1. What exactly is a feature? Give an example to illustrate your point.

2. What are the various circumstances in which feature construction is required?

3. Describe how nominal variables are encoded.

4. Describe how numeric features are converted to categorical features.

5. Describe the feature selection wrapper approach. State the advantages and disadvantages of this approach?

6. When is a feature considered irrelevant? What can be said to quantify it?

7. When is a function considered redundant? What criteria are used to identify features that could be redundant?

8. What are the various distance measurements used to determine feature similarity?

9. State difference between Euclidean and Manhattan distances?

10. Distinguish between feature transformation and feature selection.

11. Make brief notes on any two of the following:

1.SVD (Standard Variable Diameter Diameter)

2. Collection of features using a hybrid approach

3. The width of the silhouette

4. Receiver operating characteristic curve