

MAHATMA GANDHI UNIVERSITY, KOTTAYAM

MGU-UGP (HONOURS)

FIRST SEMESTER EXAMINATION

(2024 ADMISSION ONWARDS)

MG1DSCBIF100 – Fundamental IT for Bioinformatics

Duration: 2 hrs

Maximum Marks: 50

Students should attempt atleast one question from each course outcome to enhance their overall outcome attainability.

Part A

Short Answer Questions

Answer any 5 out of 7 Questions

Each question carries 2 mark

- | | |
|---|-----------|
| 1. Name an example of an input device. | [K][CO1] |
| 2. Recognize the role of the CPU in a computer. | [K][CO1] |
| 3. Recognize the purpose of a computer network | [K][CO2] |
| 4. Outline the use of the tag in HTML. | [K][CO3] |
| 5. Recognize the function of CSS in a web page. | [K][CO3] |
| 6. Demonstrate the use of an if-else statement in JavaScript. | [U][CO3] |
| 7. Identify basic terminologies in Bioinformatics | [K] [CO4] |

[2 x 5 = 10]

Part B

Short Essay Type Questions

Answer any 4 out of 6 Questions

Each question carries 5 marks

- | | |
|---|-----------|
| 8. Compare primary memory and secondary storage in terms of speed, volatility, and use cases. | [U][CO1] |
| 9. Differentiate between compilers and interpreters and explain how each processes code. | [U][CO3] |
| 10. Identify common HTML elements for text formatting and demonstrate their uses with examples. | [K][CO3] |
| 11. Describe how JavaScript uses conditional statements for decision-making. | [S][CO3] |
| 12. Summarize history of Bioinformatics. | [U] [CO4] |
| 13. Comprehend Human Genome Project. | [U] [CO4] |

[5 x 4 = 20]

Part C

Long Essay Type Questions

Answer any 2 out of 4 Questions

Each question carries 10 marks

14. Explain the purpose of network protocols and describe examples like HTTP, HTTPS, FTP, and SMTP. [U][CO2]
15. List and explain the main tags used in HTML for creating headings, paragraphs, and links. Describe their functions. [K][CO3]
16. Explain basic terminologies and important areas of Bioinformatics. [U] [CO4]
17. Discuss any 4 applications of Bioinformatics. [U] [CO4]

[10 x 2 = 20]

MAHATMA GANDHI UNIVERSITY, KOTTAYAM

MGU-UGP (HONOURS)

FIRST SEMESTER EXAMINATION

(2024 ADMISSION ONWARDS)

MG1MDCBIF100 – Bioinformatics for Beginners

Duration: 1.5 hrs Maximum Marks: 35

Students should attempt atleast one question from each course outcome to enhance their overall outcome attainability.

Part A

Short Answer Questions

Answer any 5 out of 7 Questions

Each question carries 2 mark

- | | |
|---|-----------|
| 1. List and label important part of cell. | [K] [CO1] |
| 2. Outline protein and its features. | [K] [CO2] |
| 3. Differentiate between DNA, RNA and protein. | [U] [CO1] |
| 4. List the role of internet on Bioinformatics. | [U] [CO3] |
| 5. Discuss Human Genome Project | [U] [CO4] |
| 6. State central dogma of biology. | [U] [CO5] |
| 7. Recall FASTA | [K] [CO5] |

[2 x 5 = 10]

Part B

Short Essay Type Questions

Answer any 3 out of 5 Questions

Each question carries 5 marks

- | | |
|---|-----------|
| 8. State "cell as basic unit of life". | [K] [CO1] |
| 9. Comprehend protein and carbohydrates. | [U] [CO2] |
| 10. Outline any 3 applications of bioinformatics. | [K] [CO5] |
| 11. Identify biological database and its type. | [U] [CO5] |
| 12. Discuss scope of bioinformatics | [U] [CO3] |

[5 x 3 = 15]

Part C

Long Essay Type Questions

Answer any 1 out of 3 Questions

Each question carries 10 marks

- | | |
|---|-----------|
| 13. Summarize Human Genome Project. | [U] [CO4] |
| 14. Explain biomolecules and its types. | [U] [CO2] |
| 15. Comprehend applications of bioinformatics | [U] [CO5] |

[1 x 10 = 10]