**DARAJANI BOYS’ HIGH SCHOOL,**

P.O BOX 20-90129, NGWATA.

**School Motto:** “**Knowledge is Liberty, Ignorance is Fatal**”.

**END OF YEAR EXAMINATION, 2015**

**FORM 1,**

**BIOLOGY**

**TIME: 2 HRS**

NAME:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ADM.NO\_\_\_\_\_\_\_\_\_\_\_CLASS\_\_\_\_\_\_

1. (a) What is meant by the term Biology? (2 marks)

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(b) List two branches of Biology and for each, give a definition. (4 marks)

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1. (a) The scientific name for the black jack is Bidens pilosa. Which taxonomy group does the name pilosa refer to? (1 mark)

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(b) Define the term species. (2 marks)

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(c) Distinguish between taxonomy and taxon. (2 marks)

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1. What is:-
2. A cell? (2 marks)

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1. An organelle? (2 marks)

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1. Some students set up an experiment as shown in the diagram below.
2. Name the process the students were investigating. (1 mark)

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1. Account for the results obtained. (3 marks)

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1. (a) What is the name given to the double naming system of living organisms? (2 marks)

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(b) Give reasons why scientific names are given in Latin. (2 marks)

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1. Define the following:- (3 marks)
2. A tissue.

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1. An organ.

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1. An organ system.

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1. If the nucleus of a cell is removed, what would happen to that cell? Why? (2 marks)

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1. (a) What type of membrane is the visking tubing? (2 marks)

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(b) How does a visking tubing differ from a cell membrane? (2 marks)

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1. Explain the following terms:-
2. Diffusion. (2 marks)

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1. Osmosis (2 marks)

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1. Active transport. (2 marks)

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1. Plasmolysis. (2 marks)

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1. State two mechanisms by which small molecules such as glucose enter cells. (2 marks)

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1. State the function of the following cell organelles:-
2. Ribosomes (2 marks)

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1. Smooth endoplasmic reticulum. (2 marks)

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1. (a) Explain the role of chlorophyll in photosynthesis. (2 marks)

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(b) What is the main product of the dark stage of photosynthesis? (2 marks)

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1. (a) Name the carbohydrate that is:-
2. Stored in plant seeds. (1 mark)

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1. Stored in mammalian muscles. (1 mark)

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1. Most abundant in human blood. (1 mark)

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(b) State the main function of carbohydrates in living organisms. (2 marks)

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1. Define the term photosynthesis. (2 marks)

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1. State four requirements and their sources for the process of photosynthesis to occur. (4 marks)

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1. (a) Illustrate by means of simple labelled diagram the structure of a chloroplast. (4 marks)

(b) State the parts where:-

(i) Light reaction occur. (1 mark)

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(ii) Dark reaction occur. (1 mark)

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1. (a) Name the element that forms carbohydrates. (2 marks)

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(b) (i) State two properties of polysaccharides. (2 marks)

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(ii) Write down three differences between polysaccharides and monosaccharides. (6 marks)

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1. A drawing of 5cm in length was made of a beetle whose actual length was one centimetre. Calculate the magnification of the drawing. (3 marks)

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1. List four differences between a plant and an animal. (4 marks)

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1. State four reasons why Biology should be studied. (4 marks)

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1. State the use of the following apparatus:-
2. Sweep net. (1 mark)

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1. Pooter. (1 mark)

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1. Pair of forceps. (1 mark)

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1. Magnifying lens. (1 mark)

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1. How would you demonstrate the process of diffusion using a bottle containing perfume? (4 marks)

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1. State four factors which affect the rate of photosynthesis. (4 marks)

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