

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST 2 EXAMINATION - October 2017
BTDD Biotechnology

COURSE CODE: 13M11Bt114

MAX. MARKS: 25

COURSE NAME: High Throughput Technologies

COURSE CREDITS: 3

MAX. TIME: 1.5 HR

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

1. Write on the Polony Multiplex Analysis of Gene Expression (PMAGE) as high throughput technology to study the global gene expression? Where do apply its precise application? (4)
2. Write on Human Microbiome? What are the estimated numbers of microbials cells present in human? What are these micro-organisms reside in human? What are the biological processes that are influenced by microbial populations, also highlight its benefit to human health? (4)
3. What is single cell RNA sequencing and give its strategies? What are the different applications of single RNA sequencing? (4)
4. What are characteristics DNA Microarray? (1.5)
5. Write the major difference between oligo based and cDNA based DNA microarray? (1.5)
6. If you have been provided with oligo-based DNA microarray of mouse genome, describe in detail the strategies of DNA microarray to identify the differentially regulated gene expression from cancerous and non-cancerous mice model studies? (5)
7. Give the flow chart strategies for Serial Analysis of gene Expression (SAGE) by sequencing? (5)