Department of Mathematics & Natural Sciences (MNS)
Course code: ***BTE406***; *Course title:* ***Genomics & Proteomics***
Exam: ***Midterm***; *Session:* ***Summer 2024***
Exam Time: ***60*** *Minutes*; *Total Marks: 20*

Student Name: **Student ID:**

Part A

Answer all questions

1. Which of the following is NOT a prime number? [3]
   A. 2 B. 9 C. 13 D. 23

2. Simplify the expression: $3x^2 + 5x - 2x^2 - x$ A. $x^2 + 4x$ B. $x^2 - 4x$ C. $5x^2 + 4x$ D. $-x^2 - 4x$ [5]

3. True or False - *The building block of DNA is amino acids.* A. True B. False [3]

Part B

Answer any ***four*** *questions from the following*

4. Another multiple-choice question. A. Option A B. Option B C. Option C D. Option D [4]

5. What is the central dogma of molecular biology? Write a short note on the importance of the central dogma. [2+4]

6. What geometric shape is shown in the figure below? [2]

7. What geometric shapes are shown in the figures below? [3]

Figure *left* Figure *center* Figure *right*

8. What geometric shapes are shown in the figures below? Insert vertical space. [3.5]

9. What geometric shapes are shown in the figures below? Ans fill with line. [3.5]

10. What geometric shapes are shown in the figures below? Ans fill with box. [3.5]

11. What geometric shapes are shown in the figures below? Ans fill with dotted lines. [3.5]

12. What geometric shapes are shown in the figures below? Ans line short. [3.5]

12. _____