**MID TERM 2 2022 EXAM**

**AGRICULTURE FORM 3**

**MARKING SCHEME**

1. Define the term soil erosion (1mk)

* *This is the process by which soil is detached, removed and carried from one place to another where it may not be useful.*

1. Give four natural factors that **encourage** soil erosion (4mks)

* *Steep slope*
* *Light soil /sandy soil*
* *High amount of rainfall*
* *Barenness*
* *High rainfall intensity*
* *Strong slopes*
* *Shallow soils*

1. Outline the steps followed in the development of a gully (4mks)

* *Movement of water from a water shed*
* *Channel erosion caused by flowing of water*
* *Widening of the channel*
* *Scouring of the floor of the channel*

1. State four types of landslides (2mks)

* *Slump/slip*
* *Debris slide*
* *Debris fall*
* *Rock fall*
* *Rock slide*

1. Give the effects of soil erosion (4mks)

* *Remove the top soil thus lowering the soil fertility*
* *Destroys soil structure and washes away he soil microorganisms*
* *Causes siltation in dams and rivers*
* *Sedimentation affects fishing*
* *Destroys underground pipes and roads*

1. How does mulching help in soil and water conservation (3mks)

* *Prevent splash erosion*
* *Reduce speed of runoff*
* *Reduce evaporation*
* *Increase organic matter and water retention*
* *Increase water infiltration*

1. Highlight four structural measures used in soil and water conservation (4mks)

* *Trash/stone lines*
* *Bunds*
* *Cut off drains/diversion ditches*
* *Terraces*
* *Gabions/porous dams*
* *Dams and reservoirs*

1. Outline four functions of trees in soil and soil conservation (4mks)

* *Prevent the soil from splash erosion by reducing the force of raindrops*
* *Provide shade and reduce loss of water through evaporation*
* *Act as wind breakers thus reducing wind erosion*
* *Roots bind soil particles together reducing its liability to erosion*
* *Reduce speed of runoff thus minimizing its erosive force*

*Their leaves decay and form humus which increases water infiltration*

1. Name any three methods that may be used in water harvesting (3mks)

* *Weirs and dams*
* *Ponds*
* *Roof catchment*
* *Wells*
* *Rock catchment*
* *Micro catchment*
* *Retention ditches/level terraces*

1. Explain Five cultural measures used in soil and water conservation (5mks)

* *Grass strips/ filter strips-minimize speed of runoff water*

*, traps soil reducing erosive force*

* *Cover crops-reduce impact of raindrops/splash*
* *Contour farming-creates ridges of earth which hold water thus reducing runoff and prevent rill erosion*
* *Grassed waterways-reduce speed of running water and traps soil*
* *Mulching- Reduces speed of runoff and reduce impact of raindrops*
* *Afforestation or reafforestation-Trees act as windbreaks, reduce impact of raindrop*
* *Strip cropping-Reduces speed of runoff, traps soil particles from runoff*

1. The diagram below illustrates a micro-catchment. Study it and answer the questions that follow.
2. Identify the type of micro-catchment above (1mk)

* *V-shaped/Triangular*

1. State one use of the above structure (1mk)

* *Used to conserve water for plants during dry seasons /drought*

1. Apart from this type ,state two other types of micro-catchments (2mks)

* *Semi circular bunds*
* *Trapezoidal bunds*
* *Contour bunds/furrows/contour ridges*
* *Planting bits*

1. Give four pieces of information contained in a land title deed (4mks)

* *Land parcel number*
* *Size of the land*
* *Name of the owner*
* *Date of registration*
* *Seal of the registrar*
* *Condition if any*
* *Place of issue*
* *Signature of the issuing officer*

1. Give four advantages of land consolidation (4mks)

* *Proper supervision of land*
* *Saves time and transport costs*
* *Ease of accessing agricultural extension service*
* *Proper planning and adoption of crop rotation programme*
* *Soil conservation and land improvement*
* *Construction of permanent structures*
* *Title deed is used to secure loan*
* *Weed, pests, and disease control is enhanced*

1. Give four disadvantages of hedges as opposed to other fences (4mks)

* *Takes too long to grow*
* *Occupy wide space hence not suitable for paddocking*
* *Can be hiding places for thieves and rodents*
* *Thorny species can injure humans and livestock*
* *Laborious in trimming*
* *Irregular growth may leave gaps an advantage to thieves*