

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2018
(Third Semester)

Branch -**BIOTECHNOLOGY**

GENOMICS AND PROTEOMICS

Time: Three Hours

Maximum: 75 Marks

Answer ALL questions

ALL questions carry EQUAL marks

(2 -t- 5+ 8)

- 1 a What do you mean by transposon?
b Discuss the repeats present in eukaryote genome,
c Elaborate on any two mapping techniques.
OR
d What are the various types of genome?
e Illustrate cytogenetic mapping.
f Explain any two DNA polymorphism and its importance.
- 2 a Comment on scaffold.
b Enumerate the importance of HTS.
c Write an essay about array based method for the study of gene expression.
OR
d Define contig.
e How is RNAi influence transcriptome analysis?
f Discuss shotgun sequencing approach.
- 3 a State the principle of liquid chromatography.
b Distinguish between antigen and antibody array,
c Write a detailed account on MS.
OR
d What do you know about expression profiling?
e Illustrate the process of protein microarray,
f Overview the mechanism of 2D gel .electrophoresis.
- 4 a Highlight the importance of protein annotation.
b Discuss the principle of affinity chromatography,
c Explain protein - protein interaction study.
OR
d Comment on the types of proteomics.
e Briefly explain comparative genomics in protein structure,
f Enumerate any one method to determine protein structures.
- 5 a What do you mean by metabolome?
b Illustrate QTL based gene expression study,
c Discuss pharmacogenomics in drug designing.
OR
d What is meant by M cell?
e Evaluate the significance of knock out library,
f Elaborate on the application of genomics.