GENDA SECONDARY SCHOOL

FORM TWO SPECIAL ASSESSMENT SERIES 02

BIOLOGY

TIME 2:30Hours **July, 2025**

Instructions

1. This paper consists of sections **A**, **B** and **C** with a total of **ten (10)** questions.
2. Answer **all** questions from all sections.
3. All writings must be in black or blue ink EXCEPT drawings which must be in pencil.
4. All answers must be written in the space provided for each question.
5. Cellular phones and any unauthorized materials are not allowed in the Examination room.
6. Write your **Examination Number** on the top right hand corner of every page.

SECTION A: (15 Marks)

Answer **all** questions

1. For each items (i) to (x), choose the correct answer from the given alternatives and write its letter in the box provided.
   (i) If a food sample was boiled with Benedict's solution, the mixture turned green to orange to yellow and finally red precipitates. Which food substance was according to the observations. A. Non – reducing sugar B. Protein C. Sucrose C. Reducing sugar
   (ii) Why moss plants are referred to as primitive plants? A. They lack true vascular bundles B. They have cell walls made up to cellulose C. They store food in form of glycogen D. They have cell walls made up of Chitin
   (iii) Which protein is found on the surface of pathogens that cause infections and diseases? A. Antibodies B. Antigens C. Rhesus factor D. Vectors
   (iv) Which of the following waste in produced from hospitals? A. Bioharzadous waste B. Biodegradable waste C. Hazardous waste D. Recyclable wastes
   (v) Viruses are considered to be as substances with no life because. A. They have true nuclei B. They are only active in the host cell C. They have bodies covered with cell walls D. They are single celled prokaryotic organisms
   (vi) Mass flow occurs in one of the following system. A. Lymphatic system B. Reproductive system C. Respiratory system D. Blood group system
   (vii) A xylem is an example of; A. Organ B. Cell C. Tissue D. Organ system
   (viii) Which of the following organisms uses gills for gaseous exchange? A. Chamelion B. Owl C. Rabbit D. Tadpole
   (ix) You may see liquid drops on plant leaves in the morning. Which process causes this phenomenon? A. Transpiration B. Respiration C. Gutation D. Photosynthesis
   (x) Organisms in a particular pond form:- A. Population B. Family C. Biome D. Community

Answers

i	ii	iii	iv	v	vi	vii	viii	ix	x

2. Match functions in **List A** to corresponding part of internal structure of the leaf in **List B.**

LIST A	LIST B
i. It protects the leaf from injury, pests and excessive loss of moisture. ii. It contains pores that allow oxygen and carbondioxide to diffuse in and out of the leaf. iii. It is surrounded by guard cells that close and open the pores for gaseous exchange. iv. Enable the cell to absorb maximum amount of sunlight energy. v. Has intra cellular spaces that allow air containing carbondioxide to circulate to parts where photosynthesis take place	A. Stomata B. The epidermis C. Palisade layer D. Spongy mesophyll layer E. The cuticle F. Mesophyll G. Xylem H. Upper and lower epidermis

Answers

List A	i	ii	iii	iv	v
List B					

SECTION B: (70 Marks)

Answer **all** questions in this section

3. During a football match, one of the form two student fell down and his leg was fractured.
   (a) Name an immediate help that you could possibly provide to a victim
   _____
   (b) Give four (4) importance of the help named in (a) above.
   (i) _____
   (ii) _____
   (iii) _____
   (iv) _____
   (c) Name and give one function of any five (5) components that may be used to give the named help in (a) above.
   (i) _____
   (ii) _____
   (iii) _____
   (iv) _____
   (v) _____

4. (a) Sometime plants take in carbondioxide and give out oxygen and sometime plants take in oxygen and give out carbondioxide. Justify the statement.
   _____
   _____
   _____
   _____
   _____
   _____
   _____
   _____
   (b) Aerobic respiration and anaerobic respiration on are two different processes that takes place in both plants and animals. By using five points justify this statement.
   _____
   _____
   _____

(c) What biological term best describe the process of taking in oxygen and giving out carbondioxide across a respiratory surface.

5. (a) Illustrate the arrangement of vascular bundles in a root of a bean plant.

(b) List cells which compose the xylem

(i)

(ii) _____

(iii) _____

(c) (i) Differentiate between pulmonary circulation and systematic circulation. Give one point

_____

_____

_____

_____

_____

_____

(ii) Why arteries have thicker walls than veins?

_____

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_____

6. A tomato was left on a wet board for two weeks. After that the grey structure formed which later turned to black thread like structures which finally became club – shaped.
   (a) (i) Give common name of the organism that grew on the tomato

   _____

   (ii) Name the kingdom to which the organism named in a (i) above belongs

   _____

   (iii) Name the phylum to which the named organisms in a (i) belongs_____

   (b) State four (4) merits of the kingdom to which the named organism in (a) (i) belongs

   (i) _____

   (ii) _____

   (iii) _____

   (iv) _____

   (v) _____

   (c) In which ways does the kingdom of the named organism in a (i) above is harmful to other organisms?

   (i) _____

   (ii) _____

   (d) Give one feature that enabled to place the named organism in a (i) to its respective kingdom. _____

7. (a) Interaction among living things is inevitable in stable ecosystem. Justify this statement by considering three main types of interaction.

   (i) _____

   (ii)_____

   (iii)

   _____

   (b) Give the role of the following in the nitrogen cycle.

   (i) Lighting

_____

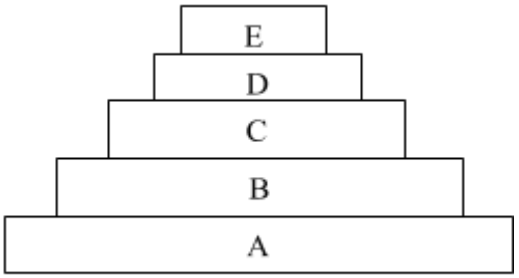
(ii) Nitrogen – fixing bacteria

_____

(iii) Denitrifying bacteria_____

(iv) Decomposers _____

(c) Study the figure below then answer the questions that follow.



(i) Why do trophic levels form a pyramid shape?

_____

_____

_____

_____

(ii) State the roles of the organisms in trophic level A.

_____

_____

_____

_____

8. (a) Give two ways that you may apply in storing food in a too remote area with no electricity.

(i) _____

(ii) _____

(b) Explain four (4) methods used for food preservation.

(i) _____

(ii) _____

(iii) _____

(iv) _____

9. Summarize the main processes that take place in the human digestive system.

(i) _____

(ii) _____

(iii) _____

(iv) _____

(v) _____

SECTION C: (15 Marks) Answer question ten (10)

10. Pathogens spread from one person to another. Discuss five methods by which pathogens spread from one person to another.

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_____

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_____

_____

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