CONCURRENT EVALUATION FOR BUSINESS ANALYTICS SPECIALISATION

III SEM / Machine Learning and Cognitive Intelligence using Python (305)
Faculty Name: Prof. Ujjval More

Important Instructions:

1. The subject is evaluated on the basis of three components

Component Number	Component	Marks	Submission Date
1	Written Home Assignment	50	10th Feb 2023
2	Presentation Print	50	13th Feb 2023
3	Term Paper	50	

2. Assignments to be submitted in person.
3. Student Name, contact number, email-id, Specialization, Component must be clearly mentioned

COMPONENT 1: Written Home Assignment

Q1. What is Machine Learning? Elaborate Supervised, Unsupervised learning method.

Q2. What is KDD process model, Explain it with suitable example by using Python. Q3.

What is packages in python ? Explain any two Machine learning Python packages.

Q4. Explain following terms with suitable example list, dictionary and tuples.

Q5. Explain the read and write functions in python. How to read excel file in PandasQ6.

Calculate linear regression using following data

Sr no	City	Temperature (0^o)	Wind speed (m/s)
1	Pune	32	7.2
2	Nasik	28	5.6
3	Sangali	31	4.5
4	Jalgaon	35	7.1
5	Bhusawal	34	4.5
6	Kolhapur	29	6.1
7	Barmati	27	7.2

Q7. Explain Dimension Reduction ? What are the different stages decomposition of datain python.

Q8. What is numpy? Explain any four functions used in numpy during data process.Q9.

What is K-Nearest Neighbour algorithms ? elaborate this with suitable example. Q10. What

is Clustering? How it is implementation in data analysis.

COMPONENT 2: PRESENTATION PRINT

Prepare presentation on **Python**

Make a presentation on following parameters and submit its report format word and power point presentation.

- Python Basics
- Working with Data in Python
- Machine Learning and Cognitive Intelligence
- Supervised Learning
- Unsupervised Learning

Submission in Hard Copy Printout (PPT)

Power Point Presentation A student needs to make a professional 10 minute presentation. You will be rewarded for making an interesting and professional presentation. Submission is in hard copy printout.

DNYANSAGAR INSTITUTE OF MANAGEMENT AND RESEARCH

COMPONENT 3: TERM PAPER

MBA-II / SEM-III / (2022-23)

END SEMESTER EVALUATION

Subject: Machine Learning and Cognitive Intelligence using Python
Subject Code: BA 305
[Time: 2.5 Hours] **[Max. Marks: 50]**

Instructions to the candidates:

1. ***All questions are compulsory***
2. ***All questions carry 10 marks***
3. ***Figures to the right indicate full marks***

Q1) Solve any five:

a) State how to define variable in python? **[2]**

b) Identify any two features of machine learning. **[2]**

c) List various loops in python. **[2]**

d) List any two differences between lists and sets. **[2]**

e) What do you mean by operator overloading in python? **[2]**

f) Define the term cognitive intelligence. **[2]**

g) Identify the steps of CRISP - DM Methodology. **[2]**

h) What do you mean by data visualisation? **[2]**

Q2) Solve any two:

a) Describe Numpy Arrays. Explain with example. **[5]**

b) Distinguish between clustering and classification in machine learning. **[5]**

c) Discuss the Reinforcement learning with example. **[5]**

Q3) Solve any one:

a) Explain the decision tree algorithm in machine learning with example. **[10]**

b) Explain the concept of simple and multiple regression. **[10]**

Q4) Solve any one:

a) Discuss how the clustering is useful in marketing domain? **[10]**

b) Analyse K - Nearest Neighbour algorithm for machine learning. **[10]**

Q5) Solve any one:

a) Design a code in python to print the following pattern. **[10]**

```
*
* *
* * *
* * * *
* * * * *
```

b) "Machine learning will make companies more efficient and allow them to streamline business processes of an organisation". Justify the statement. **[10]**