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Time taken	21 mins 55 secs
Grade	9.00 out of 10.00 (90%)

Question 1

Complete

Mark 1.00 out of 1.00

Which of the following sentences is not true for the cycle of selection, crossover and mutation is repeated a number of times till:

○ a.   The average fitness value of a population becomes more or less constant over a specified number of generations.

○ b.   The number of generations (or iterations) is greater than some threshold

○ c.   None of the above

◉ d.   A desired objective function value is attained by at most, one string in the population.

The correct answer is: A desired objective function value is attained by at most, one string in the population.

Question 2

Complete

Mark 1.00 out of 1.00

In a genetic algorithm optimisation problem, the fitness function is defined as, $f(x) = x^2 - 4x + 4$. Given a population of 4 individuals with values of x: {1.5, 2.0, 3.0, 4.5} what is the fitness value of the individual that will be selected as the parent for reproduction in one generation?

- ○ a.   6.0
- ○ b.   2.25
- ◉ c.   6.25
- ○ d.   0.0

The correct answer is: 6.25

Question 3

Complete

Mark 1.00 out of 1.00

In a scenario where a learner aims to forecast housing prices based on the size of each house, the variable "size" would typically be categorized as the:

- ○ a.   label set variable
- ○ b.   dependent variable
- ○ c.   target variable
- ◉ d.   independent variable

The correct answer is: independent variable

Question 4

Complete

Mark 1.00 out of 1.00

Relation between inertia and quality of clusters

      a.   as inertia increases, the intra cluster quality decreases

      b.   as inertia decreases, the intra cluster quality increases

      c.   as inertia increases, the clusters are better

      d.   as inertia increases, the intra cluster quality increases

The correct answer is: as inertia decreases, the intra cluster quality increases

Question 5

Complete

Mark 1.00 out of 1.00

What is intra-cluster distance

      a.   sum of squares of distances between points

      b.   distance between each point in the cluster

      c.   distance between points in the cluster to its centroid

      d.   None of the above

The correct answer is: distance between points in the cluster to its centroid

Question 6

Complete

Mark 1.00 out of 1.00

Which of the following is true for dunn index:

- ○ a.   1. maximum the dunn index, better the cluster quality
- ○ b.   All of the above
- ○ c.   minimum the dunn index, lesser the clusters quality
- ○ d.   minimum the dunn index, better the clusters quality

The correct answer is:

1. maximum the dunn index, better the cluster quality

Question 7

Complete

Mark 1.00 out of 1.00

What does the relationship mean between residuals and predicted values in linear regression?

- ○ a.   There is a relationship means our model is not good
- ○ b.   None of these
- ○ c.   Can't say
- ○ d.   There is a relationship means our model is good

The correct answer is: There is a relationship means our model is not good

Question 6

Complete

Mark 1.00 out of 1.00

Question 8

Complete

Mark 1.00 out of 1.00

For a give N independent input variables (X1,X2... Xn) and dependent (target) variable Y a linear regression is fitted for the best fit line using least square error on this data. The correlation coefficient for one of it's variable(Say X1) with Y is -0.97. Which of the following is true for X1? ?

- ○ a.   Relation between the X1 and Y is strong
- ○ b.   Correlation does not imply relationship
- ○ c.   Relation between the X1 and Y is neutral
- ○ d.   Relation between the X1 and Y is weak

The correct answer is: Relation between the X1 and Y is strong

Question 9

Complete

Mark 0.00 out of 1.00

If the Pearson correlation coefficient between variables V1 and V2 is zero, can we infer that there is no relationship between V1 and V2?

- ○ a.   False
- ⦿ b.   True

The correct answer is: False

Question 10

Complete

Mark 1.00 out of 1.00

What is the best fit line method for data in linear regression?

    a.   Maximum Likelihood

    b.   Logarithmic Loss

    c.   No of them

    d.   Least Square Error

The correct answer is: Least Square Error

Question 10

Complete

Mark 1.00 out of 1.00

What is the best fit line method for data in linear regression?