PVP 19

Code: 19IT4501F

III B.Tech - I Semester – Regular Examinations
JANUARY 2022

FUNDAMENTALS OF BIG DATA ANALYTICS
(INFORMATION TECHNOLOGY)

Duration: 3 hours Max. Marks: 70

Note: 1. This question paper contains two Parts A and B.
2. Part-A contains 5 short answer questions. Each Question carries 2 Marks.
3. Part-B contains 5 essay questions with an internal choice from each unit. Each question carries 12 marks.
4. All parts of Question paper must be answered in one place

PART – A

1. a) Define share nothing architecture.
   b) Write a query using CQL for Alter table to change the data type of a column.
   c) Give the features of Hadoop.
   d) Write about Spark stack in unified spark.
   e) What is recommendation system with real time examples?

PART – B

UNIT – I

2. a) Explain the classification of digital data along with sources. 6 M
   b) Compare SQL, NoSQL and NewSQL. 6 M

OR

3. a) Compare the classification of analytics in view of Basic, Operationalized, Advanced and Monetized 8 M

analytics.

b) Define Big Data in 5 V's. 4 M

UNIT – II

4. a) Explain the collections in CQL. 6 M

b) Demonstrate the CRUD operations using CQL. 6 M

OR

a) Use counter in casandra for time to live applications. 6 M

5. b) Outline the steps of importing and exporting of data from CSV files. 6 M

UNIT-III

6. a) Explain HDFS (Hadoop Distributed File System) architecture for data processing 6 M

b) Demonstrate the Mapper, Reducer, Combiner and Partitioner components in Hadoop. 6 M

OR

7. a) Explain the YARN architecture. 6 M

b) Outline the Process of sorting data in Map Reduce program with an example. 6 M

UNIT – IV

8. a) Summarize the steps in passing functions to spark. 6 M

b) Describe the steps in connecting to JDBC Server, Loading and Saving Data using csv files in spark. 6 M

OR

9. a) Explain Spark SQL interface. 6 M

b) Write a user defined function for string length UDF using spark SQL. 6 M

UNIT – V

10.	a)	Describe a model recommendation system along with applications.	6 M
	b)	What is collaborative filtering system. Outline the steps.	6 M

OR

11.	a)	Explain the process for obtaining Item Features from Tags with example.	6 M
	b)	Build a content based recommendation system using user profile.	6 M