

PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT
UKEREWE DISTRICT COUNCIL



FORM TWO MOCK EXAMINATION

033

BIOLOGY

TIME 2:30 HRS

YEAR: 2025

INSTRUCTIONS

1. This paper consist of THREE sections (A, B, and C)
2. Answer **all** questions in Section A and B and **one** question in Section C.
3. Read each question carefully before attempting it.
4. Except for diagrams that must be drawn in pencil, other writings should be in blue/black ink.

SECTION A (15 Marks)

Answer all questions from this section

1. (i) – (x) contains of multiple choice questions, choose the letter of the most correct response and write it against the number in the box provided

i) During laboratory experiment you observe a classmate mixing chemicals without wearing gloves. The BEST way to address this situation is to

- A. Ignore it, as it not your responsibility
- B. Direct confront them in front of the class
- C. Politely remind them about the laboratory rule for wearing gloves
- D. Report the behavior to the teacher directly

ii) Regular hand washing and using sanitizer after visiting public spaces can

- A. Increase your social status
- B. Increase your physical strength
- C. Reduce risk of spreading infections
- D. Influence potential employers

iii) A student studying a disease outbreak discovers an infection agent that is much smaller than bacteria and cannot reproduce on its own. This agent is most likely a

- A. Fungus
- B. Virus
- C. Parasite
- D. Bacterium

iv) Foresters studying a protected forest ecosystem consider the interactions between.

- A. Metals and alloys used in constitution
- B. Plant growth and climate pattern
- C. Drug development and clinical trials
- D. Nutritional value of processed food

v) A manufacturer is seeking of inspiration for sustainable packaging materials. One potential advantage of using fern frond structures, instead of plastic is their

- A. High cost and limited availability in nature
- B. Biodegradable nature and rapid decomposition
- C. Water-resistant properties and durability
- D. Availability to produce vibrant colours for aesthetic appeal

vi) A farmer notices an outbreak of insects decimating her crops. Base on this observation, she infers that

- A. There has been a sudden decrease in population of top predators in the area.
- B. There insect population is likely experiencing an abundant of food resources
- C. The food chain in the ecosystem is balanced and stable
- D. The insect outbreak is not connected to other organisms in the environment

vii) The scientific name of mango tree is *Mangifera indica*. Which rank is the taxonomic unit represented by the name *Mangifera*?

- A. Genus
- B. Order
- C. Family
- D. Species

viii) Effective ways of reducing waste are displayed in each of the following **EXCEPT**

- A. Using recycled materials
- B. Using cloth instead of paper to clean window
- C. Buying new plastic shopping bags every time we go shopping
- D. Using rechargeable batteries

ix) Which of the following components is required by plants all the time?

- A. Oxygen
- B. Carbon dioxide
- C. Sunlight
- D. Chlorophyll

x) The presence of antigen in the body can cause an extreme reaction of the immune system called

- A. Allergy
- B. Hypersensitivity
- C. Active immunity reaction
- D. Passive immunity reaction

ANSWER

i	ii	iii	iv	v	Vi	vii	viii	ix	X

2. Match each item in LIST A with a correct response in LIST B by writing its letter

Below the number of the corresponding item in a table provided.

LIST A	LIST B
i) Painful sore in the living of the duodenum ii) Results the erosion of the mucus coating of the digestive system iii) Painful sensation caused by reflux of stomach content iv) The affected individual lacks appetite and feels full of a very little food. v) A condition caused by excess gas in the digestive system	A. Ulcers B. Flatulence C. Peptic ulcers D. Dental carries E. Heartburn F. Indigestion G. Anorexia nervosa H. Rickets

ANSWER

i	ii	iii	iv	V

SECTION B (70 Marks)

Answer all questions in this section

3. a) Imagine you are preparing a science fair experiment and you are expected to design the experiment. Basing on your scientific knowledge define the following term

i) Dependent variable

ii) Independent variable

iii) Controlled variable

iv) Scientific method

v) Variables

b) Jelvin is experiencing signs of illness. He visits doctor who follows several steps to determine the cause of his condition and how to treat it. As a science student, analyze the doctor's actions and relate them to the steps of the scientific method. Use the situation below to support your responses

i) Jelvin is not feeling well; he goes to see a medical doctor at a nearby hospital

ii) The doctor asks Jelvin several questions about how he feels

iii) The doctor's orders Jelvin's body temperature, blood and urine samples for observation in the laboratory

iv) The laboratory technician diagnoses malaria parasites in Jelvin's blood

v) The doctor confirms that Jelvin has malaria and prescribes medicine for him

4. Your community health club has assigned you to create an educational session for fellow students and community members on COVID-19. You are expected to demonstrate knowledge of how COVID-19 pandemic spread and its impacts on health and society

a) Use your understanding of this infectious disease briefly explain three methods of transmission of COVID-19

i. _____

ii. _____

iii. _____

b) Describe two (2) effects that COVID-19 had on individuals and the general

i. _____

ii. _____

5. You are part of a scientific research team exploring deep-sea ecosystems where sunlight cannot penetrate. What are the four major requirements for chemosynthesis to take place?

i. _____

ii. _____

iii. _____

b) In three points support the statement that "Photosynthesis is an important process to living Organism"

i. _____

ii. _____

iii. _____

6. During an athletics training session, your biology teacher asks you to discuss five factors that affect the rate of gaseous exchange in mammals

i. _____

ii. _____

iii. _____

iv. _____

v. _____

7. a) Describe four structural adaptations the plant leaf that enhance its efficient in photosynthesis process

i. _____

ii. _____

iii. _____

iv. _____

b) As part of a school science exhibition, you are required to draw the structure of a typical plant leaf and label its four parts

8. a) Microorganisms like paramecium, Amoeba and Yeast play important roles in their environment and human life. Using relevant examples from everyday life, explain two advantages of

i) Paramecium

ii) Amoeba

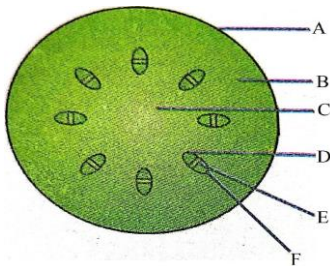
iii) Yeast

b) During your presentation you are required to explain the biological classification of the organisms. Identify two characteristics of the phylum to which the following organisms belong

i) Amoeba

ii) Yeast

9. The following diagram shows the cross-section of dicot stem. Study it carefully and answer the questions that follow



a) Name the parts labeled A,B,C,D,E and F

A = _____

B = _____

C = _____

D = _____

E = _____

F = _____

b) State the function of the parts D and F

Answer question number **ten (10)**

[illegible]