

**2020-1-HR01-KA226-HE-094713**

**O3 - Two distance learning curricula in machine learning and cloud computing**

**Machine Learning - Assessments**

October 2022

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**CODEIN**

Cloud cOmputing for Digital Education INnovation

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**Identification Sheet**

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## INTRODUCTION

Please find below a set of assessment questions designed to help you evaluate your knowledge. These questions, along with others like them, were previously posted on the Oracle Academy Member Hub platform as interactive assessment quizzes, midterms, and final exams.

## ASSESSMENT QUESTIONS: EVALUATE YOUR KNOWLEDGE

1. The Turing test is

* A test on how fast a computer can think.
* A test to see whether a computer can imitate a human
* A test to see whether a human can imitate a computer
* A test to see if a human understands AI.

2. Data normally stored in a table in a spreadsheet is

* Structured data
* Unstructured Data
* Indepedent data
* Dependent data

3. Independent data relies on dependent data.

* True
* False

4. Rainfall recorded as low, medium, high is an example of

* Classification
* Regression

5. Data that can be shown in table format can be described as structured

* True
* False

6. You train your algorithm with test data then test it with training data

* True
* False

7. You watch a baseball game without ever having seen or read about it and you wish to classify the players based on certain criteria - team, pitcher, fielder etc. This is an example of unsupervised learning.

* True
* False

8. Data shown as a regression can be converted to a classification by grouping it in ranges?

* True
* False

9. Rainfall recorded as 2,3,0,3,4 is an example of

* Classification
* Regression
* Both Classification and Regression
* None of the other options

10. Classification of data is when

* Data can be any numeric value
* Data can only be a given discrete value for a list of choices
* Data can only be categorised with a small subtype of values
* Data must be in a small range of values

11. What is data exhaust?

* Is the temporary data that you do not delete on your mobile phone
* Is delete data that you are still able to recover
* A trail of data that you leave behind you
* Is data that you upload to the cloud

12. Data exhaust allows systems to monitor your behaviours

* True
* False

13. Can machine learning only be used against one type of task

* True
* False

14. Which of the following are exampes that use Machine Learning

* In car Navigation
* Credit Card fraud detection
* Bank loan application
* All of the options

15. Which of the following is not an example of Machine Learning

* Internet Search
* Stock trading predictions
* Temperature gauge in a car
* All of the options

16. Viewing the number of visitors to a website from the USA is an example of data

* True
* False

17. Information is data in context

* True
* False

18. Information can be as simple as presenting data in a different format?

* True
* False

19. What does data mean?

* Data is information in context
* It is the gathering of the figures or facts
* It is information that has been processed in a particular format
* It is when figures have been processed via machine learning

20. Recording the tempearture every hour is an example of data

* True
* False

21. The CRISP model is iterative.

* True
* False

22. The single most important thing to know is what should be achieved by using Machine Learning.

* True
* False

23. Data understanding is the first stage of the CRISP model.

* True
* False

24. Business understanding is when we understand which question that we want to try and answer.

* True
* False

25. Requiring to check if someone has a good credit rating is an exampe of which stage?

* Business understanding
* Data understanding
* Data preparation
* Modelling

26. We can move onto the next stage of our model without fully knowing the business question we wish to answer.

* True
* False

27. As personal computers and devices become more powerful, then the cloud will become irrelevant.

* True
* False

28. The reason for the increase use in AI is:

* Data is recorded in far greater quantity
* Computer processing power has increased
* Machine Learning algorithms have improved
* All of the above

29. In the following tree what would be the result of a In-Order Traversal?



* 123456
* 4275631
* 4217536
* 1243576

30. In the following tree what would be the result of a Post-Order Traversal?



* 123456
* 4275631
* 4217536
* 1243576

31. In the following tree, what would be the result of a Pre-Order Traversal?



* 123456
* 4275631
* 4217536
* 1243576

32. Which of the following is not a typical example of tree traversal?

* Pre Order Traverasal
* Post Order Traversal
* In Order Traversal
* Reverse Order Traversal

33. In a Node class the name of the links to the children are normally called:

* Child1, Child2
* Left, Right
* Sibling1, Sibling2
* Top, Bottom

34. What do we call a node that has 0 children?

* Sibling
* Leaf
* Root
* Branch

35. A binary tree can only store primitive values.

* True
* False

36. The first node on a tree is known as a:

* Point
* Crown
* Top
* Root

37. Trees are very useful for representing hierarchical structures.

* True
* False

38. Recurive methods can always be written as iterative methods.

* True
* False

39. In recursion, a base case must be defined.

* True
* False

40. This is an example of a recursive method

int power(int a, int n) {

int result = 1;

for(int i=0;i result \*= a; }

return result;

}

* True
* False

41. A method making a call to itself is called:

* Iteration
* Conditional
* Recursion
* Search

42. In a decision tree, it doesn't matter which questions you start with.

* True
* False

43. ID3 is short for:

* Interactive Dichotomiser 3
* Intersectional Dichotomiser 3
* Iterative Dichotomiser 3
* Institutational Dichotomiser 3

44. Decision trees work better if they have more access to more data.

* True
* False

45. Decision trees can only be created using ID3.

* True
* False

46. Variance is:

* How average of all data items
* How far data is spread out
* The difference between the largest and smallest item
* Measures the relationship between all items

47. Which of the following has the greatest variance?

* 0,0,0,0
* 1,2,3,4
* 1,1,2,2,3,3
* 1,50,100,2000

48. Information entropy quantifies how much information there is in an event.

* True
* False

49. Decision trees can only be represented using binary trees.

* True
* False

50. The difference between a tree and a binary tree structure is:

* A binary tree is restricted to a maximum of 2 siblings
* A binary tree is based around the notion of a root node
* A non binary tree cannot be traversed
* A non binary tree does not have leaf nodes

## REFERENCES

[1] Cloud cOmputing for Digital Education INnovation, Accessed: 18.09.2022. [Online]. Available: <https://code-in.org>