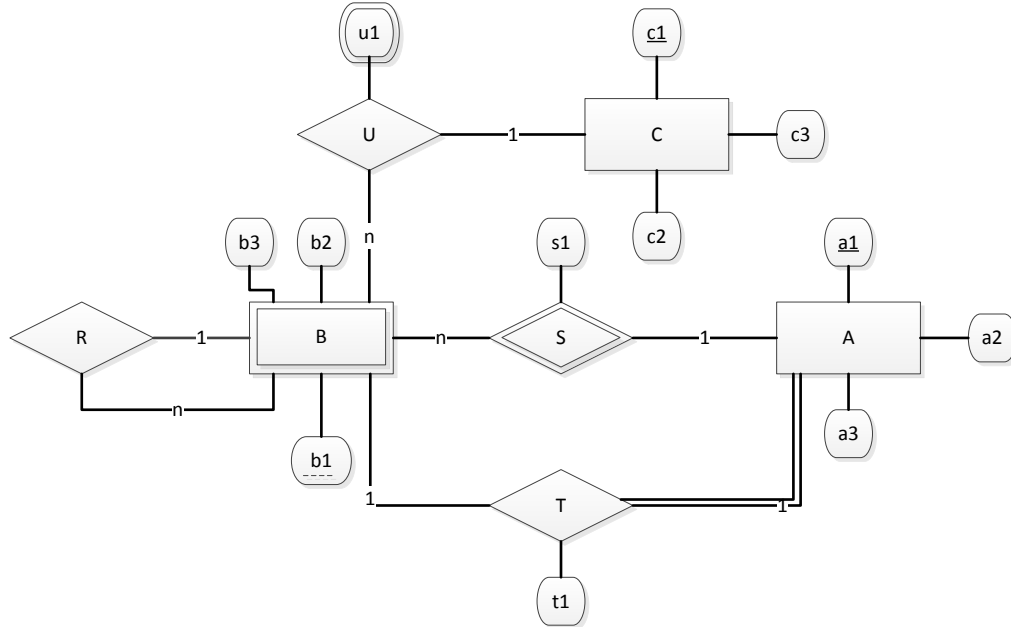


**Question 1: (12 Marks)**

Map the following ER diagram into a relation schema. Show the different constraints and specify how the total participation is reflected in your obtained schema.



**Answer**

(a<sub>11</sub>, b<sub>i</sub>): unique, not Null  
(1:1) (==)

A(a<sub>1</sub>, a<sub>2</sub>, a<sub>3</sub>, a<sub>11</sub>, b<sub>i</sub>, t<sub>1</sub>)

C(c<sub>1</sub>, c<sub>2</sub>, c<sub>3</sub>)

B(a<sub>1</sub>, b<sub>1</sub>, b<sub>2</sub>, b<sub>3</sub>, s<sub>1</sub>, c<sub>1</sub>, a<sub>11</sub>, b<sub>11</sub>)

U(u<sub>1</sub>, a<sub>1</sub>, b<sub>i</sub>)