

S-1016

Total Pages : 3

Roll No.

CDSA-101

Foundations of Data Science and Data Analytics Tools

Certificate in Data Science & Applications (CDSA)

1st Semester, Examination, 2022 (Dec.)

Time : 2 Hours]

Max. Marks : 100

Note : This paper is of Hundred (100) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein.

SECTION–A

(Long Answer Type Questions)

Note : Section 'A' contains Five (05) long answer type questions of Twenty six (26) marks each. Learners are required to answer any Two (02) questions only.

(2×26=52)

1. (A) What do you mean by data science? What are the components of data science? [13]
(B) Data visualization can help to analyze the data effectively. Do you agree with this statement? Justify your answer with suitable example. [13]

2. (A) Describe data analytics. Also, explain the types, role, and methods of data analytics. [13]
- (B) Is Python a good analytical Tool? Yes or No. Justify your answer. [13]
3. (A) What are the different data types used in R programming language? [13]
- (B) What is the usefulness of Chart? Explain various types of charts available in MS-Excel. [13]
4. (A) Explain the advantages and disadvantages of different database models. [13]
- (B) Explain any six mathematical function of MS- Excel with example. [13]
5. Explain various key components of SPSS. How SPSS is an efficient tool for data analysis? Explain. [26]

SECTION-B

(Short Answer Type Questions)

Note : Section 'B' contains Eight (08) short answer type questions of Twelve (12) marks each. Learners are required to answer any Four (04) questions only.

(4×12=48)

1. How will you define supervised and unsupervised learning? Discuss the role of machine learning algorithms in data model. [12]

2. What are the main packages used in Python for Data science and Machine Learning? Briefly explain. [12]
 3. What are the various types of operators used in Python? Explain. [12]
 4. Explain the characteristics of SQL. [12]
 5. Explain the following R object:
 - (i) Matrix
 - (ii) List
 - (iii) Data Frame [12]
 6. Explain any three logical and any three lookup functions available in MS-Excel. [12]
 7. Is predictive analysis good for the Industry? Yes or No. Justify your answer. [12]
 8. Discuss the uses and difference between ANOVA and T-Test? [12]
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