

SLO Based MCQs of Chapter No. 04 Data Analysis

Sr.	Questions	A	B	C	D	Correct
1	Data analysis is crucial for:	Storing larger amounts of data	Making informed decisions	Organizing data efficiently	Deleting irrelevant data	Making informed decisions
2	A statistical model can be used to analyze:	Data and make prediction	Fashion trends	Movie scripts	Different languages	Data and make prediction
3	Statistical models are commonly used in:	Science experiments	Music composition	Art galleries	Cooking shows	Science experiments
4	The main goal of machine learning is to:	Make the computer faster	Generate random output	Automate manual tasks	Enable computers to learn from data	Enable computers to learn from data
5	The type of learning that uses labeled data is:	Supervised	Unsupervised	Reinforcement	Self-supervised	Supervised
6	In supervised learning, the algorithm learns from:	Unlabeled data	Labeled data	Both a and b	Analysis	Labeled data
7	Which type of learning uses unlabeled data?	Supervised	Unsupervised	Reinforcement	Self-supervised	Unsupervised
8	The purpose of unsupervised learning is:	Identify patterns within the data	Optimize models	Classify data	Predict specific outcomes	Identify patterns within the data
9	Classification and regression models are of type:	Unsupervised learning	Supervised learning	Reinforcement learning	Deep learning	Supervised learning
10	In linear regression, the goal is to predict a:	Category	Continuous value	Cluster of data points	None	Continuous value
11	The equation of a simple linear regression line is typically represented by:	$y=mx+b$	$y=ax^2+bx+c$	$Y=1/2x$	$y=ex$	$y=mx+b$
12	In linear regression, what is b in the equation $y=mx+b$:	Slope	y-intercept	Predicted value	Dependent variable	y-intercept
13	The intercept in a linear regression model is where the line crosses the:	x-axis	y-axis	Origin	Slope	y-axis

14	In linear regression, which variable is represented by 'x' in the equation $y=mx+b$:	Independent variable	Dependent variable	Predictor variable	Intervening variable	Independent variable
15	In linear regression, the variable used for prediction is called:	Dependent variable	Independent variable	Intervening variable	Usually y	Independent variable
16	In linear regression, the variable that is being predicted is:	Independent variable	Dependent variable	Intervening variable	Usually x	Dependent variable
17	The slope of the regression line indicates:	Intercept value	Dependent variable	Relationship between variables	Error in the model	Relationship between variables
18	K-Means clustering is an example of:	Supervised learning	Unsupervised learning	Reinforcement learning	Self-supervised	Unsupervised learning
19	The algorithm commonly used in unsupervised learning to group similar data points is:	Decision tree	K-means clustering	Support Vector Machine	Random forest	K-means clustering
20	Which of the following tools can be used to build statistical models?	MS-Excel	R Studio	Python	All	All
21	_____ can be used to write and execute Python code online.	Google Colab	R Studio	Python	Kaggle	Google Colab
22	Where can you access Google Colab?	www.google.com	https://colab.google/	www.python.org	www.github.com	https://colab.google/
23	_____ refers to the entire group of individuals or objects under study?	Sample	Population	Group	Selection	Population
24	_____ is a subset of the population.	Random selection	Sample	Incomplete population	Experimental data	Sample
25	In statistical terms, a sample represents:	Incomplete set of data points	Random selection of people	Subset of the population	Undefined group of characteristics	Subset of the population
26	_____ refers to something known about the entire population.	Statistic	Parameter	Estimate	Analysis	Parameter
27	In the context of statistics, what does the mean represent?	Most frequent value	Average value	Total sum	Largest value	Average value
28	The average age of people in a city is an example of a:	Parameter	Statistics	Survey	Graph	Parameter
29	Primary data is collected:	From existing sources	Directly from the main source	Through online forums	By analyzing secondary data	Directly from the main source

30	Which of the following is a primary data collection method?	Interviews	Government archives	Internet research	Libraries	Interviews
31	A method where a researcher asks questions and respondent provides answers is called:	Focus Group	Interview	Observation	Survey	Interview
32	Questionnaires can be administered in which ways?	Face-to-face	Mailed	Online	All	All
33	A focus group discussion involves a group of people with:	No commonalities	Similar interests and experiences	Opposing viewpoints	Specialized knowledge	Similar interests and experiences
34	Which method involves watching and recording behaviors without direct interaction with participants?	Interviews	Focus Group	Observations	Surveys	Observations
35	The best method for gathering data from large audience is:	Interviews	Surveys and questionnaires	Oral histories	Observations	Surveys and questionnaires
36	The best method for collecting personal experiences of a specific event is:	Oral histories	Focus Group	Observation	Surveys	Oral histories
37	Which of the following is not a primary data collection method?	Internet research	Focus Group	Observation	Interviews	Internet research
38	What is secondary data?	Data collected firsthand	Data collected by someone	Imaginary data	Data collected by robots	Data collected by someone
39	What kind of data can be found in libraries?	Academic research	Business directories	Annual reports	All	All
40	Data from government archives is considered:	Unreliable	Authentic	Fictional	Irrelevant	Authentic
41	_____ can be used to compare two version of an ad to see which one performs better.	Usability test	Split testing	User acceptance testing	Beta testing	Split testing
42	What does A/B testing compare?	Two different users	Two versions of something	Two different companies	Two different products	Two versions of something
43	A/B testing is most commonly referred to as:	Parallel testing	Split testing	Sequential testing	Random testing	Split testing
44	What does Airbnb use data science for?	Designing new homes	Set rental prices	Hire employees	Build websites	Set rental prices
45	What of the following is analyzed Airbnb in A/B testing?	Booking rates	Weather patterns	Travel distances	Color preferences	Booking rates

46	YouTube primarily uses A/B testing to improve:	Video editing	User engagement	Advertisement costs	Video quality	User engagement
47	What type of metrics does YouTube evaluate in A/B testing?	User age	Click-through rates	Device type	Internet speed	Click-through rates
48	_____ is the practice of representing data in visual formats like charts or graphs.	Data visualization	Visual analytic	Infographics	Data graphics	Data visualization
49	What does python provide for visualizing data?	Modules	Functions	Libraries	Packages	Libraries
50	The “pandas” is a popular Python library specifically designed for:	Create games	Visualize data	Analyze and manipulate data	Play music	Analyze and manipulate data
51	The command to import pandas in python is:	import pandas as pd	use pandas	from pandas import *	Install pandas	import pandas as pd
52	Which of the following is NOT a type of plot the Matplotlib can create?	Pie chart	Bar chart	Line chart	Data chart	Data chart
53	Matplotlib is a python library primarily used for:	Data cleaning	Data visualization	Text analysis	Data validation	Data visualization
54	A scatter plot visualizes the relationship between variables using:	Bars	Dots	Lines	Curves	Dots
55	The purpose of a bar graph is to:	Show Trends over time	Represent continuous data	Compare categorical data	Represent numerical proportions	Compare categorical data
56	Which function is commonly used to create a line chart in Python?	scatter()	plot()	bar()	line()	plot()
57	The primary purpose of scatter() function in the matplotlib library is:	Draw line plots	Create bar graphs	Draw scatter plots	Generate histograms	Draw scatter plots
58	Which function is commonly used to create a histogram in Python?	plot()	histogram()	bar()	hist()	hist()
59	A pie chart is a circular chart used to represent:	Trends over time	Relationships between two variables	Proportions of a whole	Distribution of a dataset	Proportions of a whole
60	Which function in matplotlib is used to create pie chart?	plot()	circle()	scatter()	pie()	pie()
61	The main visual feature of a pie chart is:	Bars	Slices	Points	Grid lines	Slices

62	In a pie chart, each slice represents:	data point	Category's proportion of the total	Mean value	Median value	Category's proportion of the total
63	A box plot or box-and-whisker plot is used to represent:	Trends over time	Relationships between two variables	Proportions of a whole	Distribution of a dataset	Distribution of a dataset