

BIOLOGY FORM TWO NECTA 2013

Solutions from: [Maktaba by TETEA](https://maktaba.tetea.org)

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1.

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

2.

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

3.

i	ii	iii	iv	v	vi	vii	viii	ix	x
C	K	M	C	I	O	J	H	A	B

4.(a) Classification is the grouping of organisms according to the structures.

(b)

Fungi are useful:

1. Decay dead material and are important to recycle nutrients in the soil
2. Decompose sewage
3. Are used to make the antibiotic penicillin
4. Are eaten e.g. mushrooms
5. Yeast is useful to make bread, wine and beer

(c) Disadvantages of fungi.

- can spoil foods
- can cause diseases

5.(a)(i) Laboratory is the special room where scientific experiments are done.

(ii) qualities of good laboratory.

- have enough apparatus
- large windows
- has first aid kit.
- has list of laboratory rules

(b) -petri dish is used to place specimens.

- mortar and pestle is used to grind substance.
- hand lens is used to observe small organisms as it magnify.
- thermometer is used to measure temperature.

6.(a) A producer

- B primary consumer
- C secondary consumer
- D tertiary consumer

E decomposer.

(b) The shape of the energy pyramid shows that there is enough biomass energy contained in the primary producers at the bottom to support the predators at the top, even though energy is lost at each level.

(c) organisms but E has a role of decomposing the dead organisms.

7.(a)(i) Gaseous exchange is the exchange of gases between the body and the environment.

(ii) Respiration is the process of breaking food using oxygen to give out energy.

(b)(i) tracheal tube (ii) alveoli (iii) gills (iv) lung book

(c)(i) thin walls make diffusion easy.

(ii) large surface area enables enough gas diffusion.

8.(a) Agent of disease is the organism that transmits disease from one body to another.

(b)(i) virus

(ii) vibrio cholerae.

(iii) bacteria

(iv) worms.

9. BALANCED DIET.

A balanced diet is a diet that includes every category of nutrients in it. It is important to eat according to a balanced diet because it is the best way to ensure our good health. A balanced diet consists of every food group that we need to prevent ourselves from harmful infections and diseases.

There are five primary nutrients that our body requires for proper functioning. Carbohydrates are the energy-giving food that contains starch and sugar; proteins are bodybuilding foods, fats are energy-giving, vitamins and minerals are foods that make us resistant to diseases. All these food groups are vital for our good health.

Apart from the primary five nutrients, there is also roughage and water. Roughage is the fiber portion of the food we eat, and water is crucial for regulating our body processes. A balanced diet contains all these nutrients in appropriate quantities. It is essential to understand what kind of food gives us nutrients. Bread, potatoes, sugar, rice, and chapattis are rich in carbohydrates. We must consume this kind of food as they are our primary source of energy. Any vegetable that grows under the ground, for example, carrots, sweet potato, radishes are rich in carbohydrates. Children and adolescents must consume carbohydrates as they need a lot of energy. Meat, fish, pulses, lentil, eggs, milk, and every kind

of milk product like cottage cheese and paneer are rich in proteins. Proteins are our main source of energy. Proteins are essential for people of every age group. Anybody who wants to eat less fat for their meals must compensate for it by eating more proteins. Proteins are necessary for adolescents since they help in muscle development.

A balanced diet is a diet that comprises every food group and helps sustain a healthy body.

Carbohydrates, fats, proteins, vitamins, and minerals are the five main food groups that we must incorporate in our diet.

The deficiency of carbohydrates can cause exhaustion and fatigue. Lack of proteins may result in stunted growth and underdeveloped muscles.

Vitamins and minerals deficiency leads to increased susceptibility to diseases, night blindness, rickets, etc.

Less roughage and water in the diet may lead to dehydration and indigestion, leading to irregular bowel movements.

A balanced diet must have every component in sufficient amounts. Increased consumption of carbohydrates and fats may lead to consequences.

A balanced diet helps maintain proper body weight, keeps us nourished, and our skin is free of acne and pimples.

Proteins are essential for adolescents as they need it for their growth and development.

It develops healthy eating habits and helps us to reach our optimum health goals.

10.

Wastes are the products of our consumptions in our daily life routines such as lunch, work, school and other things we do. Little things such as throwing out a piece of paper, we are producing waste by the seconds. After we consume a product we usually throw out what's left that can't be consumed any further. Results in producing waste, substance that are born after it's been use or consume by us. At the end of each day we throw out a bag full of garbage, all of the materials in that.

Poor Maintenance of machine tools may result in excessive tool wear and greater process scrap/waste.

- Faulty store keeping techniques, without requisite preservation, lead to spoilage/wastage.

- Unawareness of technological advancements leads to surplus/waste.

-Wrong specifications, standards and codes results in wastage

-Lack of requisite inventory control is a cause of waste.

-Lack of layout of facilities, handling of material and proper storage results in waste.

- Inadequate emphasis on P.P.C

Wrong recruitment/selection policies of the enterprise.

-Poor working conditions and industrial relations result in waste.