LINDI MUNICIPAL COUNCIL

FORM FOUR UMEKTA EXAMINATION – JULY 2023

033/2A

BIOLOGY 2A

(Actual Practical)

MARKING SCHEME

- 1. From the experiment
 - (a) The aim of experiment is to demonstrate the process of diffusion (03 marks)
 - (b) Water changed into pink (02 marks)
 - (c) The molecules of sample M spread throughout the beaker (02marks)
 - (d) Change in colour of water shows the process of diffusion (02 marks)
 - (e) The significance of the process are

In animals – (any two 01 mark@ = 02 marks)

- Food nutrients
- Gaseous exchange
- Reabsorption of glucose in kidney

In plants— (any two 01 mark@ = 02 marks)

- Uptake of minerals salts from soil
- Uptake of carbon dioxide by the plant tissues
- (f) The organs

In animals – (any two 01 mark@ = 02 marks)

- Kidney
- Lungs
- Ileum

In plants – (any two 01 mark@ = 02 marks)

- Leaves
- Root hairs
- (g) The daily application of the process -(02 marks@ = 08)
 - Application of perfumes or body spray
 - Use of mosquito repellents
 - Treatment of asthma using muscle relaxants
 - Preparing tea using tea blenders

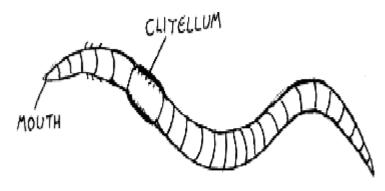
- 2. From specimens M1,M2,M3 and M4
 - (a) Identification of specimens (01 mark @ = 04 marks)

SPECIMEN	COMMON NAMES	
M1	Pine leaves	
M2	Maize seedling	
M3	Grasshopper	
M4	Earth worm	

(b) Classification of specimen M2,M3 and M4 – (01 marks@ = 09)

SPECIMEN	KINGDOM	PHYLUM/ DIVISION	CLASS
M2	Plantae	Angiospermophyta	Monocotyledonae
М3	Animalia	Arthropoda	Insecta
M4	Animalia	Annelida	Oligochaeta

- (c) From specimen M1 the significant of -(01 mark@) = 02 marks)
 - (i) Needle leaves is to reduce the rate of transpiration
 - (ii) Green colour is for facilitating photosynthesis
- (d) (i) Specimen M4
 - ADVANTAGES TO FARMERS- (01 mark@ = 03)
 - Increases soil fertility by feeding on different plants
 - Increases soil aerations by burrowing in soil
 - Improves soil texture
 - (ii) Diagram of specimen M4 (05 marks)



ANUS

(e) The contribution of the kingdom in which specimen M1 and M2 belong towards middle income economy – (01 mark@) = 02)

- They are used as building materials of various industries
- They are raw materials for manufacturing different products