

# COMP 353 – Quiz 8

1. If relation  $R(A, B)$  has 2 tuples and  $S(C, D, E)$  has 3 tuples, the number of tuples in the natural join  $R \bowtie S$  would be?

(a). 0

(b). 1

(c). 2

(d). 3

(e). 6

2. Suppose relation  $S(B, C, D)$  has 2 tuples and  $R(A, B)$  has 3 tuples. If  $B$  is the key of  $S$ , what can we say about the number of tuples in the result of the RA query:  $R \bowtie S$ ?

(a). At most 2 tuples

(b). At most 3 tuples

(c). At most 6 tuples

3. Suppose relations  $R$  and  $S$  have the same schema. Which of the following set identities is true?

(a).  $R \bowtie S = R \cap S$

(b).  $R \bowtie S = R \cup S$

(c).  $R \bowtie S = R \times S$

4. Relation  $Enroll(sid, cid)$  stores information about which student ( $sid$ ) has enrolled in which course ( $cid$ ). Then what is the result of the following query?

$$\pi_{sid}(\sigma_{cid=353 \text{ and } cid=335}(Enroll))$$

- (a). Students who have taken 353 or 335
- (b). Students who have taken 353 and 335
- (c). It returns no tuples