

ABU DHABI POLYTECHNIC

EXAMINATION COVER SHEET

Student Name:		
Student ID Number:		
Subject:	Intro. to Database System Security	
CRN No.	Course No.	Reference
1257	ICT-042	Mid Term Exam
Duration	Instructor	
01 Hr	Enrico V. Angeles	

Instructions:

1. Use a blue/black pen. Do not use a **red pen**.
2. Write your Name, ID number and section in the above space.
3. Read each question carefully. Answer all Questions and show your work.
4. You **are not** allowed to use a Mobile phone during the examination.

Question	Maximum Marks	Marks Obtained	Marked by:	Initials	Final Exam Only	
					Moderated by:	Signature
1	15					
2	20					
3	30					
Total	65					
%	100					

Caution:-

1. ADPoly considers CHEATING as a serious offence and students may be dismissed if caught.
2. Talking is considered as a cheating during examination.

Quiz

Note: It is recommended that you save your response as you complete each question.

Question 1 (1 point)



The entity integrity rule states that a primary key attribute can be null.

- True
- False

Save

Question 2 (1 point)



A good data definition is always accompanied by diagrams, such as the entity-relationship diagram.

- True
- False

Save

Question 3 (1 point)



A primary key is an attribute that uniquely identifies each row in a relation.

- True
- False

Save

Question 4 (1 point)



An attribute whose values can be calculated from related attribute values is called a derived attribute.

- True
- False

Save

Question 5 (1 point)



In an E-R diagram, strong entities are represented by double-walled rectangles.

- True
- False

Save

Question 6 (1 point)



A person is an example of an entity.

- True
- False

Save

Question 7 (1 point)



The systems development life cycle is the traditional methodology used to develop, maintain, and replace information systems.

- True
- False

Save

Question 8 (1 point)



Redundancy increases the risk of consistent data.

- True
- False

Save

Question 9 (1 point)



When normalizing, the goal is to decompose relations with anomalies to produce smaller, well-structured relations.

- True
- False

Save

Question 10 (1 point)



Unlike columns, the rows of a relation may not be interchanged and must be stored in one sequence.

- True
- False

Save

Question 11 (1 point)



One property of a relation is that each attribute within a relation has a unique name.

- True
- False

Save

Question 12 (1 point)



A foreign key is a primary key of a relation that also is a primary key in another relation.

- True
- False

Save

Question 13 (1 point)



An attribute is a person, place, object, event, or concept in the user environment about which the organization wishes to maintain data.

- True
- False

Save

Question 14 (1 point)



A cascading delete removes all records in other tables associated with the record to be deleted.

- True
- False

Save

Question 15 (1 point)



Metadata are data that describe the properties of other data

- True
- False

Save

Question 16 (1 point)



A primary key that consists of more than one attribute is called a:

- cardinal key
- foreign key
- composite key
- multivalued key

Save

Question 17 (1 point)



An attribute in a relation of a database that serves as the primary key of another relation in the same database is called a:

- link key
- foreign attribute
- link attribute
- foreign key

Save

Question 18 (1 point)



All of the following are properties of metadata EXCEPT:

- processing logic
- data structures
- data definitions
- rules or constraints

Save

Question 19 (1 point)



A relationship where the minimum and maximum cardinality are both one is a(n) _____ relationship.

- mandatory link
- mandatory one
- optional
- unidirectional

Save

Question 20 (1 point)



An attribute (or attributes) that uniquely identifies each row in a relation is called a:

- primary key
- duplicate key
- column
- foreign field

Save

Question 21 (1 point)



A _____ specifies the number of instances of one entity that can be associated with each instance of another

entity.

- limit
- cardinality constraint
- degree
- counter constraint

Save

Question 22 (1 point)



Which of the following is NOT an advantage of database systems

- Better data quality
- Reduced program maintenance
- Redundant data
- Program-data independence

Save

Question 23 (1 point)



Relational databases establish the relationships between entities by means of common fields included in a file called a(n):

- entity
- relation
- association
- relationship

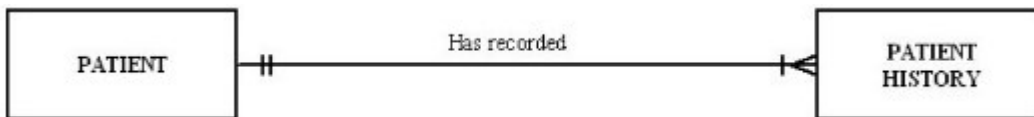
Save

Question 24 (1 point)

A two-dimensional table of data sometimes is called a:

- relation
- set
- group
- declaration

Save

Question 25 (1 point)

In the diagram above, which of the answers below is true?

- Each patient has one or more patient histories
- Both A and C
- Each patient history belongs to one and only one patient
- Each patient has one and only one visit

Save

Question 26 (1 point)

When all multivalued attributes have been removed from a relation, it is said to be in:

- first normal form
- third normal form
- second normal form
- Boyce-Codd normal form

Save

Question 27 (1 point)

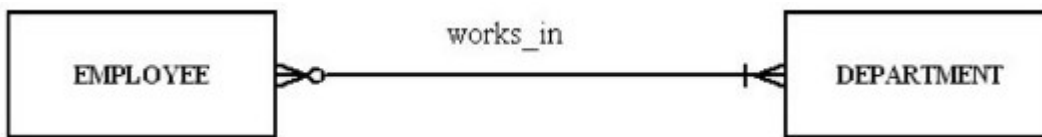


An entity type whose existence depends on another entity type is called a _____ entity.

- codependent
- weak
- strong
- variant

Save

Question 28 (1 point)



For the relationship represented in the figure above, which of the following is true?

- An employee can work in more than one department but does not have to work for any department
- A department must have at least one employee
- An employee has to work for more than one department
- A department can have more than one employee

Save

Question 29 (1 point)



Which of the following are properties of relations?

- All of the above
- Each attribute has a unique name
- There are no multivalued attributes in a relation
- No two rows in a relation are identical

Save

Question 30 (1 point)



A person, place, an object , an event or concept about which the organization wishes to maintain data is called a(n):

- entity
- object
- relationship
- attribute

Save

Question 31 (1 point)



An attribute that can be calculated from related attribute values is called a(n) _____ attribute.

- multivalued
- derived
- composite
- simple

Save

Question 32 (1 point)



Which of the following is software used to create, maintain, and provide controlled access to databases?

- Network operating system
- Database Management System
- User view
- Attribute

Save

Question 33 (1 point)



All of the following are the main goals of normalization EXCEPT:

- make it easier to maintain data
- simplify the enforcement of referential integrity
- maximize storage space
- minimize data redundancy

Save

Question 34 (1 point)



A relation that contains no multivalued attributes and has non-key attributes solely dependent on the primary key but contains transitive dependencies is in which normal form?

- Fourth
- Second
- Third
- First

Save

Question 35 (1 point)



A database is an organized collection of _____ related data.

- badly
- loosely
- logically
- physically

Save

Save All Responses

Go to Submit Quiz

	MAXIMUM	Your SCORE
	75	

Abu Dhabi Polytechnic
INFORMATION SECURITY ENGINEERING TECHNOLOGY
ICT-042 – Intro. to Database System Security
Quarter 4 – 2015/2016

MIDTERM EXAM

Date: September, 2015

Duration: 1 Hour

PART 2:

Section 3 – Data Model and Database Normalization: (30 Marks)

1. Draw an ER Diagram (10 Marks)

Consider a movie database in which data is recorded about the movie industry. The data requirements are summarized as follows:

- Movies are identified by their title and year of release. They have a length in minutes. Movies are directed by one or more directors and have one or more actors acting in them.
- Actors are identified by their names and date of birth and act in one or more movies. Each actor has a role in the movie.
- Directors are also identified by their names and date of birth and direct one or more movies. It is possible for a director to act in a movie (not necessarily in a movie they direct).
- Studios are identified by their names and have an address. They produce one or more movies.

2. Perform the following task. (20 Marks)

- Decompose Grade Report below into a set of 3NF relations and Draw the functional dependencies (show the full, partial and transitive dependencies if applicable) (10 Marks)
- Draw a relational schema for your 3NF relations and show the referential integrity constraints. (5 Marks)

c. Show the 3NF relations in Visio notation. (5 Marks)

MILLENNIUM COLLEGE GRADE REPORT FALL SEMESTER 200X				
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IS 350	Database Mgt.	Codd	B104	A
IS 465	System Analysis	Parsons	B317	B

ANSWER SHEET

ANSWER SHEET