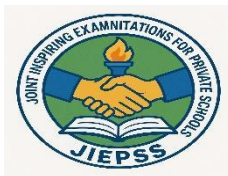


PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT
JOINT INSPIRING EXAMINATIONS FOR PRIVATE SECONDARY SCHOOLS



(JIEPSS)

FORM TWO JOINT TERMINAL EXAMINATION

CODE 033

BIOLOGY

Time: 2:30 Hours

May/ June 2025

Instructions

- i. This paper consists of section A, B and C.
- ii. Answer all questions in in this paper.
- iii. EXCEPT for diagrams which must be drawn in pencil, other writings should be in blue or black ink.
- iv. Cellular phones and any other unauthorized material are not allowed in the examination room.

FOR EXAMINER'S USE ONLY		
QUESTION NUMBER	MARKS	EXAMINER'S SIGNATURE
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
TOTAL MARKS		

ANSWER GRID

LIST A	i	ii.	iii.	iv	v	vi	vii	viii	ix	x
LIST B										

2. Match function of a microscope in list A and corresponding letters labeled in a diagram by writing the correct response beside the item number in your answer sheet.

LIST A	LIST B
<p>(i) Raises or lowers the body tube in order to bring the image into sharp focus</p> <p>(ii) Raises and lowers the stage to keep the specimen in right position for observations.</p> <p>(iii) It supports the eye piece and revolving a nose piece.</p> <p>(iv) Allows light to reflect towards the objective lens to the eye piece lens</p> <p>(v) A part where the eye is placed for making a clear observation.</p>	

ANSWER GRID

LIST A	i	ii	iii	iv	v
LIST B					

SECTION B (70 MARKS)

Answer all questions in this section

3. a) What is meant by the following

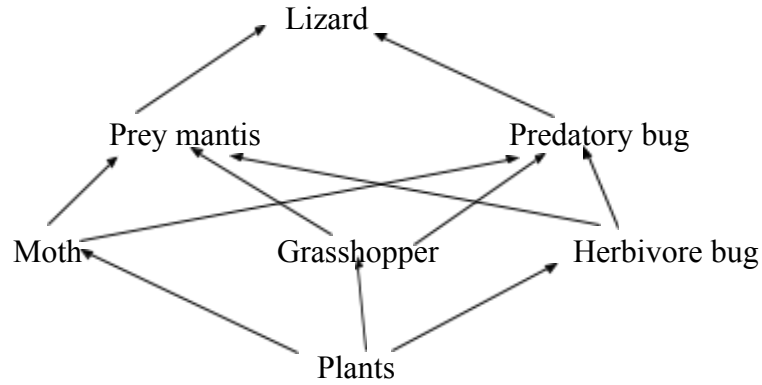
i. Food chain

.....

ii. Food web

.....

b) The sketch below shows a feeding relationship in an ecosystem.



- i. What is the name of the feeding relationship represented above?
.....
- ii. What is the main source of energy in the feeding relationship?
.....
- iii. What does sequence (Plant -> Moth -> Prey mantis-> lizard) represent?
.....

c) Name the organisms that are:-

- i. Primary consumers.....
- ii. Secondary consumers.....

d) Which group of organisms has not been included in the relationship above?
.....

4. (a) Differentiate the following terminologies as applied in biology.

(i) Chemoautotroph from photoautotroph.

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(ii) Photolysis from carbon dioxide fixation.

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(b) The process of photosynthesis requires two raw materials and two conditions; what are they?

(i) Raw materials

.....
.....

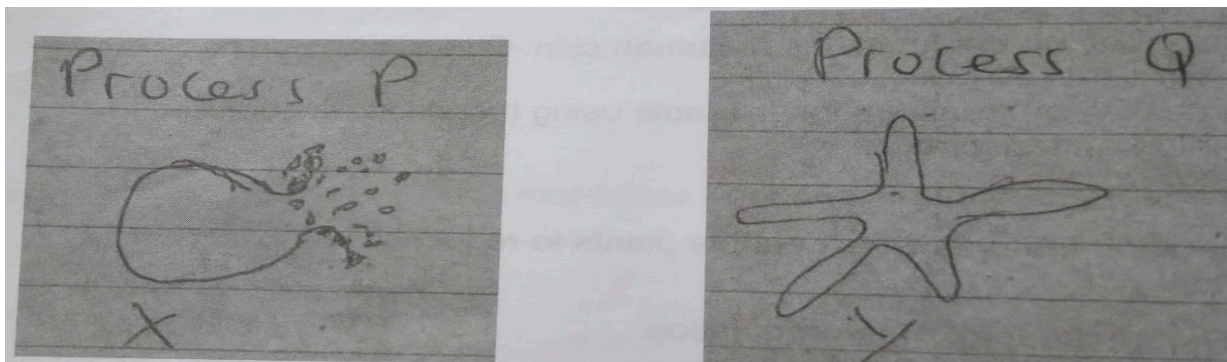
(ii) Conditions

.....
.....

(c) Write down the chemical equations of the process of photosynthesis.

.....
.....

5. Two red blood cells X and Y were dropped in two solutions and the results were as shown below.



a) In what type of solution were the cells placed

i. Cell X.....

ii. Cell Y.....

b) Identify process

i. P.....

ii. Q.....

c) i. How can process Q be reversed?

.....
.....

ii. If a plant cell dipped in similar solution as that of cell X, it will not experience a similar effect. Name the two types of pressure that develops within the plant cell prevent this effect.

.....

iii. Name the structure in amoeba that prevents suffering in similar effects as cell X

.....

d) A form two student told a form one student that osmosis and diffusion are important for the life process to take place in a living organism.

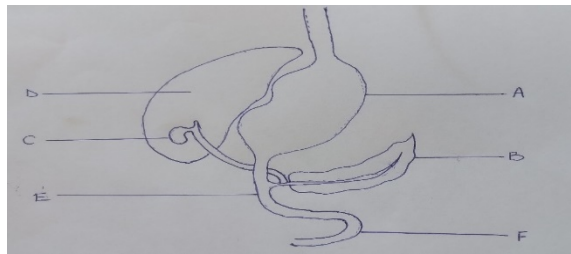
i. What is meant by Osmosis and Diffusion?

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ii. Give two importance of diffusion in in a living organism.

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6. a) Study the diagram below and answer the questions that follows



i. Name parts labelled A, B, C and D.

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.....
.....

ii. Name the finger like projection found in F

iii. State how the structure mentioned (a. ii) above is adapted to its function.

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.....

b) John took 2cm³ of a sample and placed it in a test tube. He then added three drops of iodine solution and shook the mixture. The mixture turned black.

i. Name the food substance present in the sample solution.

.....

ii. State the end product for the digestion of the food substances in (a i.) above.

.....

iii. Mention the deficiency disorder of the food substances above in young mammals.

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iv. Give two natural sources of the food substance mentioned above.

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v. Which part of the alimentary canal does the digestion of food substance above start?

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7. a) Mama K placed a loaf of bread in a moist room. After a few days, the bread was covered by thread like structures which ended in club- shaped structures.

i. Write the common name of the organism that grew on the bread.

.....

ii. Name the kingdom to which the organism belongs.

.....

iii. Name the phylum/division to which the organism belongs.

.....

b) After various medical laboratory tests, Peter was found to have rod-shaped bacteria in blood smear on microscopic slide.

i. Mention three disease that Peter is most likely to be suffering from.

.....

.....

.....

ii. During thorough analysis, it was discovered that Peter produced blood sputum and had night sweats. Name the disease that Peter was suffering from, and the microorganism that cause it.

.....

...

8. Mkude failed to give a clear explanation of some words that are used in Biology. As a form two student, give two differences between;

i. Virus and bacteria

.....

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ii. Artificial classification and natural classification.

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iii. Biology laboratory and school library.

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iv. Moss plant and fern plant.

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v. Plant cell and animal cell.

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9. a) Juma said that biology originates from two Greek words, mention the words and state their meanings.

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.....
b) During a biology lesson, the teacher advised form one students to do what they can to prevent accidents to occur at home and school.

i. What is meant by accident?
.....
.....

ii. Identify four accident that can occur at home.
.....
.....
.....

iii. How can you prevent accidents from occurring in the class room?
.....
.....

- c) Draw the symbols that can be found on the following
 - i. Transformer

- ii. Fuel truck

SECTION C (15 MARKS)

10. The heart is considered to be the engine of the body. It works continuously without getting tired. This enables movement of various materials such as food nutrients, oxygen and waste products in the body. As a form two student with good knowledge about the heart explain how the heart is adapted to its function. (Six points).

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