



Computer Science Department –

**Worksheet on Normalization - COMP333**

Semester 1 – 2020/2021

Student Name:

Student Number:

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**[Q#1] Consider the following relation for published books:**

BOOK (Book Title, AuthorName, Type, Price, Employment, Publisher)

Assume the following dependencies are hold:

Title  $\rightarrow$  Publisher, Type

Type  $\rightarrow$  Price

AuthorName  $\rightarrow$  Employment

a. What normal form is the relation in? Explain your answer.

b. Decompose the relation in BCNF, if it is not in BCNF. *Show your works in details.*

**[Q#2] Consider the following relation **R (A,B,C,D,E)****

Assume the following dependencies are hold:

A  $\rightarrow$  BC

CD  $\rightarrow$  E

AC  $\rightarrow$  E

B  $\rightarrow$  D

E  $\rightarrow$  AB

*Find all candidate keys that consist of at most two attributes.*