

S.No. : 124

BCA 3602

No. of Printed Pages : 04

Following Paper ID and Roll No. to be filled in your Answer Book.

PAPER ID : 31150

Roll
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B. C. A. Examination 2021-22

(Even Semester)

ADVANCE COMPUTER TECHNOLOGIES

Time : Three Hours/

[Maximum Marks : 60

Note :- Attempt all questions.

SECTION – A

1. Attempt all parts of the following : $8 \times 1 = 8$

- (a) Describe the term "Data Science".
- (b) Why data wrangling is one of the important processes in data analysis?
- (c) What are the 5.V's of big data?
- (d) What are the three modes in which hadoop can run?

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- (e) What are the two types of metadata that a name node server holds?
- (f) What is the basic use of sqoop?
- (g) Name the different types of block chain structure.
- (h) What are the basic components of Bitcoin?

SECTION – B

2. Attempt any two parts of the following : $2 \times 6 = 12$

- (a) Describe the life cycle of a data science project.
- (b) How is hadoop related to big data? Explain different features of hadoop.
- (c) Briefly outline the major steps of decision tree classification. Why is tree pruning useful in decision tree induction?
- (d) What is blockchain? What are the five architectural components of blockchain?

SECTION – C

Note:- Attempt all questions. Attempt any two parts from each questions.

$8 \times 5 = 40$

3. (a) What are the general steps in data analytics pipeling? How a scalable data analytics pipeline can be built?
- (b) What is an encoding in visualization? Which visual encoding is most accurate for visual perception?
- (c) What is data wrongling process? What are the steps involved in data wrangling process?
4. (a) Describe K-means clustering. What is "K" in K-means clustering? Justify your answer with an example.
- (b) Why is naive Bayesian classification called "naive"? Briefly outline the major ideas of naive Bayesian classification.
- (c) Why businesses are using big data for comptetive advantage?
5. (a) Explain the core components of hadoop.
- (b) What are the differences between regular file system and HDFS?

- (c) What is Hadoop map reduce? How Hadoop map reduce works?
6. (a) What is the principle on which blockchain technology is based on? What are the key features of blockchain?
- (b) How does a bitcoin peer-to-peer network work?
- (c) What is hyperledger fabric in block chain? What type of block chain is hyperledger?

