FORM 4 END TERM 2 2020

BIOLOGY PAPER 1

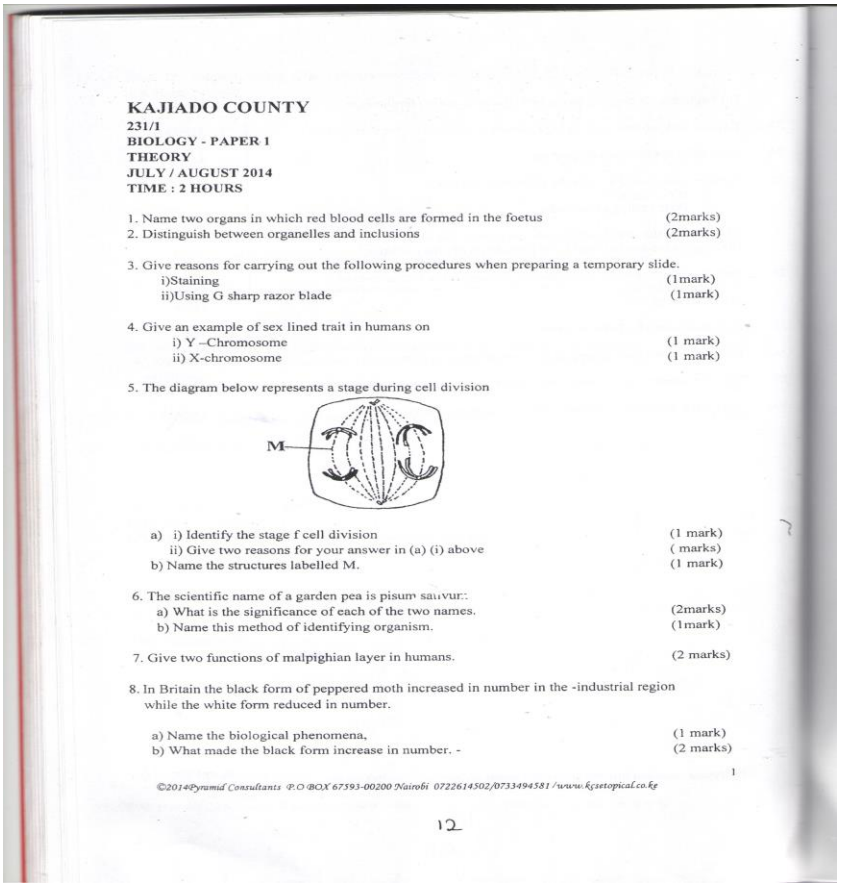
1. Name the part of a flower that develops into:

[i] Seed [1mk]

[ii] Fruit [1mk]

2. State two ways in which floating leaves of aquatic plants are adapted to gaseous exchange. [2mk]

3. The diagram below represents a stage during cell division



KAJIADO COUNTY
231/1
BIOLOGY - PAPER 1
THEORY
JULY / AUGUST 2014
TIME : 2 HOURS

1. Name two organs in which red blood cells are formed in the foetus (2marks)
2. Distinguish between organelles and inclusions (2marks)

3. Give reasons for carrying out the following procedures when preparing a temporary slide.
   i)Staining (1mark)
   ii)Using G sharp razor blade (1mark)

4. Give an example of sex lined trait in humans on
   i) Y –Chromosome (1 mark)
   ii) X-chromosome (1 mark)

5. The diagram below represents a stage during cell division

   a) i) Identify the stage f cell division (1 mark)
   ii) Give two reasons for your answer in (a) (i) above (marks)
   b) Name the structures labelled M. (1 mark)

6. The scientific name of a garden pea is pisum sativur:
   a) What is the significance of each of the two names. (2marks)
   b) Name this method of identifying organism. (1mark)

7. Give two functions of malpighian layer in humans. (2 marks)

8. In Britain the black form of peppered moth increased in number in the -industrial region while the white form reduced in number.

   a) Name the biological phenomena, (1 mark)
   b) What made the black form increase in number. - (2 marks)

12

[a] [i] Identify the stage of cell division [1mk]

[ii]Give two reasons for your answer in [a] [i] above [2mk]

[b] Name the structures labeled M [1mk]

[b] Name the class to which millipede belongs [1mk]

4[a] Distinguish between the terms [2mk]

Homodont and heterodont

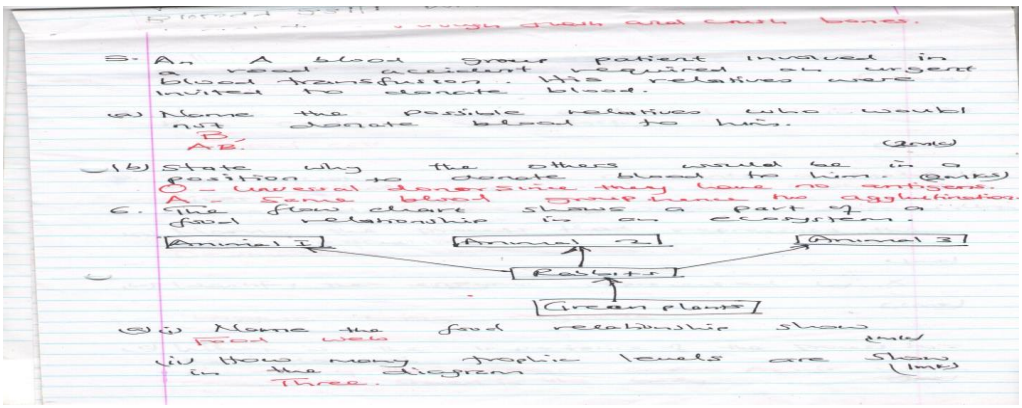
[b]what is the function of the carnassial teeth [2mk]

5.An A blood group patient involved in a road accident required an urgent blood transfusion. His relatives were invited to donate blood.

[a]Name the possible relative who would not donate blood to him [2mk]

[b]State why the others would not be in a position to donate blood to him [2mk]

6. The flow chart shows a part of a food relationship in an ecosystem



[a][i]Name the food relationship shown [1mk]

[ii] How many trophic levels are shown in the diagram [1mk]

[b]What is the main source of energy in the ecosystem [1mk]

7. Name the only epidermal cell in plants that contain chloroplast [1mk]

8. The equation below represents a metabolic process that occurs in the mammalian lives

Amino Acids Enzyme x organic compound

[a]Name the process that represents the above equation [1mk]

[b]Identify the enzyme represented by x [1mk]

[c] What is the importance of the process to the mammal [1mk]

9. [a] Name the carbohydrate that is stored in mammalian muscle [1mk]

[b]What name is used to describe removal of indigestible and undigested food material from the alimentary canal [1mk]

10.[a]Carl Linnaeus developed the taxonomic units of classification

[i]What is taxonomy [1mk]

[ii]Why was the system of classification by carl linneaus described as natural system of classification [2mk]

11. Phagocytes also called granulocytes or polymorphs are cells found in the blood whose they ingest pathogens and cell debris

[i]why are they called polymorphs. [1mk]

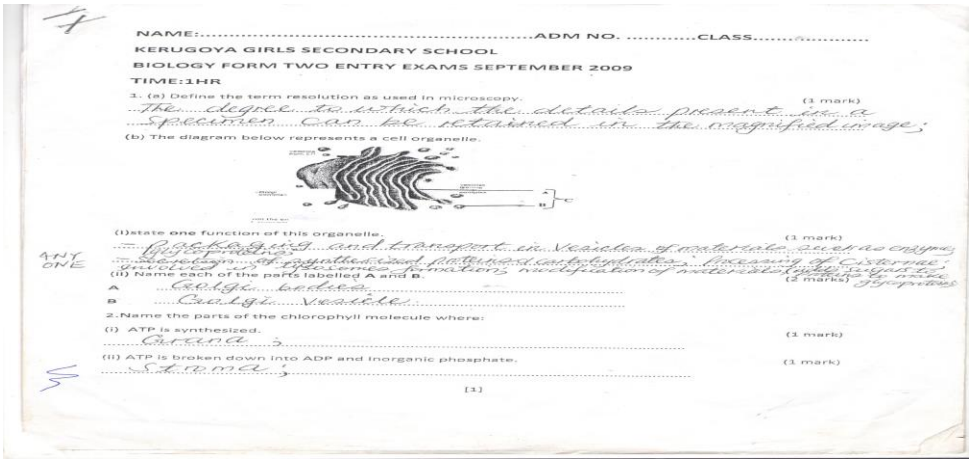
[ii]Name the cell organelle most abundant in phagocytes to enable them function effectively [1mk]

12. Name the:

[a] Material that strengthens xylem tissue [1mk]

[b]Tissue that is removed when the part of a plant is ringed [1mk]

13. The diagram below represents a cell organelle.



NAME:.....ADM NO. .....CLASS.....

KERUGOYA GIRLS SECONDARY SCHOOL

BIOLOGY FORM TWO ENTRY EXAMS SEPTEMBER 2009

TIME:1HR

3. (a) Define the term resolution as used in microscopy. (1 mark)

the degree to which the details present in a specimen can be enhanced at the magnified image;

(b) The diagram below represents a cell organelle.

(i)state one function of this organelle. (1 mark)

ANY ONE

(ii) Name each of the parts labelled A and B. (2 marks)

A Golgi bodies

B Golgi Vesicle

2.Name the parts of the chlorophyll molecule where:

(i) ATP is synthesized. (1 mark)

Grana

(ii) ATP is broken down into ADP and inorganic phosphate. (1 mark)

Stroma

[1]

[i]State the function of this organelle [1mk]

[ii]Name each of the parts A and B

A [1mk]

B [1mk]

14. In which two ways do guard cells differ from other epidermal cells [2mk]

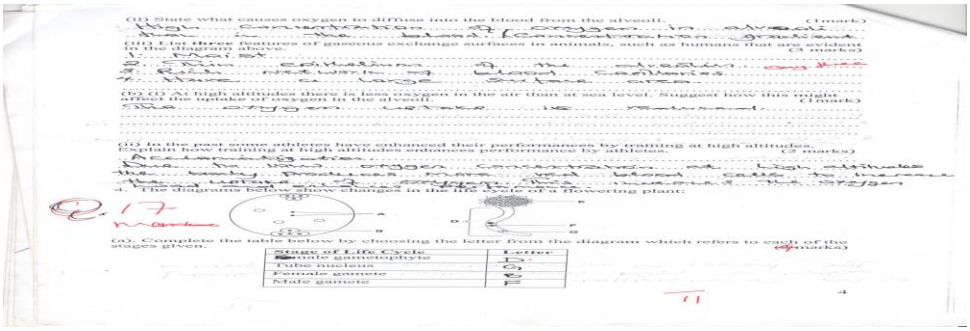
15.Through cellular respiration, the chemical energy stored in glucose molecule is converted into which specific molecule [3mk]

[b]Name the substance that speed up chemical reaction without being used up in those reactions

[1mk]

16.During germination and early growth, the dry weight of endosperm decreases while that of embryo increase explain [2mk]

17. The diagrams below show changes in the life cycle of flowering plants



[i]Complete the table below by choosing the letters from the diagram which refers to each of the stages given [4mk]

STAGE OF LIFE CYCLE	LETTER
Male gametophyte	
Tube nucleus	
Female gamete	
Male gamete	

[1mk]

3 [a]. State 2 characteristics of kingdom Monera that are not found in other kingdoms [2mk]

19.State three ways by which plants compensate for lack of the ability to move from one place to another [3mk]

20. State three physiological processes that are involved in movements of substances across the cell membrane [3mk]

21. If the human pancrease is not functional:

[a]Name the hormone which will be deficient [1mk]

[b]Name the disease the human is likely to suffer from [1mk]

22. The oxidation state of a certain food is represented below by a chemical equation

$2C_3H_2O_2N + 6O_2 \quad (NH_4)_2CO_2 + 5CO_2 + 5H_2O$

[a] Calculate the respiratory quotients[RQ] of the food substance [2mk]

[b]Identify the food substrate [1mk]

23. The diagram below shows an apparatus used during collection of specimen

[a]Identify the apparatus [1mk]

[b]What is the use of the apparatus named above [1mk]

24. State two factors in an ecosystem that affect the distribution of organisms [2mks]

25. A DNA strand has the following base sequence G C C T A G A T C A C

What is the sequence of the

[i] Complementary DNA strand [1mk]

[ii] M-RNA strand copied from this DNA strand [1mk]

26. State three limitations of fossil records as evidence of organic evolution [3mk]

27. How does nutrition as a characteristic of living organism differ in plants and animals [2mk]

28.State the function of the following parts of a light microscope .

[i] Body tube [1mk]

[ii] Diaphragm [1mk]

29. State three characteristics of gaseous exchange surfaces [3mk]

30. State two sources of variations [2mk]