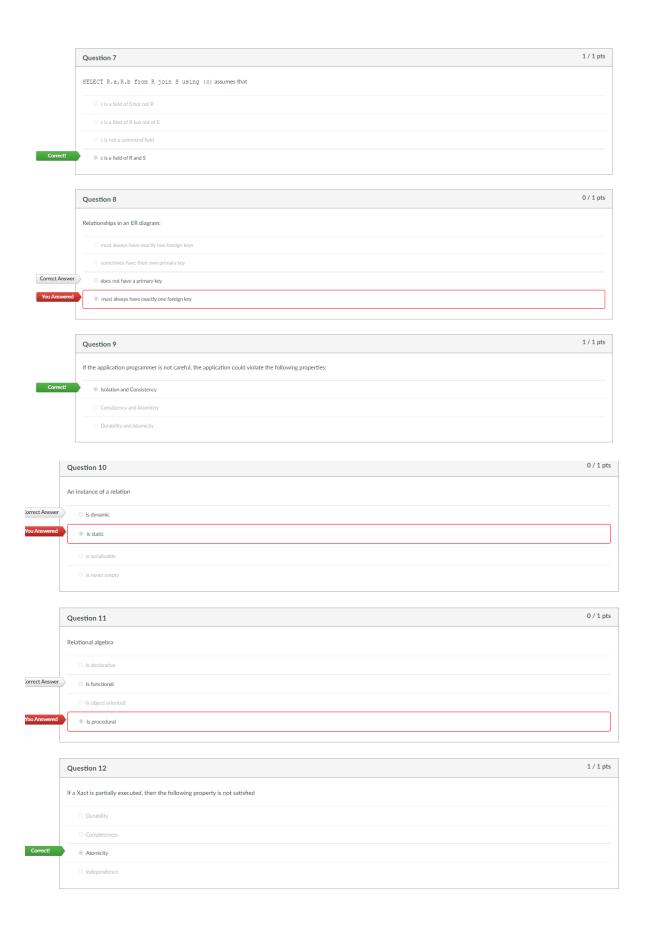
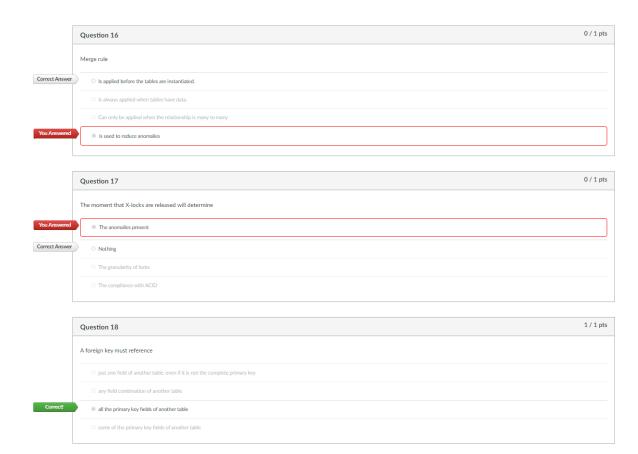
Score for this quiz: **95** out of 100 Submitted May 11 at 7:26pm This attempt took 114 minutes.

	Question 1	1 / 1 pts	
	The difference between data and information is:		
	○ A, there is no difference		
	© B. functional		
	○ C, hard to establish		1/1 pts
	Question 2	1 / 1 pts	
	A relational schema		
	(ii) is the same for every tuple in a relation		
	nust be lossless		
	can be different for different tuples		
	includes functional dependencies		
	Question 3	1 / 1 pts	
	"Concurrent transactions must not interact" is		
	O Independence		
	O Durability		
	Correct!		
	○ Atomicity		
	Question 4		1 / 1 pts
	Observed Cond Assembly in modeled		
	Phantom Read Anomaly is avoided		
Correct!	by the "serializable" isolation level		
	by the "repeatable read" isolation level		
	by the "unrepeatable read" isolation level		
	by the "read committed" isolation level		
	Question 5		1 / 1 pts
	The strongest normal form that R=AB is in is:		
	A. Not known since we don't know the set of functional dependencies		
	○ 3NF		
	○ 2NF		
Correct!	● BCNF		
	Question 6		1 / 1 pts
	In semi-structured databases		
Comment			
Correct!	the schema is part of each document		
	O there is no schema		
	the schema is provided together with each document		
	the schema is given as part of the collection		



Question 13	1/1 pts
If during the execution of a transaction, the database enters an inconsistent state then	
the offending transaction will be rolled back	
the offending transaction will not satisfy the Isolation property.	
the DBMS will ignore it	
the offending transaction will be aborted	
Question 14	1 / 1 pts
The strongest normal form that (R, \emptyset) is in is:	
O 3NF	
○ 2NF	
® BCNF	
○ 1NF	
Question 15	1 / 1 pts
Interleaved serializable schedules	
Need the current Xact to finish before another one starts	
Are just theoretical and cannot be implemented in real life	
Avoid all anomalies	



Question 19	1/
To avoid a deadlock	
Isolation must be enforced	
A graph can be used	
○ WAL is used	
○ A log is used	
Question 20	1/
Every candidate key	
is the primary key	
○ B. is a subset of F*	
⊚ is a superkey	
o must be a singleton	
Question 21	5 /
Given R=ABCD	
and $F = (AB \rightarrow C, C \rightarrow D, D \rightarrow A)$	
Which of the following is a BCNF violation?	
○ ABC→D	
○ C→B	
○ AB→CD	
® C→AD	
Question 22	5 / 5 pts
Given R*(A,B,C,D) and F*(A \rightarrow B,BC \rightarrow D,AD \rightarrow C,AC \rightarrow D,BD \rightarrow A)	
When computing a minimal cover, if you process the functional dependencies in order, which is the first one that is found to be redundant?	
○ AD→C	
○ A→B	
® AC→D	
○ BC→D	
○ BD→A	
Question 23	5 / 5 pts
Given R=ABCDEFG	
and $F = \{GC \rightarrow B, B \rightarrow G, CB \rightarrow A, GBA \rightarrow C, A \rightarrow DE, CD \rightarrow B, BE \rightarrow CA, BD \rightarrow GE\}$ The following is a minimal cover:	
(GCF, CBF, BAF, BDF, BFE)	
♥ (SEP, EBP, BAP, BPE)	
\bigcirc GC→B, CB→A, A→DE, CD→B, BD→E	

○ GCF→BADE

	Question 24	5 / 5 pts
	Given R=ABCDEFG and $F = \{CF \rightarrow B, B \rightarrow C, FB \rightarrow E, CBE \rightarrow F, E \rightarrow AG, FA \rightarrow B, BG \rightarrow FE, BA \rightarrow CG\}$ Which attribute can be removed from the left hand side of a functional dependency?	
	○ F	
Correcti	⊕ c	
	○ E	
	ОВ	
	○ A	
	Question 25	5 / 5 pts

Given R(A,B,C,D,E) and E \rightarrow AB, A \rightarrow B, C \rightarrow D. Which of the following is a correct 3NF decomposition of R based on a minimal cover?

O EAB, AB, CD
O EA, BC, CD, ED

EA, AB, CD, ECEAB, EC, CD

Correct!

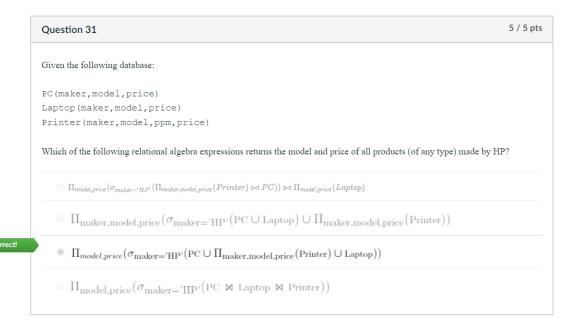
	Given R=ABCDEFG and F = {CF \rightarrow B, B \rightarrow C, FB \rightarrow E, CBE \rightarrow F, E \rightarrow AG, FA \rightarrow B,BG \rightarrow FE, BA \rightarrow CG} The following is a candidate key:
	○ CFB
	O EAD
Correct!	® FBD
	○ FB
	○ FEA

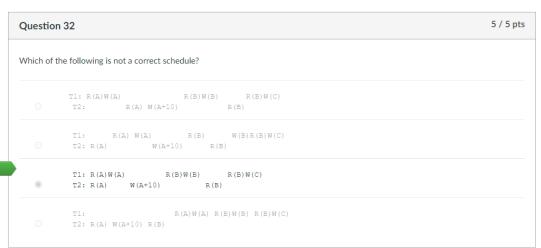
	Question 27	5 / 5 pts
	Given R=ABCDEFG and F = {CF \rightarrow B, B \rightarrow C, FB \rightarrow E, CBE \rightarrow F, E \rightarrow AG, FA \rightarrow B,BG \rightarrow FE, BA \rightarrow CG} The following is redundant:	
	○ E→G	
Correct!	® BE→F	
	○ FB→E	
	○ BA→G	

	Question 28	5 / 5 pts
	Suppose that relations R and S have n tuples and m tuples respectively. What is the maximum number of tuples that the of the following expression can have? $\pi_L(R) - S$, for some list of attributes L	e results
	0 0	
Correct!	® n	
	○ m	
	○ max(n,m)	
	○ n÷m	
	○ n'm	
	○ min(n,m)	
	○ п-т	

	Question 29	5 / 5 pts
	Suppose that relations R and S have n tuples and m tuples respectively. What is the minimum number of tuples that to of the following expression can have? $\pi_L(R) - S$, for some list of attributes L	he results
	○ n*m	
	○ n	
	О м	
	○ n-m	
Correct!	◎ 0	
	○ max{n,m}	
	○ n+m	
	○ min(n,m)	

	Question 30	5 / 5 pts
	Given $R=(x,y,z)$, $S=(u,v,w,t)$ The following is a valid Relational Algebra expression:	
	\circ A $\Pi_x(R\Join S)$	
	\circ B. $\Pi_{x,w}(R \cup S)$	
Correct!	${}^{\tiny{\textcircled{\tiny 0}}}$ C. $\Pi_x(R imes S)$	
	\circ D. $\sigma_{R.x=S.u}(R\bowtie S)$	





5 / 5 pts

ven R(A, B, C, D, E) and D \rightarrow BE, C \rightarrow D, AB \rightarrow C e closure of C is	
O BDE	
O ABCD	
O C	
ОСВ	
® CBDE	
CBDE	





Ouiz Score: 95 out of 100