

Reg. No.

Question Paper Code

11586

M.E. - DEGREE EXAMINATIONS, NOV/DEC 2022

Third Semester

M.E. - Embedded System Technologies

20PESEL306 - MACHINE LEARNING

(Regulations 2020)

Duration: 3 Hours

Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

- | | <i>Marks,
K-Level, CO</i> |
|---|-------------------------------|
| 1. State the types of distance involved in Distance based method. | 2,K1,CO1 |
| 2. Define Hyperplane. | 2,K1,CO1 |
| 3. Write about Bagging with suitable example. | 2,K1,CO2 |
| 4. What is PCA and when it is used? | 2,K1,CO2 |
| 5. State dynamic pricing with example. | 2,K1,CO3 |
| 6. List the applications of unsupervised learning paradigms of machine learning algorithms. | 2,K1,CO3 |
| 7. State the IOT applications using classification methods. | 2,K1,CO5 |
| 8. Why we use machine learning for IOT? | 2,K1,CO5 |
| 9. List out any five application of ML across industries. | 2,K1,CO6 |
| 10. Why cloud computing useful in Machine Learning? | 2,K1,CO6 |

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

11. a) (i) What are the various kinds of Machine Learning? 6, K2,CO1
(ii) What is decision tree? List the advantages and disadvantages. 7,K2,CO1

OR

- b) Illustrate support vector machine with an example in classifying the patterns in data. 13, K2,CO1
12. a) How do you evaluate Machine Learning algorithm? 13, K2,CO2

OR

- b) Given the dataset {a, b, c, d, e} and the distance matrix given in below Table, construct a dendrogram by single-linkage hierarchical clustering using the agglomerative method. 13, K2,CO2

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create

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	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>
<i>a</i>	0	9	3	6	11
<i>b</i>	9	0	7	5	10
<i>c</i>	3	7	0	9	2
<i>d</i>	6	5	9	0	8
<i>e</i>	11	10	2	8	0

13. a) Bagging and Random Forest Ensemble Algorithms for Machine Learning. *13, K2, CO3*

OR

- b) Applying the k-means algorithm, find two clusters in the following data. *13, K2, CO3*

<i>x</i>	185	170	168	179	182	188	180	180	183	180	180	177
<i>y</i>	72	56	60	68	72	77	71	70	84	88	67	76

14. a) Describe different machine learning techniques in detail with suitable example. *13, K2, CO5*

OR

- b) Discuss in detail about various models for IOT applications. *13, K2, CO5*

15. a) Write short notes on the following for Machine learning. *13, K2, CO6*

- i) Amazon Web Service
- ii) Microsoft Azure
- iii) Google cloud
- iv) IBM cloud

OR

- b) Explain in detail about the implementation of machine learning techniques used in Health care sector. *13, K2, CO6*

PART - C (1 × 15 = 15 Marks)

16. a) Explain Monte-Carlo Learning. *15, K4, CO4*

OR

- b) Discuss the role Of Dynamic Programming In Machine Learning. *15, K4, CO4*