

**PARUL UNIVERSITY**  
**FACULTY OF APPLIED SCIENCE**  
**B.Sc., Winter 2017-18 Examination**

**Semester: 4**  
**Subject Code: 11102252**  
**Subject Name: Bioinformatics**

**Date: 09/01/2018**  
**Time: 2:00 pm to 4:30 pm**  
**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) Brief note (Each of 04 marks) (08)**  
 (a) Write short note on Genebank.  
 (b) Short note on Role of NCBI.
- Q.1. B) Answer the following questions (Any two) (04)**  
 (a) Short note (Each of 02 marks) (04)  
 1. What is HOVERGEN?  
 2. Mention the option to submit data to Genbank.  
 (b) Write Short note on DDBJ. (04)  
 (c) Write Short note on EMBL. (04)
- Q.2. A) Answer the following questions. (04)**  
 (a) Short note/ Brief note (2x2)/ Fill in the blanks. (Each of 02 marks) (04)  
 1. Write brief note on Data Base management system.  
 2. Define: Bioinformatics, Database.  
 (b) Write short note on various type of Computer. (04)
- Q.2. B) Answer the following questions (Any two) (03)**  
 (a) Short note/ Multiple choice questions. (Each of 01 marks) (03)  
 1. Who is the father of Bioinformatics  
 (a) Gibbs (b) Dayhoff (c) McIntyre (d) Smith  
 2. All are Sequence alignment tools except  
 (a) Rasmol (b) BLAST (c) FASTA (d) Clustal W  
 3. All the following are protein sequence database except  
 (a) PIR (b) PSD (c) SWISS-PORT (d) EMBL  
 (b) Describe dot matrix in brief. (03)  
 (c) Write short note on primary database and its type. (03)
- Q.3. A) Essay type/ Brief note (4x2) (Each of 04 marks) (08)**  
 (a) Explain the tools : 1) Bankit 2) Sequin  
 (b) Discuss Printers and its type
- Q.3. B) Answer the following questions (Any two) (04)**  
 (a) Short note/ Brief note (2x2)/ Schematically label the figures (2x2) (Each of 02 marks) (04)  
 1. Full name of PIR and PlasmoDB  
 2. Full name of BLOSUM and TIGR  
 (b) Different type of BLAST (04)  
 (c) Explain PDB and its significance (04)
- Q.4. A) Answer the following questions. (04)**  
 (a) Short note/ Brief note (2x2)/ Fill in the blanks. (Each of 02 marks) (04)  
 1. What is Pubmed? Discuss its role in scientific communities  
 2. Describe different Biological Database with Example  
 (b) Write short note on Swiss Port (04)

**Q.4. B) Answer the following questions (Any two)**

(a) Short note/ Multiple choice questions. (Each of 01 marks)

**(03)**

1. Which of the following is a sequence alignment tool

(a) BLAST (b) PRINT (c) PROSITE (d) PIR

2. Submission to GenBank are made using

(a) Bankit & Sequin (b) Bankit and Bankin (c) Sequin & BankIn (d) Entrez

3. Which of the following is a protein sequence database

(a) DDBJ (b) EMBL (c) Genbank (d) PIR

(b) Write Short note on Central Processing Unit

**(03)**

(c) Write short note on Pair wise alignment

**(03)**