

UNIVERSITY OF LONDON

GOLDSMITHS COLLEGE

Department of Computing

B. Sc. Examination 2018

IS52032A

Data Journalism and Visualisation

Duration: 2 hours 15 minutes

Date and time:

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*This paper is in two parts: part A and part B. You should answer ALL questions from part A and TWO questions from part B. Part A carries 40 marks, and each question from part B carries 30 marks. The marks for each part of a question are indicated at the end of the part in [.] brackets.*

*There are 100 marks available on this paper.*

**THIS PAPER MUST NOT BE REMOVED  
FROM THE EXAMINATION ROOM**

## Part A

**Question 1** What type of relationship does a time-series analysis describe? What is the type of chart most suitable to reflect this relationship? Explain what would be your x and y axes. [4]

**Question 2** Suppose you are looking for PDF files of expenses on UK police force websites. What would you type into Google? [4]

**Question 3** What is a CSV file? Give two reasons why this file format is common in data journalism. [4]

**Question 4** List four descriptive statistics commonly used in data journalism. [4]

**Question 5** What type of data are each of the following:  
(a) Height: 60m  
(b) Notes: "Police stated they were looking for more than one assailant"  
(c) Favourite snack: Snickers  
(d) Period: 3rd Quarter [4]

**Question 6** Explain briefly why a journalist might want to use annualised change in a story? Give an example. [4]

**Question 7** Describe the difference between a population and a sample. Name two important considerations when choosing a sample. [4]

**Question 8** Briefly describe why the median is often a more useful measure of centre than the mean. Give one example of how the median is commonly used in journalism. [4]

**Question 9** Give four examples of thematic maps used in online journalism. [4]

**Question 10** Give an example of when a result is statistically significant but is not newsworthy. [4]

## Part B

**Question 11** Data journalism

- (a) Data journalism is often described in terms of a 5-step workflow. List the 5 steps. [5]
- (b) What are the common problems with trying to communicate data to the public? What techniques and strategies can you employ to make your writing more understandable when dealing with numbers? [5]
- (c) Explain briefly, the difference between descriptive and predictive statistics. When would a journalist use predictive statistics? [5]
- (d) What does JSON mean? Give two examples of how JSON is used in data journalism. [6]
- (e) What are the three most common types of chart used by journalists to present data in stories? What general types of data are these charts used to present and give an example of a data set that might be used in each case. [9]

**Question 12** Scraping and statistics

- (a) What is web scraping? Describe the workflow involved when using web scraping for journalism. [6]
- (b) Give three examples of how web scraping is used to produce data sets that can be used by journalists. [6]
- (c) Explain using an example of where relative risk and absolute risk are used in journalism. [6]
- (d) What does the standard deviation tell you about a data set? Use diagrams if necessary. When would a journalist use standard deviation? When can standard deviation be misleading? What should you do to understand how the data is distributed? [12]

**Question 13** Digital mapping

- (a) What are the two common coordinate systems used to represent a point on a map? Describe reverse geocoding and how it is used in digital mapping. [6]
- (b) What is a cartogram? Give an example of how a cartogram might be used in journalism. Describe a common problem with cartograms. [6]
- (c) Name three common geographical units of analysis used in the UK and give two examples of data commonly used by data journalists for each unit. [6]
- (d) Write a short essay describing how digital mapping and satellite imagery are used in online journalism. Give some examples of contemporary practice. What are some of the advantages and common problems with using online maps? [12]