No. of Printed Pages : 03 **Roll No. .....**

H-121

B. Tech. EXAMINATION, Dec. 2018

(Eighth Semester)

(B. Scheme) (Re-appear Only)

(BT)

BT402B

DNA MICROARRAY TECHNOLOGY

Time : 3 *Hours*] [*Maximum Marks :* 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

Unit I

1. What is DNA microarray ? Describe the process of developing oligonucleotide micro-array by using photolithography. **15**

2. Expand SAGE and explain steps involved in this technique. Write any *one* software used for SAGE analysis. **15**

Unit II

3. What methods would you use to visually estimate the number of clusters in a gene expression data. **15**

4. Explain different methods of gene normalisation under heading : **15**

(a) Scale normalisation

(b) Lowers normalisation and variance stabilisation.

Unit III

5. Explain the following : **15**

(a) Steady state approach

(b) Resequencing chips.

6. Explain different regulatory network involved in reverse engineering. Write the limitations of network modelling. **15**

Unit IV

7. If you have 8 tissues/samples on 16 arrays how will you design it ? **15**

8. Which design are always fine for two condition studies ? What are the factors that determine the signal to noise ratio ? **15**