



SAMPLE QUESTION PAPER
Data Science (419)
Class X (Session 2025-26)

Time Allowed: 2 Hours

Maximum Marks: 50

General Instructions:

1. Please read the instructions carefully.
2. This Question Paper consists of **21 questions** in two sections – Section A & Section B.
3. Section A has Objective type questions whereas Section B contains Subjective type questions.
4. **Out of the given (5 + 16 =) 21 questions, a candidate has to answer (5 + 10 =) 15 questions in the allotted (maximum) time of 2 hours.**
5. All questions of a particular section must be attempted in the correct order.
6. **SECTION A – OBJECTIVE TYPE QUESTIONS (24 MARKS):**
 - i. This section has 05 questions.
 - ii. There is no negative marking.
 - iii. Do as per the instructions given.
 - iv. Marks allotted are mentioned against each question/part.
7. **SECTION B – SUBJECTIVE TYPE QUESTIONS (26 MARKS):**
 - i. This section contains 16 questions.
 - ii. A candidate has to do 10 questions.
 - iii. Do as per the instructions given.
 - iv. Marks allotted are mentioned against each question/part.

SECTION A: OBJECTIVE TYPE QUESTIONS

Q.1	Answer any 4 out of the given 6 questions on Employability Skills (4 × 1 = 4 marks)	
i.	_____ is an aggressive behavior and will most likely bring a negative response from the speaker. a) Yawning b) Slapping c) Interrupting d) Dancing	1
ii.	Which of following is not advantage of working independently? a) Working for your nation only b) Working in your pace c) Working remotely d) Making Progress on Assignment	1



iii.	Which of following is a part of effective time management without someone or something influencing us. a) Self-management c) Self-control b) Self-motivation d) All of above	1
iv.	_____ is a system software without which no computer shall operate. a) Windows b) Operating system c) Antivirus d) GUI	1
v.	Which of following are the quality of an successful entrepreneur? a) OPTimistic b) Self-confident c) Independent d) All of above	1
vi.	_____ is the Final sustainable development goal as approved by United nations General assembly. a) Economic development b) Agenda 2030 c) Green city Development d) Global development	1
Q.2 Answer any 5 out of the given 6 questions (5 × 1 = 5 marks)		
i.	The mode is the number that appears _____ in a data set. a) Averagely b) At the end c) mostly d) conservatively	1
ii.	What does a binominal distribution represent in Data Science? a) A common probability distribution that models the probability of obtaining one of the two outcomes under a given number of parameters. b) It is the measure of how spread out the numbers are. c) There are only two mutually exclusive outcomes i.e. success or failure d) The maximum values for a variable and how often they occur.	1
iii.	What is not true about Selection Bias? a) It is most common type of bias unknowingly practiced in real life. b) This type of bias usually occurs when a model itself influences the creation of data that is used to train it. c) It is Observer Bias. d) This bias occurs mostly in systems that rank the content like recommendation systems, polls or personalized advertisements	1

iv.	In Data Science, _____ is the process of joining two tables in three different ways. a) Data Join b) key c) Data merging d) None of above.	1
v.	Which of the following is not the appropriate way of discarding the confidential data? a) Shredding the data b) Cutting the files which contain confidential data c) Burning the confidential data d) Crumbling the papers which contain confidential data and throwing it in the dustbin	1
vi.	Online Privacy is essential for _____ visitors and customers. a) E-Commerce b) Transaction c) E-Banking d) E-mail	1
Q.3 Answer any 5 out of the given 6 questions (5 × 1 = 5 marks)		
i.	Subsetting can be of following types only. Choose the correct answer. a) Row based subsetting b) Column based subsetting c) Data based subsetting d) All of above	1
ii.	Find out the wrong statement in following: a) Central tendency is a descriptive summary of a dataset through a single value that reflects the center of the data distribution. b) Measures of central tendency help you find the middle, or the average, of a data set c) Central tendency describes the best business practice. d) The 3 most common measures of central tendency are the mean, median and mode.	1
iii.	What is the Data Science term used to describe partiality, preference, and prejudice? a) Bias b) Favouritism c) Influence d) Unfairness	1
iv.	The primary use of the standard error of the mean is in calculating the: a) confidence interval b) error rate c) standard deviation d) variance	1

v.	The one-to-many join works by merging the data tables using the _____ key. a) Basic b) Secondary c) Primary d) Alternate	1
vi.	Which of the following is not one of the principles in data governance framework? a) Protect your customer b) Data should never institutionalize unfair biases c) Never collect confidential data from users d) All of above	1
Q.4 Answer any 5 out of the given 6 questions (5 × 1 = 5 marks)		
i.	In Data Science, what is the purpose of subsetting?	1
ii.	The arithmetic mean of the numerical values of the deviations of items from some average value is called the _____. a) Standard Deviation b) Range c) Quartile Deviation d) Mean Deviation	1
iii.	Which of following a correct option in case of central tendency in statistics? a) Normally mean and median both represent the central tendency of a data set. b) Median is a more accurate form of central tendency especially in scenarios where there are some irregular values also known as outliers. c) Median is preferable particularly when you have some extreme low and high values in the data distribution. d) All of above	1
iv.	What is a z-score? a) It is the number of standard deviations a particular score lies above or below the mean of the set of scores. b) It is a standardized measure of the mean of a set of data. c) It is the average frequency of scores in a sample. d) It is a measure of central tendency in the data.	1
v.	The quartiles, median, percentiles and deciles are measures of central tendency classified as _____. a) paired average b) deviation averages c) positioned averages d) central averages	1

vi.	The measure of spread most affected by one extreme value is the: a) Interquartile range b) Range c) Standard deviation d) Mean	1
Q.5	Answer any 5 out of the given 6 questions (5 × 1 = 5 marks)	
i.	Frequency refers to the number of times an event or a value occurs. A _____ is a table that lists items and shows the number of times the items occur.	1
ii.	Education levels, Star ratings and Survey responses are all examples of _____ data. a) Discrete c) Ordinal b) Qualitative d) Continuous	1
iii.	Find the mode of the following data. 12, 8, 4, 8, 1, 8, 9, 11, 9, 10, 12, 8	1
iv.	Find out the wrong statement in following: a) Central tendency is a descriptive summary of a dataset through a single value that reflects the center of the data distribution. b) Measures of central tendency help you find the middle, or the average, of a data set c) Central tendency describes the best business practice. d) The 3 most common measures of central tendency are the mean, median and mode.	1
v.	_____ is a great way to destroy data if you have a large data enterprise center or a large stockpile of old media that you want to destroy. It's very secure, fast and efficient.	1
vi.	_____ refers to the data that accepts only particular values.	1

SECTION B: SUBJECTIVE TYPE QUESTIONS

Answer any 3 out of the given 5 questions on Employability Skills ($3 \times 2 = 6$ marks)
Answer each question in 20 – 30 words.

Q.6	What is meant by body language and gestures?	2
Q.7	What is self motivation and its types?	2
Q.8	What is the operating system stating any two of them?	2
Q.9	Being woman entrepreneur is more difficult. Justify your answer.	2
Q.10	Briefly discuss Sustainable Development.	2

Answer any 4 out of the given 6 questions in 20 – 30 words each ($4 \times 2 = 8$ marks)

Q.11	What is central tendency? Give an example of mode.	2
Q.12	Briefly explain the term distribution of data with the help of an example.	2
Q.13	What is sampling error? When does it occur?	2
Q.14	Why is the concept of percentile? Is quartile is also percentile?	2
Q.15	What is many-to-many Join? Give an example to support your answer.	2
Q.16	Mention the names of any two discrete probability distribution.	2

Answer any 3 out of the given 5 questions in 50 – 80 words each ($3 \times 4 = 12$ marks)

Q.17	Explain what is the central Limit theorem and its importance?	4
Q.18	What is normal or Gaussian distribution? How does it relate with real-life situations?	4
Q.19	With reference to Data Science, answer the following questions: a) What is prejudice? b) Is it different than bias? c) Briefly indicate what we mean by population and sample?	4
Q.20	List down the steps to calculate percenile.	4
Q.21	Explain the need of data governance and ethics.	4