SmartKalike

CBSE Class 12 · Computer Science

undersTandIng daTa

10 most probable questions for Boards 2027

Q1. 1 mark · Multiple choice

Which statement best describes structured data? (1 mark)
(A) Data with no fixed format
(B) Data organised in a well-defined format
(C) Data that cannot be stored digitally
(D) Data consisting only of images

Answer

(B) Data organised in a well-defined format — structured data are organised in a well-defined format.

Q2. 2 marks · Multiple choice

Which set consists entirely of examples of automated data processing given in the textbook? (2 marks)
(A) Online bill payment, complaint registration and ticket booking
(B) Handwriting a letter, painting a picture and reading a book
(C) Filing paper forms, shelving books and writing a diary
(D) Drawing a chart, printing a photograph and binding a report

Answer

(A) Online bill payment, complaint registration and ticket booking — these are examples of automated data processing.

Q3. 3 marks · Medium answer

Explain how structured data are organised in a table. In your answer, state what a row and a column represent. (3 marks)

Answer

1. Structured data are organised in a well-defined format and are usually stored in a computer in a table with rows and columns.
2. Each column represents different data for a particular parameter, called an attribute, characteristic or variable, in the table.
3. Each row represents the data of one observation for different attributes.

Q4. 5 marks · Long answer

Explain what a census is and how census data can help a government plan and formulate policies. (5 marks)

Answer

A census is the systematic collection and recording of data about a population by a government.

1. Census data provide valuable information about the population. Governments can

analyse this information to understand the population's characteristics and needs.

2. The analysed data help governments identify areas where services and facilities may be required. This supports informed planning rather than decisions based on guesswork.

3. Governments use the information to plan and formulate policies suited to the population. Reliable data can help them set priorities and direct resources towards identified needs.

Census data therefore support government decisions by providing information for planning and policy formulation.

Q5. 10 marks · Very long answer

In a detailed response, define the range of a numerical data set and explain how it is found from the largest and smallest values. Clarify what the result represents, and use a suitable example to illustrate the definition.

Answer

Range is a measure of dispersion that describes the spread of numerical data values.

1. Range is the difference between the maximum and minimum values of the data. The calculation uses the largest and smallest observations in the data set.

2. The maximum value is the largest value in the data set, while the minimum value is the smallest value. These two values are the extreme values used to find the range.

3. Subtract the minimum value from the maximum value to calculate the range. The formula is Range = Maximum − Minimum.

4. The result shows the total distance between the two extreme values and gives an indication of the coverage or spread of the data. A larger range indicates a wider span between the smallest and largest values.

5. For student heights of 85 cm, 90 cm, 100 cm and 115 cm, the range is 115 − 85 = 30 cm. The heights therefore cover a span of 30 cm.

Range gives a simple measure of spread based on the two extreme numerical values.

Q6. 12 marks · Essay answer

A shop maintains structured data about its kitchen-item inventory. Explain how the owner can use the inventory fields to determine the total number of items and the total value of the inventory. Then describe the data fields that could be used to organise information for each of the following: books at a shop, school fee deposits, and ATM withdrawals. (12 marks)

Full answer on SmartKalike: https://smartkalike.com/cbse/class-12/computer-science/understanding-data

Q7. 1 mark · Multiple choice

In a table containing structured data, what does each row usually represent? (1 mark)
(A) One observation across different attributes
(B) A single attribute for all observations
(C) The table's formatting instructions

(D) A collection of unrelated files

Full answer on SmartKalike: https://smartkalike.com/cbse/class-12/computer-science/understanding-data

Q8. 2 marks · Short answer

How can data and its analysis help someone choose a college? Give examples of relevant data. (2 marks)

Full answer on SmartKalike: https://smartkalike.com/cbse/class-12/computer-science/understanding-data

Q9. 3 marks · Medium answer

Describe how a shop owner can use the inventory quantity and unit-price fields to find the total number of items and the total value of the inventory. (3 marks)

Full answer on SmartKalike: https://smartkalike.com/cbse/class-12/computer-science/understanding-data

Q10. 5 marks · Long answer

Describe how data supports decision-making in at least three fields or settings discussed in the textbook. (5 marks)

Full answer on SmartKalike: https://smartkalike.com/cbse/class-12/computer-science/understanding-data

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