DHARMSINH DESAI UNIVERSITY, NADIAD

FACULTY OF TECHNOLOGY

M.TECH. SEMESTER - II (CE)

SUBJECT: [MT219] BIG DATA ANALYTICS

| **Examination** | **: Remedial I (Sessional)** | **Seat No.** | **: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |
| --- | --- | --- | --- |
| **Date** | **: 30/09/2022** | **Day** | **Friday** |
| **Time** | **: 11:30 a.m. to 12:45 p.m.** | **Max. Marks** | **: 36** |
| **INSTRUCTIONS:** | |
| 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. |

| **Q.1** | **Answer the following:** | | **[12]** |
| --- | --- | --- | --- |
| **(A)** | Fill in the blank below to give statement a proper meaning:  (I) start-dfs.sh starts \_\_\_\_\_\_\_\_\_\_\_\_ (full form). | **[2]** |
|  | (II) start-yarn.sh starts \_\_\_\_\_\_\_\_\_\_\_ (full form). |  |
| **(B)** | State true or false with justification:  (I) BASE stands for Basically Available Soft Eventual consistent. | **[2]** |
|  | (II) ACID stands for Atomicity, Consistency, Isolation and Durability. |  |
| **(C)** | What is data science? | **[2]** |
| **(D)** | Draw diagram explaining CAP theorem. | **[2]** |
| **(E)** | Define horizontal scaling and vertical scaling with suitable examples. | **[2]** |
| **(F)** | When a user is surfing the internet, what types of analytics are possible by websites to improve user experience? | **[2]** |
|  |  | |  |
| **Q.2** | **Answer the following:** | | **[12]** |
| **(A)** | Big Data characteristics are discussed by various V. Provide details of any four Vs. | **[4]** |
| **(B)** | Describe key advantages of the Hadoop. | **[4]** |
| **(C)** | How is clustering helpful in classification? | **[4]** |
|  | | |  |
| **Q.3** | **Answer the following:** | | **[12]** |
| **(A)** | Describe various types of data and preprocessing techniques. | **[4]** |
| **(B)** | Develop/describe a program/example to perform word count using mapreduce (java or mongoDB). | **[4]** |
|  | **(C)** | How to setup a hadoop cluster having multiple nodes? | **[4]** |

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