Total No. of Questions: 6 *Total No. of Printed Pages:3*

Enrollment No.....

Faculty of Management Studies

End Sem Examination Dec-2023

MS5CO29

Introduction to Business Analytics & Data Science

Programme: MBA Branch/Specialisation: Management

Duration: 3 Hrs. **Maximum Marks: 60**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if necessary. Notations and symbols have their usual meaning.

Q.1 i. Which of the following are known as the types of research data? **1**

(a) Organised data and unorganised data
(b) Qualitative data and quantitative data
(c) Processed data and unprocessed data
(d) None of these

ii. Which of the following statements is true about the census? **1**

(a) The census involves a process of choosing a few units out of the entire population for collecting data
(b) The census involves a process of organising and publishing the data
(c) The census involves a process of collecting data from each and every unit
(d) None of these

iii. Which of the following is NOT a type of plot available in Seaborn? **1**

(a) Line plot (b) Scatter plot
(c) Bar plot (d) Tree plot

iv. Which function is used to draw multiple figures in one plot? **1**

(a) subplot() (b) subplots() (c) pyplots() (d) subpyplot()

v. What will be the output of the following code ? **1**

```
import pandas as pd
pd.Series([1,2], index= ['a','b','c'])
```

(a) Syntax Error (b) Index Error
(c) Value Error (d) None of these

P.T.O.

vi. A Python pandas dataframe object can be created using: **1**
(a) Python dictionary (b) Python list
(c) Pandas Series (d) All of these

vii. A statement made about a population for testing purpose is called? **1**
(a) Statistic (b) Hypothesis
(c) Level of Significance (d) Test-Statistic

viii. Which of the following mentioned standard Probability density functions is applicable to discrete Random Variables? **1**
(a) Gaussian Distribution (b) Poisson Distribution
(c) Rayleigh Distribution (d) Exponential Distribution

ix. Identify the kind of learning algorithm for "facial identities for facial expressions". **1**
(a) Prediction (b) Recognition patterns
(c) Recognizing anomalies (d) Generating patterns

x. What is the meaning of cluster sampling? **1**
(a) It is a process where the sampling universe is divided into multiple groups
(b) It is a process where the samples for a study is obtained through conscious selection
(c) It is a process where the samples for a study are selected at regular intervals
(d) It is a process through which the sample for a study is divided into multiple groups

Q.2 i. Explain the role of data in the decision-making process. **2**
ii. Write a short note on the data cleaning process. **3**
iii. What are different statistical concepts with reference to analytics? Explain any three with suitable examples. **5**
OR iv. What is the data visualization? Explain the usage of the same in the decision-making process. **5**

Q.3 i. Write a short note on the dashboard. **2**
ii. What do you understand by exploratory data analysis (EDA)? Explain with suitable examples. **8**
OR iii. Explain any one visualization package available in Python with suitable code examples. **8**

Q.4 i. What are the basic requirements to run any Python code? **3**
ii. Explain the usage of pandas library with Python code. **7**
OR iii. Write a Python code to demonstrate the usage of for loop. **7**

Q.5 i. What do you understand by probability and probability distributions? Explain with suitable examples. **4**
ii. What do you understand by regression? Explain with the suitable code example. **6**
OR iii. What do you understand by Machine Learning? Explain any one machine learning method with suitable code examples. **6**

Q.6 Attempt any two:
i. Explain the concept of supervised learning, with suitable example. **5**
ii. Explain the concept of unsupervised learning, with suitable examples. **5**
iii. Explain the concept of clustering. Explain the method / algorithm for the same. **5**

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Medi-Caps University Indore
End Sem Exam 2023
Introduction to Business Analytics & Data Scienc
MS5C029 Scheme

Q.1 (i) (b)
(ii) (c)
(iii) (d)
(iv) (a)
(v) (a)
(vi) (d)
(vii) (b)
(viii) (b)
(ix) (b)
(x) (a) (a)

Q.2 (i) Role of data 2 marks
(ii) Explanation 3 marks
(iii) Explanation 2 marks, example 3 marks
(iv) Explanation 2 marks, usage 3 marks

Q.3 (i) Explanation 2 marks
(ii) Explanation 6 marks, example 2 marks
(iii) Visualization package 6 marks code example 2 marks

Q.4 (i) each requirement 1 mark
(total - 3 marks)

(ii) each useage 2 marks explanation 1 mark

(iii) code 7 marks

Q.5 (i) explanation 3 marks
Example 1 mark

(ii) Explanation and diagram 5 marks
code 1 mark

(iii) Explanation 3 marks
each type 1.5 marks (total 6 mar

Q.6 (i) explanation 4 marks, example 1 mark

(ii) Explanation 4 marks, example 1 mark

(iii) Clustering explanation 3 marks
method 2 marks