

**(DBI01)**

**ASSIGNMENT-1**

**P.G. DIPLOMA DEGREE EXAMINATION, MAY – 2018**

**BIO-INFORMATICS**

**Principles of Cell & Molecular Biology & Bioinformatics**

**MAXIMUM MARKS:30**

**Answer ALL Questions**

*Q1)* Describe the structure and functions of Endoplasmic reticulum.

*Q2)* Write an account on cell theory.

*Q3)* Describe in detail Meiosis with labeled diagrams.

*Q4)* Describe the organization and functions of genome.

*Q5)* Write an account on genetic code.

**(DBI01)**

**ASSIGNMENT-2**

**P.G. DIPLOMA DEGREE EXAMINATION, MAY – 2018**

**BIO-INFORMATICS**

**Principles of Cell & Molecular Biology & Bioinformatics**

**MAXIMUM MARKS:30**

**Answer ALL Questions**

- Q1)* Enumerate the DNA as genetic material.
- Q2)* Describe DNA repair mechanisms.
- Q3)* Describe replication and transcription.
- Q4)* Describe the applications of Drug discovery.
- Q5)* Write an account on the scope of Bioinformatics.



**(DBI02)**

**ASSIGNMENT-1**

**P.G. DIPLOMA DEGREE EXAMINATION, MAY – 2018**

**BIO-INFORMATICS**

**Numerical Methods, Optimization Tech. & Computer Pro.**

**MAXIMUM MARKS:30**

**Answer ALL Questions**

**Q1)** Explain inherent parallelism in physical and biological phenomenon.

**Q2)** Write an account on parallel computers.

**Q3)** Describe operating systems and their applications in biology.

**Q4)** Describe the internal and external coordinate systems.

**Q5)** Write an account on numerical methods.

**(DBI02)**

**ASSIGNMENT-2**

**P.G. DIPLOMA DEGREE EXAMINATION, MAY – 2018**

**BIO-INFORMATICS**

**Numerical Methods, Optimization Tech. & Computer Pro.**

**MAXIMUM MARKS:30**

**Answer ALL Questions**

- Q1)** Enumerate the Errors involved in the construction of mathematical model for the real physical processes.
- Q2)** Describe Randomized minimization techniques.
- Q3)** Describe Fast Fourier Transform (FFT).
- Q4)** Describe the programming with HTML.
- Q5)** Explain designing of web pages.



**(DBI03)**

**ASSIGNMENT-1**

**P.G. DIPLOMA DEGREE EXAMINATION, MAY – 2018**

**BIO-INFORMATICS**

**Database Mana. & Biological Data Banks Mole. Desi.**

**MAXIMUM MARKS:30**

**Answer ALL Questions**

- Q1)* Explain Biological databanks.
- Q2)* Enumerate information processing challenges.
- Q3)* Enumerate the Genomic databanks.
- Q4)* Write an account on structural databanks.
- Q5)* Explain the DDBJ data model.

**(DBI03)**

**ASSIGNMENT-2**

**P.G. DIPLOMA DEGREE EXAMINATION, MAY – 2018  
BIO-INFORMATICS**

**Database Mana. & Biological Data Banks Mole. Desi.**

**MAXIMUM MARKS:30  
Answer ALL Questions**

- Q1)** Describe the NCBI datamodel with examples.
- Q2)** Explain the primary and tertiary structure of proteins.
- Q3)** Describe primary and tertiary structure of RNA.
- Q4)** Describe the structure prediction of biopolymers.
- Q5)** Explain phylogenetic analysis of Molecular Modeling and simulation studies.



**(DBI04)**

**ASSIGNMENT-1**

**P.G. DIPLOMA DEGREE EXAMINATION, MAY – 2018**

**BIO-INFORMATICS**

**Genomic and Proteomics and Sequencing analysis**

**MAXIMUM MARKS:30**

**Answer ALL Questions**

**Q1)** Describe the structure and function of organellar genomes.

**Q2)** Enumerate the Eukaryotic and Viral genomes.

**Q3)** Explain the genome projects.

**Q4)** Write an account on Genetic code.

**Q5)** Explain Ramachandran plot and its significance.

**(DBI04)**

**ASSIGNMENT-2**  
**P.G. DIPLOMA DEGREE EXAMINATION, MAY – 2018**  
**BIO-INFORMATICS**  
**Genomic and Proteomics and Sequencing analysis**

**MAXIMUM MARKS:30**  
**Answer ALL Questions**

- Q1)* Describe protein purification and degeneration.
- Q2)* Describe drug design and delivery.
- Q3)* Describe predictive methods using DNA sequences.
- Q4)* Describe PCR and its application in genomics and proteomics.
- Q5)* Explain cell culture techniques.

