BIOLOGY 1 2020 - NECTA FORM FOUR

Solutions from: dadisi.co.tz TEA

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1.

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

2.

LIST A	LIST B
i	G
ii	A
iii	D
iv	B
v	E

3.(a)Ways that can be used to avoid accidents at school laboratory: -

-keep chemical containers closed, except when in use.

-maintain adequate ventilation

-use labelled and proper safety cans and cabinets.

(b)causes of cut accidents at home

-getting bitten

-falling onto something sharp

-stepping on a sharp object, such as nail.

4.Structure of tilapia fish.

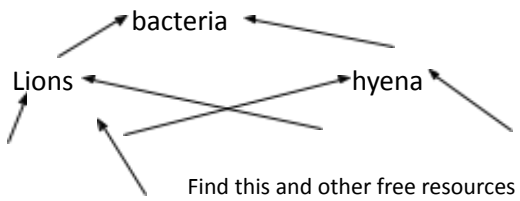
(a)NATURE OF SKELETON-has the endoskeleton

(b)TYPES OF SCALES – has fairly large scales which scrape off easily with moderate flying about.

(c)POSITION OF MOUTH- Has a protrusible, usually bordered with wide and often swollen lips.

(d)TAIL FIN- has the caudal fins.

5.(a)FOOD WEB



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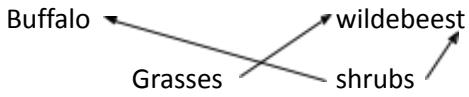

(b)once bacteria removed from ecosystem, there will be no organic nutrients and all the dead plants would destroy the animals habitat. The ecosystem will be fill by plants and animal wastes as there will be no decomposers to decompose waste materials.

6(a)-artery and veins.

(b)the vessel with high pressure transmits blood to the whole body from the heart that why it has high pressure, while the other has low pressure as transmit blood to the heart.

7.Significances of mitosis.

-helps to body repair

-helps to growth and development of an organism

-it makes the identical copies of a single cell.

8.Adaptations of the eye.

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Adaptation to function of the eye

STRUCTURE	ADAPTATION	FUNCTION
1. Sclera	A tough fibrous layer	Protect the inner delicate eye structures
2. Cornea	Transparent layer	1. Allow light to enter the eye
		2. refract light
3. conjuctiva	Thin transparent membrane	Protects the eye ball
4. Choroid	1.Dark pigmented membrane. 2. Contains blood capillaries	1.Absorbs astray light preventing internal reflections 2. provides nourishment to eye cells
5. Iris	1.Thin round tissue of muscles(circular& Radial) 2. it is pigmented	1. Contracts to reduce pupil diameter Relaxes to increase pupil diameter 2. Give eye its color
6. Pupil	1. An open in the iris	Allow light to enter the eye.
7. Ciliary body	1. muscular tissue 2. It is glandular	1. contracts& relaxes to change lens curvature (accommodation) 2. secretes aqueous humour
8. Lens	1. transparent	1. to allow light to pass thro
	2. Biconvex structure	2. to converge light at the retina
9. suspensory ligaments	Elastic ligaments	which tighten or loosen to change the curvature of the lens
10. Aqueous humour	Watery transparent fluid	1. maintain eyeball shape refracted in coming light
11.Vitreous humour	Jelly like transparent fluid	Maintain the shape of the eye ball
12. Retina	1. Have cones (photochemical pigments-Iodeosin)	Perceive high intensity light
	2. Have Rods (photochemical pigments – Rhodopsin)	1.Perceive low intensity light 2. Sensitive to color
	3. have Neurons	Transmission of nerve impulses
13. Blind spot		Where the optic nerves enter the eye ball
14. Fovea	Have many cones	Site where images fall on the retina

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9.ways by which plants get rid of waste materials; -

-by transpiration process where they remove excess water.

-through leaves when shedding

-by diffusion.

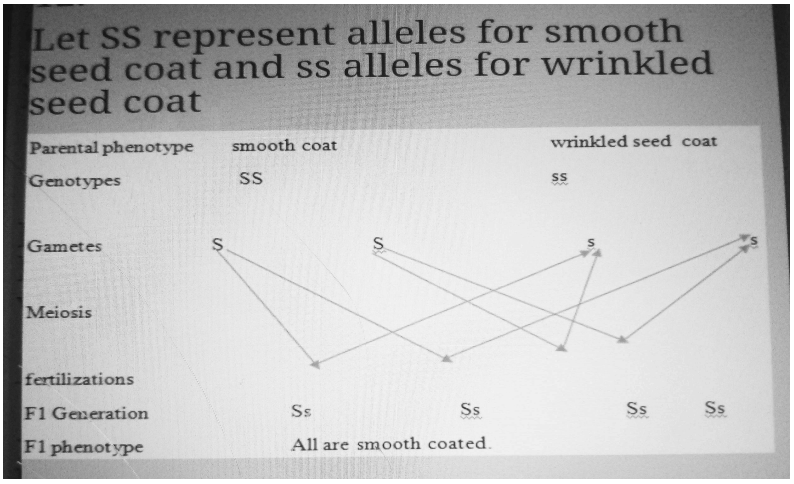
10.factors affecting content of water in human body.

1. **AGE -** Older adults have less water content than younger adults because of muscle mass loss and decreased ratio of lean body mass to total body weight.
2. **GENDER -** Males have more water content than females because of increased stature and lean body mass. Females have more body fats.
3. **BODY FAT -** contain little water

11.

	Insect Pollinated	Wind Pollinated
Petals	Large, brightly coloured – to attract insects	Small, dull in colour – no need to attract insects
Smell	Sweet smell – to attract insects	No scent – no need to attract insects
Nectar	Contains nectar – to attract insects	No nectar – no need to attract insects
Pollen quantity	Not much required – less wastage than with wind pollination	Huge quantities required – most of the pollen doesn't reach another flower
Pollen characteristic	Sticky or spiky – to stick to insects	Light, dry and smooth – so it doesn't clump together and can be blown by the wind
Anthers position	Firm and inside flower – to brush against insects	Loose and outside flower – to release pollen into the wind
Stigma position	Inside flower – so that insect brushes against it	Outside flower – to catch the drifting pollen
Stigma characteristic	Sticky – so that pollen from insect sticks to it	Stick but also feathery and / or net like – to catch drifting pollen

12.



13. TUBERCULOSIS.

Tuberculosis (TB) is a potentially serious infectious disease that mainly affects the lungs. The bacteria that cause tuberculosis are spread from person to person through tiny droplets released into the air via coughs and sneezes.

SYMPTOMS.

Latent TB. You have a TB infection, but the bacteria in your body are inactive and cause no symptoms. Latent TB, also called inactive TB or TB infection, isn't contagious. Latent TB can turn into active TB, so treatment is important.

Active TB. Also called TB disease, this condition makes you sick and, in most cases, can spread to others. It can occur weeks or years after infection with the TB bacteria.

Signs and symptoms of active TB include:

Coughing for three or more weeks

Coughing up blood or mucus

Chest pain, or pain with breathing or coughing

Unintentional weight loss

Fatigue

Fever

Night sweats

Chills

Loss of appetite.

WAYS TO AVOID TB.

Stay home. Don't go to work or school or sleep in a room with other people during the first few weeks of treatment.

Ventilate the room. Tuberculosis germs spread more easily in small closed spaces where air doesn't move. If it's not too cold outdoors, open the windows and use a fan to blow indoor air outside.

Cover your mouth. Use a tissue to cover your mouth anytime you laugh, sneeze or cough. Put the dirty tissue in a bag, seal it and throw it away.

Wear a face mask. Wearing a face mask when you're around other people during the first three weeks of treatment may help lessen the risk of transmission.

Finish your medication

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This is the most important step you can take to protect yourself and others from tuberculosis. When you stop treatment early or skip doses, TB bacteria have a chance to develop mutations that allow them to survive the most potent TB drugs. The resulting drug-resistant strains are deadlier and more difficult to treat.