

**PSG COLLEGE OF ARTS & SCIENCE**  
(AUTONOMOUS)

**MSc DEGREE EXAMINATION MAY 2019**  
(Third Semester)

Branch **BIOTECHNOLOGY**

**GENOMICS AND PROTEOMICS**

Time: Three Hours

Maximum: 75 Marks

Answer **ALL** questions  
**ALL** questions carry **EQUAL** marks (2 + 5+ 8)

- 1 a Write a note on telomeres.  
b Describe transposons and retrotransposons in brief,  
c Illustrate organization and structure of eukaryotic genome in brief  
OR  
d Write a note on Pseudogenes.  
e Explain human Y chromosome in brief  
f Write a detailed note on DNA polymorphisms.
- 2 a RNAi  
b Write a short note on Shotgun sequencing,  
c Give a detailed account on DNA Microarray.  
OR  
d Transcriptome.  
e Illustrate the steps involved in expression profiling,  
f Write a detailed account High throughput sequencing.
- 3 a What is antibody array?  
b Illustrate 2D gel electrophoresis in brief  
c Write a detailed note on Mass spectrophotometry.  
OR  
d What is antigen array?  
e Give a short note on Protein array.  
f Elaborate multidimensional liquid chromatography and its application.
- 4 a E cell.  
b Explain yeast 2 hybrid system in brief  
c Describe X ray crystallography in detail  
OR  
d Protein annotations,  
e Explain random library methods in brief  
f Illustrate NMR spectroscopy in detail
- 5 a M cell.  
b Explain QTL in brief  
c Give a detailed account on metabolomics and biochemical network.  
OR  
d Knock out library.  
e Write a short note on personalised medicine,  
f Describe pharmacogenomics in detail.