

M.Sc. - II (Computer Science) (NEP Pattern) Semester-III
03MSCCS04.2 - Elective-II Paper-V : Machine Learning

P. Pages : 2

Time : Three Hours



GUG/S/25/15971

Max. Marks : 40

- Notes :
1. All questions are compulsory and carry equal marks.
 2. Draw neat and labelled diagram and use supporting data whenever necessary.
 3. Avoid vague answers and write specific answers related to questions.

Either:

1. a) Explain the following 4
- i) Geometric models
- ii) Probabilistic models
- b) Differentiate between Grouping and Grading. 4

OR

- c) List and explain the types of learning in detail. 4
- d) Describe PAC learning in detail. 4

Either:

2. a) What is Multiple Linear Regression? Explain in detail. 4
- b) Define the term multilayer perception explain it in detail. 4

OR

- c) Describe the Kernal function in detail. 4
- d) Explain Regression Trees in detail. 4

Either:

3. a) Describe the term Exception-maximization in brief. 4
- b) What do you mean by Nearest Neighbour smoothing? Explain in detail. 4

OR

- c) Explain Random Forest Trees with suitable example. 4
- d) Write a detail note on KD-Tree in detail. 4

Either:

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| 4. | a) | Explain the Relationship to Dynamic Programming. | 4 |
| | b) | Describe Binomial Distribution in detail. | 4 |

OR

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|-----------|-----|--|----------|
| | c) | Write a detail note on- | 4 |
| | i) | Bias | |
| | ii) | Variance | |
| | d) | Define the term Baldwin effect Explain in detail. | 4 |
| 5. | | Solve all the questions. | |
| | a) | Write a short note on logic models. | 2 |
| | b) | Explain Linear Regression in detail. | 2 |
| | c) | Write a short note on AdaBoost. | 2 |
| | d) | Explain the term temporal-difference learning in detail. | 2 |
