

**PSG COLLEGE OF ARTS & SCIENCE**  
(AUTONOMOUS)  
**BSc DEGREE EXAMINATION DECEMBER 2019**  
(Fifth Semester)

Branch - **BIOTECHNOLOGY**

**GENOMICS AND PROTEOMICS**

Time : Three Hours

Maximum : 75 Marks

**SECTION-A (20 Marks)**

Answer **ALL** questions

**ALL** questions carry **EQUAL** marks ( 10 x 2 = 20)

- 1 Define SINES.
- 2 List out the importance of genetic markers.
- 3 Enlist on few types of model organisms used for genomic studies.
- 4 Mention the uses of comparative genomics.
- 5 Name any 2 techniques used in protein study.
- 6 Comment on the applications of mass spectrophotometry.
- 7 Bring out the significance of genomic medicine.
- 8 Define pharmacogenetics.
- 9 Enlist the role of Reverse transcriptase PCR.
- 10 Bring out the importance of DNA chip.

**SECTION - B (25 Marks)**

Answer **ALL** Questions

**ALL** Questions Carry **EQUAL** Marks ( 5 x 5 = 25)

- 11 a Write notes on structural genomics.  
OR  
b Compare between RH mapping and cytogenetic mapping.
- 12 a Appraise a note on comparative genomics.  
OR  
b Make a note on orthologs and paralogs.
- 13 a Exemplify the salient features of Isoelectric focusing.  
OR  
b Describe on peptide sequencing.
- 14 a Illustrate on the significance of pharmacogenomics.  
OR  
b Describe in detail about the concept of genomic medicine.
- 15 a Make a note on PCR directed protein arrays.  
OR  
b Explain about structural proteomics.

**SECTION - C (30 Marks!)**

Answer any **THREE** Questions

**ALL** Questions Carry **EQUAL** Marks (3 x 10 = 30)

- 16 Explain the concept and methodology of genomics.
- 17 Discuss about the hierarchical sequencing.
- 18 Summarize in detail about MALDI - EOF.
- 19 Describe the process of High Throughput screening in genome for drug discovery.
- 20 Narrate on the application of metabolomics in proteomics.