13/5/2019

14.00 - 16.00pm

Programme Code: DT2228A, DT228B, DT9231. DT118
Module Code: SPEC 9995
CRN: 22805, 22347, 32042

TECHNOLOGICAL UNIVERSITY DUBLIN

KEVIN STREET CAMPUS

MSc. in Computing
(Full-Time)

Year 1

MSc. in Computing
(Part-Time)

Year 2

Postgraduate Certificate in Data Science

Year 1

MSc. Sustainable Development

Year 1

SEMESTER 2 EXAMINATIONS 2018/19

Data Visualisation

Dr. Marisa Llorens Salvador
Dr. Deirdre Lillis
Dr. Barry Haycock

ANSWER ALL OF THE FOLLOWING QUESTIONS

1. **(a)** Describe and compare *informative*, *persuasive* and *visual art* visualisations.

(20 marks)

(b) Describe the *process of visualisation* from the viewer's point of view.

(15 marks)

(c) For each of the following plot types, describe **one** situation where each plot would be appropriate over the others.

(i) Line Chart
(ii) Scatter Plot
(iii) Stacked Bar Chart

(15 marks)

2. **(a)** *Map projections* are used to visualise geospatial data. Describe the *Mercator projection* and identify advantages and disadvantages of this projection.

(20 marks)

(b) Discuss the use of colour as an encoding. Include examples of appropriate and inappropriate use of colour encoding.

(15 marks)

(c) List the most appropriate charts to visualise relationships between variables with:

(i) Two dimensional data

(ii) Three dimensional data

(iii) Multiple dimensions (more than three) data

Use examples to illustrate your selection.

(15 marks)