

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST-3 EXAMINATION- May-2017

M. Tech (2<sup>nd</sup> Semester) /Ph.D.

COURSE CODE: 14M11BT213

MAX. MARKS: 35

COURSE NAME: Functional Genomics

COURSE CREDITS: 03

MAX. TIME: 2 HRS

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*Note: All questions are compulsory. Carrying of mobile phone during examination will be treated as case of unfair means. Marks are indicated below each question*

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1. Describe how the efficacy of drugs varies from the one individual to another individual, explain with example? [3]
2. Calculate the gene density of any organism belonging to prokaryote, lower eukaryote and from higher eukaryote [3]
3. Write the characteristics of protein microarray? Explain with example how enzymes can interact with substrate on the glass slide? [3]
4. How biomarker is important for prognosis or diagnosis of a disease conditions? [3]
5. What is SNP? Describe a method to screen SNP in a genome? [3]
  
6. Yeast two hybrid system is a useful technique to study protein-protein interaction, explain with example how two proteins interact in the yeast? [4]
7. Post-translational modification is important for eukaryotic protein, what are these modifications? What is significance of these modifications for the cell? What techniques do you use to distinguish Glycosylated proteins? [4]
  
8. If you have been provided with mice oligo chip, how do you proceed to identify differently expressed gene from the given lung sample from cancerous and normal mice [6]
9. From the given lung sample from cancerous and normal mice, how do you proceed to identify differently expressed protein from these two different sample? [6]