ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT) ORGANISATION OF ISLAMIC COOPERATION (OIC)

Department of Computer Science and Engineering (CSE)

QUIZ II

SUMMER SEMESTER, 2019-2020

DURATION: 40 Minutes FULL MARKS: 20

HUM 4441: Engineering Ethics

Programmable calculators are not allowed. Do not write anything on the question paper.

Figures in the right margin indicate marks.

1. Consider the following Private Table (PT).

Name	Zip	Age	Nationality	Salary
Alister	13053	31	Russian	100K
Brian	13068	27	American	100K
Clark	13068	36	Japanese	100K
Dwayne	13053	35	American	100K
Evin	14853	50	Indian	100K
Flintoff	14853	55	Russian	50K
Gordon	14850	47	American	75K
Herschelle	14850	49	American	75K
Ian	13053	28	American	50K
Jayasuria	13053	29	Indian	50K
Kieron	13068	21	Japanese	75K
Liton	13068	23	Bangladeshi	75K

Here, Name is the unique identifier and {Zip, Age, Nationality} are quasi-identifiers and Salary is the sensitive information.

Apply data anonymization techniques on PT such that the release table (RT) satisfies 2-anonymity model. (15 marks)

Further, if someone knows everything about Liton, what is the probability to identify Liton based on your release table, i.e. anonymized dataset? (5 marks)