

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 EXAMINER'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**

1. Questions (i) – (x) are multiple choice items write the letter of the most correct answer in the bracket against each questions.
- i) Factors which contribute to spread of dental carries in human being include ()
- A: Prolonged exposure to cold water
B: Prolonged exposure to bitter food
C: Prolonged exposure to warm water
D: Prolonged exposure to sugary food
- ii) The chicken lung is an example of a ()
- A: Cell
B: An organs
C: Tissue
D: System
- iii) A branch of Biology which concerned with body defense against infections and diseases is called ()
- A: Immunology
B: Parastology
C: Cytology
D: Entomology
- iv) In light microscope the part that regulates the amount of light from the mirror to the condenser is ()
- A: Stage
B: Condenser
C: Mirror
D: Diaphragm
- v) Which of the following organisms cause dysentery? ()
- A: Plasmodium
B: Entamoeba
C: Trypanosome
D: Staphylococcus
- vi) Blood vessel which conveys deoxygenated blood away from the heart is called ()
- A: Pulmonary artery
B: Vein
C: Pulmonary vein
D: Capillaries

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

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

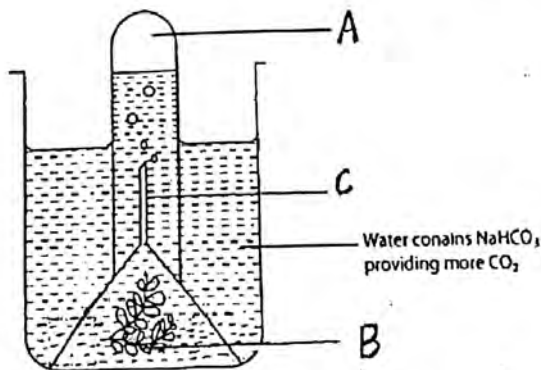
i)

ii)

iii)

c)

Light



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?

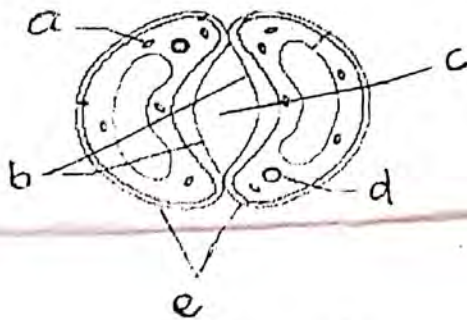
b) How do the following types of transpiration take place:-

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.	

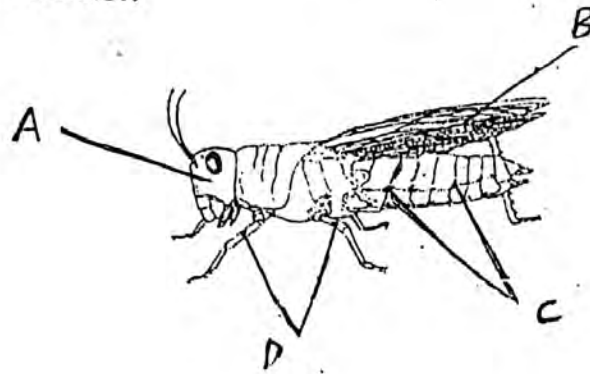
9. a) Define the term respiration

- b) What is the difference between:-

- i) Respiration and gaseous exchange

- ii) Aerobic respiration and anaerobic respiration

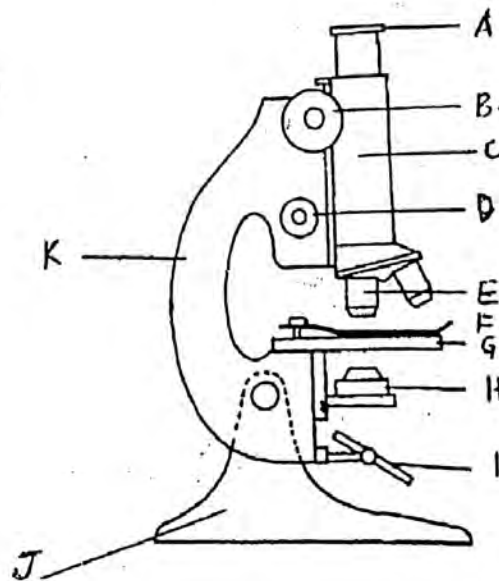
c) Label the diagram below



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 _____

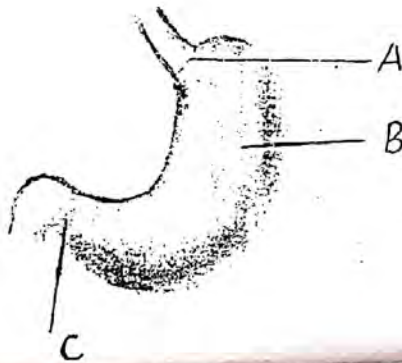
b) State the functions of the parts. D, F, I, J and K

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