



IoT Fundamental: Big Data and Analysis

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Time taken	3 mins 4 secs
Marks	36.00/36.00
Grade	100.00 out of 100.00

Question 1

Correct

Mark 2.00 out of 2.00

Match the term to the definition. (Not all options are used.)

a conclusion not justified by the premise of the argument	fallacy	✓
used to make valid statements about a proposition	logic	✓
presented to support a conclusion in explanatory analysis	evidence	✓

Refer to curriculum topic: 5.1.2

The correct answer is: a conclusion not justified by the premise of the argument → fallacy, used to make valid statements about a proposition → logic, presented to support a conclusion in explanatory analysis → evidence

Question 2

Correct

Mark 2.00 out of 2.00

What is the business value of data?

- Select one:
- ☐ It has no value to the departments within an organization.
 - ☐ It has equal value to all departments within the organization.
 - ☒ It has different value to different departments within the organization.
 - ☐ It has equal value to all organizations.

Refer to curriculum topic: 5.1.1

Data has different business value and means different things to different departments in an organization.

The correct answer is: It has different value to different departments within the organization.

Question 3

Correct

Mark 2.00 out of 2.00

Which type of chart is useful for identifying clustering and outliers in data?

Select one:

- ☒ scatter plot
- ☐ bar
- ☐ line
- ☐ pie



Refer to curriculum topic: 5.2.3

Scatter plot charts are useful for visualizing correlations between data sets and identifying outliers in the data.

The correct answer is: scatter plot

Question 4

Correct

Mark 2.00 out of 2.00

What is the purpose of Plotly?

Select one:

- ☒ to allow the online creation of data visualizations
- ☐ to add plotting capabilities to Microsoft Excel
- ☐ to analyze variables stored on a Jupyter notebook
- ☐ to analyze a scatter plot using a specific statistical algorithm that shows trends



Refer to curriculum topic: 5.2.2

Plotly is an online tool used to generate data visualizations.

The correct answer is: to allow the online creation of data visualizations

Question 5

Correct

Mark 2.00 out of 2.00

Which type of chart displays comparisons of values of specific data points in a horizontal position?

Select one:

- ☐ line
- ☒ bar
- ☐ pie
- ☐ scatter



Refer to curriculum topic: 5.2.3

Determining the appropriate chart to use to display data depends on the number of variables, data points, and other factors. Bar charts are good for displaying specific data points so they can be compared across categories.

The correct answer is: bar

Question 6

Correct

Mark 2.00 out of 2.00

In the story telling step of data analysis, how much time should be spent on explaining the data?

Select one:

- ☐ enough to walk the audience through the entire data analysis process
- ☐ all of the allotted time
- ☐ none, the data itself should not be part of the story
- ☒ enough to explain the point



Refer to curriculum topic: 5.1.1
In the story telling step, spend only as much time on the data as necessary to explain the point.
The correct answer is: enough to explain the point

Question 7

Correct

Mark 2.00 out of 2.00

Match the type of question to the example.

Where is the audience?	Is the audience online or in-person?	✓
Who is the audience?	What is the motivation of the listener?	✓
When is the audience?	Is recording of the presentation allowed?	✓

Refer to curriculum topic: 5.1.1
The correct answer is: Where is the audience? → Is the audience online or in-person?, Who is the audience? → What is the motivation of the listener?, When is the audience? → Is recording of the presentation allowed?

Question 8

Correct

Mark 2.00 out of 2.00

Which application should be used to create a Pyplot customized style sheet (CSS)?

Select one:

- ☐ Microsoft Excel
- ☐ Microsoft Visio
- ☐ Plotly
- ☒ text editor



Refer to curriculum topic: 5.2.1
A text editor is used to add a line for each element in the plot you want to customize. If using a Jupyter notebook, use the Linux terminal to create or edit a text file.
The correct answer is: text editor

Question 9

Correct

Mark 2.00 out of 2.00

True or False?

A user created a custom style sheet to be used with Pyplot and saved the file in the user home directory. When the style sheet is being referenced in code, the path information for the location of the file must be specified.

Select one:

- ☒ true
- ☐ false



Refer to curriculum topic: 5.2.1

Pyplot is a matplotlib extension that can be customized.

The correct answer is: true

Question 10

Correct

Mark 2.00 out of 2.00

While preparing a presentation, which question would be important in understanding "who" is the audience?

Select one:

- ☐ Will the presentation be recorded?
- ☒ What is the possible reaction of the audience?
- ☐ Is the presentation delivered virtually?
- ☐ Are there any security considerations?



Refer to curriculum topic: 5.1.1

Effectively telling a story requires knowing who the audience or listener is. This means knowing the motivation of the listener, the technical knowledge of the listener, and the reaction of the listener to the story.

The correct answer is: What is the possible reaction of the audience?

Question 11

Correct

Mark 2.00 out of 2.00

When you are preparing to give a presentation, which question would be important to ask yourself in order to understand where the audience is located?

Select one:

- ☐ What is the technical knowledge of the participants?
- ☐ Will the presentation be shared?
- ☐ Are there any security considerations?
- ☒ Will the presentation be delivered virtually?



Refer to curriculum topic: 5.1.1

Effectively telling a story requires knowing where the audience or listener is. This means knowing the physical environment of the listener or if the story is to be delivered online or in person.

The correct answer is: Will the presentation be delivered virtually?

Question 12

Correct

Mark 2.00 out of 2.00

For preparing a presentation to a targeted audience, why is the "when" of the audience important to consider?

Select one:

- ☒ The information may be time sensitive.
- ☐ The presentation may be shared with others.
- ☐ The motivation of the participants may need to be determined.
- ☐ Some participants may be online and some attending in person.



Refer to curriculum topic: 5.1.1

Effectively telling a story requires knowledge about the who, where, and when of the audience. The "when" is an important consideration with time-sensitive information.

The correct answer is: The information may be time sensitive.

Question 13

Correct

Mark 2.00 out of 2.00

True or False?

A drawback to Plotly is that files cannot be exported.

Select one:

- ☐ true
- ☒ false



Refer to curriculum topic: 5.2.2

The correct answer is: false

Question 14

Correct

Mark 2.00 out of 2.00

True or False?

In the story telling step of data analysis, plenty of time should be spent on explaining the entire data-analysis process.

Select one:

- ☐ true
- ☒ false



Refer to curriculum topic: 5.1.1

In the story telling step, spend only as much time on the data as necessary to explain the point.

The correct answer is: false

Question 15

Correct

Mark 2.00 out of 2.00

Which term is used to describe the process of discovery that may lead to the creation of a hypothesis?

Select one:

- ☒ exploratory analysis
- ☐ deductive reasoning
- ☐ inductive reasoning
- ☐ explanatory analysis



Refer to curriculum topic: 5.1.2

Exploratory analysis is the part of the data analysis lifecycle in which a hypothesis about the data is created.

The correct answer is: exploratory analysis

Question 16

Correct

Mark 2.00 out of 2.00

Which term is used to describe the process of making inferences about a population based on attributes of a sample?

Select one:

- ☐ deductive reasoning
- ☒ inductive reasoning
- ☐ explanatory analysis
- ☐ exploratory analysis



Refer to curriculum topic: 5.1.2

It is not always possible to study an entire population, therefore a sample is studied. By using inductive reasoning, inferences can be made about the whole population.

The correct answer is: inductive reasoning

Question 17

Correct

Mark 2.00 out of 2.00

What is a characteristic of the explanatory analysis process?

Select one:

- ☐ produces summaries of data
- ☒ tells a story about the data
- ☐ makes valid statements about a proposition
- ☐ uses statements of truth to arrive at a conclusion



Refer to curriculum topic: 5.1.2

Telling a story to persuade an audience through presentation of evidence is the process of explanatory analysis.

The correct answer is: tells a story about the data

Question **18**

Correct

Mark 2.00 out of 2.00

What is the purpose of Pyplot?

Select one:

- ☐ to add plotting capabilities to Microsoft Word
- ☐ to analyze variables separately as scatter plots and as pie charts
- ☒ to create and customize a plot using a collection of style functions
- ☐ to analyze a scatter plot using a specific statistical algorithm that shows trends



Refer to curriculum topic: 5.2.1
Pyplot is a matplotlib extension that includes a collection of style functions used to create and customize a plot.
The correct answer is: to create and customize a plot using a collection of style functions

◀ Chapter 5 Terms and Concepts Practice

Jump to...

Read Chapter 6: Architecture for Big Data and Data Engineering ►

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