

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
M3	Animalia	Arthropoda	Insecta
M4	Animalia	Annelida	Oligochaeta

(c) From specimen M1 the significant of – **(01 mark@ = 02 marks)**

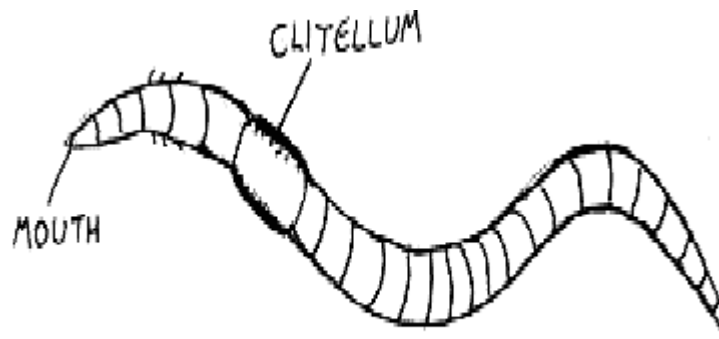
- (i) Needle leaves – is to reduce the rate of transpiration
- (ii) Green colour – is for facilitating photosynthesis

(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