA
DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE
B.Sc. DEGREE PROGRAMME : LEVEL 04
NO BOOK TEST II - 2013 / 2014
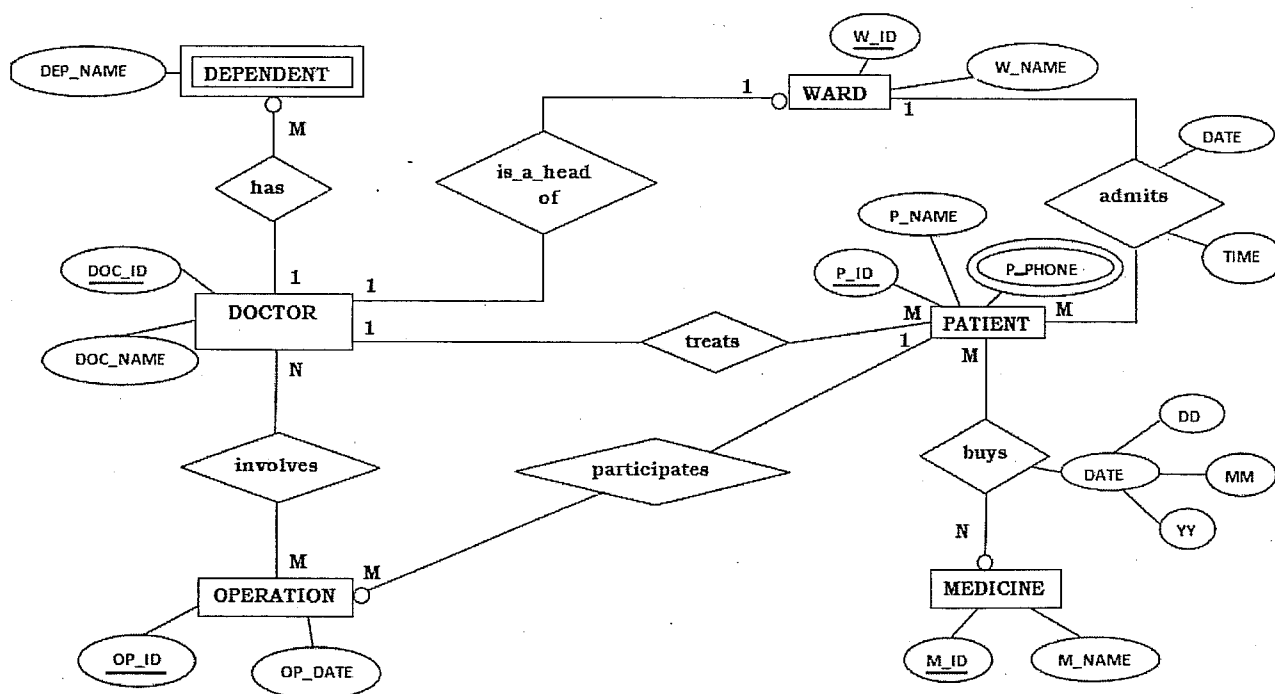CPU 2241: DATABASE MANAGEMENT SYSTEMS
Duration: One Hour

Date: 05-04-2014   Time: 10.30 a.m - 11.30 a.m

Answer ALL Questions

QUESTION 01

1. Following ER Diagram describes a small process in a Hospital. Carefully go through the ERD and draw the relevant Relational Schema for the process.

2. Briefly explain the meaning of the following terms in Database Integrity

    (a) Entity Integrity

    (b) Referential Integrity

3. Following is a Snap Shot from the 'employee' table in 'ABC_COMPANY' database. By looking at it, carefully answer the given questions.

```
+--------+----------+--------+--------+------+-------+
| empId  | empName  | empAge | empSal | dNo  | prjNo |
+--------+----------+--------+--------+------+-------+
|      1 | saman    |     25 |  55000 |    3 |     1 |
|      2 | kamal    |     55 |  85000 |    2 |     1 |
|      3 | dasun    |     40 |  65000 |    3 |     2 |
|      4 | samadhi  |     28 |  58000 |    1 |     3 |
|      5 | kasun    |     33 |   NULL |    2 |     2 |
+--------+----------+--------+--------+------+-------+
```

Write the output of the following queries. When you write the output to a given query, show it properly as you see it in MySQL Console with correct column names(Table Structure)

(a) select empName from employee where empSal **not between** 54000 and 66000;

(b) select empAge from employee where **exists** (select * from employee where empSal **is null**);

(c) select empName, empAge from employee where empAge > **ALL** (select empAge from employee where empSal < 65000);

(d) select empId, empName from employee where empName **like** '_a_a%';

(e) select dNo, **max**(empSal) from employee **group by** dNo;

(f) select empName from employee where empName = kasun;

(g) select **count**(empSal)from employee;

(h) select empsal+1000 from employee;