

APOLLO

Data and Analysis

FBISE Computer Science Class 9 (SSC-I)

Domain D: Data and Analysis

48 questions | questions

Original FBISE question crops. National Curriculum 2022-23 topic.

5.	Why is visualization important in data analysis?	It increases file size	It makes data harder to read	It helps in understanding data easily	It removes unnecessary data
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6.	A student organizes exam marks in a table to easily compare results. What does this represent?	Data collection	Data analysis	Data encryption	Data backup
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18.	Which of the following classifications represents categorical data?	Quantitative	Binary	Qualitative	Continuous
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19.	Big data helps organization to:	Ignore Customers	Reduce Information	Avoid Technology	Make Better Decision
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40.	The 3 Vs of big data are:	Volume, Variety, Velocity	Value, Validity, Visibility	Vision, Voice, Value	Volume, Verification, Vision
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SCENARIO#4 (FOR QUESTIONS 53-56)		A data science team is working on a project to analyze student performance in schools. They collect data using online surveys, school databases, and sensors that track attendance automatically. The team ensures that the data is accurate, relevant, and properly organized before analysis. They also remove incomplete or duplicate entries to improve data quality.			
53.	When data is collected from users through Google Forms or online questionnaires, it is called:	Sensor-based collection method	Survey method	Simulation method	Experimental method

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54.	Why does the team remove duplicate and incomplete entries?	To increase storage usage	To improve data accuracy and quality	To reduce internet speed	To randomize the dataset structure

SCENARIO#4 (FOR QUESTIONS 53-56)		A data science team is working on a project to analyze student performance in schools. They collect data using online surveys, school databases, and sensors that track attendance automatically. The team ensures that the data is accurate, relevant, and properly organized before analysis. They also remove incomplete or duplicate entries to improve data quality.			
55.	Which data collection method automatically collects information in real time without human involvement?	Surveys	Interviews	Sensors	Questionnaires

SCENARIO#4 (FOR QUESTIONS 53-56)		A data science team is working on a project to analyze student performance in schools. They collect data using online surveys, school databases, and sensors that track attendance automatically. The team ensures that the data is accurate, relevant, and properly organized before analysis. They also remove incomplete or duplicate entries to improve data quality.			
56.	Which of the following is a primary data source in the scenario?	School databases	Published reports	Online surveys	Historical books

SCENARIO#5 (FOR QUESTIONS 57-60)		A smart city uses interconnected digital systems to improve traffic management and public services. Sensors placed on roads collect real-time traffic data, which is analyzed to reduce congestion and optimize traffic signals. AI systems process this data to predict traffic flow and suggest alternate routes to drivers through mobile applications. Public transport systems are also monitored to improve efficiency and scheduling. The city stores large amounts of data in cloud systems for easy access and scalability. To ensure safety, cybersecurity measures and ethical data usage policies are implemented to protect citizens' information and maintain system reliability.			
59.	What is the main purpose of installing sensors on roads in a smart city?	To store citizen personal data	To collect real-time traffic data	To replace traffic police completely	To provide internet to drivers

Differentiate between discrete and continuous data with one example of each.	3
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A teacher uses graphs and charts to analyze student exam results in order to identify performance trends and make decisions. How can data visualization be applied in this situation? (Explain any two applications)	3
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First Annual 2025 | Section A Q2 | 1 mark

2. The smallest unit of memory in a digital computer:	Bit	Byte	Kilobyte	Word
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First Annual 2025 | Section A Q3 | 1 mark

3. Which of the following is an example of primary data collection method?	Government records	Online database	Interviews	Past research studies
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First Annual 2025 | Section B Q2(ii) OR | 2 marks

OR	Write down any two differences between qualitative data and quantitative data?	02
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First Annual 2025 | Section B Q2(viii) OR | 2 marks

OR	Enlist any four examples of secondary data collection method.	02
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First Annual 2025 | Section C Q6 | 5 marks

Q.6	What is the purpose of big data? Explain any three applications of big data in business.	2+3
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First Annual 2025 | Section A Q3 | 1 mark

3. Which of the following is an example of secondary data collection method?	Government records	Observations	Interviews	Experiments
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Second Annual 2025 | Section A Q10 | 1 mark

10. Which one is an example of continuous data?	Number of students	Book titles	Temperature	Postal codes
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Second Annual 2025 | Section B Q2(x) OR | 2 marks

(x)	What is the purpose of operators in JavaScript?	02	OR	Write down any two differences between discrete and continuous data.	02
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Second Annual 2025 | Section C Q5 OR | 5 marks

Q.5	Write a JavaScript program that prints numbers from 10 to 1.	05	OR	What is big data? Explain any three advantages of big data.	2+3
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First Annual 2026 | Section B Q2(iv) | 3 marks

(iv)	Write down two advantages of Big data.	1.5 + 1.5
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How Data Science differs from Data Analytics?	1.5 + 1.5
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(vii) Differentiate between dataset and database.	03
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1.5 Explain any six benefits of computing innovation.	1x6	OR	What is meant by categorical (qualitative) data? Discuss its main types in detail. Illustrate your answer with examples.	2+4
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12 Why is categorical data different from numerical data?	It is measured in units	It always changes	It represents categories or labels	It is continuous
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Briefly describe quantitative data. Give one example.	2+1
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Compare Primary and Secondary data collection methods.	1.5 + 1.5
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What is Big data? Explain any two applications of Big data in detail.	2+4
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4. Which of the following is on an example of secondary data collection methods?	Experiment	Observations	Interviews	Government record
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What is concept map? How does it represent knowledge?	2+1
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Briefly describe Volume, Velocity and Variety in Big data.	1x3
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How is data science helpful in solving business problem?
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Briefly discuss primary data collection methods. Also identify any two examples.	2+1	OR	Write HTML code to display unordered list as follows: <u>Software</u> 1. System Software	03
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What is Big data? Write any four benefits of Big data.	2+4
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ii.	Which of the following is a commonly used tool for data analysis and visualization?	Microsoft Word	Microsoft Excel	Microsoft PowerPoint	Microsoft Outlook	☐ ☐ ☐ ☐
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iv.	You are working with two types of data collected from a school: 1. The number of students in each class. 2. The heights of students in centimeters. Classify each type of data as discrete or continuous, and justify your classification with reasoning.	1.5 +1.5
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OR	You are conducting a survey to understand the eating habits of students in your school for a health awareness project. Identify and explain any three (03) suitable primary data collection methods for gathering reliable information.	03
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vii.	Why is data analytics important for determining the number of students who prefer various ice cream flavors in our school cafeteria?	03
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OR	What is big data? Describe applications of big data in health care and manufacturing.	6
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First Annual 2025 | Section B Q2(ii) OR | 2 marks

Write down any two differences between ordinal data and nominal data.	02
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First Annual 2025 | Section B Q2(viii) OR | 2 marks

List down any four examples of primary data collection method.	02
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First Annual 2025 | Section C Q6 OR | 5 marks

What is the purpose of big data? Explain any three benefits of big data.	2+3
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First Annual 2026 | Section B Q2(vi) OR | 2 marks

OR	A Newspaper reports rising traffic accidents in a city. How can data science help analyze this problem? ایک اخبار کی شہر میں ٹریفک حادثات میں اضافے کی رپورٹ دیتا ہے۔ ڈیٹا سائنس اس مسئلے	02
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First Annual 2026 | Section B Q2(vii) | 2 marks

(vii)	Give two advantages of Big data. بگ ڈیٹا کے دو فوائد بیان کریں۔	02
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First Annual 2026 | Section B Q2(vii) OR | 2 marks

OR	State two differences between dataset and database. ڈیٹا سیٹ (Dataset) اور ڈیٹا بیس (Database) میں دو فرق بیان کریں۔	02
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First Annual 2026 | Section C Q4 OR | 5 marks

OR	What is big data? Discuss any four major challenges associated with it.	05
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First Annual 2026 | Section C Q5 | 5 marks

Q.5	What is data collection? Explain primary and secondary data collection methods in data science with one example of each. ڈیٹا کلیکشن کیا ہے؟ ڈیٹا سائنس، میٹرا، انٹرنی اور سیکنڈری ڈیٹا کلیکشن کے طریقوں کی	1+4
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