

Weekly Assessment

AI

Points: 44/50

Time: 25:51

1. Name of the Student *

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✓ **Correct** 1/1 Points

4. What will be the output of the following code?

```
a = {'key1': 1, 'key2': 2}
```

```
print(a['key2'])
```

*

- ☐ a) 1
- ☒ b) 2
- ☐ c) key2
- ☐ d) Error

✗ **Incorrect** 0/1 Points

5. Which of the following is not a valid Python operator? *

- ☐ a) * *
- ☐ b) //
- ☐ c) %%%
- ☒ d) @

✓ **Correct** 1/1 Points

6. What will be the output of the following code?

```
list1 = [1, 2, 3, 4, 5]
list2 = list1
list2.append(6)
print(list1)
```

*

- ☐ a) [1, 2, 3, 4, 5]
- ☒ b) [1, 2, 3, 4, 5, 6]
- ☐ c) [6]

☐ d)[1, 2, 3, 4, 5, 6, 6]

✓ **Correct** 1/1 Points

7. Which of the following algorithms is used in unsupervised learning for clustering? *

☐ a) *Linear regression*

☐ b) *Logistic regression*

☒ c) *K – means*

☐ d) *Decision trees*

✓ **Correct** 1/1 Points

8. What is the main goal of unsupervised learning? *

☐ a) *To predict future outcomes*

☒ b) *To find hidden patterns in data*

☐ c) *To label the data*

☐ d) *To reduce the dimensionality of data*

✓ **Correct** 1/1 Points

9. What will be the output of the following code?

```
for i in range(3):  
    print(i)
```

*

☐ a) 123

☒ b) 012

☐ c) 0123

☐ d)12

✓ **Correct** 1/1 Points

10. Which AI application involves converting spoken language into text? *

☐ a) *Image recognition*

☒ b) *Speech – to – text*

☐ c) *Text – to – speech*

☐ d) *Virtual reality*

✓ **Correct** 1/1 Points

11. Which machine learning technique is used for classification problems? *

☐ a) *K – means clustering*

☒ b) *Decision trees*

☐ c) *Apriori algorithm*

☐ d) *Linear regression*

✓ **Correct** 1/1 Points

12. Which of the following is an application of unsupervised learning? *

☐ a) *Spam detection*

☒ b) *Customer segmentation*

☐ c) *Stock price prediction*

☐ d) *House price prediction*

✓ **Correct** 1/1 Points

13. Which algorithm is used in supervised learning? *

- ☐ a) *K – means clustering*
- ☒ b) *Decision trees*
- ☐ c) *Apriori algorithm*
- ☐ d) *PCA (Principal Component Analysis)*

✓ **Correct** 1/1 Points

14. In supervised learning, what is the 'target variable'? *

- ☒ a) *The variable being predicted*
- ☐ b) *The variable used to train the model*
- ☐ c) *The variable that is ignored*
- ☐ d) *The variable used to test the model*

✓ **Correct** 1/1 Points

15. What is the definition of Machine Learning (ML)? *

- ☐ a) *The study of human learning*
- ☒ b) *A method of data analysis that automates analytical model building*
- ☐ c) *The process of making machines learn programming languages*
- ☐ d) *The development of new hardware*

✓ **Correct** 1/1 Points

16. What will be the output of the following code?

```
def multiply(a, b=2):  
    return a * b
```

```
result = multiply(5)  
print(result)
```

*

- ☒ a) 10
- ☐ b) 5
- ☐ c) 2
- ☐ d) Error

✓ **Correct** 1/1 Points

17. Which application uses AI to understand and respond to human speech? *

- ☐ a) Video streaming
- ☒ b) Voice assistants (e. g. , Siri, Alexa)
- ☐ c) Text editors
- ☐ d) Image editors

✓ **Correct** 1/1 Points

18. Which type of AI is capable of human-level intelligence across a variety of tasks? *

- ☐ a) Narrow AI
- ☐ b) Weak AI
- ☒ c) General AI

☐ d) *Special AI*

✓ **Correct** 1/1 Points

19. When was the term "Artificial Intelligence" first coined? *

☐ a) 1950

☒ b) 1956

☐ c) 1965

☐ d) 1972

✓ **Correct** 1/1 Points

20. Which of the following is NOT an application of machine learning? *

☐ a) *Email filtering*

☐ b) *Image recognition*

☒ c) *Website design*

☐ d) *Predictive maintenance*

✓ **Correct** 1/1 Points

21. Which type of machine learning involves an agent learning to make decisions by trial and error? *

☐ a) *Supervised learning*

☐ b) *Unsupervised learning*

☒ c) *Reinforcement learning*

☐ d) *Transfer learning*

✓ **Correct** 1/1 Points

22. Who is considered the father of AI? *

- ☐ a) *Alan Turing*
- ☒ b) *John McCarthy*
- ☐ c) *Marvin Minsky*
- ☐ d) *Andrew Ng*

✓ **Correct** 1/1 Points

23. Which method is used to find the index of an element in a list? *

- ☐ a) *find()*
- ☐ b) *search()*
- ☒ c) *index()*
- ☐ d) *locate()*

✓ **Correct** 1/1 Points


24. Which algorithm is commonly used in unsupervised learning? *

- ☐ a) *Linear regression*
- ☒ b) *K – means clustering*
- ☐ c) *Logistic regression*
- ☐ d) *Naive Bayes*

✓ **Correct** 1/1 Points

25. What is 'clustering' in machine learning? *

- ☐ a) A supervised learning technique
- ☒ b) Grouping similar data points together
- ☐ c) A reinforcement learning technique
- ☐ d) A dimensionality reduction technique

 **Will be reviewed**

26. What will be the output of the following code? `print("Hello World".replace("World", "Python"))` *

- ☒ a) Hello Python
- ☐ b) Hello World Python
- ☐ c) HelloPythonWorld
- ☐ d) Hello

 **Correct** 1/1 Points

27. What will be the output of the following code?

```
a = [1, 2, 3]
b = a
b[0] = 10
print(a)
```

*

- ☐ a) [1, 2, 3]
- ☒ b) [10, 2, 3]
- ☐ c) [10, 2, 3, 1]

☐ d)[1, 2, 3, 10]

✓ **Correct** 1/1 Points

28. Which of the following is used to define a block of code in Python? *

☐ a) *Curlybraces*

☐ b) *Parentheses()*

☒ c) *Indentation*

☐ d) *Squarebrackets[]*

✓ **Correct** 1/1 Points

29. Which algorithm is commonly used in unsupervised learning? *

☐ a) *Linear regression*

☒ b) *K – means clustering*

☐ c) *Logistic regression*

☐ d) *Naive Bayes*

✓ **Correct** 1/1 Points

30. What is the definition of Artificial Intelligence (AI)? *

☐ a) *The study of natural intelligence in humans*

☒ b) *The simulation of human intelligence in machines*

☐ c) *The development of computer hardware*

☐ d) *The study of computer networks*

✓ **Correct** 1/1 Points

31. How do you get the number of rows and columns in a DataFrame? *

- ☒ a) `df.shape`
- ☐ b) `df.size`
- ☐ c) `df.length`
- ☐ d) `df.count`

✓ **Correct** 1/1 Points

32. How do you create a DataFrame from a dictionary in Pandas? *

- ☐ a) `pd.DataFrame([dict])`
- ☒ b) `pd.DataFrame(dict)`
- ☐ c) `pd.DataFrame([dict.keys(), dict.values()])`
- ☐ d) `pd.DataFrame.from_dict(dict)`

✓ **Correct** 1/1 Points

33. Which of the following fields heavily uses AI for predictive analysis? *

- ☐ a) *Astronomy*
- ☒ b) *Marketing*
- ☐ c) *Marinebiology*
- ☐ d) *Sports*

✓ **Correct** 1/1 Points

34. Which of the following is the correct syntax to open a file in write mode in Python? *

- ☐ a) `open('filename', 'r')`
- ☒ b) `open('filename', 'w')`
- ☐ c) `open('filename', 'rw')`
- ☐ d) `open('filename', 'wr')`

✓ **Correct** 1/1 Points

35. Which function concatenates two DataFrames? *

- ☒ a) `pd.concat([df1, df2])`
- ☐ b) `pd.join([df1, df2])`
- ☐ c) `pd.combine([df1, df2])`
- ☐ d) `pd.merge([df1, df2])`

✓ **Correct** 1/1 Points

36. What will be the output of the following code?

```
a = [1, 2, 3, 4]
b = a.pop()
print(b)
```

*

- ☐ a) 1
- ☐ b) 2
- ☐ c) 3
- ☒ d) 4

✓ **Correct** 1/1 Points

37. Which of the following is the correct syntax for a lambda function? *

- ☒ a) *lambda x : x + 1*
- ☐ b) *lambda (x) : x + 1*
- ☐ c) *lambda x => x + 1*
- ☐ d) *lambda : x + 1*

✓ **Correct** 1/1 Points

38. What is Pandas in Python? *

- ☐ a) *A web framework*
- ☒ b) *A data manipulation and analysis library*
- ☐ c) *A machine learning library*
- ☐ d) *An operating system*

✗ **Incorrect** 0/1 Points

39. How do you import the Pandas library in Python? *

- ☐ a) *import pandas as pd*
- ☐ b) *import numpy as np*
- ☐ c) *import pd*
- ☒ d) *import pandas as np*

✓ **Correct** 1/1 Points

40. Which of the following keywords is used to define a class in Python? *

- ☐ a) *function*
- ☐ b) *define*
- ☒ c) *class*
- ☐ d) *object*

✓ **Correct** 1/1 Points

41. Which principle is central to machine learning? *

- ☐ a) *Rule – based decision making*
- ☒ b) *Learning from data*
- ☐ c) *Static data processing*
- ☐ d) *Manual data entry*

✓ **Correct** 1/1 Points

42. What will be the output of the following code?

```
a = 2  
b = 3  
a, b = b, a  
print(a, b)
```

*

- ☐ a) *2 3*
- ☒ b) *3 2*
- ☐ c) *Error*

☐ d)5

✓ **Correct** 1/1 Points

43. What type of machine learning involves labeled data? *

☒ a) *Supervised learning*

☐ b) *Unsupervised learning*

☐ c) *Reinforcement learning*

☐ d) *Self-supervised learning*

✓ **Correct** 1/1 Points

44. What will be the output of the following code?

```
a = [1, 2, 3, 4]
print(len(a))
```

*

☐ a)3

☒ b)4

☐ c)5

☐ d)Error

✓ **Correct** 1/1 Points

45. Which of the following is an application of AI? *

☐ a) *Word processing*

☐ b) *Email marketing*

☒ c) *Autonomous vehicles*

☐ d) Web browsing

✓ **Correct** 1/1 Points

46. Which method provides a boolean DataFrame indicating whether each element is NA? *

☒ a) `df.isna()`

☐ b) `df.isnull()`

☐ c) `df.notna()`

☐ d) `df.notnull()`

✓ **Correct** 1/1 Points

47. What will be the output of the following code?

```
x = 10
if x > 5:
    print("Greater than 5")
else:
    print("5 or less")
```

*

☒ a) `Greaterthan5`

☐ b) `5orless`

☐ c) `10`

☐ d) `Error`

✗ **Incorrect** 0/1 Points

48. What is Narrow AI? *

- ☒ a) AI that can perform multiple tasks simultaneously
- ☐ b) AI that is focused on a single task
- ☐ c) AI with the capability of human – like general intelligence
- ☐ d) AI that can only process text

✓ **Correct** 1/1 Points

49. What will be the output of the following code?

```
a = [1, 2, 3]
a.append([4, 5])
print(a)
```

*

- ☐ a) [1, 2, 3, 4, 5]
- ☒ b) [1, 2, 3, [4, 5]]
- ☐ c) [4, 5, 1, 2, 3]
- ☐ d) [[4, 5], 1, 2, 3]

✓ **Correct** 1/1 Points

50. What will be the output of the following code?

```
def func(x):
    return x * x
```

```
print(func(4))
```

*

- ☐ a) 4
- ☐ b) 8
- ☒ c) 16

☐ d)20

✗ **Incorrect** 0/1 Points

51. In reinforcement learning, what is the 'agent'? *

- ☐ a) *The entity that makes decisions and learns from actions*
- ☒ b) *The environment in which decisions are made*
- ☐ c) *The reward signal for correct actions*
- ☐ d) *The policy for decision making*

✓ **Correct** 1/1 Points

52. Which of the following is the primary data structure in Pandas? *

- ☐ a) *Array*
- ☒ b) *DataFrame*
- ☐ c) *List*
- ☐ d) *Dictionary*

📝 **Will be reviewed**

53. Which of the following is an example of supervised learning? *

- ☐ a) *Grouping news articles into topics*
- ☐ b) *Predicting house prices based on historical data*
- ☒ c) *Identifying anomalies in network traffic*
- ☐ d) *Segmenting customers based on behavior*

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