NAME………………………………………………………….ADM NO………………………

SCHOOL…………………………………………………….. DATE……………………………

 SIGN…………………………….

BIOLOGY

COMBINED PAPER

(Theory)

JULY/AUGUST 2016

TIME: 2 HOURS

**TOP EVALUATION EXAMINATIONS 2016**

***FORM 1 PAPER***

**INSTRUCTIONS TO CANDIDATES**

1. Write your name and admission number in the spaces provided above
2. Sign and write the date of examination in the spaces provided above
3. Answer all questions
4. Answers must be written in the spaces provided in the question paper
5. This question paper has 8 printed pages.
6. Students should check the question paper to ascertain that all the pages are printed as indicated and that not questions are missing
7. Students should answer the questions in English.

**FOR EXAMINER’S USE ONLY**

|  |  |  |
| --- | --- | --- |
| Question | Maximum score | Student’s Score |
| **1-12** | **80** |  |

1.List and explain **four** branches of biology. (4marks)

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 2. Name three careers that study of Biology enables one to enter. (3marks)

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3. Discuss two characteristics of living things. (4 marks)

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4. Identify each of the following materials and state its use. (6marks)



Name:……………………………………………………………………………………………………..

Use:…………………………………………………………………………………………………………………………………………………………………………………………………………………………



Name:………………………………………………………………………………………………………..

Use:…………………………………………………………………………………………………………..



Name: ……………………………………………………………………………………………………………..

Use:………………………………………………………………………………………………………….

5. State the differences between plants and animals. (3 marks)

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6. (a) Define: (2 marks)

1. Classification.

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1. Taxonomy

……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

 (b) Outline the steps followed in using a magnifying lens to observe specimen. (2 marks)

*………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………*

(c) Give two reasons for classification. (2 marks)

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7. (a) Identify the kingdom each of the following belong. (3 marks)

 *i)* Moulds *– …………………………………………………………………………………………………………..*

ii) Protozoa – ……………………………………………………………………………………………………

iii) maize *…………………………………………………………………………………………*

(b) List any **three e**xternal features of a plant. (3 marks)

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8.(a) Below is a part of a microscope. Use it to answer the questions that follow.



1. On the diagram,label the three parts. (3 marks)
2. Give the function of each of the three parts labeled. (3 marks)

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(b) Describe the steps followed when using a microscope. (4 marks)

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(c) Give the ways of caring for a microscope. (2 marks)

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9. Below is plant cell Structure as Seen Through the Electron Microscope. Use it to answer questions that follow.



1. Name the part labeled: (4 marks)
2. A ………………………………………………………………………………………
3. B ………………………………………………………………………………………
4. C …………………………………………………………………………………….
5. D …………………………………………………………………………………….
6. Give the function(s) of:
7. F (1 mark)

…………………………………………………………………………………………………………………………………………………………………………………………………………………..

1. G (2 marks)

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1. Explain the adaptation of part E to its function. (2 marks)

*………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………..*

1. Name the organelle: (3 marks)
2. That controls the movement of substances into and out of the cell.

 …………………………………………………………………………………………………

1. Which is a jelly-like substance in which chemical processes are carried out.

 …………………………………………………………………………………………………

1. That consist of protein and ribonucleic acid (RNA).

 ………………………………………………………………………………………………..

1. Identify three organelles found in both plant and animal cell. (3 marks)

*. ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………..………………………………………………………………………..*

10. State the: (2 marks)

(a) Advantage the Electron Microscope has over the light microscope.

*………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………..*

 (b) Advantage the light microscope has over the Electron Microscope.

*………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………..*

*11.* Give **four** differences between animal cell and plant cell. (4 marks)

*………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………..……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………….………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………..*

12. The diagram shows a typical experiment using Visking tubing and sucrose solution to demonstrate a certain process:



(a)State the purpose of the experiment above. (1 mark)

………………………………………………………………………………………………………………………………………………………………………………………………………………………………

(b) Give two conditions necessary for the process above to occur. (2 marks)

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 (c) Give ways in which you will make this test fair and accurate by. (3 marks)
………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………..
(d) Give the observation when the set up was left for 12 hours. (1 mark)

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1. Account for (d) above. (2 marks) *………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………*

 (g) Explain **two** factors affecting the the process under investigation above. (4 marks)

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1. Define the following terms: (2 marks)
2. Hypertonic solution

*……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………*

1. Isotonic solution

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