

Name:

Adm. No

School:

Candidate's Sign.....

Date:

231/1
BIOLOGY
PAPER 1
(THEORY)
OCT/NOV - 2010
TIME: 2 HOURS

SOUTH LINK JOINT EVALUATION TEST

FORM THREE

Biology
Paper 1

INSTRUCTIONS TO CANDIDATES:

- Write *your name* and *your index number* in the spaces provided above.
- Sign and write the date of the examination in the spaces provided above.
- Answer **ALL** the questions in the spaces provided.

For Examiner's Use Only:

QUESTIONS	MAXIMUM SCORE	CADNIDATE'S SCORE
1 – 29	80	

Answer ALL the questions in the spaces provided.

1. To which class does an animal with two body parts and four pairs of legs belong? (1mk)

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.....

2. Name the substances which accumulates in muscles when respiration occurs with insufficient oxygen (1mk)

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3. What is meant by the following terms.
i) Epigynous flower(1mk)

.....
ii) Staminate flower(1mk)

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4. How is aerenchyma tissue adapted to its function ? (2mks)

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5. Other than carbon (IV) Oxide, name the other products of anaerobic respiration in plants (2mks)

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6. Name **two** mineral elements that are necessary in the synthesis of chlorophyll. (2mks)

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7. Name the tissues in plants responsible for:
a) Transport of water and mineral salts. (1mk)

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b) Transport of carbohydrates. (1mk)

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c) Primary growth.

(1mk)

8. The diagram below shows a red blood cell that was subjected to a certain treatment



At the start of the treatment



At the end of the treatment

Account for the shape of the cell at the end of the experiment.

(2mks)

9. a) What is Homeostasis?

(1mk)

b) Name **four** processes in the human body in which homeostasis is involved.

(4mks)

10. Describe the characteristics of a population.

(3mks)

11. The diagram below shows a human tooth.



a) Identify the tooth (1mk)

b) How is the tooth adapted to its function ? (1mk)

12. Name the sites of Chloroplast where the dark and light reactions of photosynthesis occur. (2mks)

i) Light reaction

ii) Dark reaction.

13. State the use of each of the following excretory products of plants.

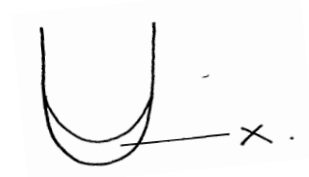
a) Colchicine (1mk)

b) Papain (1mk)

14. a) Name the bacteria found in root nodules of leguminous plants (1mk)

b) What is the role of the bacteria named in (a) above (1mk)

15. The diagram below represents a region of a root tip



a) Name the **two** regions above X in ascending order. (2mks)

b) State the function of the part labeled X (1mk)

16. Name the blood vessel with the highest concentration of :-
a) Glucose (1mk)

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.....

b) Carbon (IV) Oxide (1mk)

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17. a) State **three** environment conditions that can cause seed dormancy. (3mks)

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c) Name the part of the bean that elongates to bring about epigeal germination. (1mk)

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18. a) Name **two** structures for gaseous exchange in aquatic plants. (2mks)

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b) What is the effect of contraction of the diaphragm muscles during breathing in mammals? (3mks)

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19. a) The action of enzyme ptyalin stops in the stomach. Explain (2mks)

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b) Name the features that increase the surface area of small intestines. (2mks)

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c) State a factor that denatures enzymes.

(1mk)

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20. State the functions of the following part of a light microscope.

a) Objective lens

(1mk)

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b) Diaphragm.

(1mk)

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21. State the functions of the following cell organelles.

a) Ribosomes

(1mk)

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b) Lysosomes

(1mk)

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.....

22. a) Pregnancy continues in the pregnant woman if the ovary is removed after four months of the gestation period. Explain

(2mks)

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b) What is the role of the testes in the mammalian reproductive system?

(2mks)

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23. Name the causative agents of the following diseases in humans (2mks)
- a) (i) Typhoid
(ii) Amoebic dysentery.....
- c) Name the disease in human caused by plasmodium falciparum (1mk)

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24. Explain what happens in human when the concentration of glucose decreases below the normal level. (4mks)

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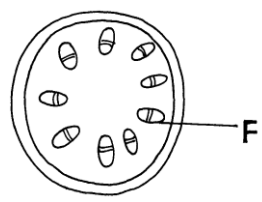
25. a) State **three** structural differences between arteries and veins in mammals. (3mks)

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- b) Name a disease that causes thickening and hardening of arteries (1mk)

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26. The diagram below shows a section through a plant .



- a) (i) Name the class of the plant from which the section was obtained (1mk)

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- (ii) Give a reason for your answer in a (i) above (1mk)

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.....

b) State the function of the part labeled F.

(1mk)

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27. State **three** ways in which the red blood cells are adapted to their function.

(3mks)

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28. Outline **three** roles of active transport in the human body

(3mks)

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29. Explain how drooping of leaves on a hot sunny day is advantageous to a plant

(2mks)

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