

**End Semester Examinations - 2015-16 Even Semester - May 2016**

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**15BI3005 Microarray and Image Analysis**

**Set B**

**Time : 3 hrs**  
**Total Marks: 100**

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1. Elaborate the different statistical methods used after the image is extracted from microarray experiments.

**OR**

2. Write a note on different clustering methods used for grouping genes after microarray data analysis.

3.           a. Pen down the steps involved in model based algorithm used in dChip software for data analysis. (12)  
              b. Mention the linear and nonlinear methods used for any microarray data sets. (8)

**OR**

4.           a. Describe the three methods used for explaining any box plots for microarray data sets. (7)

- b. Describe the different regression plots used WITHIN-ARRAY normalization. (13)

5.           a. Explain how feature extraction is done during Image Processing. (15)  
              b. Mention the steps involved in identifying the background pixel and calculation of numerical information. (5)

**OR**

6.           a. Define normalization and discuss about LOWESS and Quantile Normalization. (13)

- b. Mention the process involved in Data cleaning and Transformation. (7)

7.           a. Explain how microarray technology will be used for detecting breast cancer from patient's samples. (10)  
              b. Mention the different chips used for microarray technology. (10)

**OR**

8.           a. Define microarray and mention its application in biological sciences. (10)

- b. Explain MGED database use for microarray information. (10)

9.           a. Mention the software's and databases which can perform microarray data analysis. (5)

- b. What are the two types of approach used for microarray technology? (15)

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**Wishing you All the Best**

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