

This question paper contains 2 printed pages]

PH—15—2024

FACULTY OF SCIENCE

B.Sc. (BI) (First Year) (Second Semester) EXAMINATION

MARCH/APRIL, 2024

(New Pattern)

BIOINFORMATICS

(Basic of Genetics)

(Monday, 08-04-2024)

Time : 10.00 a.m. to 1.00 p.m.

Time—Three Hours

Maximum Marks—75

Note :— (i) All questions are compulsory.

(ii) Draw neat and well labelled diagrams wherever necessary.

1. Explain in detail 'Laws of Mendelian inheritance'. 15

Or

(a) Explain multiple alleles and give examples. 8

(b) Explain scope and significance of genetics. 7

2. Describe in detail genetic cause and symptoms of cri-du-chat syndrome. 15

Or

(a) Write about anomalies in sex chromosome. 8

(b) Explain Hardy-Weinberg equilibrium. 7

P.T.O.

3. Describe in detail generalised and abortive transduction. Add a note on application of transduction. 15

Or

- (a) Describe euchromatin and heterochromatin. 8
- (b) Explain classical and modern concept of gene. 7
4. Describe in detail types of mutation and mutagens. 15

Or

- (a) What role does mutation play in evolution of plants ? 8
- (b) What is the difference between gene pool and gene frequency ? 7
5. Write short notes on any *three* : 3×5=15

- (a) Scope and significance of genetics
- (b) Gamma garden
- (c) Turner syndrome
- (d) Cytoplasmic male sterility
- (e) Lethality.

This question paper contains 2 printed pages]

PH—09—2024

FACULTY OF SCIENCE

B.Sc. (First Year) (Second Semester) EXAMINATION

APRIL/MAY, 2024

(New Pattern)

BIOINFORMATICS

(Basics of Biochemistry)

(Friday, 05-04-2024)

Time : 10.00 a.m. to 1.00 p.m.

Time—Three Hours

Maximum Marks—75

Note :— (i) All questions are compulsory.

(ii) All questions carry equal marks.

1. Describe in detail classification of simple and complex carbohydrates.15

Or

(a) Describe in detail classification of lipids. 8

(b) Discuss properties and role of lipids. 7

2. Define peptides. Describe peptide bond, types and biologically important peptides. 15

Or

(a) Explain concept of acid and base. 8

(b) Explain various chemical properties of amino acids. 7

P.T.O.

3. Describe in detail tertiary structure of proteins with example. 15

Or

(a) Discuss classification and nomenclature of enzymes. 8

(b) Explain biological role of enzymes. 7

4. Discuss in detail types of RNA. 15

Or

(a) Discuss secondary structure of DNA. 8

(b) Discuss properties and biological role of nucleic acid. 7

5. Write short notes on (any *three*) : 3×5=15

(a) Concept of atom and molecule

(b) Glycolipids

(c) Protein family

(d) Nucleotides

(e) Concept of buffers.

This question paper contains 2 printed pages]

PH—23—2024

FACULTY OF SCIENCE

B.Sc. (Second Semester) EXAMINATION

MARCH/APRIL, 2024

(New Pattern)

BIOINFORMATICS

(Basics of Biocomputing)

(Friday, 12-04-2024)

Time : 10.00 a.m. to 1.00 p.m.

Time—Three Hours

Maximum Marks—75

Note :— (i) All questions are compulsory.

(ii) All questions carry equal marks.

(iii) Draw diagrams wherever necessary.

1. Write in detail about classification of computers. 15

Or

(a) Describe about block diagram of computer. 8

(b) Describe about I/O devices in brief. 7

2. Write in detail about computer memory. 15

Or

(a) Describe about optical storage devices. 8

(b) Describe about printers and its types. 7

P.T.O.

3. Describe in detail about Linux OS. 15
- Or*
- (a) Describe about features of MS-Windows. 8
- (b) Give an account on Windows elements. 7
4. Write about MS-PowerPoint in detail. 15
- Or*
- (a) Describe MS-Word and its uses. 8
- (b) Give an account on MS-Access. 7
5. Write short notes on (any *three*) : 15
- (a) Notepad
- (b) CPU
- (c) MICR
- (d) Windows help
- (e) MS-Excel.

This question paper contains 3 printed pages]

PH—04—2024

FACULTY OF SCIENCE

B.Sc. (First Year) (Second Semester) EXAMINATION

MARCH/APRIL, 2024

(New Pattern)

BIOINFORMATICS

(Business Communication)

(Wednesday, 03-04-2024)

Time : 10.00 a.m. to 1.00 p.m.

Time—Three Hours

Maximum Marks—75

Note :— (i) All questions are compulsory.

(ii) Draw neat and well labelled diagrams if necessary.

1. Write a descriptive passage about your favourite sport player. 15

Or

(a) Write a recipe about your favourite food dish. 8

(b) How to describe object ? Give a suitable example. 7

2. How to spell correctly ? Write 10 spelling rules and give examples. 15

Or

(a) Write one word substitution for the following phrases : 8

(i) A lover of good food.

P.T.O.

- (ii) A person who acts against religion.
- (iii) One who does not express himself freely.
- (iv) A person who speaks more than one language.
- (v) A person who presents a radio/television programme.
- (vi) A person who writes beautiful writing.
- (vii) A secret or confidential way of writing.
- (viii) Government not connected with religious or spiritual matters.

(b) Write synonyms of the following words : 7

- (i) Baffle
- (ii) Lazy
- (iii) Weak
- (iv) Awful
- (v) Dumb
- (vi) Demolish
- (vii) Exhibit

3. Describe in detail basic approaches for understanding English. 15

Or

(a) What is cloze test ? Why does conduct this test ? 8

(b) Write an e-mail sample to your friend inviting him to your birthday party. 7

WT

(3)

PH—04—2024

4. How to write meeting notices ? 15

Or

(a) How to write meeting agenda ? 8

(b) How to write meeting minutes ? 7

5. Write short notes on any *three* : 3×5=15

(i) Reference section of a research paper.

(ii) E-mail writing for day-to-day purposes

(iii) Idioms and phrases

(iv) Moral story writing

(v) Expression opinions.

PH—04—2024

3