

Total No. of Questions : 8]

SEAT No. :

**P826**

**[5870] - 1149**

[Total No. of Pages : 2

**T. E. (Information Technology)**  
**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) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right side indicate full marks.
- 4) Assume the suitable data, if necessary.

- Q1)** a) Explain Big data Ecosystem with suitable diagram. [7]  
b) Explain anatomy of File read and write in HDFS. [7]  
c) Write and explain any two Hadoop shell commands. [4]

OR

- Q2)** a) Explain Map Reduce with proper diagram for word count example. [7]  
b) Explain Google file system. [7]  
c) Explain ETL processing. [4]

- Q3)** a) Explain different steps in Data Analytics Project Life cycle [7]  
b) Draw and explain Architecture of HIVE. [7]  
c) Explain different data transformation techniques. [3]

OR

- Q4)** a) Explain different kinds of Big Data Analysis. [7]  
b) How data can be ingested in python. Write syntax in python for the same. [7]  
c) Explain role of visualization in big data analytics. [3]

- Q5)** a) Explain different techniques of Big Data visualization. [7]  
b) Explain challenges in Big data visualization. [7]  
c) Write two data visualization functions from matplotlib. [3]

OR

**P.T.O.**

- Q6)** a) Explain different tools for data visualization. [7]  
b) Explain scatter plot, histogram and heat map with example. [7]  
c) Write two data visualization functions from seaborn. [3]

- Q7)** a) How Social Media analytics helps in value creation? Explain with suitable examples. [7]  
b) Explain in brief data analytics life cycle. [7]  
c) Explain big data value terminology. [4]

OR

- Q8)** a) What is text mining? Draw and explain text mining architecture and its use. [7]  
b) Explain Big data analytics in research. [7]  
c) Explain big data impact on organizations. [4]

