

22683

24225

3 Hours / 70 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
 - (2) Answer each next main Question on a new page.
 - (3) Illustrate your answers with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.
 - (5) Assume suitable data, if necessary.

Marks

1. Attempt any FIVE of the following :

10

- (a) Define the following :
 - (i) Low level features
 - (ii) High level features
- (b) State any two characteristics of good features.
- (c) Enlist the application of Random Forest algorithm.
- (d) Define KNN algorithm.
- (e) State K-means clustering.
- (f) Define ANN.
- (g) Define machine learning & deep learning.

2. Attempt any THREE of the following :

12

- (a) Describe supervised learning with suitable example.
- (b) State the advantages & disadvantages of Random Forest algorithm.
- (c) Explain the failure of K-means algorithm.
- (d) Explain ANN concept with suitable example.



- 3. Attempt any THREE of the following : 12**
- (a) Explain the working of Random Forest algorithm in detail.
 - (b) List the type of Support Vector Machine & explain any one in detail.
 - (c) Describe Dimensionality Reduction with example.
 - (d) Describe fine tuning for image data.
- 4. Attempt any THREE of the following : 12**
- (a) Enlist the feature engineering & explain any one with suitable examples.
 - (b) State the advantages & disadvantages of Naïve Bayes classifier.
 - (c) Enlist advantages and disadvantages of KNN algorithm.
 - (d) Explain perception Ex-OR problem in detail.
- 5. Attempt any TWO of the following : 12**
- (a) Write a python program to implement Naïve Bayes Classifier.
 - (b) Write a python program to implement decision tree for classification using suitable data/dataset.
 - (c) Write a python program to implement sequential data for Gated Recurrent Unit (GRU).
- 6. Attempt any TWO of the following : 12**
- (a) Write a python program to implement K-means algorithm.
 - (b) Describe hyper parameter basic layer using Greedy Search & Random Access.
 - (c) Write a python program to implement deep learning for sequential data for RNN.
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