

PRESIDENT'S OFFICE

REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

LINDI REGIONAL COMMISSIONER'S OFFICE

FORM FOUR MOCK EXAMINATION

BIOLOGY 1

CODE NO.033/1

MAY, 2018

TIME: 3 HOURS

INSTRUCTIONS:

1. This paper consists of sections A, B and C.
2. Answer ALL questions in section A and B and one (1) question from section C.
3. Except diagrams all your work must be neatly written in blue or black pen.
4. Cellular phones are not allowed in the examination room.
5. Write your examination number on every page of your answer booklet(s).

SECTION A

1. For each of the items (i) – (x) choose the correct answer among the given alternatives and write its letter beside the item number in the answer sheet provided.
- i) When the body produces too much ADH, the content of water in the blood will be;
 - a) Reduced
 - b) Remain unchanged
 - c) Increased
 - d) Maintained because ADH produce water in the body
 - e) All answers (A, B, C, D) are correct
 - ii) The bulk movement of substance from one region to another due to difference in pressure between the two regions is called
 - a) Mass flow
 - b) Active transport
 - c) Diffusion
 - d) Osmosis
 - e) Passive transport
 - iii) The purpose of CONTROL in an experiment is to;
 - a) Identify the problem
 - b) Test the hypothesis
 - c) Display results
 - d) Predict results
 - e) Confirm conclusion
 - iv) Which of the following disease is caused by bacteria?
 - a) sleeping sickness
 - b) Malaria
 - c) Tuberculosis
 - d) AIDS
 - e) Ascariasis
 - v) Which of the following joints allow movement in one plane only?
 - a) Ball and socket
 - b) Gliding
 - c) Hinge
 - d) Immovable
 - e) Gliding and immovable
 - vi) In a motor accident, the bus driver found that he could hardly maintain his body equilibrium. Which of the following structure was damaged?
 - a) Semi circular canal
 - b) Medulla oblongata
 - c) Pituitary gland
 - d) Cerebellum
 - e) Hypothalamus

- vii) Gaseous exchange in human being occurs in the;
- Mouth
 - Nose
 - Bronchioles
 - Trachea
 - Alveoli
- viii) Which person suggested that evolution might be the inheritance of acquired characteristics;
- Darwin
 - Mendel
 - Webber
 - Redi
 - Lamarck
- ix) It is composed of sugar, organic base and the phosphate group
- Chromosome
 - Gene
 - Allele
 - Nucleotide
 - Histone
- x) The stamen of a flower consists of;
- Anther and filament
 - Stigma and ovary
 - Anther and stigma
 - Ovary and anther
 - Filament and ovary

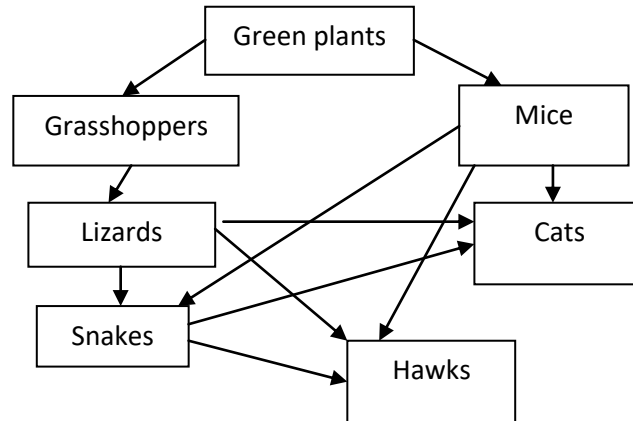
2. Match the response in list B with the phrases in list A by writing the letter of correct response beside the item number in the answer booklet.

LIST A		LIST B	
i	The layer of cells sensitive to light	A	Sclerotic layer
ii	Controls the size of the pupil	B	Choroid layer
iii	Allows light to pass into the eye	C	Aqueous humour
iv	Delicate outer membrane of the eye	D	Vitreous humour
v	Jelly like substance in front of the lens	E	Ciliary muscle
vi	Jelly like substance behind the lens	F	Suspensory ligaments
vii	Corrects short sight	G	Retina
viii	Structures which hold the lens	H	Optic nerves
ix	Cells which transmit the image to the brain	I	Blind spot
x	The layer with plenty of blood capillaries	J	Cornea
		K	Iris
		L	Pupil
		M	Conjunctiva
		N	Diverging lens
		O	Converging lens
		P	Rods and cones

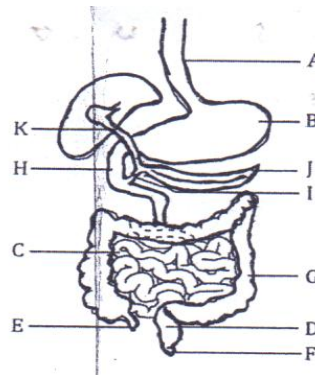
SECTION B: 60 MARKS

Answer all questions in this section

3. a) Define the following terms as used in Biology
- i. First aid Kit
 - ii. Accident
- b) Outline four features which distinguish a Biology laboratory from other school facilities
- c) State the first aid procedures which can be given to someone got motorcycle accident with severe bleeding. (Any four (4) procedures).
4. a) Describe the following ecological terms;
- i. Food chain
 - ii. Trophic level
 - iii. Producers
- b) Study the figure below of a food web and then answer the questions that follow;



- c) (i) Construct three (3) food chains each ending with tertiary consumer
(ii) Which organism has the largest variety of preys?
(iii) How would the ecosystem be affected if there could be a prolonged drought?
(iv) From the food web which organisms can both be a secondary and tertiary consumers.
5. The diagram below is the alimentary canal of human being. Study it carefully and answer the questions that follow;



- a) Name the parts labeled A – K
- b) (i) Name the juice which is produced in the part labeled B
(ii) Mention the substances contained in the juice named in b (i) above
6. a) (i) What do you understand by the term “Locomotion:
(ii) Briefly describe why “movement of curvature” is a better way to explain plant growth rather than the term “bending”?
- b) (i) State any two functions of skeleton
(ii) Describe two useful substances excreted by plants
7. a) Define the following terms as used in Genetics
- Gene
 - Recessive
- b) When a pure pea plants with green pods were crossed with yellow pods, result in all the F₁ plants with green pods. Out of 580F₂ plants, 429 had green pods. Let the gene for pod colour be G and g.
- Which colour was dominant and the other recessive? Give reasons.
 - In F₂ plants how many were recessive, heterozygous and homozygous dominant
8. a) Mabangayeye is a woman whose menstrual starts at 9th day every month. Having the understanding of menstrual cycle:-
Draw a diagram to show her monthly menstrual cycle for days which are danger, and safe.
- b) List any four (4) factors which can cause changes to Mabangayeye’s menstrual cycle
- c) State any three roles of mammalian blood
9. a) (i) Define the term “intercalary growth”
b) State and briefly explain three external conditions necessary for seed germination
10. Study the equations below and answer the questions that follow.
- $C_6H_{12}O_6 + 6O_2 \rightarrow 6H_2O + 6CO_2 + Energy$
 - $C_6H_{12}O_6 \rightarrow C_6H_5OH + 2CO_2 + Energy$
- What kind of metabolic reactions represented by each of these equations
 - Write an equation to show the reaction similar to equation (a) (2) above which occur in animal cells
- c) With examples, briefly explain how comparative embryology supports the idea of organic evolution

SECTION C: 20 MARKS

Answer only one question

11. Write an essay on “drug abuse: using the following headlines:-
- Concept of drug abuse
 - Examples of common drugs
 - Causes of drug abuse
 - Effects of drug abuse
 - Ways of preventing drug abuse
12. “KEEP THE ENVIRONMENT CLEAN”, Is the most current slogan in which the community is assigned to do general public cleanliness of their surroundings and proper waste disposal, one day in a month. You as a student knowledgeable in this, with examples, suggest the best method of waste disposal and the impacts of poor waste disposal in the community.
13. Explain six factors that affect human immunity.