

Technical Test Result

DESCRIPTION	STATUS
Attempted Questions	15
Blank Answer	0
Basic Correct	11
Optional Correct	0

1.  **Where does the bayes rule can be used**

- ☐ (A) Solving queries
- ☐ (B) Increasing complexity
- ☐ (C) Decreasing complexity
- ☒ (D) Answering probabilistic query ✓

2.  **Where does the Hidden Markov Model is used?**

- ☐ (A) Speech recognition ✓
- ☐ (B) Understanding of real world
- ☒ (C) Both Speech recognition & Understanding of real world
- ☐ (D) None of the mentioned

3.  **Which data structure is used to give better heuristic estimates?**

- ☐ (A) Forwards state-space
- ☐ (B) Backward state-space
- ☒ (C) Planning graph algorithm ✓
- ☐ (D) None of the mentioned

4. ★★ Which object recognition process is an error-prone process

- ☒ (A) Bottom-up segmentation ✓
- ☐ (B) Top-down segmentation
- ☐ (C) Both Bottom-up & Top-down segmentation
- ☐ (D) None of the mentioned

5. ★★ How the distance between two shapes can be defined?

- ☒ (A) Weighted sum of the shape ✓
- ☐ (B) Size of the shape
- ☐ (C) Shape context
- ☐ (D) None of the mentioned

6. ★★ Which of the following machine learning algorithm can be used for imputing missing values of both categorical and continuous variables?

- ☒ (A) K-NN ✓
- ☐ (B) Linear Regression
- ☐ (C) Logistic Regression
- ☐ (D)

7. ★★ In k-NN it is very likely to overfit due to the curse of dimensionality. Which of the following option would you consider to handle such problem?

- ☐ (A) Dimensionality
- ☐ (B) Feature selection
- ☒ (C) A and B ✓
- ☐ (D) None of these

8. ★★ Which of the following statements is true for k-NN classifiers?

- ☒ (A) The classification accuracy is better with larger values of k
- ☐ (B) The decision boundary is smoother with smaller values of k
- ☐ (C) The decision boundary is linear
- ☐ (D) k-NN does not require an explicit training step ✓

9. ★★ Which of the following algorithm doesn't use learning Rate as one of its

hyperparameter?

- ☐ (A) Random Forest ✓
- ☒ (B) Gradient Boosting
- ☐ (C) AdaBoost
- ☐ (D)

10. ★★ When you use the boosting algorithm you always consider the weak learners. Which of the following is the main reason for having weak learners?

- ☐ (A) To prevent overfitting ✓
- ☐ (B) To prevent under fitting
- ☒ (C) To prevent overfitting and underfitting
- ☐ (D) None of these

11. ★★ A perceptron is:

- ☒ (A) a single layer feed-forward neural network with pre-processing ✓
- ☐ (B) an auto-associative neural network
- ☐ (C) a double layer auto-associative neural network
- ☐ (D) a neural network that contains feedback

12. ★★ A 4-input neuron has weights 1, 2, 3 and 4. The transfer function is linear with the constant of proportionality being equal to 2. The inputs are 4, 10, 5 and 20 respectively. The output will be:

- ☒ (A) 238 ✓
- ☐ (B) 76
- ☐ (C) 119
- ☐ (D) 123

13. ★★ What is true regarding backpropagation rule?

- ☐ (A) it is a feedback neural network
- ☒ (B) actual output is determined by computing the outputs of units for each hidden layer ✓
- ☐ (C) hidden layers output is not all important, they are only meant for supporting input and output layers
- ☐ (D) none of the mentioned

14. ★
☆ $p(s=1|x) = 1/(1+\exp(-x/T))$, where 's' is the output given the activation 'x' is a?

- ☐ (A) hopfield network
- ☐ (B) sigma network
- ☒ (C) stochastic network ✓
- ☐ (D) none of the mentioned

15. ★
☆ What consist of boltzman machine?

- ☐ (A) fully connected network with both hidden and visible units
- ☐ (B) asynchronous operation
- ☐ (C) stochastic update
- ☒ (D) all of the mentioned ✓