

FORM 3
BIOLOGY PAPER 1
END OF TERM EXAMS – MARCH 2016

NAME.....ADMIN NO.....CLASS.....

SECTION A (30MKS)

1. State the characteristics that can separate the following organisms into respective classes
Millipedes, tsetse fly and spider (3mks)

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2. Name the blood vessel that transports blood from

(i) Heart to the lungs (1mk)

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(ii) Small intestines to the liver (1mk)

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3. a) State the role of light in the process of photosynthesis (1mk)

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b) Name one of the end products of dark reaction in photosynthesis (1mk)

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4. Give any two benefits of transport in plants (2mks)

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6. i) State the role of decomposers in an ecosystem (1mk)

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ii) Give any two symptoms of amoebiasis (2mks)

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7. The figure below shows the structure of a chromosome
Identify the parts labeled K and J (2mks)

8. Define the following terms

i) Biomass (1mk)

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ii) Population (1mk)

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9. a) What is nitrogen cycle (1mk)

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b) Mention the two methods in which free atmospheric nitrogen is converted into a form in which it can be utilized by plants (2mks)

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10. a) State three ways in which energy is lost from one trophic level to the next (3mks)

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11. Mention any three methods used to estimate population of organisms in an ecosystem (3mks)

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SECTION B (30 MARKS)

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13. (a) Form three students from Sunshine Secondary School were estimating the number of tsetse flies in a small bush near the school. At first they caught 600 tsetse flies marked and released them. After five days they caught 500 tsetse flies of which too had been marked.

i) Calculate the tsetse flies population (3mks)

(b) State two abiotic and two biotic factors that influence tsetse fly population in a bush

i) Abiotic factors

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ii) Biotic factors

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SECTION C (40MKS)

Answer Question 16(Compulsory) either question number 17 or 18 in the spaces provided.

16. A group of students estimated the population of grass hoppers in the school compound. The table below shows the number of grass hoppers collected from eight sites within the compound.

Site	1	2	3	4	5	6	7	8
No of grass hoppers	280	50	190	220	85	300	175	30

a) Draw histograms to represent the number of grass hoppers collected from each site
(5mks)

b) The students caught 240 grass hoppers marked them and then released them. After five days they caught 160 grasshoppers and found that 40 were marked. Work out the grasshopper population in the compound (2mks)

c) Identify the methods used in (b) above (1mk)

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d) Name the instrument the student used to collect and mark the grasshoppers. (2mks)

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e) State the limitation of the methods identified in (c) above (3mks)

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f) State observable adaptations the students would have noted in the grass hopper regarding

i) Locomotion (3mks)

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ii) Protection (2mks)

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17. Discuss the adaptations of xerophytes to their habitat (20mks)

18. Describe the adaptation of the mammalian heart to its function

(20mks)

[illegible]

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