3. Find the customerid of customers in the customers table that have 10101 as customerid.

```
select customerid
from customers
wher customerid = 10101
```

(4)

4. Find the highest price of an item in items_ordered table.

```
Select T.price , S.price
from items_ordered T, items_orderds
where T.price > S.price.
```

X

5. Give the user Manager the privilege of reading data from items_ordered relation.

```
Grant select on items_ordered
to user manager.
```

(4)

--------------------ALL THE BEST--------------------

Q.7   Use the tables below to answer the following questions:

customers

customerid	firstname	lastname	city	state
10101	John	Gray	Lynden	Washington
10298	Leroy	Brown	Pinetop	Arizona
10299	Elroy	Keller	Snoqualmie	Washington
10315	Lisa	Jones	Oshkosh	Wisconsin
10325	Ginger	Schultz	Pocatello	Idaho

items_ordered

customerid	order_date	item	quantity	price
10330	30-Jun-1999	Pogo stick	1	28.00
10101	30-Jun-1999	Raft	1	58.00
10298	01-Jul-1999	Skateboard	1	33.00
10101	01-Jul-1999	Life Vest	4	125.00
10299	06-Jul-1999	Parachute	1	1250.00

Write SQL statements for the following queries: (5 x 4 = 20)

1. List all customers IDs along with their items and order date. (Customer who has
   not ordered any item should also be shown in the result)

   select customerID. from

   select customers.customerid , items_orderd.customerid , item,
   order_data from , Customers , items_ordered where

   full oute join

   (3)

2. Create a view *Idaho_customers* to show customers information in Idaho State only.
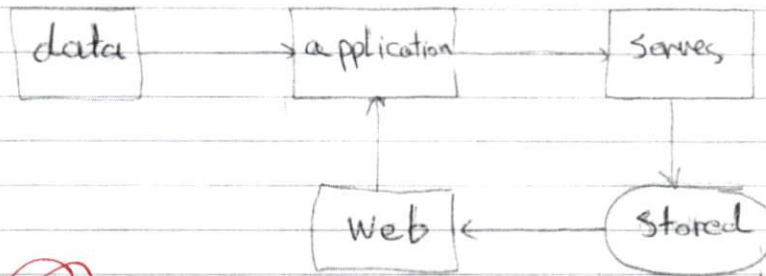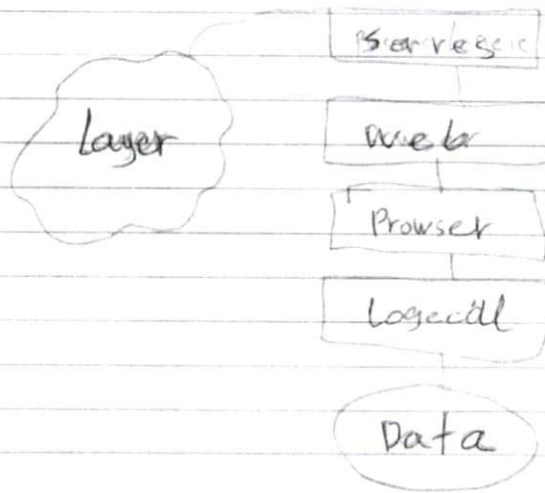
   Create view Idaho_customers

   as

   (select * from Customer)

   (2)

Q.6   Explain the database web application architecture with diagram.   (10 Marks)

Server

Layer   Web

Prowser

Logicall

Data

data → application → Serves

Web ← Stored

Q. 5 Compute at least 6 rules of the closure of the following set *F* of functional dependencies for relation schema $R = (A, B, C, D, E)$.

$$A \rightarrow BC$$
$$CD \rightarrow E$$
$$B \rightarrow D$$
$$EA \rightarrow A$$

NOTE: You MUST show all the stages of your work and use Armstrong's Axioms to explain every step.

(10 Marks)

$A \longrightarrow BC$
$BC \longrightarrow CD$ Augmention
$A \longrightarrow BC, BC \longrightarrow CD$ Transitivity.
$\boxed{A \longrightarrow CD}$ ①

$CD \longrightarrow E$
$E \longrightarrow A$
$CD \longrightarrow E, E \longrightarrow A$ Transitivity
$\boxed{CD \longrightarrow A}$ ②

$CB \longrightarrow DC$ Augmention
$CD \longrightarrow E$
$CB \longrightarrow CD, CD \longrightarrow E$ Transitivity
$\boxed{CB \longrightarrow E}$ ③

$E \longrightarrow A$
$A \longrightarrow BC$
$E \longrightarrow A, A \longrightarrow BC$ Transitivity
$\boxed{E \longrightarrow BC}$ ④

$EA \longrightarrow A$ $EA \longrightarrow A, A \longrightarrow BC$ Transitivity
$A \longrightarrow BC$
$\boxed{EA \longrightarrow BC}$ ⑤

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⑧

4. List two reasons why null values might be introduced into the database.

1- Values unkonew.

2- values dosn't exist.

(4)

5. Explain the distinction between total and partial constraints.

total → must belong one of level-luer entity set.

(2) partial → not belong one of level-luer entity set.

Q. 4   Answer the following questions briefly.   (5 x 4 = 20)

1. What is a view?

a View is SQL Quaany Statment
✓ Provide to user aview and hid deatials
② of query User dosnrt can't see it.

2. List three goals of normalization.

✓ 1- remove redandancy.
③ 2- Solve problem of insett
update and delet.
3- Transitive dpendency.

3. What is the difference between commit work and rollback work in transaction?

                    transaction
Commit work ——→ fully exedute work. #
                    transaction
rollback Work ——→ return ever excute
③ wehn fall as is dosnrt neve happen.
                              occurred.

Q.3   Fill in the blanks with appropriate words: (10 x 1 = 10)

Weak Entity Set	First	Grant	Second
View	HTTP	Time Stamp	Normalization
Cookie	Index	Rename	File Manager

1. An entity set that does not have a primary key is referred to as a ..weak....Entity..Set

2. ....File...manage... manages the allocation of space on disk storage and the data structures used to represent information stored on disk.

3. The ...H..T.T..P......... protocol is connectionless.

4. To give authorization to database users on table and views, the SQL command ....Grant..... is used.

5. The operator ρ means ....Rename.........

6. The main task carried out in the .....First....... normal form is to remove repeating attributes to separate tables.

7. ..Normalization is a process to help reduce the likelihood of data anomalies.

8. ....Index......... is a data structure used to speed up access to records with specified values.

9. ......Time..Stamp..... type is the date plus time of day.

10. A ....Cookie..... is a small piece of text containing identifying information that sent by server to browser or reversely.

Q. 2   For each of the following statements, answer with True or False. (10 x 1 = 10)

S. No.	STATEMENT	TRUE/ FALSE
1.	A primary key is a field whose values identify each record in a database	T ✓
2.	A database management system is a collection of interrelated data and a set of program to access those data	T ✓
3.	Atomic attributes are attributes that can be further divided.	F ✓
4.	NULL signifies an unknown value or a value that does not exist	T ✓
5.	The duplicate rows removed from the result of project operation	F ✗
6.	Given the functional dependency R → (S,T) , then it is also true that R → S.	T ✓
7.	A relation is in Boyce-Codd Normal Form (BCNF) if every determinant is a composite key.	F ✓
8.	A table is in BCNF if every determinant in the table is a candidate key	T ✓
9.	Cookies can be stored permanently or for a limited time	F ✗
10.	HyperText Transfer Protocol (HTTP) is used for communication with the Web server.	T ✓

16. From a structural point of view, 2NF is better than _____.

   A. 1NF

   B. 3NF

   C. 4NF

   D. BCNF

17. What does HTML stand for?

   A. Home Tool Markup Language

   B. Hyperlinks and Text Markup Language

   C. Hyper Text Markup Language

   D. High Tool Markup Language

18. _____ a small piece of text containing identifying information.

   A. HTML

   B. HTTP

   C. Cookies

   D. Encryption

19. Audit Trails are used to:

   A. Authorize a user

   B. Locate when and how a data is updated

   C. Encrypt data

   D. Reduce cost of serving pages

20. _____ is (are) a server side scripting language

   A. JSP

   B. PHP

   C. Both A and B

   D. None of the above

11. Transaction either fully executed or rolled back as if it never occurred is

   A. Atomic transaction

   B. Rollback work

   C. Commit work

   D. API

12. A _____ relationship set is represented as a schema with attributes for the primary keys of the two participating entity sets, and any descriptive attributes of the relationship set.

   A. Many-to-Many

   B. Many-to-One

   C. One-to-Many

   D. One-to-One

13. In the below figure, Section is considered to be ....

   A. Strong entity

   B. Primary key

   C. TABLE operation

   D. Weak entity

14. An .... is a set of entities of the same type that share the same properties

   A. Entity set

   B. Attributes

   C. Primary key

   D. Relation

15. Tables in second normal form (2NF)

   A. Eliminate transitive dependencies.

   B. Have fields must contain a single value.

   C. Have a composite key

   D. Have all non-key fields depend on the whole primary key

6. A _____ is a select-from-where expression that is nested within another query

   A. Schema

   B. Subquery

   C. Query

   D. Above all

7. What command is used to get back the privileges offered by the GRANT command?

   A. Grant

   B. Revoke

   C. Execute

   D. Run

8. _____ is a logical unit of work that contain one or more SQL statements.

   A. Query

   B. Workspace

   C. Transaction

   D. Savepoint

9. _____ computes the join and then adds tuples from one relation that does not match tuples in the other relation to the result of the join.

   A. Join

   B. Natural join

   C. Cartesian product

   D. Outer join

10. Avg, min, max, sum and count are called _____ functions.

   A. Algebra

   B. Normal

   C. Aggregate

   D. Complex

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Q. 1 For each of the following multiple choice questions, choose one correct answer.

(20 x 1 = 20)

1. Which is the database language

   A. C

   B. C++

   C. SQL

   D. None of these

2. Which is the component of database management system

   A. Query Language

   B. Database Manager

   C. File manager

   D. All of these

3. Key to represent relationship between tables is called

   A. Primary key

   B. Secondary key

   C. Foreign key

   D. Candidate key

4. A set of possible data values is called

   A. Attribute

   B. Degree

   C. Tuple

   D. Domain

5. Fixed point number, with user-specified precision of p digits, with n digits to the right of decimal point is

   A. Char (p,d)

   B. Numeric (p,d)

   C. Float (p,d)

   D. Above all

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Final Examination Cover Sheet
Second Semester: 1436-1437 / 2015-2016

Course Title:	INTRODUCTION TO DATABASE	Course Code:	IT244
Exam Duration:	2 HOURS	Number of Pages:(including cover page)	13

Student Name:	Ohood Saad Alsinari	Student ID:	13012557 72
Course Instructor:		Exam Date:	

Exam Guidelines

- Mobile phones are not permitted.

Marking Scheme

Questions	Score
Question 1 (20 Marks)	14
Question 2 (10 Marks)	08
Question 3 (10 Marks)	10
Question 4 (20 Marks)	14
Question 5 (10 Marks)	08
Question 6 (10 Marks)	7
Question 7 (20 Marks)	13
Total: 100 Marks	70
Final Total: 50 Marks	35