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JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST -3 EXAMINATION, DECEMBER 2018

B.Tech (Biotechnology) BTDD/Phd

Course Code: 13M11BT114

MAX. MARKS: 35

Course Name: High Throughput Technology

Course Credits: 03

MAX. TIME: 2 Hr

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means. Marks are indicated in square brackets against each question

- Q1. Cell free translation system is an important tool for the proteins forming inclusion or toxic to the cells, thus making it difficult to purify. Describe the methodology of in-vitro protein translation system for eukaryotic protein? (3.5)
- Q2. Write the approach to extract proteins from the given sample for detail proteome analysis? (2.5)
- Q3. Protein modifications of proteins in a eukaryotic system influence the functional role of the protein, describe the protein modification with their role in biology of the organism? (3.5)
- Q4. Give a high throughput approach to identify the phosphorylated and glycosylated proteins from the given protein samples (drug-treated cells and normal epithelial cells)? (4.5)
- Q5. Define SNP, how these SNPs are introduced in the genome? Write the major methods to screen/identify the SNPs. Explain with example, where screening of SNP is important for predisposition to the disease? (3.5)
- Q6. With release of mouse genome, the microarray chips containing all the representative genes are available; write the detail strategies to identify the differentially expressed genes from the given epithelial cancer cells and normal cells? (5.5)
- Q7. Write the detail strategies to identify the differentially expressed proteins using MALDI TOF from the given epithelial cancer cells and normal cells? (5.5)
- Q8. What are characteristic of protein array? Give examples of proteins that are used to perform the protein-protein interaction on to the glass slides (3.5)
- Q9. Write on biomarker with example? (3)