Question: 01

1. Email address *

   _____

2. State: True or False. Histogram represents the distribution of a continuous   1 point
   variable over a given interval or period of time.

   Mark only one oval.

   ◯ True

   ◯ False

3. Which are the issues of Machine Learning   1 point

   1. Focusing Too Much on Algorithms and Theories
   2. Using Changing or Premade Tools
   3. Getting Bad Predictions to Come Together with Biases
   4. Having Algorithms Become Obsolete as Soon as Data Grows

   Mark only one oval.

   ◯ 1 and 2 both

   ◯ 2 and 3 both

   ◯ 1, 2 and 3

   ◯ All of the mentioned

4. Which of the following are applications of Machine Learning?   1 point

Mark only one oval.

○ Email filtering

○ Product Recommendations

○ Fraud Detection

○ All of the mentioned

5. Machine Learning is the field of study that gives computers the capability to   1 point
    learn without being explicitly programmed.

Mark only one oval.

○ True

○ False

6. Which of the following statement is not correct?   1 point

1. Linear regression is used to predict the continuous dependent variable using a given set of independent variables.

2. Linear regression is used for solving Classification problems.

3. In Linear regression, we predict the value of continuous variables.

4. In Linear regression, it is not required to have the linear relationship between the dependent and independent variable.

Mark only one oval.

○ Statement 1 & Statement 2

○ Statement 2 & Statement 3

○ Statement 1 & Statement 4

○ Statement 2 & Statement 4

7. Is the data linearly separable?   1 point
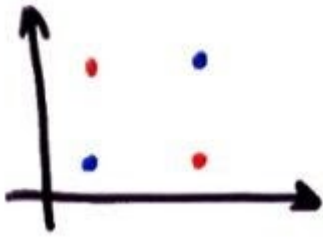
Mark only one oval.

( ) Yes

( ) No

8. Which of the following is FALSE for unsupervised learning?   1 point

Mark only one oval.

( ) In unsupervised learning model, only input data will be given

( ) Highly accurate and trustworthy method.

( ) Unsupervised learning is computationally complex compared to supervised learning

( ) All of the mentioned

9. Which method can be applied on the given data?   1 point

User ID	Gender	Age	Estimated Salary	Will purchase Car or not
157841	Male	19	19000	No
157842	Male	27	1000000	Yes
157843	Female	27	57000	No
157844	Female	32	1500000	Yes
186525	Male	27	50000	Yes
896523	Male	32	18000	No
745821	Female	21	56000	Yes

Check all that apply.

☐ Logistic regression

☐ Linear Regression

☐ K nearest Neighbor

☐ K-means

10. Which of the following can act as possible termination conditions in K-Means?   1 point

1 - For a fixed number of iterations.

2 - Assignment of observations to clusters does not change between iterations. Except for cases with a bad local minimum.

3 - Centroids do not change between successive iterations.

4 - Terminate when RSS falls below a threshold

Mark only one oval.

◯ 1, 3 and 4

◯ 1, 2 and 3

◯ 1, 2 and 4

◯ All of the options

11. Cluster quality depends on _____ intra-class distance and _____   1 point
     inter-class distance.

     Mark only one oval.

     ⬭ average, minimum

     ⬭ minimum, maximum

     ⬭ maximum, minimum

     ⬭ minimum, average

12. Which of the following is correct about deep learning?   1 point

     Check all that apply.

     ☐ Deep learning uses algorithms to parse and to pre-process the data.

     ☐ Deep learning structures algorithms in layers to create an "artificial neural network" that
     can learn and make intelligent decisions on its own

     ☐ Deep learning is a subfield of machine learning. While both fall under the broad category
     of artificial intelligence, deep learning is what powers the most human-like artificial
     intelligence

     ☐ None of the mentioned

13. In 'Hand written character Recognition', which of the following method is   1 point
     most suitable ?

     Mark only one oval.

     ⬭ convolutional neural network

     ⬭ recurrent neural network

     ⬭ Auto Encoder

     ⬭ Deep Belief Network

14.   What is the Mean, Median, Mode and Range of the following set of numbers 2 points
       respectively: 10, 48, 57, 62, 89, 111, 10, 48, 89, 10

Mark only one oval.

○ 53.4, 52.5, 10, 101

○ 35.97, 100, 10, 101

○ 52.5, 100, mode does not exist, 0

○ 52.5, 53.4, mode does not exist, 101

15.   Question: 2 points

Using K-Nearest Neighbors, what will be the values marked as "?". k = 3.
Raining = 1 indicates that it is raining and 0 indicates that it is not raining.

Use Euclidean distance as a measure.

ID	Temperature	Wind Speed	Raining
1	5	0.4	1
2	17	1.5	0
3	7	5	1
4	10	3.5	1
5	22	2.2	0
6	13	4.5	1
7	15	12	?

Mark only one oval.

○ Raining

○ Not Raining

○ Both option

○ None of the options

16.

What is the covariance for given input data?

X	Y
4	4
5	6
7	3
3	9
1	7

Mark only one oval.

⬭ -3

⬭ -3.75

⬭ 3.25

⬭ 5

17.   Which of the following are real world applications of the SVM?

Mark only one oval.

⬭ Text and Hypertext Categorization

⬭ Image Classification

⬭ Clustering of News Articles

⬭ All of the mentioned

18. The effectiveness of SVM depends upon _____ .   1 point

Mark only one oval.

◯ Selection of Kernel

◯ Kernel Parameters

◯ Soft Margin Parameter

◯ All of the mentioned

19. Which of the following is the most appropriate strategy for data cleaning   1 point
     before performing clustering analysis, given less than desirable number of
     data points:

     1 - Capping and flouring of variables
     2 - Removal of outliers

Mark only one oval.

◯ 1 only

◯ 2 only

◯ 1 and 2

◯ None of these

20.   What is the outcome of below query?   1 point

index	company	body-style	wheel-base	length	engine-type	num_cylinders	hp	avg_mileage	price
0	alpha-romero	convertible	88.6	168.8	dohc	four	111	21	13495.0
1	alpha-romero	convertible	88.6	168.8	dohc	four	111	21	16500.0
2	alpha-romero	hatchback	94.5	171.2	ohcv	six	154	19	16500.0
3	audi	sedan	99.8	176.6	ohc	four	102	24	13950.0
4	audi	sedan	99.4	176.6	ohc	five	115	18	17450.0

```
import pandas as pdo

dfo = pdo.read_csv("autom.csv")

dfo = dfo [['company','price']][dfo.price==dfo['price'].max()]

dfo
```

Mark only one oval.

○ the most expensive car price

○ the most expensive car company name

○ the most expensive car company name with price

○ None of the options

21.   In which algorithm computation time is required more to test unseen   1 point
samples?

Mark only one oval.

○ K-Nearest Neighbours

○ Decision Tree

○ SVM

○ Neighbourhood

Question: 2

22.   Question: 2 (A)   2 points

Using Linear Regression Y=mX + c, find the equation for the line that
fits the following data:

X	Y
6	10
-5	14
13	5
20	15

Mark only one oval.

◯ Y = -0.557X + 1.4

◯ Y = -0.1306X + 11

◯ Y = 0.1306X + 8.5

◯ Y = -0.055X + 11.47

23.   In question 2(A), Can we perform regression using neural network?   1 point

Mark only one oval.

◯ Yes

◯ No

Question: 03

24.   Question: 3(A)   2 points

.

	X	Y
P1	2	5
P2	3	3
P3	5	4
P4	5	7
P5	4	5

For k = 2, and Centers initialized as C1 = P1, C2 = P2 what will be the clusters after the first iteration of k-means clustering algorithm? Use Euclidean distance instead of Manhattan distance.

Mark only one oval.

◯ {P1, P4, P5}, {P2, P3}

◯ {P1, P5}, {P2, P3, P4}

◯ {P1, P4}, {P2, P3, P5}

◯ {P1}, {P2, P3, P4, P5}

25.   In Question 2(A), What will be the final Clusters?   2 points

Mark only one oval.

◯ {P1, P4, P5}, {P2, P3}

◯ {P1, P5}, {P2, P3, P4}

◯ {P1, P4}, {P2, P3, P5}

◯ {P1}, {P2, P3, P4, P5}

This content is neither created nor endorsed by Google.

Google Forms