Chapter 1: Introduction to Database Management

TRUE/FALSE

1.	Redundancy wastes space because you are storing the same data in more than one place.				
	ANS: T	PTS:	1	REF:	2
2.	A spreadsheet's data- the same time.	sharing	features allows	s multij	ple employees to update data in one spreadsheet at
	ANS: F	PTS:	1	REF:	2-3
3.	An attribute is a char	acteristi	c or property o	f an en	tity.
	ANS: T	PTS:	1	REF:	4
4.	A relationship is an a	ssociati	on between attr	ributes.	
	ANS: F	PTS:	1	REF:	5
5.	A database will not o the relationships amo	-			ultiple types of entities, but also information about
	ANS: T	PTS:	1	REF:	5
6.	In a database, each er	ntity has	s its own table.		
	ANS: T	PTS:	1	REF:	5
7.	The attributes of an entity become the rows in the table				
	ANS: F	PTS:	1	REF:	5
8.	In an entity-relations between connected en		R) diagram, rec	tangles	represent entities and lines represent relationships
	ANS: T	PTS:	1	REF:	9
9.	Programs created with Visual Basic, Java, Perl, PHP, or C++ can access the database directly, rather than having to access it through the DBMS.				
	ANS: F	PTS:	1	REF:	10
10.	Sharing data is one a	dvantag	e of database p	rocessi	ng.
	ANS: T	PTS:	1	REF:	12
11.	Eliminating redundar	ncy is al	ways possible	when u	sing a database approach.
	ANS: F	PTS:	1	REF:	13

12. A database cannot be password protected to prevent unauthorized users from accessing			nt unauthorized users from accessing the data.				
	ANS: F	PTS:	1	REF:	13		
13.	There is a greater impact of failure in a nondatabase, file-oriented system.						
	ANS: F	PTS:	1	REF:	14		
14.	A good DBMS provides integrity constraints, which are features that let you change the structure of the database without changing the programs that access the database.						
	ANS: F	PTS:	1	REF:	14		
15.	To support all the complex functions that it provides to users, a DBMS must store data in multiple files.						
	ANS: F	PTS:	1	REF:	14		
MUL	TIPLE CHOICE						
1.	Storing the same data		re than one plac				
	a. data independent	e			redundancy		
	b. data integrity			a.	security		
	ANS: C	PTS:	1	REF:	2		
2.	A(n) is a person, place, object, event, or idea for which you want to store and process data.						
	a. attribute		, , ,		entity		
	b. DBMS			d.	DBA		
	ANS: C	PTS:	1	REF:	4		
3.	A(n) is a characteristic or property of an entity.						
	a. attribute	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	or property or		datapoint		
	b. constraint			d.	record		
	ANS: A	PTS:	1	REF:	4		
4.		iputer c	ounterpart to ar	n ordina	ary paper file you might keep in a file cabinet or ar		
	accounting ledger. a. spreadsheet				data file		
	b. database			d.			
	ANS: C	PTS:	1	REF:			
_							
5.	The of an entity	<i>i</i> becom	ne the columns				
	a. E-R diagramsb. tuples				data files attributes		
	-	D.T.C					
	ANS: D	PTS:		REF:			
6.	An association between		ties is known as	—			
	a. integrity constrai	nt		C.			
	b. relationship			d.	data file		

	ANS: B	PTS:	1	REF:	5
7.	A visual way to repre a. spreadsheet b. DBMS	sent a c	database is with	a(n) _ c. d.	
	ANS: D	PTS:	1	REF:	9
8.	Popular include a. E-R diagrams b. DBAs	Access	s, Oracle, DB2,		DBMSs
	ANS: C	PTS:	1	REF:	10
9.	During the proca. data security b. database integrity		latabase expert	determ c. d.	E
	ANS: C	PTS:	1	REF:	10
10.	are screen objects. Forms b. Fields	ets used	l to maintain, vi	c.	d print data from a database. Data files Entities
	ANS: A	PTS:	1	REF:	10
11.		file-orns with the commonly of	iented environi each system ha ibined and shar ot have access	ment, day wing its red amo to the sa	ame information.
	ANS: A	PTS:	1	REF:	12-13
12.	An integrity constraint a. is kept in an extension can unintentional c. can be accessed and data must follow	rnal file ly be aconly by	e ccessed by una- authorized use		ed users
	ANS: D	PTS:	1	REF:	13
13.	A database hasa. redundancy b. integrity	if the d	ata in it satisfie	s all est c. d.	
	ANS: B	PTS:	1	REF:	13
14.	is the preventional. Data independent b. Integrity constrain	ce	authorized acce		Redundancy
	ANS: D	DTC.	1	DEE.	12

15.			n as adding new da c.	access programs from having to engage in mundane ata and deleting existing data. entity DBMS		
	ANS: D	PTS: 1	REF:	13		
16.	A person who is in a. writer b. administrator	charge of a da	c.	organization is often called the database designer controller		
	ANS: B	PTS: 1	REF:	13		
17.	A good should provide an opportunity for users to incorporate integrity constraints when they design the database.					
	a. database adminib. DBA			E-R diagram DBMS		
	ANS: D	PTS: 1	REF:	13		
18.	A DBMS lets you as a. groups b. classes	ssign users to	c. d.			
	ANS: A	PTS: 1	REF:	13		
19.	is a property the programs that ac a. Data independent b. Integrity constraints	ccess the data	ibase.	Database design Data dependence		
	ANS: A	PTS: 1	REF:	14		
20.	One disadvantage of a. a larger file size b. data dependence ANS: A	e	c. d.	reduced integrity reduced productivity		
COM	PLETION					
		ction of prog	rams, through whi	ich users interact with a database is known as a(n)		
	ANS: DBMS database manageme database manageme DBMS (database m	nt system (D				
	PTS: 1	REF: 9				
2.	In an E-R diagram,			represent entities.		
	ANS: rectangles					

	PTS: 1	REF: 9				
3.	In an E-R diagram, _	represent relat	ionships between connected entities.			
	ANS: lines					
	PTS: 1	REF: 9				
4.	In an E-R diagram, the at the end of a line indicates the "many" part of the one-to-many relationship between two entities.					
	ANS: dot					
	PTS: 1	REF: 9				
5.	A group of people in	charge of a database within an organiz	ation is often called the			
	ANS: DBA database administrat database administrat DBA (database admi	on on (DBA)				
	PTS: 1	REF: 13				
6.	The problem of inco	sistency in data is a direct result of	·			
	ANS: redundancy					
	PTS: 1	REF: 13				
7.	Eliminating much simpler.	not only saves space b	out also makes the process of updating data			
	ANS: redundancy					
	PTS: 1	REF: 13				
8.	A good database without have	has many features the ng to do any programming.	nat allow users to gain access to data in a			
	ANS: DBMS database management database management DBMS (database management)	system (DBMS)				
	PTS: 1	REF: 13				
9.	A database file requi	es a large amount of disk space and int	ernal			
	ANS: memory					

	PTS: 1	REF: 14
10.	()	relationship between two entities, each occurrence of the first entity is rences of the second entity and each occurrence of the second entity is related to of the first entity.
	ANS: one-to-many one to many	

ESSAY

1. List the advantages of database processing.

ANS:

PTS: 1

Getting more information from the same amount of data Sharing data
Balancing conflicting requirements
Controlling redundancy
Facilitating consistency
Improving integrity
Expanding security
Increasing productivity
Providing data independence

REF: 28

PTS: 1 REF: 12

2. Explain why it is better to try to control redundancy rather than eliminate it.

ANS:

Although eliminating redundancy is the ideal, it is not always possible. Sometimes, for reasons having to do with performance, you might choose to introduce a limited amount of redundancy into a database. However, even in these cases, you would be able to keep the redundancy under tight control, thus obtaining the same advantages. This is why it is better to say that you control redundancy rather than eliminate it.

PTS: 1 REF: 13

3. Discuss how the database approach and the nondatabase approach differ in terms of ensuring the security of the database.

ANS:

A DBMS has many features that help ensure the enforcement of security measures. For example, a DBA can assign passwords to authorized users; then only those users who enter an acceptable password can gain access to the data in the database. Further, a DBMS lets you assign users to groups, with some groups permitted to view and update data in the database and other groups permitted only to view certain data in the database. With the nondatabase approach, you have limited security features and are more vulnerable to intentional and accidental access and changes to data.

PTS: 1 REF: 13

4. List the disadvantages of database processing.

ANS:

Larger file size Increased complexity Greater impact of failure More difficult recovery

PTS: 1 REF: 14

5. Explain why the impact of failure is greater in database processing, compared with the nondatabase approach.

ANS:

In a nondatabase, file-oriented system, each user has a completely separate system; the failure of any single user's system does not necessarily affect any other user. On the other hand, if several users are sharing the same database, a failure on the part of any one user that damages the database in some way might affect all the other users.

PTS: 1 REF: 14