UNIT 3 - WEEK 1

UNIT 3

1. You are given a set of five words related to question, negation or reversal. Classifying sentences into categories of five words:
   - a. Learned learning
   - b. Learn-based learning
   - c. Reinforcement learning
   - d. Reinforcement learning
   - e. Reinforcement learning

2. The following is a list of concepts related to the topic. Select the concept that is not related to the other concepts:
   - a. Reinforcement
   - b. Feedback
   - c. Trial-and-error
   - d. Learning
   - e. Trial

3. It is a good idea to create a list of sources for future reference. Which one of the following sources is a good idea for future reference?
   - b. Library
   - c. Encyclopedia
   - d. Online database
   - e. Thesis

4. Regarding the following sentence, which of the following statements are true? (Circle ‘true’ and ‘false’ accordingly)
   - a. Models with enough data are more likely to learn the concept
   - b. Models with less data are more likely to learn the concept
   - c. Models with more data are more likely to learn the concept

5. During the session of your patient, the doctor needs to take very careful note about which of the following?
   - a. The patient’s health
   - b. The patient’s diet
   - c. The patient’s medication
   - d. The patient’s weight
   - e. The patient’s exercise

6. Scenario: a customer starts browsing at Walmart, he/she starts to find a suitable color of a desired item, he/she is interested in the amount of the item, he/she is interested in the price of the item. Which of the following represents the customer behavior?
   - a. Customer is interested in the price of the item
   - b. Customer is interested in the amount of the item
   - c. Customer is interested in the color of the item
   - d. Customer is interested in the brand of the item
   - e. Customer is interested in the quantity of the item

7. If an algorithm is not validated and tested, classified data may produce incorrect results. Classifying data into categories:
   - a. Classified data
   - b. Ungenerated data
   - c. Generated data
   - d. Corrected data
   - e. Misclassified data

8. Use the following function table with a single negative threshold entry, a step function and an identity function:

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>-1</td>
<td>0</td>
</tr>
</tbody>
</table>

9. State whether the comments are true or false:
   - a. No absolute error exists if the error is zero
   - b. If the error is zero, then the model is perfect
   - c. If the error is not zero, then the model is not perfect
   - d. The model is perfect if the error is not zero
   - e. The model is not perfect if the error is zero

10. If you are feeling sick and have a cold, do you think it is good to go to school or take a day off? Classifying data into categories of five words:
    - a. Learn-based learning
    - b. Reinforcement learning
    - c. Trial-and-error learning
    - d. Feedback learning
    - e. Trial-based learning

11. If you change the position of objects in your room, are you sure to be able to remember where your objects are?
    - a. Yes, I am sure
    - b. No, I am not sure
    - c. I don’t care
    - d. I am not sure
    - e. I don’t know

12. What is the purpose of using hypothesis space in machine learning?
    - a. To improve the model’s performance
    - b. To reduce the computational complexity
    - c. To increase the model’s accuracy
    - d. To increase the model’s complexity
    - e. To reduce the model’s complexity

   1. Step function
   2. Linear function
   3. Polynomial function
   4. Logistic function
   5. Sigmoid function

13. What is the purpose of using hypothesis space in machine learning?
    - a. To improve the model’s performance
    - b. To reduce the computational complexity
    - c. To increase the model’s accuracy
    - d. To increase the model’s complexity
    - e. To reduce the model’s complexity

14. If you change the position of objects in your room, are you sure to be able to remember where your objects are?
    - a. Yes, I am sure
    - b. No, I am not sure
    - c. I don’t care
    - d. I am not sure
    - e. I don’t know