| **Examination** | **: B.Tech Semester VII** | **Seat No.** | **:** |
| --- | --- | --- | --- |
| **Date** | **: 20/10/2022** | **Day** | **: Thursday** |
| **Time** | **: 3:00 p.m. to 4:15 p.m.** | **Max. Marks** | **: 36** |

| **INSTRUCTIONS:** | |
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| 1. | Figures to the right indicate maximum marks for that question. |
| 2. | The symbols used carry their usual meanings. |
| 3. | Assume suitable data, if required & mention them clearly. |
| 4. | Draw neat sketches wherever necessary. |

Blooms Taxonomy levels : R-Remembering, U- Understanding, A-Applying, N-Analyzing, E- Evaluating, C-Creating

| **Q.1** |  | **Do as directed.** | | **[12]** |
| --- | --- | --- | --- | --- |
| **CO2** | **A** | (a) | Show that presence of outliers can trouble data analytics. | [2] |
| **CO1** | **N** | (b) | Analyze how spark performs faster big data operations? | [2] |
| **CO4** | **R** | (c) | What does CAP theorem state about distributed computing? | [2] |
| **CO1** | **U** | (d) | Compare and contrast SQL, NoSQL and NewSQL | [2] |
| **CO5** | **C** | (e) | How is the gossip protocol utilized in Cassandra architecture? | [2] |
| **CO6** | **R** | (f) | State true/false: Combiner is a local reducer with respect to map-reduce. | [1] |
| **CO6** | **R** | (g) | Describe the mentioned terms with respect to HBase: Zookeeper, regionserver. | [1] |
|  |  |  |  |  |
| **Q.2** |  | **Attempt the following:** | | **[12]** |
| **CO4** | **E** | (a) | Summarize various Vs as characteristics of Big Data with examples. | [4] |
| **CO5** | **E** | (b) | Provide ways to generate RDD in Spark. | [4] |
| **CO6** | **E** | (c) | Describe map-reduce via working example or program api in brief. | [4] |
|  |  |  |  |  |
| **Q.3** |  | **Attempt the following:** | | **[12]** |
| **CO3** | **N** | (a) | Illustrate supervised and unsupervised machine learning techniques in brief. | [4] |
| **CO2** | **R** | (b) | As part of knowledge discovery from data (KDD) / Data analytics,  describe/narrate what all steps are required to be followed. | [4] |
| **CO1** | **U** | (c) | Describe how to perform CRUD operations with mongoDB. | [4] |