

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**MCA - SEMESTER-V- EXAMINATION – WINTER 2018**

**Subject Code: 3650015**

**Date: 28/11/2018**

**Subject Name: Data Visualization**

**Time: 10.30 am to 1.00 pm**

**Total Marks: 70**

**Instructions:**

- 1. Attempt all questions.**
- 2. Make suitable assumptions wherever necessary.**
- 3. Figures to the right indicate full marks**

**Q.1 (A) Defining the following term 07**  
1)Visualization  
2)Filtering  
3)Infographics  
4)Scale  
5)Axes  
6)data()  
7)attr()

**(B) True or False. Justify your answer 07**  
1. D3 doesn't require the DOM element  
2. D3 doesn't require any server for loading external data  
3. Multiple sub groupbar can be possible in stacked bar chart  
4. Exit() and remove() gives same work in d3.  
5. Callback function of d3 must take one parameter  
6. Key() are used whenever our data is in order  
7. There is no circle() in canvas for drawing circle

**Q.2 (A) Discuss what are the real applications of data visualization. 07**  
**(B) Discuss rise of html5 and What are the Key feature of html5 for data visualization 07**

**OR**

**(B) What are the Key Factors of data visualization 07**  
**Q.3 (A) How to read data from JSON file. Explain with example 07**  
**(B) Differentiate 01**

- Canvas and svg 02
- Linear scale and ordinal scale 02
- Map graph and infographics 02
- .csv file and .xml file 01

**OR**

**Q.3 (A) How to asynchronously read data from xml file with example 07**  
**(B) How to work with GOOGLE API. Give an example of pie chart in google api 07**

**Q.4 (A) Define Data Binding. And what are the used of append(), text(), selectAll() (using class,id) 07**

**(B) What is Transaction? how to apply Transaction with example. 07**

**OR**

- Q.4** (A) How to used selection in d3. And also describe chaining method of d3 **07**  
(B) How to make interactive button and updating chart **07**
- Q.5** (A) Explain Data-joins with example **07**  
(B) Write a code to create following list element using data object in d3. **07**
- MCA
  - BCA
  - Degree
  - Diploma
  - Pharmacy
  - Others
- OR**
- Q.5** (A) How to add Play button to the page. Explain with example. **07**  
(B) Compare the code with data object and without data object in d3. And **07**  
Write a code to draw blue circle in svg with 50 radius using d3 with data object.

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