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Daffodil International University

Department of Genetic Engineering and Biotechnology
Faculty of Health and Life Sciences
B. Sc. (Hons.) in Genetic Engineering and Biotechnology
Midterm Examination Summer 2025

Course Code: 0231-111 **Course Title:** Communicative English
Level and Term: L-1, T-1 **Section: 252 All** **Course Teacher Initials: RIS, AK**
Time: 1 hour and 20 minutes **Total Marks: 20+5 (Listening)**

Splitting any answer is strictly prohibited

Marks

1. Grammar Section: [CLO1, PLO10, C3] 5

A. Fill in the blanks with the correct form of the verb in brackets: **0.5 x 5=2.5**

People around the world now realize the importance of protecting the environment. In many countries, governments are taking steps to reduce pollution. They (a) _____ (plant) more trees and promote green technology. Last year, several organizations (b) _____ (launch) campaigns to stop plastic use. Many volunteers (c) _____ (join) these efforts willingly. If we do not act now, future generations (d) _____ (suffer) greatly. Every individual needs to contribute to saving the planet. Together, we (e) _____ (make) a difference.

B. Fill in the gaps with the correct prepositions [in, at, on, with, by]: **0.5 x 5=2.5**

Genetic engineering is one of the most exciting developments (a) _____ modern science. It allows scientists to modify the genes of organisms (b) _____ advanced techniques, resulting (c) _____ improved traits such as disease resistance or faster growth. Research in this field is ongoing (d) _____ many top universities around the world. Some critics, however, warn about the potential risks posed (e) _____ genetically modified organisms to the environment.

2. Reading Comprehension: [CLO2, PLO10, C3] **15**

Genetic engineering refers to the direct manipulation of an organism's DNA using biotechnology. It allows scientists to alter genetic material to achieve desired traits such as disease resistance, increased yield, or faster growth. One widely known example is genetically modified (GM) crops that can survive in extreme weather or repel pests without pesticides.

The development of CRISPR-Cas9 technology has revolutionized genetic editing by providing a precise and cost-effective method for modifying DNA. This tool enables scientists to target specific genes and make modifications without affecting the rest of the genome. However, ethical concerns arise regarding its application, especially when used in human embryos.

In medicine, genetic engineering has made significant progress in gene therapy, where defective genes are replaced or repaired to treat genetic disorders like cystic fibrosis or sickle cell anemia. As the technology advances, it becomes essential to strike a balance between innovation and ethical responsibility. Genetic engineering holds the potential to transform agriculture, medicine, and industry- but it must be handled with care to ensure safety and fairness.

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A. Choose the correct option (MCQ): 0.5 x 5=2.5

a) What is the primary purpose of CRISPR-Cas9?
i) To grow crops faster
ii) To copy DNA
iii) To modify specific genes precisely
iv) To create viruses

b) What are GM crops designed for?
i) Faster cooking
ii) Withstanding extreme weather
iii) Absorbing more sunlight
iv) Increasing water pollution

c) Which of the following diseases is mentioned in the passage as being treated using gene therapy?
i) Diabetes
ii) Malaria
iii) Sickle cell anemia
iv) Influenza

d) Which one is a concern with editing human embryos?
i) It is expensive
ii) It may be unethical
iii) It is time-consuming
iv) It affects plant growth

e) What does genetic engineering aim to achieve in different organisms?
i) Reduce lifespan
ii) Eliminate DNA
iii) Introduce desirable traits
iv) Create bacteria

B. Apply your comprehension skills to make judgments to the following statements: 0.5 x 5=2.5

Write only True/ False/ Not given.
True- If the statement is aligned with the information given.
False- If the statement contradicts the given information.
Not Given- If no such information is given in the text.

i) Genetic engineering is used to change an organism's DNA.
ii) Genetically Modified (GM) crops need more pesticides to survive.
iii) CRISPR-Cas9 helps scientists edit genes more easily.
iv) Genetic engineering has no use in the medical field.
v) The passage mentions how long CRISPR-Cas9 has been used.

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C. Answer to the following questions, explain if needed: 1 x 5=5

i) What is genetic engineering?

ii) How has CRISPR-Cas9 impacted genetic modification?

iii) Write down two benefits of genetically modified (GM) crops.

iv) What is gene therapy used for? Explain.

v) What ethical concern is mentioned in the passage?

D. Read the text again and complete the paragraph by using one word in each gap. 1 x 5=5
[Fill in the Gap Activity]

Genetic engineering is a way to change the (a) _____ of living things. Scientists use it to help crops grow better and to (b) _____ people with some illnesses. In farming, it helps plants fight pests and grow in (c) _____ weather. In medicine, doctors hope it can fix (d) _____ problems in the body. However, some people have (e) _____ about using it in humans.

3. A **Listening Test** will be conducted section wise. [CLO2, PLO10, C2] 0.5 x 10=5

Students will be provided answer script and audio tape will be played twice. Students will listen to the audio carefully and write the correct answers. **The test will be taken on the later date.**