

S.M.Z.

ZANZIBAR EXAMINATION COUNCIL

FORM THREE ENTRANCE EXAMINATION 2014

BIOLOGY**TIME: 2.30 Hours****INSTRUCTIONS TO CANDIDATE**

1. This paper consists of TWO sections A and B. Answer ALL questions in section A and only 7 questions from section B.
2. Write all answers in the space provided under each question.
3. Write your centre and index number as indicated on the top right corner of each page
4. Circle the number of the question which you have attempted in the table below.

QUESTIONS NUMBER	THIS PART FOR EXAMINAER'S ONLY	
	MARKS	SIGNATURE
1.		
2.		
3.		
4.		
5.		
6.		
7.		
9.		
10.		
11.		
12.		

THIS PAPER CONSISTS OF 14 PRINTED PAGES

SECTION A

Answer all questions in this Section

- vii) Gastric juice contains ()
A: Amylase and Rennin B: Amylase and Pepsin
C: Rennin and Pepsin D: Rennin and Ptyalin
- viii) Disease which occurs occasionally and at random intervals e.g, ebola and Rift valley fever are classified as ()
A: Epidemic B: Sporadic
C: Endemic D: Pandemic
- ix) Which of the following would result if a plant cell is placed in a strong solution? ()
A: Turgidity B: Hydrolysis
C: Plasmolysis D: Haemolysis
- x) Part of the tooth that contains blood capillaries and nerve ending is called ()
A: Cement B: Dentine
C: Enamel D: Pulp Cavity

2. The following are the matching items. Match the statements in the List A with the correct one in List B. Write the number against the space provided

	LIST A	LIST B
i)	Movement of muscles which brings contraction to allow passage of food from the esophagus.	1. Hookworm. 2. Tricuspid valve 3. Wearing clean clothes. 4. Hypotonic. 5. Peristalsis. 6. Hypertonic. 7. Mushroom 8. Lenticels 9. Sweating 10. Hemophilia 11. Rickets 12. Anemia 13. Marasmus 14. Bicuspid valve 15. Filaria-worm 16. Food webs 17. Producers 18. Stomata 19. Photolysis 20. Pathogens
ii)	Is a saprophytic multi cellular organism.	
iii)	The opening between the left auricle and the ventricle is controlled by	
iv)	A small opening on the stem of woody plant which is responsible for gaseous exchange.	
v)	A way of maintaining personal hygiene.	
vi)	A solution which has a lower water potential.	
vii)	Elephantiasis is a disease of the lymphatic system in human being caused by	
viii)	Inability of the blood to clot easily.	
ix)	Loss of weight, slowed growth Decreased activity and lack of energy are the signs and symptoms of	
x)	Help to maintain the balance of the total number of the organisms in the environment	

3. The following statements either correct or wrong. In the spaces provided write TRUE if the statement is correct and FALSE if the statement is wrong.

- i) _____ Photometer is the instrument used to measure the rate of transpiration in plant.

- ii) _____ Gonorrhea, syphilis, malaria and bilharzias among sexual transmitted diseases.
- iii) _____ Biology is an importance subject because it help us to understand the relation between matter and energy.
- iv) _____ The loss of water by evaporation from plant is called plasmolysis.
- v) _____ Formulating the hypothesis is the first step in the scientific process.
- vi) _____ Enzymes work either in acidity or alkalinity medium.
- vii) _____ Absorption of digested food takes place in the ileum.
- viii) _____ Vascular tissue and blood are all equal in functions
- ix) _____ Extreme intake of fat food may lead to obesity.
- x) _____ Translocation is the process by which plant shade its leaves.

SECTION B

Answer any seven (7) questions from this section

4. a) Define Dentition

- b) Write the dental formula of a man

- c) Draw a large and fully labeled diagram of an incisor tooth.

d) What is the work of molar tooth?

e) Write two (2) common dental diseases.

i) _____

ii) _____

5. a) Give the name of storage organ for each of the following

i) Cassava _____

ii) Irish potato _____

iii) Onion _____

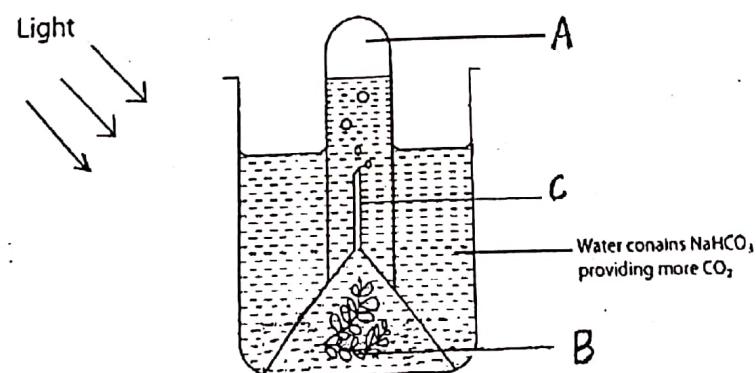
b) Mention three (3) importances of photosynthesis to living things

i) _____

ii) _____

iii) _____

c)



Study this diagram very careful and then answer the following questions

- i) Label the parts A to C

A: _____

B: _____

C: _____

- ii) How gas A is tested

- iii) What does the diagram illustrate?

- d) Name all necessary conditions for photosynthesis

6. a) What is a first aid Kit?

- b) i) Mention any three items that are found in the first aid Kit and state the use of each item.

- ii) Why it is necessary to cover your hands with gloves or plastic material when giving first aid to a bleeding person?

- c) If the child has swallowed Kerosine oil, how can you help the child?

7. a) What is immunity?

- b) Give the long forms of:-

- i) STDs _____
ii) STIs _____
iii) HIV _____
iv) AIDS _____

- c) Mention four (4) effects of HIV and AIDS

- i) _____
ii) _____
iii) _____
iv) _____

- d) During prevention and control of HIV and AIDS the first rule is to avoid sexual behavior followed by A,B C guide. This means:-

- A _____
 B _____
 C _____

8. a) What is a transpiration?

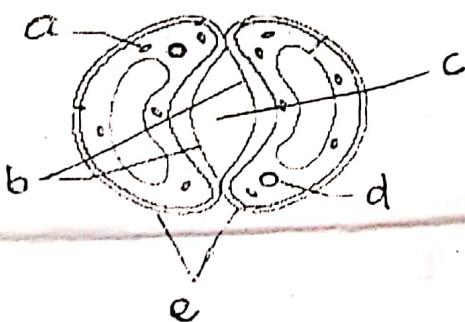
b) How do the following types of transpiration take place:-

i) Stomata transpiration

ii) Cuticular transpiration

iii) Lenticular transpiration

c) Complete the diagram of guard cell showing stoma



a)

b)

c)

d)

e)

- d) Give four (4) differences between monocoty and dicotyledonous seeds.

Monocotyledonous seed	Dicotyledonous seed
1.	
2.	
3.	
4.	

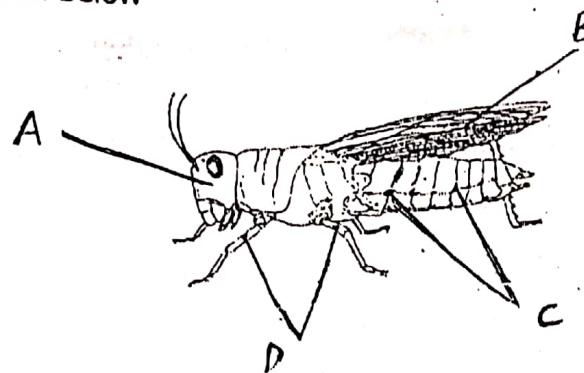
9. a) Define the term respiration

- b) What is the difference between:-

- i) Respiration and gaseous exchange

- ii) Aerobic respiration and anaerobic respiration

c) Label the diagram below



A is _____

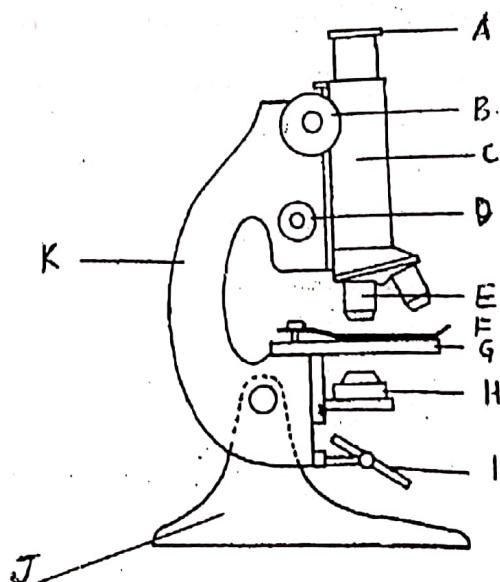
B is _____

C is _____

D is _____

d) Which label from the diagram is responsible for the respiration of the animal?

10. Use the following diagram of the microscope to answer the following questions



- a) Name the parts labeled: A, B, C, E, G and H

A _____
B _____
C _____
E _____
G _____
H _____

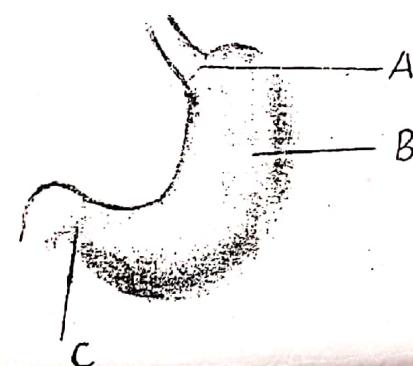
- b) State the functions of the parts. D, F, I, J and K

PARTS	FUNCTIONS
D	
F	
I	
J	
K	

- c) If the magnification power of the eyepiece lens is $\times 10$ and the total magnification of a specimen is $\times 400$, work out the magnification power of the objective lens.

11. a) What is digestion?

- b) Study the following diagram of the human stomach and then label the parts.



a)

b)

c)

- c) Name and state the functions of five enzymes present in intestinal juice or succus entericus.

ENZYMES	FUNCTIONS
i)	
ii)	
iii)	
iv)	
v)	

12. a) Mention three blood vessels

I) _____
II) _____
III) _____

- b) Write three (3) differences between arteries and veins

ARTERY	VEINS
1.	
2.	
3.	

- c) Give the difference between:-

- i) Double circulation and single circulation

- ii) Pulmonary circulation and systematic circulation
