Jata Shankee

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
T3 EXAMINATIONS, DECEMBER-2019

PhD Biotechnology

Course Code: 13M11BT114

Course Name: High throughput Technologies

Course Credits: 03

MAX. MARKS: 35

MAX. TIME: 2 Hours

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.

1. Write explanatory notes on high throughput screening platform for engineered nano-particle mediated genotoxicity using cometchip technology? (5)

2. Write explanatory notes on high through profiling of nanoparticles protein-interaction by fluorescent dye labeling (5)

3. In a sequencing laboratory set up, how you are going to identify the differentially expressed genes in non small lung cancer tissue in comparison to the normal lung tissue using SAGE technology? (5)

4. Using expedite approach, how you are able to identify the glycosylated and phosphorylated proteins/peptides from the given sample using MALDI TOF? (5)

5. What is NGS, what are the advantages of it? Describe the steps with well labeled diagram for the Solid phase Illumina sequencing Technology (5)

6. Write notes a. Biomarker in medicine   (10)

   b. SNP

   c. Gene structure of typical eukaryotic gene

   d. Microarray