

**PRESIDENT'S OFFICE**  
**REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT**  
**MBEYA DISTRICT COUNCIL**  
**FORM FOUR MOCK EXAMINATIONS-2017**  
**BIOLOGY 1**

**CODE 033/01**

TIME 3HRS

19/07/2017

**INSTRUCTIONS.**

1. This paper consist of sections A, B, and C
2. Answer ALL questions in section A and B and only One (1) question from section C.
3. Calculator and cellular phones are not allowed in the examination room.
4. Except for diagrams that must be drawn in pencil, all writings should be done using a blue or black pen.
5. Write your examination number on every page of your answer sheet or Booklet.

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**SECTION A: (20 Marks)**

1. For each of the items (i) – (x) choose the correct answer from among the given alternatives and write its letter beside the item number.
  - i. The Bowman's capsule is found in which of the following organs?  
A. Liver B. Pancrease C. Kidney D. Spleen E. Heart
  - ii. Digestion of starch starts in  
A. Mouth B. Stomach C. Ileum D. Colon E. Duodenum.
  - iii. Parts of the animals body which detect the change in the environment is called  
A. Effector B. Receptor C. Response D. Stimulus E. Coordinator.
  - iv. The concept of good health implies ..... health  
A. Physical, mental and social  
B. Mental, physical and sexual  
C. Reproductive, social and family  
D. Physical, mental and family  
E. All of the above are correct
  - v. The offsprings of crosses between red flowered and white flowered plants were always found to be pink. This is an example of  
A. Crossing over B. Mutation C. Co-dominance D. Inbreeding  
E. Incomplete dominance

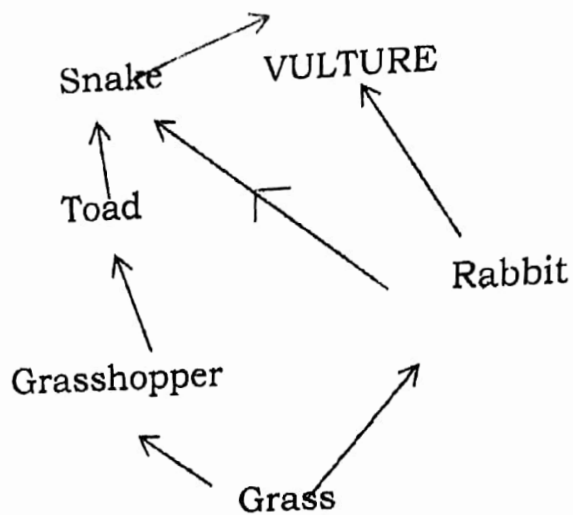
- vi. The structures that perform different functions, but have similar ancestral origin are known as  
 A. Analogous endoskeleton  
 B. Exoskeleton  
 C. Analogous endoskeleton  
 D. Homologous structures  
 E. Vestigial organs
- vii. A blood vessel which conveys deoxygenated blood away from the heart is called.  
 A. Capillaries B. Artery C. Vein D. Pulmonary artery E. Pulmonary vein
- viii. Organisms with similar nutritional habits constitute  
 A. Biosphere B. Food web C. Ecosystem D. Trophic Level E. Community
- ix. Which of the following is a metabolic waste product  
 A. Tears B. Saliva C. Urine D. Mucus E. Feases
- x. Which of the process is involved in regulation of body temperature in human being?  
 A. Urination B. Panting C. Deamination D. Sweating E. Detoxification.
2. Match the phrases in list A with the responses in List B by writing the letter of the correct response from List B beside the item number of list A in your answer sheet paper.

LIST A	LIST B
i. The chamber between oviduct and cervix where zygote develops.	A. Fertilization
ii. Transfer of pollen grain from anther to the stigma	B. Testis
iii. Parts of tests which store sperm.	C. Anaphase stage
iv. Monthly activities accompanied with changes in the ovaries and uterus.	D. Two eggs fertilized at the same time.
v. Prevents diseases causing microorganism and their toxins from mother getting to the foetus.	E. Stigma, style and ovary
vi. Mixing of the characters with two plants of the same species for beneficial such as Diseases resistance and high yield.	F. Anther, style and ovary
vii. Parts which make the female reproductive organ of flower.	G. One egg split into two
viii. The chromatids separate from each other at the centromere.	H. Crossing over
ix. Chorion, allantois, Amnion	I. Epididymis
x. Twins of different sex	J. Menstrual cycle
	K. Vegetative propagation
	L. Placenta
	M. Vagina
	N. Embryonic membrane
	O. Pollination
	P. Scrotum
	Q. Uterus
	R. Metaphase stage

**SECTION B: (60 Marks)**

**Each question carries 8 marks except question 5 and 9 carries 6 marks.**

3. (a) Define the term gaseous exchange and Respiratory surface.  
(b) Write features for respiratory surface.  
(c) Explain why the rate of breathing increases during physical exercise.
4. (a) What do you understand by the term classification of Living things.  
(b) Classify the following organisms up to their class Levels Moss plant and Tilapia Fish.  
(c) State any four adaptive features which make a fish to Live in water.
5. (a) Define the term Transpiration.  
(b) Outline three (3) factors affecting Transpiration.  
(c) State significance of transpiration
6. (a) (i) What is a reflex action.  
(ii) Give two examples of Reflex action.  
(iii) Explain the importance of Reflex actions to animals.  
  
(b) (i) State to differences between nervous coordination and hormonal coordination.  
(ii) Why can a person manage to climb a big tree when they suddenly see a big Lion.
7. Distinguish between the following pairs of terms
  - a) Gene and allele
  - b) Dominant and Recessive
  - c) Homozygous and Heterozygous
  - d) Phenotype and Genotype.
8. (a) Define the following terms  
(i) Growth (ii) Intercalary growth.  
(b) Briefly explain three (3) factors that affect growth and development in human.  
(c) Outline the three (3) changes that take place inside a seed before it germinate.
9. (a) Name two types of girdles found in human skeletal system.  
(b) (i) Describe the three (3) main functions of the girdles.  
(ii) State the type of joint formed at the girdles.
10. (a) What is the three significance of food chain and food web in real life Situation?  
  
(b) Study the following diagram then answer the questions that follow.



- i. What is the name of the feeding relationship represented above.
- ii. Name organism which is both prey and predator.
- iii. Which group of organism is missing above and the role it play.
- iv. Construct a food chain in which a vultures is a secondary consumer.

**SECTION C: (20 Marks)**

11. Discuss the application of genetics in everyday life.
12. Explain six factors affecting the body immunity in human being.
13. (i). What do you understand by the term coordination.  
(ii) Briefly explain the mechanism of hearing in mammals.