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Grade Not yet graded

Question **1**

Correct

Mark 0.50 out of 0.50

Who is known as the -Father of AI"?

- ☐ Fisher Ada
- ☐ Alan Turing
- ☒ John McCarthy
- ☐ Allen Newell



The correct answers are: Alan Turing, John McCarthy

Question **2**

Correct

Mark 0.50 out of 0.50

If a robot is able to change its own trajectory as per the external conditions, then the robot is considered as the__

- ☐ Mobile
- ☐ Non-Servo
- ☐ Open Loop
- ☒ Intelligent



The correct answer is: Intelligent

Question **3**

Correct

Mark 0.50 out of 0.50

A technique that was developed to determine whether a machine could or could not demonstrate the artificial intelligence known as the__

- ☐ Boolean Algebra
- ☒ Turing Test
- ☐ Logarithm
- ☐ Algorithm



The correct answer is: Turing Test

Question **4**

Correct

Mark 0.50 out of 0.50

The main tasks of an AI agent are_____.

- ☐ Input and Output
- ☐ Moment and Humanly Actions
- ☒ Perceiving, thinking, and acting on the environment
- ☐ None of the above



The correct answer is: Perceiving, thinking, and acting on the environment

Question **5**

Complete

Marked out of 1.00

Which of the following are ML methods? (Select an option as well write explanation for each option below about why it is correct and why it is not correct.)

- a) Based on human supervision
- b) Supervised Learning
- c) Semi-reinforcement Learning
- d) All of the above

Answer : b) Supervised learning - It is a paradigm where machines learn and build a model based on labelled data set to make predictions or decisions.

Explanations:

- a) Based on human supervision - Not ML method as the phrase indicates human supervision. However supervised learning ML method involves machines learning or getting trained based on a labeled data set
- c) Semi-reinforcement learning - There is a semi-supervised learning method but there is not any generally accepted concept or technique of semi-reinforcement learning as an ML technique!
- d) All of the above - Not a ML method.

Question **6**

Complete

Mark 1.00 out of 1.00

Write whether the following statement is True or False. (Justify your answer with proper explanation)

Statement: The term neural network is a reference to neurobiology, but although some of the central concepts in deep learning were developed in part by drawing inspiration from our understanding of the brain, deep-learning models are not models of the brain. There's no evidence that the brain implements anything like the learning mechanisms used in modern deep-learning models

True - as the evidence that brain works or implements the modern deep-learning concepts or vice versa is NOT established tangibly. However, the correspondence or evidence is more conceptual and heuristic while the modern day deep-learning methods draw inspiration from the brain's functioning and architecture, the level of abstraction and complexity in ANNs is far simpler than biological neural networks.

Comment:

Question **7**

Correct

Mark 0.50 out of 0.50

Which statement is true?

- ☒ Deep learning is a mathematical framework for learning representations from data
- ☐ Deep learning is a biological framework for learning representations from brain data
- ☐ Deep learning is an analogue framework for learning representations from data
- ☐ Deep learning is a digital framework for learning representations from data



The correct answer is: Deep learning is a mathematical framework for learning representations from data

Question **8**

Correct

Mark 0.50 out of 0.50

What is the sum of all the diagonal elements of a square matrix?

- ☐ Diagonal matrix
- ☒ Trace of a matrix
- ☐ Identity matrix
- ☐ Both A and B



The correct answer is: Trace of a matrix

Question **9**

Complete

Mark 1.00 out of 1.00

Let u and v be 3-dimensional vectors, where specifically

$$u = \begin{bmatrix} 4 \\ -4 \\ -3 \end{bmatrix}$$

and

$$v = \begin{bmatrix} 4 \\ 2 \\ 4 \end{bmatrix}$$

what is $u^T v$?

$$= [4 \cdot 4 - 4 \cdot 2 - 3 \cdot 4] = [16 - 8 - 12] = -4$$

Comment:

Question **10**

Correct

Mark 0.50 out of 0.50

You have a dataset of different flowers containing their petal lengths and color. Your model has to predict the type of flower for given petal lengths and color. This is a-

- ☐ Regression task
- ☒ Classification task
- ☐ Clustering task
- ☐ None



The correct answer is: Classification task

Question **11**

Incorrect

Mark 0.00 out of 1.00

In simple linear regression, if you change the input value by 1 then the output value will be changed by: (Multiple answers might be correct.)

- ☐ a. 1
- ☒ b. The slope parameter
- ☒ c. The intercept parameter
- ☐ d. None



Your answer is incorrect.

The correct answer is:

The slope parameter

Question **12**

Complete

Mark 1.00 out of 1.00

The equation of the regression line is $y = 8x - 2$. Compute the residual for the point (4, 28)

$=30-28=2$

Comment:

Question **13**

Correct

Mark 0.50 out of 0.50

Which rule is followed by the Backpropagation algorithm?

- ☐ Static Rule
- ☐ Dynamic Rule
- ☒ Chain Rule
- ☐ None



The correct answer is: Chain Rule

Question **14**

Correct

Mark 0.50 out of 0.50

Neural networks are trained based on _____ algorithm?

- ☒ Backpropagation
- ☐ Front Propagation
- ☐ Signal Propagation
- ☐ Channel Propagation



The correct answer is: Backpropagation

Question **15**

Incorrect

Mark 0.00 out of 0.50

What are the primary features of a transmitter?

- ☐ Lower clock speed
- ☐ Lower transmitting power
- ☒ Higher clock speed
- ☐ None of these



The correct answer is: None of these