BIOLOGY FORM TWO NECTA 2011

Solutions from: Maktaba by TETEA

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1.

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

2.

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

3.

i	ii	iii	iv	iv	vi	vii	viii	ix	x
B	N	I	M	H	D	G	L	F	E

4.(a) Classification is the process of grouping organisms according to their difference and similarities.

(b) Binomial nomenclature is the scientific system of naming organisms .

(c)

Importance of classification

- It makes the study of such a wide variety of organisms easy.
- It projects before us a good picture of all life forms at a glance.
- It helps us understand the interrelationship among different groups of organisms.
- It serves as a base for the development of other biological sciences such as biogeography etc.
- Various fields of applied biology such as agriculture, public health and environmental biology depends on classification of pests, disease vectors, pathogens and components of an ecosystem.

5.(a)Blood circulation is the circulation of blood as it is pumped by the heart throughout the body.

(b) Importance of blood circulation.

-You'll maintain healthy blood and oxygen flow throughout the body, allowing your lungs, heart and muscles to function properly and efficiently.

- You'll fight off and avoid potential diseases and sicknesses. With good circulation, the white blood cells in your immune system will be transported around the body as needed.

- You'll keep your organs in its best working order. Efficient circulation helps remove waste from the body created by different organs.

(c) Disorders of blood circulation.

-leukaemia

-haemophylia

-anaemia.

6.(a)Diffusion is the movement of solute from region of high concentration to a region of low concentration.

(b)(i)stomata

(ii)guard cell

(c) importances of gaseous exchange

- It allows for the transfer of oxygen from the surroundings to individual cells in the body needed for respiration.
  - This process produces energy that is essential for the organism to survive.
- If carbon dioxide wasn't removed from the body by gas change, it would be harmful.
- Ultimately, without the gas exchange we would die from lack of oxygen.

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7.(a)The natural environment or natural world encompasses all living and non-living things occurring naturally, meaning in this case not artificial. The term is most often applied to the Earth or some parts of Earth.

(b)Importance of Environment

Environment plays an important role in the healthy living of human beings.

it matters because it is the only home that humans have, and it provides air, food, and other needs.

Humanity's entire life support system depends on the well-being of all the environmental factors.

Environment play an important role in regulating air and climate.

Another reason the environment is so important is because it is a source of natural beauty, and it is necessary for proper physical and mental health too.

(c)Food chains and webs are important tools in understanding that plants are the foundation of all ecosystems and food chains, sustaining life by providing nourishment and oxygen needed for survival and reproduction.

8.(a) Importances of studying biology.

-helps to know diseases.

-helps to get careers like medicine and pharmacy.

-helps to understand some mechanisms in our bodies like blood circulation.

-helps to know how organism interact together.

(b) Respiration is the process of breaking down food with oxygen to give out energy.

(c)

AEROBIC RESPIRATION	ANAEROBIC RESPIRATION
Respiration takes place in the presence of oxygen.	Respiration takes place in the absence of oxygen.
It occurs in the cytoplasm and mitochondria.	It occurs only in the cytoplasm.
Usually, glucose is broken down into carbon dioxide and water.	Glucose is broken down into ethanol (ethyl alcohol).
Aerobic respiration occurs in mammals, including humans.	Anaerobic respration occurs in yeast, some types of bacteria and also in some plants.

9.(a)KWASHIORKOR.

is a nutritional disorder most often seen in regions experiencing famine. It is a form of malnutrition caused by a lack of protein in the diet.

Kwashiorkor is caused by a lack of protein in the diet. Every cell in your body contains protein. You need protein in your diet for your body to repair cells and make new cells. A healthy human body regenerates cells in this way constantly. Protein is also especially important for growth during childhood and pregnancy. If the body lacks protein, growth and normal body functions will begin to shut down, and kwashiorkor may develop.

The symptoms of kwashiorkor include:

change in skin and hair color (to a rust color) and texture

fatigue

diarrhea

loss of muscle mass

failure to grow or gain weight

edema (swelling) of the ankles, feet, and belly

damaged immune system, which can lead to more frequent and severe infections

irritability

flaky rash

shock

Effects.

-Even with treatment, children who have had kwashiorkor may never reach their full growth and height potential. If treatment comes too late, a child may have permanent physical and mental disabilities.

If left untreated, the condition can lead to coma, shock, or death.

-Kwashiorkor can be corrected by eating more protein and more calories overall, especially if treatment is started early.

10.TUBERCULOSIS.

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.

Transmission of Tuberculosis.

- Using substances. IV drugs or excessive alcohol use weakens your immune system and makes you more vulnerable to tuberculosis.

-Using tobacco. Tobacco use greatly increases the risk of getting TB and dying of it.

-Working in health care. Regular contact with people who are ill increases your chances of exposure to TB bacteria. Wearing a mask and frequent hand-washing greatly reduce your risk.

-Living or working in a residential care facility. People who live or work in prisons, homeless shelters, psychiatric hospitals or nursing homes are all at a higher risk of tuberculosis due to overcrowding and poor ventilation.

-Living with someone infected with TB. Close contact with someone who has TB increases your risk.

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

Effects of Tuberculosis

-Spinal pain. Back pain and stiffness are common complications of tuberculosis.

-Joint damage. Arthritis that results from tuberculosis (tuberculous arthritis) usually affects the hips and knees.

-Swelling of the membranes that cover your brain (meningitis). This can cause a lasting or intermittent headache that occurs for weeks and possible mental changes.

-Liver or kidney problems. Your liver and kidneys help filter waste and impurities from your bloodstream. Tuberculosis in these organs can impair their functions.

-Heart disorders. Rarely, tuberculosis can infect the tissues that surround your heart, causing inflammation and fluid collections that might interfere with your heart's ability to pump effectively. This condition, called cardiac tamponade, can be fatal.

Prevention

-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.