BIOLOGY FORM TWO NECTA 2015

Solutions from: Maktaba by TETEA

By Yohana Lazaro

1.

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

2.

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

3.

i	ii	iii	iv	v	vi	vii	viii	ix	x
N	H	C	G	A	Ka	B	F	L	E

4.(a)Groups of living things are:-

-Animmalia

-plantae

-Fungae

-monera

-Protoctista.

(b)(i)Mucor

(ii)A is Hyphae

(iii)Phylum zygomycota.

(c)Disadvantages of kingdom fungi

-can spoils foods,eg bread molds

-can leads to disease.

5.(a)personal hygen is the act of maintaining cleanliness and grooming of the external body.

(b) Principles of personal hygiene.

-Brush Your Teeth Twice a Day: Make sure you are brushing your teeth twice a day, once in the morning and once at night, to maintain good oral hygiene along with regular dental checkups.

-. Floss Your Teeth Daily: In addition to brushing your teeth, floss your teeth once a day for optimal oral hygiene.

-. Take Care of Your Nails: Cleaning and trimming your nails reduces your risk of hangnails and infected nail beds.

-. Wear Clean Clothes: After you wear clothes, wash them with a detergent and dry them immediately upon rinsing. Dirty clothes can harbor bacteria that could lead to body odor or even skin irritations.

-. Cover Your Mouth When Your Cough or Sneeze: This is extremely important to avoid spreading germs to people around you.

-. Get Restful Sleep: Restful sleep is essential to wellbeing, no matter your age. It is recommended for all adults to sleep between seven to nine hours a night.

- Create a Routine: Whatever your process may be to maintain good personal hygiene, make either a mental checklist or write it down. This way, you'll remember and keep up with the steps you need to take to stay clean and healthy.

(c) Principles of good manner.

-Saying please and thank you

-Holding a door open for someone

-Chewing with your mouth closed

-Saying excuse me

-Offering to help when you can

-Staying home when you are sick

-Being on time

6.(a)-Diffusion is defined as the net movement of molecules from an area of greater concentration to an area of lesser concentration.

-Osmosis is a specific type of diffusion; it is the passage of water from a region of high water concentration through a semi-permeable membrane to a region of low water concentration.

(b)If red blood cells are placed in a solution with a lower solute concentration than is found in the cells, water moves into the cells by osmosis, causing the cells to swell,hence bursts.

(c)(i)Red blood cell has a function of carrying oxygen from lungs to other parts of the body.

(ii) Platelets the responsible for clotting of blood when bleeding occur.

7.(a)First aid is an immediate help given to a victim before taken to hospital.

(b)Components of first aid kit are

-cotton wool

-pair of scissors

-Bandage

-new razor blade

-iodine tincture.

(c)-Move beyond the snake's striking distance.

-Remain still and calm to help slow the spread of venom.

-Remove jewelry and tight clothing before you start to swell.

-Position yourself, if possible, so that the bite is at or below the level of your heart.

-Clean the wound with soap and water. Cover it with a clean, dry dressing.

8.(a) (i)Food chain is a linear sequence of organisms which starts from producer organisms and ends with decomposer species.

(ii) Trophic level refers to a level or a position in a food chain, a food web, or an ecological pyramid. It is occupied by a group of organisms that have a similar feeding mode.

(b)Grasses. ⇒ Grasshopper. ⇒ Frog ⇒ Snake

(c) Significances of food chains and food web

-they balance the ecosystem.

-they show that plants are the basics because they are the main source of food.

-they show the movement of nutrients and energy.

-help to determine the trophic level of organisms.

9.COMMUNICABLE DISEASE.

MEASLES.

Measles is an infectious illness caused by the rubeola virus. It spreads either through direct contact with a person who has the virus or through droplets in the air.Measles is a highly contagious disease that can lead to life-threatening complications

Symptoms include:-

-a fever, possibly up to 104°F (40°C)

-a cough

-a runny nose

-sneezing

-watery eyes

-body aches

-small white spots in the mouth, appearing 2–3 days after early symptoms

-a red rash, appearing around 3–5 days after symptoms

Vaccination offers effective protection from measles. Some people cannot have the vaccination due to other health conditions, such as a weakened immune system

Complications

Complications can arise, some of which can be severe.

They includeTrusted Source:

vision loss

encephalitis, an infection that causes brain swelling

severe diarrhea and dehydration

additional infections

pneumonia and other respiratory infections

The virus enters the body through the mouth, nose, or eyesTrusted Source. Once there, it most likely enters the lungs, where it infects immune cells.

These cells move to the lymph nodes, where the virus transfers to other cells. These cells travel through the body, releasing virus particles into the blood.

As the blood travels around the body, it carries the virus to different body organs, including the liver, the skin, the central nervous system, and the spleen.

In the skin, the measles virus causes inflammation in the capillaries. This gives rise to the hallmark measles rash.

The virus crosses the blood-brain barrier and enters the brain in around 1 in 1,000 people. This can cause swelling in the brain that may be life-threatening.

An infection in the lungs causes a person to cough, which transmits the virus to other people.

Anyone who has never had measles or the vaccination can become ill if they breathe in infected droplets or are in close physical contact with someone who has measles.

How does it spread?

The disease is contagious. The CDCTrusted Source indicate that a person can transmit the virus from 4 days before and about 4 days after the rash appears.

The infection spreads through:

-physical contact with a person who has measles

-being near a person with measles when they cough or sneeze

-touching a surface with the virus on and then putting fingers into the mouth, or rubbing the nose or eyes

-After a person coughs or sneezes, the virus remains active in the air for around 2 hoursTrusted Source.

-If one person has measles, they can pass it to up to 90%Trusted Source of those around them, unless they have immunity or have had the vaccination.

Measles only affects humans. No animal species can transmit it.

Prevention

-After a person has measles once, they usually have immunity and are unlikely to have it again.

-avoid work or school for at least 4 days from when you first developed the measles rash

-try to avoid contact with people who are more vulnerable to the infection, such as young children and pregnant women, while you're ill.

10. 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.