

1. What is the primary goal of sentiment analysis?

- A) To translate text into another language
- B) To identify emotional tone (positive, negative, neutral) in text
- C) To extract dates and locations from text
- D) To correct grammatical errors

2. Which of the following is NOT a common application of sentiment analysis?

- A) Social media monitoring
- B) Predicting weather patterns
- C) Customer feedback analysis
- D) Brand reputation management

3. What does NER stand for in NLP?

- A) Natural Entity Recognition
- B) Named Entity Recognition
- C) Neutral Emotion Recognition
- D) Numeric Entity Resolution

4. Which entity type would "Delhi" be classified as in NER?

- A) PERSON
- B) GPE (Geo-Political Entity)
- C) ORGANIZATION
- D) DATE

5. What is the output of sentiment analysis for the text: "The service was terrible and slow."?

- A) Positive
- B) Negative
- C) Neutral
- D) Mixed

6. Which Python library is commonly used for lexicon-based sentiment analysis?

- A) TensorFlow
- B) TextBlob
- C) PyTorch
- D) Pandas

7. What does a polarity score of +0.8 indicate in sentiment analysis?

- A) Strongly negative
- B) Strongly positive
- C) Neutral
- D) Slightly negative

8. Which technique combines lexicon-based and machine learning approaches for sentiment analysis?

- A) Tokenization
- B) Hybrid approach
- C) Stemming
- D) Lemmatization

9. What is the purpose of the "compound" score in VADER sentiment analysis?

- A) To count the number of words in a sentence
- B) To provide an overall sentiment score (-1 to +1)
- C) To identify named entities
- D) To correct spelling errors

10. Which of the following is a machine learning model used for sentiment analysis?

- A) K-Means
- B) Logistic Regression
- C) Random Forest
- D) All of the above

11. What is the first step in a machine learning-based sentiment analysis pipeline?

- A) Model training
- B) Data collection and labeling
- C) Feature extraction
- D) Stop-word removal

12. Which preprocessing step converts "AMAZING!" to "amazing"?

- A) Tokenization
- B) Lowercasing
- C) Stemming
- D) POS tagging

13. What type of sentiment analysis classifies text as "Very Positive," "Positive," "Neutral," etc.?

- A) Binary
- B) Multiclass
- C) Lexicon-based
- D) Hybrid

14. Which of the following is a named entity in the sentence: "Narendra Modi visited Mumbai on 15th August."?

- A) "visited"
- B) "Narendra Modi" (PERSON)
- C) "on"
- D) "the"

15. What is the key advantage of a hybrid sentiment analysis approach?

- A) It only uses lexicons
- B) It combines precision of lexicons with adaptability of machine learning
- C) It ignores context
- D) It requires no training data

16. Which NER entity type would "ISRO" be classified as?

- A) GPE
- B) ORGANIZATION
- C) PRODUCT
- D) DATE

17. What does the "subjectivity" score in TextBlob measure?

- A) Grammatical correctness
- B) How opinionated (vs. factual) the text is
- C) Named entity density
- D) Sentence length

18. Which of the following is a use case of NER in healthcare?

- A) Predicting stock prices
- B) Extracting patient symptoms from clinical notes
- C) Translating medical documents
- D) Generating weather reports

19. What is the output of NER for the sentence: "Apple launched iPhone 15 in September 2023."?

- A) ORGANIZATION: Apple; PRODUCT: iPhone 15; DATE: September 2023
- B) PERSON: Apple; LOCATION: iPhone 15; DATE: September 2023
- C) ORGANIZATION: Apple; GPE: iPhone 15; TIME: September 2023
- D) PRODUCT: Apple; EVENT: iPhone 15; DATE: September 2023

20. Which metric is used to evaluate sentiment analysis models?

- A) Mean squared error
- B) F1-score
- C) Pixel accuracy
- D) Cosine similarity

21. What is the primary challenge of lexicon-based sentiment analysis?

- A) It requires large labeled datasets
- B) It struggles with context and sarcasm
- C) It cannot handle numerical data
- D) It only works for English

22. Which Python library provides pre-trained NER models?

- A) NumPy
- B) spaCy
- C) Matplotlib
- D) Scikit-learn

23. What is the purpose of stop-word removal in sentiment analysis?

- A) To correct spelling errors
- B) To eliminate common words (e.g., "the," "is") that add little meaning
- C) To translate text
- D) To identify named entities

24. Which of the following is an example of a GPE entity?

- A) "Narendra Modi"
- B) "Mumbai"
- C) "iPhone 15"
- D) "15th August"

25. What does the term "polarity" refer to in sentiment analysis?

- A) The number of named entities in text
- B) The emotional tone (positive/negative) of text
- C) The grammatical structure of a sentence
- D) The language of the text