BIOLOGY FORM THREE ENTRANCE EXAM ZANZIBAR 2014

Solutions from: Maktaba by TETEA

By Yohana Lazaro

1.

i	ii	iii	iv	v	vi	vii	viii	ix	x
D	B	A	D	B	A	C	B	C	D

2.

i	ii	iii	iv	v	vi	vii	viii	ix	x
5	7	14	8	3	4		10	13	16

3.

i	ii	iii	iv	v	vi	vii	viii	ix	x
False	False	False	False	False	True	True	True	False	False

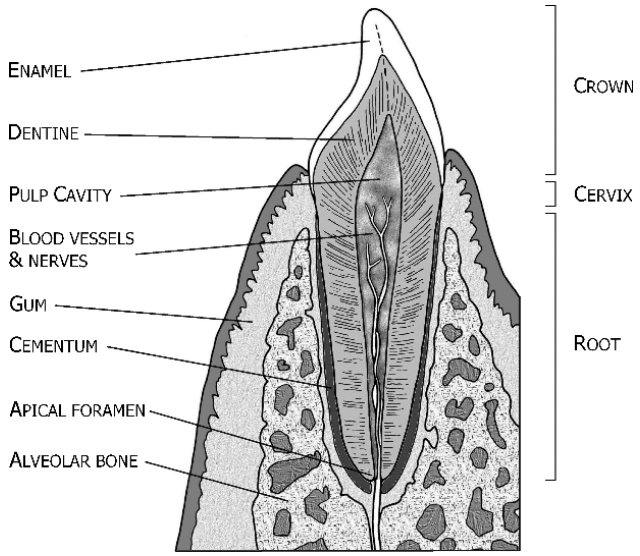
4.(a)Dentition is the makeup of a set of teeth including their kind, number, and arrangement.

(b)dental formula of human

I 2/2 C 1/1 P 2/2 M 3/3

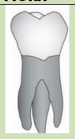
Where,I = Incisor, C = Canine, P = Premolar, M = Molar

(c) AN INCISSOR TEETH.



(d)molar teeth is used for chewing and grinding hard teeth.

Types of human teeth

	Incisor	Canine	Premolar	Molar
				
Position in mouth	Front	Either side of incisors	Behind canine	Back
Description	Chisel-shaped (sharp edge)	Slightly more pointed than incisors	2 points (cusps), 1 or 2 roots	4 or 5 cusps 2 or 3 roots
Function	Biting of pieces of food	Similar function to incisors	Tearing and grinding food	Chewing and grinding food

(e)dental diseases

-gum diseases (periodontitis)

-tooth decay.

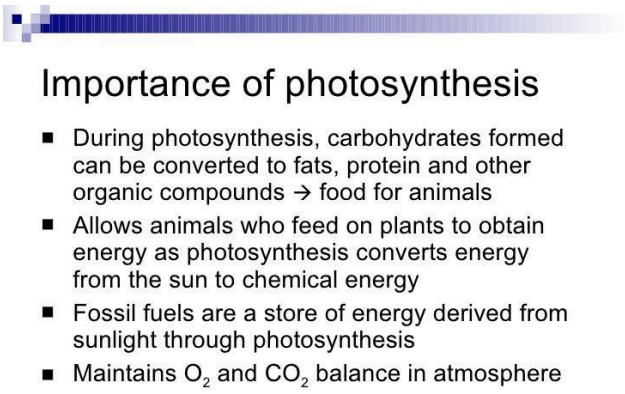
5(a)Storage organs

-cassava-Roots

-Irish potato-stem tubers.

-Onion-bulbs

(b)



(c)(i)-A is oxygen

-B is leaves

-C is Funnel.

(ii)gas A is tested by supporting combustion of a glowing split.

(iii)the photosynthesis of leaves.

(iv)conditions for photosynthesis include

-carbondioxide

-sunlight

-chlorophyll.

6.(a)First aid kit is a small box used to keep instrument used for giving first aid.

(b)(i) components and uses

-gloves used to protect hands

-pair of scissors used to cut dress materials like bandage

-cotton wool used to clean the wound

(ii)covering hands helps to prevent the direct contact to the other body fluids which could cause infection

(c)once a child swallow kerosene is supposed to be given plenty of water or milk in order to neutralise the poison from kerosene.

7.(a)Immunity is the ability of the body to resist diseases.

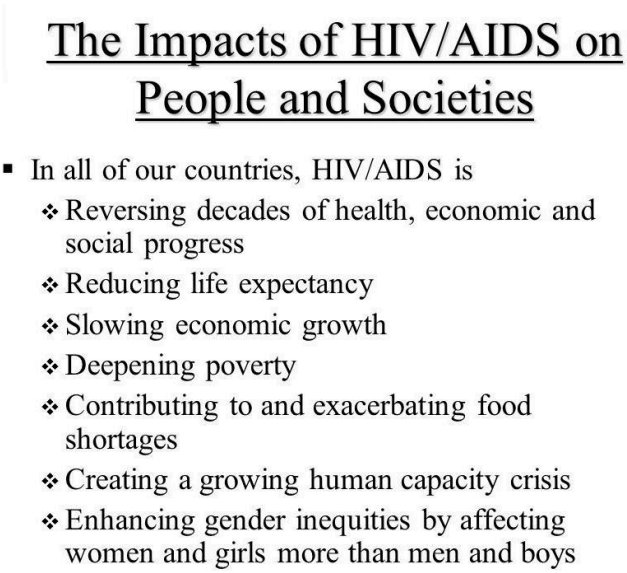
(b)STDs Sexually Transmitted Diseases

STIs. Sexually Transmitted Infections

HIV. Human Immunodeficiency Virus

AIDs Acquired Immune-Deficiency Syndrome.

(c)



(d)A -abstain from sexual intercourse.

B-be faithful to only one sexual partner

C- use CONDOM

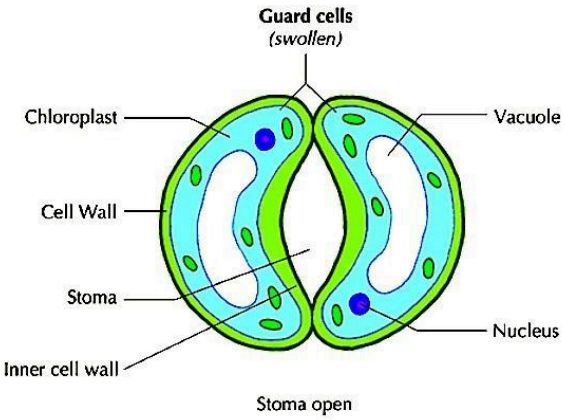
8.(a)Transpiration is the process by which plants loose water.

(b)(i) stomatal Transpiration is when a plant loses water through stomata.

(ii)cuticular Transpiration is when a plant loses water through cuticles.

(iii) Lenticular Transpiration is when a plant loses water through lentcles.

(c)



Stoma open

(d)

Comparison of Monocots and Dicots

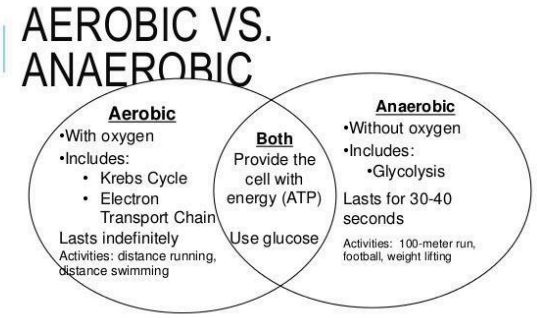
	Monocots	Dicots
Seeds	Single cotyledon	Two cotyledons
Leaves	Parallel veins	Branched veins
Flowers	Floral parts often in multiples of 3	Floral parts often in multiples of 4 or 5
Stems	Vascular bundles scattered throughout stem	Vascular bundles arranged in a ring
Roots	Fibrous roots	Taproot

9.(a) Respiration is the process of breaking down food in presence of oxygen to give out energy.

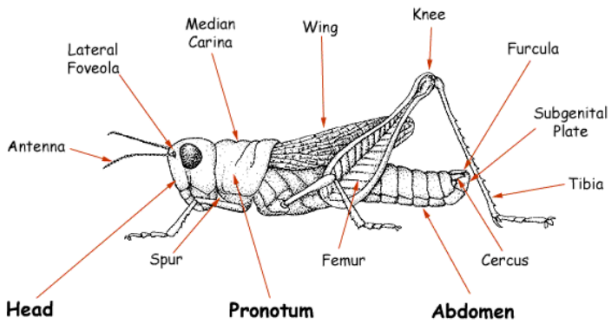
(b)(i)

Breathing	Respiration
Breathing is a continuous process that involves both inhalation and exhalation.	The process in which food is broken down in the cells to release energy is known as respiration.
It is a physical process.	It is a biochemical process.
Breathing is a part of respiration.	It involves the release of energy.

(ii)



(c)



(d)the lable part responsible for respiration is C.

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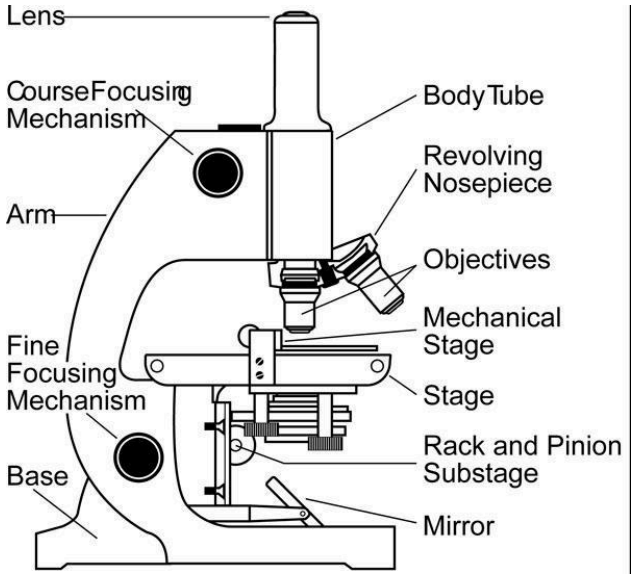
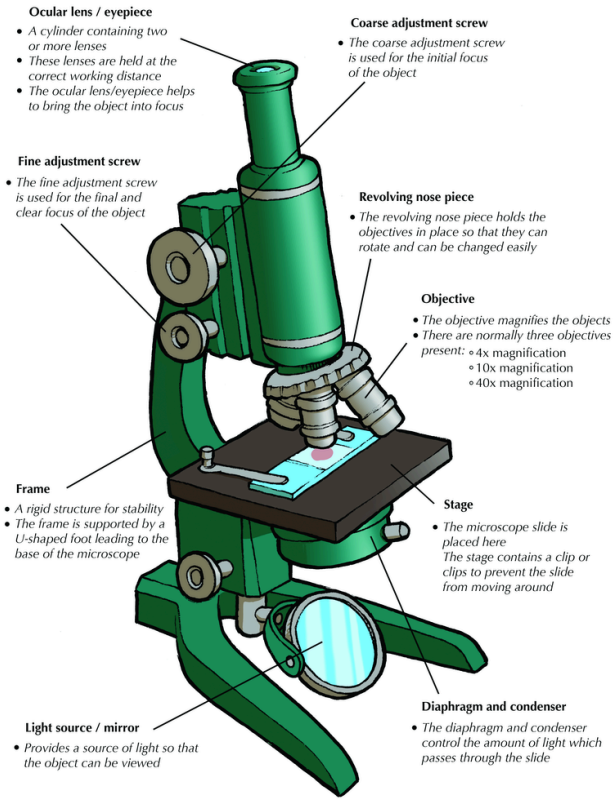
10. (a)MICROSCOPE



(b)



(c) total magnification = eyepiece magn x objective magnification.

Objective power = magnification ÷ eyepiece

= x400/x10

Magnification power of the objective lens is x40.

11.(a)Digestion is the process of breaking down food materials into small pieces

(b)A cardiac sphincter muscles

B stomach

C pyrolic sphincter.

(c)

Enzymes present in intestinal juice

- The walls of the small intestine secrete digestive enzymes to digest food.
- Peptidases to split small peptides into amino acids.
- Maltase acts on maltose and converts it into glucose.
- Sucrase acts on sucrose and converts it into glucose and fructose.
- Lactase acts on lactose and converts it into glucose and galactose.
- Lipases acts on lipids and convert it into fatty acid and glycerol.

11.(a) blood vessels are

-aterier

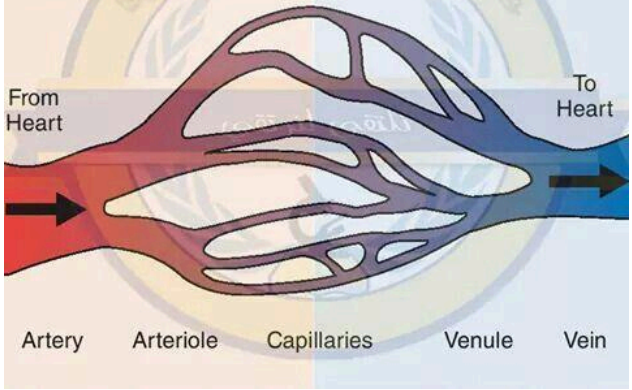
-veins

-capillaries.

(b)

ARTERIES VERSUS VEINS

Arteries	Veins
1. Carry blood from the heart, carry oxygenated blood (except pulmonary artery)	1. Carry blood to the heart, carry deoxygenated blood (except pulmonary vein)
2. Normally bright red in color	2. Normally dark red in color
3. Elastic walls that expand with surge of blood	3. Thin walls/less elastic
4. No valves	4. Valves
5. Can feel a pulse	5. No pulse



(c)(i)

Single circulation	Double circulation
1) Blood flows through heart only once for completing one circulation. It is called single circulation. **Eg :** Fishes	1) If the blood flows through heart two times for completion of one circulation. It is called double circulation. **Eg :** Mammals, birds.
2) Pulmonary circulation is absent.	2) Pulmonary circulation is present.
3) Heart consists of two chambers.	3) Heart consists of three or four chambers.
4) Single circulation is seen in fishes.	4) Double circulation occurs in frogs, reptiles, birds and mammals.

(ii)