

Total No. of Questions : 8]

SEAT No. :

**P490**

[Total No. of Pages : 2

[6003]-511

**T.E. (I.T.)**

**DATA SCIENCE AND BIG DATA ANALYTICS**

**(2019 Pattern) (Semester-II) (314452)**

*Time : 2½ Hours]*

*[Max. Marks : 70*

*Instructions to the candidates:*

- 1) Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.
- 2) Figures to the right indicate full marks.
- 3) Neat diagrams must be drawn wherever necessary.
- 4) Assume suitable data, if necessary.

**Q1) a) Explain Google file system and its advantages. [10]**

**b) Explain Hadoop distributed file system [8]**

**OR**

**Q2) a) Why map reduce is required in Hadoop? Explain the stages involved in map reduce task with a suitable example? [9]**

**b) Describe the various types of NoSQL Databases with example and also compare them. [9]**

**Q3) a) Explain Mean, Mode and variance and standard deviation with suitable example. [9]**

**b) Draw and explain Architecture of HIVE [8]**

**OR**

**Q4) a) Explain Min-max scaling. For the following dataset carry out min-max Scaling, X=24, 28, 53, 30, 40, 18, 15, 21 [9]**

**b) What is data Wrangling? Why do you need it? explain data Wrangling methods? [8]**

**Q5) a) Explain any 4 Types of data visualization with example. [9]**

**b) Explain different data visualization tools. [9]**

**OR**

**P.T.O.**

- Q6) a)** Explain data visualization with the help of example? What are the advantages of data visualization? [9]
- b)** Explain Data Visualization with Tableau. [9]

- Q7) a)** Explain Big Data Analytics Challenges in brief. [9]
- b)** Explain types of Mobile Analytics. [8]

OR

- Q8) a)** What is Porter's value chain creation model? Explain Porter's value chain analysis. [9]
- b)** What is social media analytics? Explain the process of social media data analytics. [8]

