**DARAJANI SECONDARY SCHOOL,**

**P.O. BOX 20-90129, NGWATA.**

**MID-TERM 2, 2015\_ EXAMINATION**

**FORM 1**

**BIOLOGY**

**TIME: 2HRS**

**NAME…………………………………………………………………………………………ADM. NO……………….. CLASS:…………….**

1. State the functions of the following parts of the microscope.
2. Diaphragm (1 mark)

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1. Condenser (1 mark)

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1. State the functions of the following organelles:-
2. Nucleolus (1 mark)

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1. Ribosomes (1 mark)

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1. The diagram below is a structure of a cell membrane.

**Y**

**X**

**Y**

**Z**

1. Name the part labelled X, Y, and Z. (3 marks)

X \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Y \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Z \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. State the function of the part labelled Z. (2 marks)

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1. State three properties of a cell membrane. (3 marks)

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

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(b) Explain the following terms used in cell physiological processes.

(i) Diffusion (2 marks)

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(ii) Osmosis (2 marks)

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(iii) Active transport. (2 marks)

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1. Explain why only the fine adjustment knob should be used when focusing a specimen using the high power objective lens of the light microscope. (2 marks)

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1. (a) Define the following giving example to each.
2. A tissue (2 marks)

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1. An organ (2 marks)

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1. An organ system. (2 marks)

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

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1. Compare the structure of plant and animal cells. (5 marks)

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1. Explain the differences between:
2. Turgor pressure and wall pressure (2 marks)

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1. Osmotic pressure and osmotic potential (2 marks)

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1. Haemolysis and crenation (2 marks)

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1. Define the term ‘species’. Explain why a leopard and a lion cannot breed yet they belong to the same genus. (2 marks)

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1. How is the rate of diffusion affected by:-
2. Temperature (2 marks)

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1. Surface area to volume ratio. (2 marks)

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1. Size of the molecule. (2 marks)

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1. List four characteristics of living things. (4 marks)

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1. A motor vehicle is able to move and breakdown fuel to carbon (IV) oxide and water yet it is not classified as a living thing. List other characteristics of living things that are not shown by a motor vehicle. (3 marks)

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1. State three roles of osmosis in living organisms. (3 marks)

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1. List the differences between light microscope and electron microscope. (4 marks)

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1. State the importance of classifying living organisms. (4 marks)

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1. State the functions of the following apparatus used in collection of specimen.
2. Sweep net. (1 mark)

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1. Pooler (1 mark)

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1. State two factors that affect active transport. (2 marks)

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