United International University (UIU)

Dept. of Computer Science & Engineering (CSE)

Final Exam, Trimester: Summer 2023

Course Code: CSE-3521 Course Title: Database Management Systems

Total Marks: 40 Duration: 2 hours

Any examinee found adopting unfair means will be expelled from the trimester / program as per UIU disciplinary rules.

| | | Pu | blisher | |] |
|-------|---|--|--|--|-----------------|
| | ID | Name | Rating | Number of Books Published | |
| | 1 | Samin | 4.5 | 30 | |
| | 2 | Tuhin | 4.9 | 20 | • |
| | 3 | Niloy | 4.2 | 12 | 1 |
| | 4 | Samin | 4.5 | 5 | |
| | 5 | Shakil | 4.6 | 20 | |
| | 6 | Niloy | 4.1 | 13 | - |
| b) | $R=\{A, B, G\}$ $FD=\{A\rightarrow G\}$ i. Find ou | e following <i>rela</i> C, D, E, I} C, AB→C, C- at all the <i>Candid</i> | tion, R and a DI, CD→I, ate keys from | set of <i>functional depend</i> EC→AB, EI→C } the given dependencies. | |
| b) c) | R={A, B, G FD={ A→G i. Find ou ii. Check a iii. Find th | e following <i>rela</i> C, D, E, I} C, AB→C, C— It all the <i>Candida</i> and justify in what The <i>Minimal Cove</i> ish between <i>Par</i> | tion, R and a DI, CD→I, ate keys from hich Normal f er of the relat tial Dependent | set of <i>functional depend</i> EC→AB, EI→C } the given dependencies. <i>form</i> the relation is. ion, R <i>ncy</i> and <i>Transitive Depe</i> | ndeno |
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| ŕ | R={A, B, C} FD={ A→C} i. Find ou ii. Check a iii. Find th i. Distingui ii. Check Preserve th R={A, B, C} FD = { AI AC A | e following <i>rela</i> C, D, E, I $C, AB \rightarrow C, C \rightarrow B,$ $C \rightarrow D, E, G$ $C \rightarrow B,$ $C \rightarrow D, E, G$ $C \rightarrow D, E,$ $C \rightarrow C, D \rightarrow E,$ | tion, R and a DI, CD→I, ate keys from hich Normal f er of the relat tial Dependent owing decomples or not. | set of <i>functional depend</i> EC→AB, EI→C } the given dependencies. <i>form</i> the relation is. ion, R <i>ncy</i> and <i>Transitive Dependencies</i> omposition of the relation | ndeno |
| ŕ | R={A, B, C} FD={ A→C} i. Find ou ii. Check a iii. Find th i. Distingui ii. Check Preserve th R={A, B, C} FD = { AB AC B | e following <i>rela</i> C , D , E , I } C , $AB \rightarrow C$, $C \rightarrow B$, and justify in whether the following the <i>Minimal Cove</i> C , | tion, R and a DI, CD→I, ate keys from hich Normal f er of the relat tial Dependent owing decomples or not. | set of functional dependence EC→AB, EI→C } the given dependencies. form the relation is. ion, R ncy and Transitive Dependence inposition of the relation | enden a, R v |

| | T1 | T2 | T3 | T4 | T5 | T6 | | |
|----------|---|---|---|--|---|--|---|--|
| | Read (A) | | | | | | | |
| | | M : (C) | Read (B) | | | | | |
| | | Write (C) | | | | Write (B) | | |
| | | | Read (D) | | | Wille (D) | | |
| | | | Iteaa (B) | | Read (A) | | | |
| | Write (A) | | | | | | | |
| | | Read (B) | | | | | | |
| | | | | Write (C) | | | | |
| | | | | Write (D) | D 1/D) | | | |
| | Read (C) | | | | Read (B) | | | |
| | Reau (C) | | | | | Read (A) | | |
| | | | Write (D) | | | Read (11) | | |
| | | | , , , , | | | Read (C) | | |
| | | | | | | | | |
| | Read (D) | | | | | | | |
| | Read (D) | | | | Write (B) | | | |
| <u>;</u> | Read (D) i. Draw the <i>I</i> ii. Is the <i>Sche</i> schedule. | | | _ | schedule. | alent serial | | |
| a) b) | i. Draw the <i>I</i> ii. Is the <i>Sche</i> | Precedence adule Serial between incextendible in the capacity that LSB (Lowing recordata, 45, 452, 855) | dexing and hashing so is 3 and east-signification the 15, 489, 325, | theme for the the initial cant bit) is cash table. | schedule. w all <i>equive</i> echniques ne given valocal and gehecked to Show the m | in terms of lues below global dept find any da | . Assume hs are 1. ta record, | |
| a) b) | i. Draw the <i>I</i> ii. Is the <i>Scheule</i> . Differentiate management. Consider an <i>e</i> that the buck Considering the dinsert the foll inserting the descence of the search key: 84 Corresponding | Precedence adule Serial between in extendible I et capacity hat LSB (Leowing recordata. 45, 452, 855 g hash value | thashing so is 3 and east-signification the hashing so is 489, 325, e: 9, 21, 46, | theme for the the initial cant bit) is constant table. | schedule. w all <i>equive</i> echniques ne given va local and gehecked to Show the new states 2, 10 | in terms of lues below global dept find any da ecessary st | . Assume hs are 1. ta record, eps while | |
| a) b) | i. Draw the <i>I</i> ii. Is the <i>Scheule</i> . Differentiate management. Consider an <i>a</i> that the buck Considering the insert the foll inserting the descence in the search key: 84 | Precedence adule Serial between in extendible I et capacity hat LSB (Leowing recordata. 45, 452, 855 g hash value | thashing so is 3 and east-signification the hashing so is 489, 325, e: 9, 21, 46, | theme for the the initial cant bit) is constant table. | schedule. w all <i>equive</i> echniques ne given va local and gehecked to Show the new states 2, 10 | in terms of lues below global dept find any da ecessary st | . Assume hs are 1. ta record, eps while | |