

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

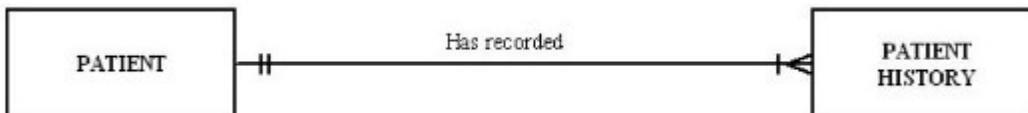
Save

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)

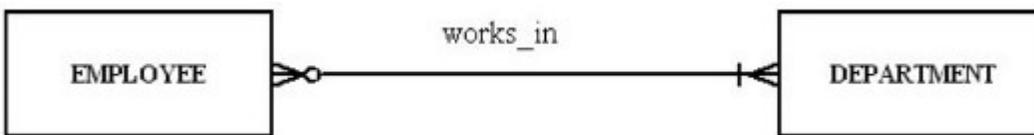


An entity type whose existence depends on another entity type is called a _____ entity.

- 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)

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IS 350	Database Mgt.	Codd	B104	A
IS 465	System Analysis	Parsons	B317	B

ANSWER SHEET

ANSWER SHEET