# AML MCQs

## Unit - 1

**1. We use a technique called Latent Dirichlet Allocation (LDA) to model the topics. LDA basically represents the documents as a mixture of different topics that tend to spit out words.**

a. True b. False

ANS : a. True

**2. Tagging is the process of identifying**

a. Semantics b. Syntax c. Parts of Speech d. Classifier

ANS : c. Parts of Speech

**3. An N gram tagger is a type of**

a. Sequential tagger b. Cross tagger c. Parallel tagger d. Continuous tagger

ANS : a. Sequential tagger

**4. Random forest is an ensemble of**

a. Decision trees b. SVM classifiers c. KNN classifiers d. Clusters

ANS : a. Decision trees

**5. Consider the following sentences:**

- **Sentence 1: The brown dog is running.**
- **Sentence 2: The black dog is in the black room.**
- **Sentence 3: Running in the room is forbidden.**

**how many unique words?**

a. 8 b. 10 c. 9 d. 11

ANS : c. 9

**6. Machine Learning is a subset of**

a. Artificial Intelligence b. Deep learning c. Image processing d. Computer vision

ANS : a. Artificial Intelligence

**7. Applied machine learning is a discipline that studies**

a. how to reconstruct and understand a 3d scene b. Specific data related problem
c. how to solve training issues d. Specific application issues

ANS : b. Specific data related problem

**8. Text analysis and NLP is an integral part of**

a. Machine Learning b. Database Systems c. Artificial Intelligence d. Operating Systems

ANS : c. Artificial Intelligence

**9. Dividing text into set of meaningful pieces called as**

a. Stemming b. Chunking c. Lemmatization d. Tokenization

ANS : d. Tokenization

**10. Which matrix counts the number of occurrences of each word in the document?**

a. Sentence term matrix b. Word term matrix c. Text term matrix d. Document term matrix

ANS : d. Document term matrix

**11. To determine if a given piece of text is positive or negative, which process is used?**

a. Natural language processing b. Semantic analysis c. Sentiment analysis d. Image Processing

ANS : c. Sentiment analysis

**12. Topic modeling is the process of identifying**

a. Texts b. Syntax c. Patterns d. Rules

ANS : c. Patterns

**13. Which tokenizer is used to split the punctuations?**

a. WordPunct b. WordPunc c. WordPunctuation d. WordPun

ANS : a. WordPunct

**14. Which process is used by stemming to cut off the ends of words?**

a. Tokenization process b. Sequential process c. Heuristic process d. Random process

ANS : c. Heuristic process

**15. Text classification used to _____ text documents**

a. Sort b. Reverse c. Categorize d. Arrange in linear order

ANS : c. Categorize

**16. Which factor measures how frequently a word occurs in a given document?**

a. inverse frequency b. term frequency c. document frequency d. inverse document frequency

ANS : b. term frequency

**17. Which function is used to encode categorical data in handling missing data?**

a. OneHot encoder b. Numpy c. ColumnTransformer d. fit_transform

ANS : a. OneHot encoder

**18. Which function is used to feature scale the dependent and independent variables in handling missing data?**

a. Label encoder b. SimpleImputer c. StandardScaler d. fit_transform

ANS : b. SimpleImputer

**19. Classify positive tweets and negative tweets belongs to**

a. Semantic analysis b. Text analysis c. Spam analysis d. Sentiment analysis

ANS : d. Sentiment analysis

**20. Which library is used to tokenize the statement?**

a. Numpy b. Pandas c. Matplotlib d. NLTK

ANS : d. NLTK

**21. The goal of NLP is to develop set of**

a. Languages b. Algorithms c. Dictionary d. Programs

ANS : b. Algorithms

**22. Stemming used to reduce**

a. Common base forms
b. Different base forms
c. Different forms to common base form
d. Common base form to different forms

ANS : c. Different forms to common base form

**23. Which stemmer is strictest?**

a. Lancaster b. Dreamt c. Snowball d. Envision

ANS : a. Lancaster

**24. Which factor measures the importance of given word?**

a. inverse frequency b. term frequency c. document frequency d. inverse document frequency

ANS : d. inverse document frequency

**25. To seed the random number generator**

a. random.seed() b. seed() c. random() d. seed.random()

ANS : a. random.seed()

**26. What is the syntax to extract features?**

a. extract() b. features() c. extractfeatures() d. extract_features()

ANS : d. extract_features()

**27. Which technique is used in bagging and random forests?**

a. Feature based b. Random patch c. Attribute bagging d. Pasting

ANS : b. Random patch

**28. AUC stands for**

a. Auxiliary under the curve
b. Artificial under the curve
c. Area under the curve
d. Appropriate under curve

ANS : c. Area under the curve

**29. PORTER is kind of**

a. Tokenizer b. Stemmer c. Lemmatizer d. Punctuator

ANS : b. Stemmer

**30. How many stemmers are used to iterate through the list of words?**

a. One b. Four c. Two d. Three

ANS : d. Three

**31. Which stemmer is best?**

a. Lancaster b. Dreamt c. Snowball d. Envision

ANS : c. Snowball

**32. A method to split text into chunks**

a. data.divide() b. data.split() c. data.splitter() d. data.divider()

ANS : b. data.split()

**33. Which corpus is used for chunking?**

a. Red b. Green c. Blue d. Brown

ANS : d. Brown

**34. Bag of words model each document by building**

a. Histogram b. Graph c. Syntax tree d. Semantic tree

ANS : a. Histogram

**35. Sentence 1: The brown dog is running. What is the feature vector?**

a. [1, 1, 1, 1, 1, 0, 0, 0, 0] b. [2, 0, 1, 1, 0, 2, 1, 1, 0]
c. [2, 2, 1, 1, 2, 2, 1, 1, 2] d. [0, 0, 0, 0, 0, 1, 1, 1, 1]

ANS : a. [1, 1, 1, 1, 1, 0, 0, 0, 0]

**36. tf-idf is an_____ tool**

a. Segmentation b. Analysis c. Classifying d. Testing

ANS : b. Analysis

**37. Which function is used to tokenize the string?**

a. self.tokenize() b. self.tokenize.tokenizer() c. self.tokenizer.tokenize() d. self.tokenizer()

ANS : c. self.tokenizer.tokenize()

**38. Which technique is used in topic modeling?**

a. PCA b. Kernel PCA c. LDA d. Stemming

ANS : c. LDA

**39. Which is text cleaning library?**

a. Beautifulsoup b, Beautifulsoap c. Beautysoup d. Beautysoap

ANS : a. Beautifulsoup

**Unit - 2**

**40. Speech recognition refers to process of**

a. Recognizing and understanding audio language b. Recognizing and understanding spoken language
c. Recognizing and understanding video language d. Recognizing and understanding image

ANS : b. Recognizing and understanding spoken language

**41. Speech recognizers input is in the form of**

a. audio b. video c. image d. Text

ANS : a. audio

**42. Actual audio signals are complex**

a. discrete value waves b. continuous value waves
c. mixture of discrete and continuous value waves d. signals of any form

ANS : b. continuous value waves

**43. Audio signals consists of a complex mixture of**

a. cosine waves b. Tangent waves c. sinusoidal waves d. None

ANS : c. sinusoidal waves

**44. MFCC refers to**

a. Medium Frequency Cepstral Coefficientsb. Mel Frequency Cepstral Coefficients
c. Mel Fourier Cepstral Coefficients d. Medium Fourier Cepstral Coefficients

ANS : b. Mel Frequency Cepstral Coefficients

**45. HMM is great at modeling**

a. Frequency series data b. Time series data c. Code series data d. Amplitude series data

ANS : b. Time series data

**46. Common sampling value of speech**

a. 42100 b. 44100 c. 44200 d. 42200

ANS : b. 44100

**47. What package is used to implement HMM**

a. wav file b. Numpy c. hmm d. mfcc

ANS : hmmlearn

**48. Fourier Transform is used in**

a. Slicing audio signals data b. Plotting audio signals data
c. Transforming audio signals data d. Generating audio signals data

ANS : c. Transforming audio signals data

**49. MFCC uses**

a. Filter banks and tan transform b. Features and sine transform
c. Filter banks and cosine transform d. Features and cosine transform

ANS : c. Filter banks and cosine transform

**50. Understanding spoken language refers to**

a. Speech synthesis b. Speech Processing c. Speech Identification d. Speech Recognition

ANS : d. Speech Recognition

**51. What is the input form of Speech recognizer?**

a. Video b. Audio c. Image d. Text

ANS : b. Audio

**52. Actual audio signals are complex because of**

a. Continuous waves b. Discrete waves c. Mixture waves d. Signals of any form

ANS : a. Continuous waves

**53. What is the name of the package used to implement HMM?**

a. Numpy b. HMM c. MFCC d. Wav file

ANS : b. HMM

**54. Audio signals consists of a complex mixture of**

a. Cos waves b. Sin waves c. Tan waves d. Mixture waves

ANS : b. Sin waves

**55. To extract first 30 values to plot**

a. audio[:30] b. audio[30] c. audio[30:] d. audio[1:30]

ANS : a. audio[:30]

**56. Lot of information hidden in _____ content of an audio signal**

a. Time b. Wave c. Space d. Frequency

ANS : d. Frequency

**57. To extract the length of the audio**

a. length(audio) b. len(audio) c. l(audio) d. length_audio()

ANS : b. len(audio)

**58. The power signal is extracted using**

a. 10*np.log10(transformed_signal) b. np.log10(transformed_signal)
c. 10*log10(transformed_signal) d. log10(transformed_signal)

ANS : a. 10*np.log10(transformed_signal)

**59. How to define a function to synthesize a tone?**

a. definition synt() b. def synthesize() c. def synthesizer() d. definition synthesizer()

ANS : c. def synthesizer()

**60. The function used to write the output file**

a. write_output() b. write(output) c. writeoutput() d. write()

ANS : d. write()

**61. Which class is used to handle HMM related processing?**

a. HMM() b. HMMTrainer(object) c. HMMTrainer() d. HMM_trainer()

ANS : b. HMMTrainer(object)

**62. Which method is used to extract the score in HMM?**

a. get_score() b. score() c. getscore() d. get(score)

ANS : a. get_score()

**63. What is the function used to read the input wave file?**

a. wavefile() b. read() c. wavefile.read() d. wavefile_read()

ANS : c. wavefile.read()

**64. What is the common sampling value of speech?**

a. 44100 b. 44200 c. 44300 d. 44400

ANS : a. 44100

**65. What is the function format used to extract MFCC features?**

a. mfcc(audio,sampling_freq) b. mfcc_features(audio,sampling_freq)
c. mfcc.features(audio,sampling_freq) d. mfccfeatures(audio,sampling_freq)

ANS : a. mfcc(audio,sampling_freq)

**66. What is the function format used to extract filter bank features?**

a. logf_bank(audio,sampling_freq) b. logfbank(audio,sampling_freq)
c. fbank(audio,sampling_freq) d. f_bank(audio,sampling_freq)

ANS : b. logfbank(audio,sampling_freq)

**67. What is the JSON file format that contains notes along with frequencies?**

a. tone_freq_map.json b. tone_freq.json c. tone.freq.map.json d. tone.freq.json

ANS : a. tone_freq_map.json

**68. How to plot the title?**

a. plot() b. plot.title() c. plt.title() d. title()

ANS : c. plt.title()

**69. Which function is used to scale the values?**

a. scale() b. pow() c. floor() d. high()

ANS : b. pow()

**70. How to add some noise to signal?**

a. audio+=noise b. audio=noise c. noise() d. audio_noise()

ANS : a. audio+=noise

**71. Which function use to plot the figure?**

a. figure() b. plot() c. plot.figure() d. plt.figure()

ANS : d. plt.figure()

**72. Which function is used to display the figure?**

a. display() b. show() c. figure() d. plot()

ANS : b. show()

**73. What is the syntax to normalize the signal?**

a. audio/(2.**15) b. audio.(2.**15) c. audio=(2.**15) d. (2.**15)

ANS : a. audio/(2.**15)

**74. LibROSA is a**

a. Library b. Software c. Tool d. Operating system

ANS : a. Library

**75. waveplot is**

a. Class b. Package c. Utility function d. Object

ANS : c. Utility function

**76. Inverse Fourier Transform is**

a. Same as Fourier Transform b. Reverse as Discrete Fourier Transform
c. Opposite to Fourier Transform d. Same as Discrete Fourier Transform

ANS : c. Opposite to Fourier Transform

**77. How to install librosa?**

a. pip librosa b. pip install librosa c. install librosa d. librosa()

ANS : b. pip install librosa

**78. To load audio file using librosa**

a. librosa.load() b. load() c. librosa() d. librosa_load()

ANS : a. librosa.load()

**Unit - 3**

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**79. To visualize time series data plot it using**

a. Line chart b. Bar graph c. Both d. either a or b

ANS : d. either a or b

**80. What library is used to extract statistics from time series data?**

a. Numpy b. Pandas c. OpenCV d. Matplotlib

ANS : b. Pandas

**81. CRFs tend to outperform HMM in several applications**

a. True b. False

ANS : a. True

**82. import matplotlib.pyplot as**

a. plot b. pyplot c. plt d. py

ANS : c. plt

**83. Time series data is always not numeric**

a. True b. False

ANS : a. True

**84. To visualize time series data plot it using**

a. Visualize() b. plot() c. Barchart d. chart()

ANS : c. Barchart

**85. CRF refers to**

a. Conventional Random Fields b. Conditional Random Function
c. Conventional Random Function d. Conditional Random Fields

ANS : d. Conditional Random Fields

**86. import pandas as**

a. panda b. pd c. pan d. pandas

ANS : b. pd

**87. Which function used to read csv file?**

a. readcsvfile() b. csv() c. read_csv() d. read_csvfile()

ANS : c. read_csv()

**88. Spectrum is important feature in**

a. Video processing b. Audio processing c. Image processing d. Text processing

ANS : b. Audio processing

**89. Time series data is a measurement collected over**

a. date b. time c. year d. month

ANS : b. time

**90. Datasets can be correlated to forecast**

a. Future values b. Present values c. Past values d. Temporary values

ANS : a. Future values

**91. A function to convert data to timeseries**

a. convertdata_timeseries() b. convertdatatotimeseries()
c. convert_data_to_timeseries() d. data_timeseries()

ANS : c. convert_data_to_timeseries()

**92. To extract starting and end dates**

a. string() b. extract() c. date() d. str()

ANS : d. str()

**93. How to create a date sequence with monthly intervals?**

a. pd.date_range() b. date_range() c. range() d. pd_date()

ANS : a. pd.date_range()

**94. When title() is used, title will be displayed in**

a. Bottom b. Left c. Top d. Right

ANS : c. Top

**95. How many times you can filter the data?**

a. 2 b. 1 c. 3 d. any time

ANS : d. any time

**96. What content is extracted from time series data?**

a. Text b. Image c. Statistics d. Speech

ANS : c. Statistics

**97. Which function is used to run the predictor in HMM?**
a. model.predict() b. predict() c. hmm() d. hmm.predict()

ANS : a. model.predict()

**98. HMM's are**
a. Computation model b. Sequential model c. Specific Model d. Generative model

ANS : d. Generative model

**99. CRF used to analyze**
a. Unstructured data b. Speech c. Structured data d. Voice

ANS : c. Structured data

**100. The library used to extract statistics from time series data is**
a. OpenCV b. Numpy c. Matplotlib d. Matlab

ANS : b. Numpy

**101. Stock market is an example of**
a. Frequency series data b. Time series data c. Amplitude series data d. Code series data

ANS : b. Time series data

**102. Define a class to handle all CRF related processing**
a. CRFTrainer() b. CRFTrainer(object) c. CRF() d. Trainer()

ANS : b. CRFTrainer(object)

**103. What is the function to use chain CRF to analyze data?**
a. Chain_CRF() b. Chain() c. CRF() d. ChainCRF()

ANS : d. ChainCRF()

**104. How to load the letters dataset?**
a. load() b. letters() c. loadletters() d. load_letters()

ANS : d. load_letters()

**105. Which method is used to evaluate the performance of the model?**
a. eval() b. performanceval() c. evaluate() d. calculate()

ANS : c. evaluate()

**106. Which method is used to classify new data?**
a. classify() b. newdata() c. classifier() d. newdata_classify()

ANS : a. classify()

**107. Letters are indexed in**

a. Character b. String c. Number d. Constant

ANS : c. Number

**108. Which function is used to load the letters data?**

a. crf.load_data() b. loaddata() c. load() d. data()

ANS : a. crf.load_data()

**109. What is the method used to train the CRF?**

a. train() b. crf() c. crf.train() d. crf_train()

ANS : c. crf.train()

**110. Which one is not a form of time series data?**

a. int64 b. float64 c. bool d. double

ANS : d. double

**111. How to import numpy?**

a. import numpy as np b. import numpy c. import np d. import numpy as num

ANS : a. import numpy as np

**112. How to convert the data into a pandas data frame?**

a. DataFrame() b. pd.DataFrame() c. pd_DataFrame() d. pdDataFrame()

ANS : b. pd.DataFrame()

**113. To extract maximum value from the data frame**

a. dataframemax() b. max() c. dataframe_max() d. dataframe.max()

ANS : d. dataframe.max()

**114. Joint distribution over the label is defined in**

a. KNN b. HMM c. Cluster d. Kmeans

ANS : b. HMM

**115. How to define init function?**

a. init() b. _init() c. _init_() d. init_()

ANS : c. _init_()

**Unit - 4**

**116. What is the input and output of image processing systems?**

a. Pixels b. Intensity c. Values d. Images

ANS : d. Images

**117. Harris is a _____ detection method.**
a. Edge b. Face c. Corner d. Biometric

ANS : c. Corner

**118. _____ points are identified by corners.**
a. corner b. edge c. salient d. 2D

ANS : c. salient

**119. _____ calculated by histogram.**
a. Index b. Density c. Mass d. Distribution

ANS : c. Mass

**120. Resize () is used to _____ the input image.**
a. enlarge b. rotate c. scale d. shrink

ANS : c. scale

**121. 3D Scene from image is an output of _____**
a. Image processing b. Machine learning c. Computer vision d. Video processing

ANS : c. Computer vision

**122. Which of the following values is possible in a grayscale image?**
a. 10 b. 101 c. 1111 d. 1

ANS : a. 10

**123. I/O of image processing systems are**
a. Images b. Pixels c. Visual Data d. Edges and Corners

ANS : a. Images

**124. Which is a corner detection method?**
A. Star feature b. Harris c. Laplacian d. PCA

ANS : b. Harris

**125. The task of high level processing involved in**
a. Morphological Processing b. Optical Flow c. Edge detection d. 3D Modeling

ANS : d. 3D Modeling

**126. In an image, salient points are identified by**
a. Edges b. Cornors c. Contours d. Object tracking

ANS : b. Cornors

**127. The Probability Mass Function is calculated in**

a. Sobel b. Histogram c. PCA d. K means

ANS : b. Histogram

**128. Which function is used to scale the input image?**

a. Resize() b. Scale() c. Enlarge() d. Change()

ANS : a. Resize()

**129. Which function is used to equalize the histogram of the grayscale image?**

a. equalizeHist() b. equalizeHistogram() c. equalize() d. Histogram()

ANS : a. equalizeHist()

**130. Which function draws the keypoints on top of the input image?**

a. draw() b. keypoints() c. drawKey() d. drawKeypoints()

ANS : d. drawKeypoints()

**131. What is the output of computer vision?**

a. 2D Scene from image b. Video c. 3D Scene from image d. Image

ANS : c. 3D Scene from image

**132. Processing, analyzing and understanding the contents of visual analysis is called as**

a. Image Processing b. Computer Vision c. Artificial Intelligence d. Machine Learning

ANS : b. Computer Vision

**133. Low level vision deals with**

a. Object Recognition b. Edge detection c. 3D Modeling d. Motion Analysis

ANS : b. Edge detection

**134. Pixel intensities in this color space is represented by values ranging from**

a. 0 and1 b. 0-256 c. 0-255 d. 254

ANS : c. 0-255

**Unit - 5**

**135. Space command is given to make a _____ in face recognizer.**

a. Loop b. Rotation c. Subtraction d. Feature extraction

ANS : a. Loop

**136. PCA is used to separate _____ from the mixture**

a. Salient points b. Signals c. Images d. Facets

ANS : a. Salient points

**137. _____ is associated with ICA.**
a. LDA b. SIFT c. Star d. PCA

ANS : d. PCA

**138. Canny edge detection extraordinarily identifies _____**
a. Features b. Corners c. Images d. Noises

ANS : d. Noises

**139. Which is called as locating the face in a given image?**
a. Face recognition b. Face detection c. Face extraction d. Face classification

ANS : b. Face detection

**140. What is the functionality of PCA?**
a. Binary b. Descriptive c. Non linear d. Linear

ANS : d. Linear

**141. To make a loop in face recognizer, which command is given?**
a. Enter b. Delete c. Space d. Escape

ANS : c. Space

**142. What is the use of Haar cascades?**
a. Face recognition b. Face classification c. Face extraction d. Face detection

ANS : d. Face detection

**143. What is the content of faces_dataset?**
a. videos b. objects c. images d. edges and corners

ANS : c. images

**144. To separate signals from the mixture, which method is used?**
a. PCA b. BSS c. ICA d. KernalPCA

ANS : b. BSS

**145. Brain's internal structure respond to specific**
a. Parts b. Objects c. Features d. Images

ANS : c. Features

**146. Blind Source Separation is associated with**
a. PCA b. ICA c. SIFT d. KernalPCA

ANS : b. ICA

**147. To train the face recognizer using the data that extracted**

a. recognizer_train() b. recognizer.training() c. recognizer_training() d. recognizer.train()

ANS : d. recognizer.train()

**148. Noise detection in image can be extraordinarily identified by**

a. Laplacian b. Canny c. Sobel d. Fuzzy

ANS : b. Canny

**149. To release the captured video and close all windows, the following function is used**

a. close(); destroy() b. close();destroyAllWindows()
c. release();destroy() d. release();destroyAllWindows()

ANS : d. release();destroyAllWindows()

**150. To create the ICA object, the following method is used**

a. FastICA() b. CreateICA() c. ComputeICA() d. ICA()

ANS : a. FastICA()