Printed page: 02 Subject Code:ACSBS0513

Roll No: | | | | | | | | | | |

NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute)

Affiliated to Dr. A.P. J. Abdul Kalam Technical University, Uttar Pradesh, Lucknow

Course : B.Tech **Branch : CSBS**

Semester: V **Session: Examination: First**

Subject Name: Machine Learning **Year- (2022 - 2023)**

Time: 1.15 Hours **Max. Marks:30**

General Instructions:

- *This Question paper consists of 02.pages &05.questions. It comprises three Sections -A, B, &C. You are expected to answer them as directed.*
- *Section A –Q.No- 1 is of one 1 mark each & Q. No- 2 carries 2 mark each*
- *Section B- Q. No- 3 carries 5 marks each.*
- *Section C - Q.No-4 & 5 carries 6 marks each. Attempt any one part a or b*

SECTION – A [08Marks]

1. All questions are compulsory- **(4×1=4)**

a. You are given review of few movies marked as positive, negative or neutral, Classifying review of a new movie is an example of: **(1) CO1**

a. Supervised learning
b. Un-Supervised learning
c. Reinforcement learning
d. semi-Supervised learning

b. Which of following are types of Learning in ML **(1) CO1**

a. Supervised learning
b.Unsupervised learning
c. Classification
d. Both a and b

c. Which of following are activation functions in neural network **(1) CO2**

a.RELU
b.Sigmoid
c.Tan
d.All of these.

d. Logistic regression uses which function for generating S curve. (1) CO2
a.Relu
b.Bipolar
c.Sigmoid
d.None of the above

2. **All questions are compulsory-** (2×2=4)
   a. What do you understand by Linear Regression. (2) CO2
   b. Describe the term Machine Learning . (2) CO1

SECTION – B

[10Marks]

3. **Answer any two of the following-** (2×5=10)
   a. Discuss the advantages and Issues in Machine Learning (5) CO1
   b. Describe the various types of learning in ML with example (5) CO1
   c. Describe the concept of neural network (5) CO2

SECTION – C

[12Marks]

4 **Answer any one of the following-** (1×6=6)

   a. Differentiate between Logistic and Linear Regression in detail (6) CO2
   b. Explain the following terms: (6) CO1
   Hypothesis , Hypothesis space, VC Dimension

5. **Answer any one of the following-** (1×6=6)
   a. Consider the following dataset of 4 instances it contain details whether person enjoy sports or not. Apply the Find S algorithm (6) CO1

Sky	Air temp	Humidity	Wind	Water	Forecast	EnjoySport
Sunny	Warm	Normal	Strong	Warm	Same	Yes
Sunny	Warm	High	Strong	Warm	Same	Yes
Rainy	Cold	High	Strong	Warm	Change	No
Sunny	Warm	High	Strong	Cool	Change	Yes

   b. Describe the concept of PCA and why these are used? (6) CO1