Seat No:_____ Enrollment No:_____

PARUL UNIVERSITY

FACULTY OF APPLIED SCIENCE

M.Sc., Summer 2018-19 Examination

Semester: 4 **Date: 03/04/2019**
Subject Code: 11202252 **Time: 2.00 pm to 4.30 pm**
Subject Name: Genomics and Proteomics **Total Marks: 60**

Instructions:
1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1. A) Essay type(Each of 04 marks) **(08)**
(a) Explain briefly 'Complete Genomes'
(b) Name and describe WGS

Q.1. B) Answer the following questions (Any two)
(a) Short note(Each of 02 marks) **(04)**
1.Write a note on Genomics
2.Short note on Unigene
(b) Short note on three mechanisms that can cause polymorphism **(04)**
(c) Short note on genomics evolution of nucleus, mitochondria and chloroplast **(04)**

Q.2. A) Answer the following questions.
(a) Short note(Each of 02 marks) **(04)**
1.What are Orthologous and Paralogous sequences?
2.What are the three steps of Genome annotation?
(b) Short note on Human Proteome Project **(04)**

Q.2. B) Answer the following questions (Any two)
(a) Short note/ Multiple choice questions. (Each of 01 marks) **(03)**
1.Give an example of RNA database
2.Explain Gene mapping in one sentence
3.What is a linkage map?
(b)Provide the full names of any three Metabolic pathway databases **(03)**
(c) What is a cancer biomarker? How does it aid in health care? **(03)**

Q.3. A) Essay type/ Brief note (4x2) (Each of 04 marks) **(08)**
(a)Describe Computer aided drug design
(b)Explain the significance of SNP technology

Q.3. B) Answer the following questions (Any two)
(a) Short note (Each of 02 marks) **(04)**
1. How does Protein-protein interaction study help Bioinformatics?
2. Any two differences between structural and functional annotation
(b) Why is drug discovery important? **(04)**
(c) Write a note on Proteomics **(04)**

Q.4. A) Answer the following questions.
(a) Short note(Each of 02 marks) **(04)**
1.Name any three Cancer biomarkers
2.What is Rational design? Describe it
(b) Describe what are Protein chips **(04)**

Q.4. B) Answer the following questions (Any two)
(a) Short note/ Multiple choice questions. (Each of 01 marks) **(03)**
1.Give an example of Protein sequence database
2.Explain the term 'Syntenic'
3.Explain Epistasis
(b) What is Protein toxicity? How is it investigated? **(03)**
(c) What is the role of Agrobacterium rhizogenes in Genomics? **(03)**