MCQ

1 -What will be the output of the following code snippet?

def func(a, b):

return b if a == 0 else func(b % a, a)

print(func(30, 75))

a) 10

b) 20

c) 15

d) 0

Ans-15

2 -numbers = (4, 7, 19, 2, 89, 45, 72, 22)

sorted\_numbers = sorted(numbers)

even = lambda a: a % 2 == 0

even\_numbers = filter(even, sorted\_numbers)

print(type(even\_numbers))

a) Int

b) Filter

c) List

d) Tuple

Ans-Filter

3) As what datatype are the \*args stored, when passed into

a) Tuple

b) List

c) Dictionary

d) none

Ans-Tuple

4) set1 = {14, 3, 55}

set2 = {82, 49, 62}

set3={99,22,17}

print(len(set1 + set2 + set3))

a) 105

b) 270

c) 0

d) Error

Ans-Error

5) What keyword is used in Python to raise exceptions?

a) raise

b) try

c) goto

d) except

Ans-Raise

6) Which of the following modules need to be imported to handle date time computations in

Python?

a) timedate

b) date

c) datetime

d) time

Ans-DateTime

7) What will be the output of the following code snippet?

print(4\*\*3 + (7 + 5)\*\*(1 + 1))

a) 248

b) 169

c) 208

d) 233

Ans-208

8) Which of the following functions converts date to corresponding time in Python?

a) strptime

b) strftime

c) both a) and b)

d) None

Ans-Strptime

9) The python tuple is \_\_\_\_\_ in nature.

a) mutable

b)immutable

c)unchangeable

d) none

Ans-Immutable

10)The \_\_\_ is a built-in function that returns a range object that consists series of integer numbers, which we can iterate using a for loop.

A. range()

B. set()

C. dictionary{}

D. None of the mentioned above

Ans-Range()

Question 11-Amongst which of the following is a function which does not have any name?

A. Del function

B. Show function

C. Lambda function

D. None of the mentioned above

Ans-. Lambda function

Question 12-The module Pickle is used to \_\_\_.

A. Serializing Python object structure

B. De-serializing Python object structure

C. Both A and B

D. None of the mentioned above

Ans- Serializing Python object structure

Question 13-Amongst which of the following is / are the method of convert Python objects for writing data in a binary file?

A. set() method

B. dump() method

C. load() method

D. None of the mentioned above

Ans- dump() method

14-Amongst which of the following is / are the method used to unpickling data from a binary file?

A. load()

B. set() method

C. dump() method

D. None of the mentioned above

Ans- load()

15.A text file contains only textual information consisting of \_\_\_.

A. Alphabets

B. Numbers

C. Special symbols

D. All of the mentioned above

Ans- All of the mentioned above

16 -Which Python code could replace the ellipsis (...) below to get the following output? (Select all that apply.)

captains = {

"Enterprise": "Picard",

"Voyager": "Janeway",

"Defiant": "Sisko",

}

Enterprise Picard,

Voyager Janeway

Defiant Sisko

a) for ship, captain in captains.items():

print(ship, captain)

b) for ship in captains:

print(ship, captains[ship])

c) for ship in captains:

print(ship, captains)

d) both a and b

Ans-Both a & b

17)-Which of the following lines of code will create an empty dictionary named captains?

a) captains = {dict}

b) type(captains)

c) captains.dict()

d) captains = {}

Ans- captains = {}

18) Now you have your empty dictionary named captains. It’s time to add some data!

Specifically, you want to add the key-value pairs "Enterprise": "Picard", "Voyager": "Janeway",

and "Defiant": "Sisko".

Which of the following code snippets will successfully add these key-value pairs to the

existing captains dictionary?

a) captains{"Enterprise" = "Picard"}

captains{"Voyager" = "Janeway"}

captains{"Defiant" = "Sisko"}

b) captains["Enterprise"] = "Picard"

captains["Voyager"] = "Janeway"

captains["Defiant"] = "Sisko"

c) captains = {

"Enterprise": "Picard",

"Voyager": "Janeway",

"Defiant": "Sisko",

}

d) None of the above

Ans- captains = {

"Enterprise": "Picard",

"Voyager": "Janeway",

"Defiant": "Sisko",

}

19 ) You’re really building out the Federation Starfleet now! Here’s what you have:

captains = {

"Enterprise": "Picard",

"Voyager": "Janeway",

"Defiant": "Sisko",

"Discovery": "unknown",

}Now, say you want to display the ship and captain names contained in the dictionary, but you also

want to provide some additional context. How could you do it?

a) for item in captains.items():

print(f"The [ship] is captained by [captain].")

b) for ship, captain in captains.items():

print(f"The {ship} is captained by {captain}.")

c) for captain, ship in captains.items():

print(f"The {ship} is captained by {captain}.")

d) All are correct

Ans- for ship, captain in captains.items():

20 ) You’ve created a dictionary, added data, checked for the existence of keys, and iterated over it with

a for loop. Now you’re ready to delete a key from this dictionary:

captains = {

"Enterprise": "Picard",

"Voyager": "Janeway",

"Defiant": "Sisko",

"Discovery": "unknown",

}

What statement will remove the entry for the key "Discovery"?

a) del captains

b) captains.remove()

c) del captains["Discovery"]

d) captains["Discovery"].pop()

Ans- del captains["Discovery"]

21 When implementing linear regression of some dependent variable 𝑦 on the set of independent

variables 𝐱 = (𝑥₁, …, 𝑥ᵣ), where 𝑟 is the number of predictors, which of the following statements will

be true?

a) 𝛽₀, 𝛽₁, …, 𝛽ᵣ are the regression coefficients.

b) Linear regression is about determining the best predicted weights by using the method of

ordinary least squares.

c) E is the random interval

d) Both and b

Ans-Both a & b

22 ) What indicates that you have a perfect fit in linear regression?

a) The value 𝑅² < 1, which corresponds to SSR = 0

b) The value 𝑅² = 0, which corresponds to SSR = 1

c) The value 𝑅² > 0, which corresponds to SSR = 1

d) The value 𝑅² = 1, which corresponds to SSR = 0

Ans- The value 𝑅² = 1, which corresponds to SSR = 0

23) In simple linear regression, the value of what shows the point where the estimated regression line

crosses the 𝑦 axis?

a) Y

b) B0

c) B1

d) F

Ans-B0

24) Check out these four linear regression plots:

Which one represents an underfitted model?

a)The bottom-left plot

b) The top-right plot

c) The bottom-right plot

d) The top-left plot

Ans- The bottom-left plot

25)-There are five basic steps when you’re implementing linear regression:

• a. Check the results of model fitting to know whether the model is satisfactory.

• b. Provide data to work with, and eventually do appropriate transformations.

• c. Apply the model for predictions.

• d. Import the packages and classes that you need.

• e. Create a regression model and fit it with existing data.

However, those steps are currently listed in the wrong order. What’s the correct order?

a) e, c, a, b, d

b) e, d, b, a, c

c) d, e, c, b, a

d) d, b, e, a, c

Ans- d, e, c, b, a

26 ) Which of the following are optional parameters to LinearRegression in scikit-learn?

a) Fit

b) fit\_intercept

c) normalize

d) copy\_X

e) n\_jobs

f) reshape

Ans- fit\_intercept

27) While working with scikit-learn, in which type of regression do you need to transform the array of

inputs to include nonlinear terms such as 𝑥²?

a)Multiple linear regression

b) Simple linear regression

c) Polynomial regression

Ans- Polynomial regression

28) You should choose statsmodels over scikit-learn when:

A)You want graphical representations of your data.

b) You’re working with nonlinear terms.

c) You need more detailed results.

d) You need to include optional parameters.

Ans- You want graphical representations of your data

29) \_\_\_\_\_\_\_\_\_ is a fundamental package for scientific computing with Python. It offers

comprehensive mathematical functions, random number generators, linear algebra routines, Fourier

transforms, and more. It provides a high-level syntax that makes it accessible and productive.

a) Pandas

b) Numpy

c) Statsmodel

d) scipy

Ans- Numpy

30 ) \_\_\_\_\_\_\_\_\_ is a Python data visualization library based on Matplotlib. It provides a high-level

interface for drawing attractive and informative statistical graphics that allow you to explore and

understand your data. It integrates closely with pandas data structures.

a) Bokeh

b) Seaborn

c) Matplotlib

d) Dash

Ans- Seaborn

31) Among the following identify the one in which dimensionality reduction reduces.

a) Performance

b) statistics

c) Entropy

d) Collinearity

Ans- Collinearity

32) Which of the following machine learning algorithm is based upon the idea of bagging?

a) Decision Tree

b) Random Forest

c) Classfication

d) SVM

Ans- Random Forest

33) Choose a disadvantage of decision trees among the following.

a) Decision tree robust to outliers

b) Factor analysis

c) Decision Tree are prone to overfit

d) all of the above

Ans- Decision Tree are prone to overfit

34) What is the term known as on which the machine learning algorithms build a model based on

sample data?

a) Data Training

b) Sample Data

c) Training data

d) None of the above

Ans- Training data

35) Which of the following machine learning techniques helps in detecting the outliers in data?

a) Clustering

b) Classification

c) Anamoly detection

d) All of the above

Ans- Anamoly detection

36) Identify the incorrect numerical functions in the various function representation of machine

learning.

a) Support Vector

b) Regression

c) Case based

d) Classification

Ans- Regression

37) Analysis of ML algorithm needs

a) Statistical learning theory

b) Computational learning theory

c) None of the above

d) Both a and b

Ans- Both a and b

38) Identify the difficulties with the k-nearest neighbor algorithm.

a) Curse of dimensionality

b) Calculate the distance of test case for all training cases

c) Both a and b

d) None

Ans-None

39) The total types of the layer in radial basis function neural networks is \_\_\_\_\_\_

a) 1

b) 2

c) 3

d) 4

Ans-3

40-Which of the following is not a supervised learning

a) PCA

b) Naïve bayes

c) Linear regression

d) KMeans

Ans-PCA