22683

12425

3 Hours / 70 Marks Seat No. | | | | | | | | |

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) Assume suitable data, if necessary.

Marks

1. Attempt any FIVE of the following : **10**

(a) Define :

(i) Feature scaling

(ii) Feature selection

(b) Enlist application of Random forest algorithm.

(c) Define KNN algorithm.

(d) Enlist advantages & disadvantages of Baye's theorem.

(e) Enlist four causes for failure of k-mean algorithm.

(f) Define Artificial Neural Network with example.

(g) Define :

(i) RNN

(ii) Fine tuning

2. Attempt any THREE of the following : **12**

(a) Explain working of Naive Baye's theorem.

(b) Explain how does k-mean algorithm work in detail with steps.

(c) Explain why we use Random forest ?

(d) Explain learn Hyper parameter basis.

3. Attempt any THREE of the following : **12**

(a) Compare feature scaling & feature selection.

(b) Write advantages & disadvantages of KNN algorithm.

(c) Describe Dimensionality Reduction.

(d) Write steps for image classification using convolutional neural network.

4. Attempt any THREE of the following : **12**

(a) Write advantages & disadvantages of decision tree.

(b) Explain support vector machine with suitable example.

(c) Explain feed forward & back propagation.

(d) Describe Gated Recurrent Unit (GRU)

5. Attempt any TWO of the following : **12**

(a) Explain Greedy layerwise pre-training with suitable example.

(b) Write steps for working of Random forest algorithm with example.

(c) Write a program in python to implement unsupervised machine learning k-mean algorithm.

6. Attempt any TWO of the following : **12**

(a) Describe ANN concepts.

(b) Write step by step working of KNN algorithm with example.

(c) Write a python program to implement decision tree for classification using suitable data/dataset.