B.E. (Computer Science & Engineering) Semester Seventh (C.B.S.)
Elective - I : Big Data Analysis & Business Intelligence

P. Pages : 2

Time : Three Hours

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Max. Marks : 80

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Notes : 1. All questions carry marks as indicated.
2. Solve Question 1 OR Questions No. 2.
3. Solve Question 3 OR Questions No. 4.
4. Solve Question 5 OR Questions No. 6.
5. Solve Question 7 OR Questions No. 8.
6. Solve Question 9 OR Questions No. 10.
7. Solve Question 11 OR Questions No. 12.
8. Due credit will be given to neatness and adequate dimensions.
9. Assume suitable data whenever necessary.

1. a) Define and Introduce Big Data. What are the Benefits of Big Data? Enlist the challenges to Big Data? **6**

   b) Define Big Data Analytics. Explain state of practice in Big Data Analytics. **4**

   c) Explain Data Analytics life cycle. **4**

OR

2. a) Explain HDFS and MapReduce Architecture with all its components. Plot HDFS and MapReduce together. **7**

   b) Give Introduction to R Language. Also describe the features of R Language. **4**

   c) What are the different Hadoop modes? **3**

3. a) Enlist Hadoop MapReduce entities with their working and explain four main data processing stages of Hadoop MapReduce. Also write its limitations. **7**

   b) Describe Hadoop MapReduce fundamentals. **6**

OR

4. a) What are different ways of writing Hadoop MapReduce in R? Draw and explain Architecture of RHIPE with its components. **7**

   b) Explain attributes of Map and Reduce phase. **6**

5. a) Explain Big Data Analytics project life cycle. **6**

   b) Describe "Web page categorization" the data analytics problem. **7**

OR

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6.	a)	Give introduction about Machine Learning. What are the different types of machine Learning Algorithm? Explain clustering – Unsupervised Machine Learning Algorithm.	7
	b)	Explain Linear Regression Algorithm of Supervised Machine Learning Algorithm.	6
7.	a)	Define Business Intelligence. Why BI is required by Business? Describe BI value chain. Give features of BI.	7
	b)	What are the different BI Roles? State their responsibilities.	7

OR

8.	a)	Draw and explain Business Intelligence component framework in detail.	8
	b)	What is Data warehouse? Give Bill Inmon's Definition of data warehouse. State the role of Data warehouse in Business Intelligence.	6
9.	a)	What is data integration? Explain schema and instance integration with an example.	7
	b)	Explain common approaches for Data Integration.	6

OR

10.	a)	Why data Quality matters? Define data Quality. Describe several dimensions of data Quality.	6
	b)	What is data profiling? When and how to conduct data profiling?	7
11.	a)	Explain Business Intelligence (BI) project life cycle.	6
	b)	What are the functional and Non-functional Requirements for requirement gathering and analysis?	7

OR

12.	a)	Which are the different methods for testing in BI project.	7
	b)	Write a note on.	6
		i) BI project Deployment.	
		ii) Post production support.	

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