

Total No. of Questions : 5]

SEAT No. :

P-7909

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**M.B.A. - II (Business Analytics)**

**305BA-SC-BA-04 : MACHINE LEARNING AND  
COGNITIVE INTELLIGENCE USING PYTHON**

**(2019 Pattern Revised) (Semester - III)**

*Time : 2½ Hours]*

*[Max. Marks : 50*

*Instructions to the candidates:*

- 1) *Draw neat labeled diagram wherever necessary.*
- 2) *Figures to the right side indicate full marks.*
- 3) *Assume suitable data if necessary.*
- 4) *All questions are compulsory.*

**Q1)** Answer the following questions. (Any 5)

**[10]**

- a) Enlist any four python features.
- b) What do you mean by operator overloading?
- c) Find the basic operators in python?
- d) Define supervised machine learning.
- e) Recall any four features of cognitive intelligence.
- f) Define machine learning. Enlist its categories.
- g) What do you mean by classification in ML?
- h) What is pandas in python?

**Q2)** Answer the following questions. (Any 2)

**[10]**

- a) Differentiate between supervised and unsupervised learning.
- b) Explain KDD machine learning framework for building machine learning system.
- c) Differentiate between list, tuple, set and dictionary.

**P.T.O.**

**Q3)** Answer the following questions. (Any 1) **[10]**

- a) Explain how regression analysis is used for making sales projections
- b) Explain the decision tree algorithm in machine learning with example.

**Q4)** Answer the following questions. (Any 1) **[10]**

- a) Explain how K-mean clustering algorithm helps in market segmentation.
- b) Write a program program to print elements in reverse order.

**Q5)** Answer the following questions. (Any 1) **[10]**

- a) Write python program to find factorial of a number entered by the user.
- b) A bank intends to group its loan applicants into high/medium/low risk based on attributes such as credit score, principal amount, annual income, debt to income ratio, etc. Explain how hierarchical clustering will be applicable?

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