

# DWD Final Assessment

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Score Obtained:

48/50 (96%)

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VIEW REPORT

Data Analysis is a process of?

- ☐ inspecting data

1/1

ATTEMPTED
- ☐ cleaning data
- ☐ transforming data
- ☒ All of the above

2.  
Which of the following is a kind of data?

- ☐ Text

1/1

ATTEMPTED
- ☐ Numbers
- ☐ Media
- ☒ All of these

3.  
Data science is the process of diverse set of data through ?

1/1

ATTEMPTED

- ☐ organizing data
- ☐ processing data
- ☐ analyzing data
- ☒ All of the above

4.

**Who is a data scientist?**

1/1

ATTEMPTED

- ☐ Statistician
- ☐ Mathematician
- ☐ Software programmer
- ☒ All of the above

**5. Which of the following is a powerful python library for data manipulation and analysis, particularly for working with structured data?**

1/1

ATTEMPTED

- ☐ Springboot
- ☒ Pandas
- ☐ Matplotlib
- ☐ Seaborn

6.

**Which of the tools are Data Science Tools used by Data Scientists to carry out their data operations?**

☐ Apache Spark

1/1

ATTEMPTED

☐ Excel

☒ Both A and B

☐ Ruby

**7.**

**Which of the following is performed by Data Scientist?**

☐ Define the question

1/1

ATTEMPTED

☐ Create reproducible code

☐ Challenge results

☒ All of the mentioned

**8.**

**Which of the following is the most Important language for Data Science?**

☐ Java

1/1

ATTEMPTED

☐ Ruby

☒ R

☐ None of the mentioned

**9. Which of the following is data that is partially structured, often with tags or elements that separate the data?**

1/1

ATTEMPTED

- ☐ Structured
- ☐ Unstructured
- ☒ Semi Structured
- ☐ All of the above

**10. What is the primary goal of data analytics?**

1/1

ATTEMPTED

- ☐ Storing data
- ☒ Extracting insights and patterns
- ☐ Creating data backups
- ☐ Encrypting data

**11. Why is data visualization important in data analytics?**

1/1

ATTEMPTED

- ☐ To make the data heavier
- ☐ To create complex datasets
- ☒ To present findings in a understandable way
- ☐ To slow down the analysis process

**12.**

**\_\_\_\_\_ is used when you want to visually examine the relationship between two quantitative variables**

- ☐ Bar graph

1/1

ATTEMPTED

- ☐ pie graph
- ☐ line graph
- ☒ Scatter plot

13.

**"Continuous" VS "Discrete" can be written as?**

- ☒ Measured Vs Counted
- ☐ Counted Vs Measured
- ☐ Measured Vs Nominal
- ☐ None of these

1/1

ATTEMPTED

14.

**As a general rule, the \_\_\_\_\_ is the best measure of central tendency because it is more precise.**

- ☐ Mode
- ☒ Mean
- ☐ Median
- ☐ Variance

1/1

ATTEMPTED

15.

**\_\_\_\_\_ provides the summary statistics of data.**

- ☒ Descriptive Statistics

1/1

ATTEMPTED

☐ Inferential Statistics

☐ -

☐ -

**16.**

**Sample is a subset of population.**

☒ True

1/1

ATTEMPTED

☐ False

☐ -

☐ -

**17.**

**\_\_\_\_\_ contains all the elements of a dataset.**

☐ Sample

1/1

ATTEMPTED

☐ Event

☒ Population

☐ None of the options

**18.**

**\_\_\_\_\_ holds the responsibility of describing the data collected.**

☐ Probability

1/1

ATTEMPTED

- ☒ Statistics
- ☐ Both the options
- ☐ None of the options

19.

**Descriptive Statistics works on \_\_\_\_\_ dataset.**

- ☐ Sample
- ☐ Population
- ☒ Both the options
- ☐ -

0/1

ATTEMPTED

20.

**\_\_\_\_\_ Is an art of learning data.**

- ☐ Probability
- ☒ Statistics
- ☐ Both the options
- ☐ None of the options

1/1

ATTEMPTED

21.

**Is Statistics required in the field of computer science?**

- ☒ Yes, statistics plays a vital role in many areas of computer science such as machine learning, data mining, and artificial intelligence.
- ☐

1/1

ATTEMPTED

No, statistics is not used in computer science at all.

- ☐ Only basic statistical concepts are required in computer science.
- ☐ Statistics is only used in certain subfields of computer science such as bioinformatics.

**22.**

**If the assumed hypothesis is tested for rejection considering it to be true is called?**

- ☒ Null Hypothesis
- ☐ Statistical Hypothesis
- ☐ Simple Hypothesis
- ☐ Composite Hypothesis

1/1

ATTEMPTED

**23.**

**If my null hypothesis is 'Dutch people do not differ from English people in height', what is my alternative hypothesis?**

- ☐ English people are taller than Dutch people.
- ☐ Dutch people are taller than English people.
- ☒ Dutch people differ in height from English people.
- ☐ All of the statements are plausible alternative hypotheses.

0/1

ATTEMPTED

**24. If a distribution is skewed to the right, then it is \_\_\_\_\_**

- ☐ Negatively Skewed

1/1

ATTEMPTED



- ☒ Positively Skewed
- ☐ Symmetrically Skewed
- ☐ Symmetric

**25. Approximately what percentage of scores fall within two standard deviation of the mean in a normal distribution?**

1/1

ATTEMPTED

- ☒ 95%
- ☐ 99%
- ☐ 68%
- ☐ 35%

**26. What is the purpose of descriptive statistics?**

1/1

ATTEMPTED

- ☐ To predict future outcomes
- ☒ To summarize and describe the main features of a dataset
- ☐ To manipulate data for analysis
- ☐ To test hypothesis

**27. Which of the following is a measure of central tendency in descriptive statistics? Answer: C) Mean**

1/1

ATTEMPTED

- ☐ Range
- ☐ Variance

- ☒ Mean
- ☐ Standard Deviation

**28. In descriptive statistics, what does the standard deviation measure?**

1/1

ATTEMPTED

- ☐ The central tendency of the data
- ☐ The range of values in the dataset
- ☒ The spread or dispersion of values around the mean
- ☐ The frequency of each value in the dataset

**29. What is the purpose of the range in descriptive statistics?**

ATTEMPTED

1/1

- ☒ To measure the spread of data
- ☐ To calculate the mean of a dataset
- ☐ To identify outliers
- ☐ To determine the mode

**30. What is a p-value used for in inferential statistics?**

1/1

ATTEMPTED

- ☐ Describing the variability of data
- ☐ Indicating the size of a sample
- ☐ Assessing the strength of a relationship between variables
- ☒ Testing the significance of a statistical hypothesis

**31. What is the purpose of hypothesis testing in inferential statistics?**

1/1

ATTEMPTED

- ☐ To summarize and describe data
- ☐ To make predictions about future data
- ☐ To calculate measures of central tendency
- ☒ To draw conclusions about a population based on a sample

**32. What is the primary purpose of inferential statistics?**

1/1

ATTEMPTED

- ☐ To summarize data
- ☒ To make predictions about a population based on a sample
- ☐ To calculate measures of central tendency
- ☐ To visualize data trends

**33. Which of the following methods is commonly used to estimate population parameters?**

1/1

ATTEMPTED

- ☐ Descriptive statistics
- ☒ Confidence intervals
- ☐ Frequency distribution
- ☐ Range

34. In which situation would you use a t-test instead of a z-test?

ATTEMPTED

1/1

- ☐ When the sample size is large ( $n > 30$ )
- ☐ When the population standard deviation is known
- ☒ When the sample size is small ( $n < 30$ ) and the population standard deviation is unknown
- ☐ When you are comparing proportions

35. What does the term "power of a test" refer to?

1/1

ATTEMPTED

- ☐ The likelihood of a Type I error
- ☐ The likelihood of a Type II error
- ☒ The probability of correctly rejecting a false null hypothesis
- ☐ The strength of the null hypothesis

36. If a population has a mean ( $\mu$ ) of 50 and a standard deviation ( $\sigma$ ) of 10, what is the mean of the sampling distribution of the sample means ( $\mu_{\bar{x}}$ ) for samples of size  $n=25$ ?

1/1

ATTEMPTED

- ☐ 40
- ☒ 50
- ☐ 10
- ☐ 2

37. What is a Type I error?

1/1

ATTEMPTED

- ☐ Failing to reject the null hypothesis when it is false.
- ☒ Rejecting the null hypothesis when it is true.
- ☐ Making a correct decision in hypothesis testing.
- ☐ Accepting the alternative hypothesis when it is false.

**38. Which of the following statements is true regarding the relationship between Type I and Type II errors?**

1/1

ATTEMPTED

- ☐ Decreasing alpha increases the probability of a Type I error.
- ☐ Increasing the sample size reduces the risk of both Type I and Type II errors.
- ☐ There is no relationship between Type I and Type II errors.
- ☒ Increasing alpha decreases the probability of a Type II error but increases the probability of a Type I error

**39. What is a confidence interval?**

1/1

ATTEMPTED

- ☐ A single value estimate of a population parameter.
- ☒ A range of values that likely contains the population parameter, with a specified level of confidence.
- ☐ The probability that a hypothesis test is correct.
- ☐ The maximum error allowed in estimation.

**40. Which of the following is a primary data collection method?**

ATTEMPTED

1/1

- ☒ Surveys

- ☐ Literature reviews
- ☐ Meta-analysis
- ☐ Historical data analysis

**41. Which data collection technique involves observing subjects in their natural environment without interference?**

1/1

ATTEMPTED

- ☐ Controlled experiments
- ☐ Case studies
- ☒ Naturalistic observation
- ☐ Surveys

**42. What is the purpose of using random sampling in data collection?**

1/1

ATTEMPTED

- ☐ To ensure every participant gives a detailed response.
- ☒ To eliminate bias and ensure that the sample represents the population.
- ☐ To collect data from a predetermined group.
- ☐ To save time and resources.

**43. What is a potential disadvantage of using observational methods for data collection?**

1/1

ATTEMPTED

- ☐ They provide quantitative data.
- ☒ They can be time-consuming and expensive.

- ☐ They are useful for understanding cause-and-effect relationships.
- ☐ They eliminate the risk of observer bias.

**44. What is the primary goal of data cleaning?**

1/1

ATTEMPTED

- ☐ To analyze data more quickly.
- ☒ To ensure data quality and accuracy.
- ☐ To visualize data trends.
- ☐ To summarize data findings.

**45. Which of the following is a common method for handling missing data?**

1/1

ATTEMPTED

- ☐ Ignoring missing values.
- ☐ Replacing missing values with zeros.
- ☒ Imputation using mean, median, or mode.
- ☐ Deleting the entire dataset.

**46. What does "data normalization" refer to?**

1/1

ATTEMPTED

- ☐ The process of removing outliers from the dataset.
- ☒ The transformation of data to fit within a specific range.
- ☐ The conversion of categorical data into numerical format.
- ☐

The elimination of duplicates in a dataset.

**47. Which technique is commonly used to identify outliers in a dataset?**

1/1

ATTEMPTED

- ☐ Mean calculation
- ☐ Standard deviation
- ☒ Data visualization (e.g., box plots)
- ☐ Data normalization

**48. What is the first step in the data cleaning process?**

1/1

ATTEMPTED

- ☐ Removing duplicates
- ☒ Identifying data quality issues
- ☐ Data transformation
- ☐ Data visualization

**49. What is "outlier detection"?**

1/1

ATTEMPTED

- ☐ A process to increase data accuracy
- ☐ A technique to find and remove records with missing values
- ☒ A method for identifying data points that differ significantly from other observations
- ☐ A way to convert categorical data into numerical data

**50. What is the main purpose of deduplication in data cleaning?**

ATTEMPTED



- ☐ To improve data visualization
- ☐ To increase the dataset size
- ☒ To ensure that there are no duplicate records
- ☐ To enhance the speed of data processing