**NAME: ……………………………………………ADM.NO.…………….STREAM…………**

**BIOLOGY FORM THREE**

**END TERM EXAM – TERM TWO 2015.**

* **Answer all questions in the spaces provided.**

1. (a) State the role of diaphragm in microscope. (1 mark)

(b) State the difference between resolving and magnifying power of microscope.

(2 marks)

1. The diagram below represents a stage in cell division. Study the diagram and answer the questions below.
2. Name the stage of cell division which the cell is undergoing. (1 mark)
3. Name the part labeled A, B and C. (3 marks)

A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

B \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

C\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. State three differences between mitosis and meiosis. (3 marks)
2. Name the process during which exchange of genetic materials occur at prophase I of meiosis I. (1 mark)
3. Study the diagram below and answer the question that follow:
4. Name the structure represented by the diagram. (1 mark)
5. Name the part labeled D, M, N and Z. (4 marks)

D \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

M \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

N \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

1. List any two likely contents for each of the parts labeled N and V. (2 marks)

D \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

M \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. State one function of part labeled Q. (1 mark)
2. Name examples of organism that reproduce through:- (3 marks)
3. Binary fusion
4. Budding
5. Spore formation
6. Name any four classes in phylum Arthropoda. (4 marks)
7. (a) State the importance of the roughages in human diet. (2 marks)

(b) Why would girls of the age 18 need more iron than boys of the same age? (2 marks)

1. (a) Give two examples of disaccharides. (2 marks)

(b) State the properties of disaccharides. (3 marks)

1. (a) Explain why amino acids are referred to as amphoteric. (1 mark)

(b) Distinguish between essential and non-essential amino acid. (2 marks)

(c) State two characteristics of protein. (2 marks)

(d) State three functions of proteins in bodies of living organism. (3 marks)

1. (a) State three properties of enzymes. (3 marks)

(b) What are the functions of enzyme in living organisms? (3 marks)

1. State the importance of the following plant’s excretory product. (5 marks)
2. Tannins
3. Caffeine
4. Cocaine
5. Rubber
6. Papain
7. State four adaptive features of insect pollinated flower. (4 marks)
8. State the general characteristics of class mammalian. (4 marks)
9. Define the following terms:- (4 marks)
10. Respiratory Quotient
11. Respiratory Substrate
12. Work out the RQ (Respiratory Quotient) of the equation below. (3 marks)

2C51H98O6 + 145O2 102CO2 + 98H2 + Energy.

1. Name the substrate used. (1 mark)