

**KAIZIREGE SECONDARY SCHOOL**  
**FORM TWO PRE-NATIONAL II EXAMINATION OCTOBER 2017**

**SUBJECT: BIOLOGY**

**TIME: 2:30 HOURS**

**Instructions:**

- Do all questions in section A and B.
- Answer only one question in section C.
- All answers to all questions must be written in spaces provided.

**SECTION A.**

1. Choose the correct answer from among the given alternatives and write its letter in the table below.

i	ii	iii	iv	v	vi	vii	viii	ix	x

- (i) Gaseous exchange in plants does not take place in the:  
 A. Flowers                      B. leaves                      C. Roots      D. Stems
- (ii) Absorption of food takes place in the:  
 A. Ileum                      B. liver                      C. stomach      D. colon
- (iii) Which one of the following diseases is not communicable  
 A. Malaria                      B. Tuberculosis      C. Cholera      D. Cancer
- (iv) Which of the following is not transported by plasma?  
 A. Faeces      B. hormones      C. Nutrients      D. Enzymes
- (v) A food sample turned violet when sodium hydroxide solution was added to it followed by copper (II) sulphate solution dropwise. Food sample contained  
 A. Lipid                      B. starch                      C. protein      D. reducing sugar
- (vi) The component of blood responsible for transporting oxygen is  
 A. White blood cells      B. platelets                      C. Red blood cells      D. Plasma
- (vii) The whole process of taking in food, digesting it to obtain nutrients is called  
 A. Nutrition                      B. Respiration                      C. Metabolism                      D. Absorption
- (viii) Aerobic respiration takes place in presence of  
 A. Water                      B. glucose                      C. Carbondioxide                      D. Oxygen
- (ix) The structures on the wall of ileum responsible for absorption of digested food are called  
 A. Villi                      B. alveoli                      C. capillaries                      D. epithelium

- (x) Organisms which move by means of flagella are:  
 A. Paramecium and euglena  
 B. Euglena and amoeba  
 C. Amoeba and bacteria  
 D. Bacteria and euglena

2. Write **TRUE** if the statement is correct and **FALSE** if the statement is wrong.
- (i) Blood groups are arranged basing on presence or absence of antibodies in plasma \_\_\_\_\_
  - (ii) Fungi can make their own food \_\_\_\_\_
  - (iii) Root hairs are for gaseous exchange in plants \_\_\_\_\_.
  - (iv) Exhaled air has a higher content of oxygen \_\_\_\_\_.
  - (v) The nucleus of a cell in plants carries out photosynthesis \_\_\_\_\_.
  - (vi) Respiration occurs in cells of organisms \_\_\_\_\_.
  - (vii) Some cells have no nuclei \_\_\_\_\_.
  - (viii) Red blood cells have no nuclei \_\_\_\_\_.
  - (ix) Plants and animals are examples of ecosystems \_\_\_\_\_.
  - (xi) Sewage treatment is one of economic importance of bacteria \_\_\_\_\_

**2. Match the item in list A with that in list B by writing its letter in the table below**

i	ii	iii	iv	v	vi	vii	viii	ix	x

<ul style="list-style-type: none"> <li>(i) A vascular tissue used for transportation of water and minerals towards a leaf.</li> <li>(ii) A small pore which allows gaseous exchange into and out of a leaf.</li> <li>(iii) A water proof material that protects the leaf from injury and excessive water loss.</li> <li>(iv) A bean shaped structure for effective control of water loss and gaseous exchange.</li> <li>(v) A broad part of a leaf which increases surface area for absorption of carbondioxide and light.</li> <li>(vi) A part of a leaf with cells loosely packed to allow maximum gaseous exchange.</li> <li>(vii) A vascular tissue that transports manufactured food away from a leaf.</li> <li>(viii) A part of a leaf with abundant chlorophyll to maximise light absorption and photosynthesis.</li> <li>(ix) A leaf stalk attaching the leaf to the stem</li> <li>(x) The outermost layer found on lower and upper surface of a leaf</li> </ul>	<ul style="list-style-type: none"> <li>A. Spongy mesophll</li> <li>B. Air space</li> <li>C. Epidermis</li> <li>D. Lamina</li> <li>E. Stomata</li> <li>F. Palisade mesophyll</li> <li>G. Xylem</li> <li>H. Midrib</li> <li>I. Petiole</li> <li>J. Veins</li> <li>K. Apex</li> <li>L. Phloem</li> <li>M. Cuticle</li> <li>N. Margin</li> <li>O. Guard cell</li> </ul>
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**SECTION B.**

4. a) What is respiration?

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b) Mention two features of respiratory surfaces.

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c) Name two end products of anaerobic respiration in plants.

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d) State three differences between aerobic and anaerobic respiration

<b>Anaerobic Respiration</b>	<b>Aerobic respiration</b>

5. (a) Give the function of the following in the body

(i) Red blood cells

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(ii) White blood cells

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(iii) Platelets

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6. (a) Define the following terms.

(i) Food chain

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(ii) Food web

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(iii) Trophic level

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(b) Construct a food web for an ecosystem with the following organisms; rabbits, rats, millet, rice, antelope, lion, tiger, vultures, saprophytes.

(c) Mention two significances of food chains in real life situation

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7. a) Differentiate between classification and binomial nomenclature

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b) State three advantages of natural classification

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c) Give three differences between natural classification and artificial classification.

natural classification	artificial classification.

8. a) Define digestion of food

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b) Fill the blank spaces in the table below showing digestion in humans

Part of the gut	Enzymes	Food substance acted on	Products
Mouth	Salivary amylase		maltose
Stomach		Protein	Peptides
Duodenum	Pancreatic amylase		maltose
	Lipase	Lipids	
Ileum		Protein	Peptides
	Peptidase	Peptides	
	Maltase	Maltose	
		Sucrose	Glucose + fructose
		Lactose	Glucose + galactose
	Lipase	Lipids	

**SECTION C.**

9. Write an essay on food preservation using the following guidelines;

- Meaning of food preservation.
- Traditional methods used in food preservation and examples of food preserved.
- modern methods used in food preservation and examples of foods preserved.

10. Write an essay on transpiration using the following guidelines

- meaning of transpiration.
- external (environmental) factors that affect the rate of transpiration.



Candidate's number \_\_\_\_\_ Stream \_\_\_\_\_ Date \_\_\_\_\_

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