CHRISTIAN SOCIAL SERVICES COMMISSION (CSSC)

NORTHERN ZONE JOINT EXAMINATIONS SYNDICATE (NZ-JES)

FORM SIX PRE-NATIONAL EXAMINATIONS 2023

113/1 GEOGRAPHY 1

MARKING SCHEMESECTION A

1. **Solution:**

1976 total = 99

TEA = $^{30}/_{99}$ x 100% = 30.3% (01 Mark)

SUGARCANE = $^{42}/_{99}$ x 100% = 42.4%

TOBACCO = $^{27}/_{99}$ x 100% 27.3%

1977 TOTAL = 80

TEA = $^{10}/_{80}$ x 100% 12.5%

SUGARCANE = $^{30}/_{80}$ X 100% 37.5%

TOBACCO = $^{40}/_{80}$ X 100% = 50% (01 mark)

1978 TOTAL = 103

TEA = $^{36}/_{103}$ X 100% = 34.96%

SUGARCANE = $^{12}/_{103}$ X 100% = 12%

TOBACC0 = $^{55}/_{103}$ X 100% = 53% (01 Mark)

1979 TOTAL = 122

TEA = $^{60}/_{122}$ X 100% = 49%

SUGARCANE = $^{20}/_{122}$ X 100% = 16%

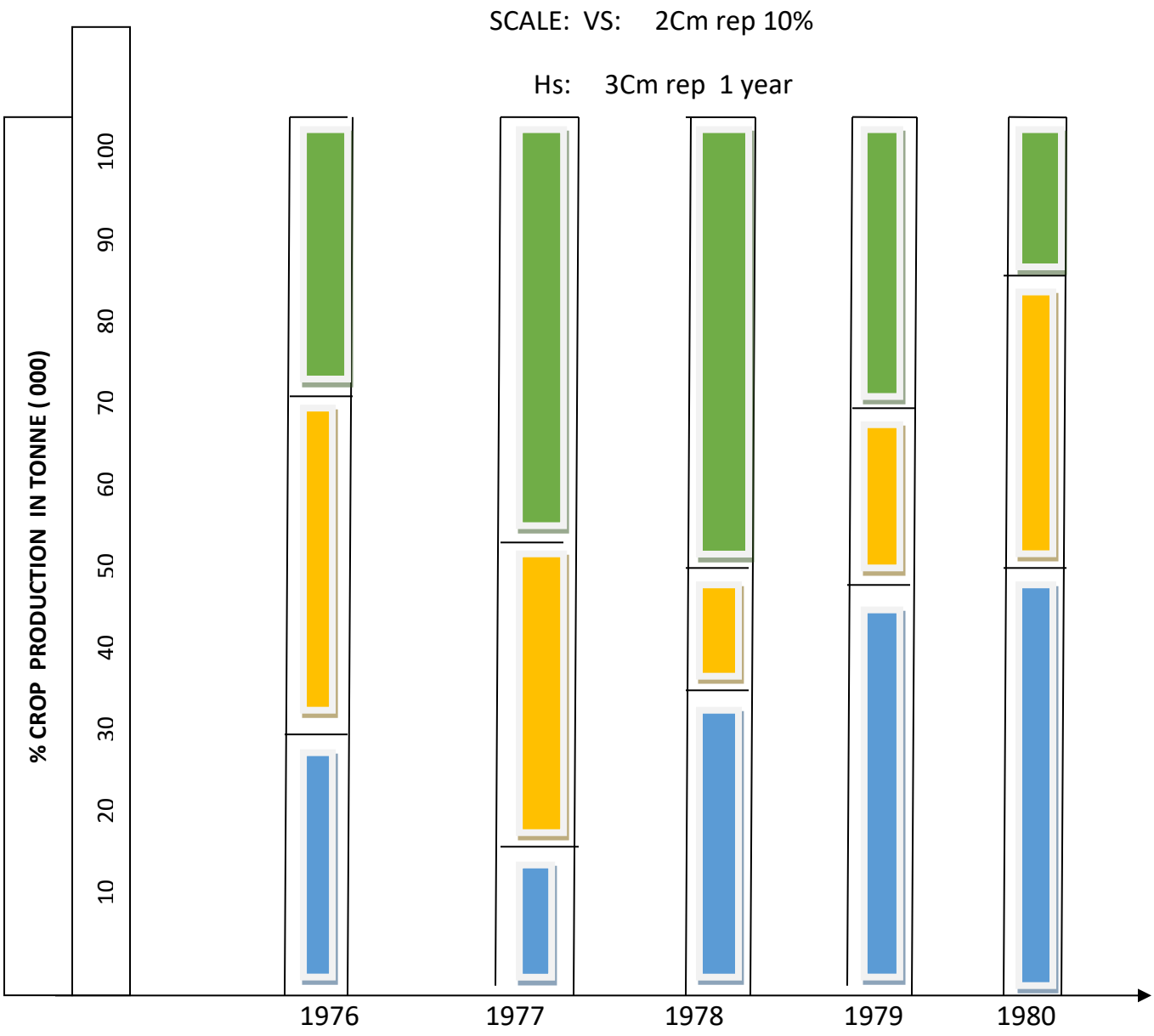
TOBACCO = $^{42}/_{122}$ X 100% = 34% (01 Mark)

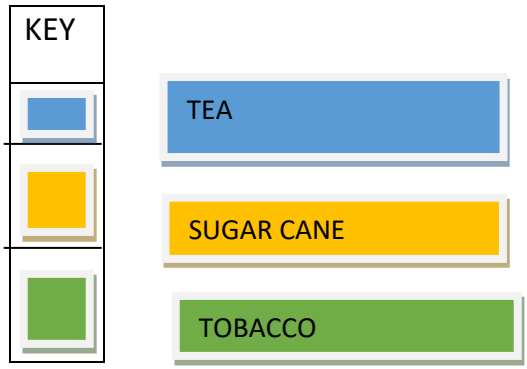
1980 TOTAL = 107

TEA = $^{50}/_{107}$ X 100% = 47%

SUGARCANE = $^{42}/_{107}$ X 100% = 39%

TOBACCO = $^{15}/_{107}$ X 100% = 14% (01 mark)THE DIVIDED PERCENTAGE (%) BAR GRAPH SHOWING CROPS PRODUCTION IN TONNES (000) FROM 1976 TO 1980.





Tittle-0.5mark, scale 1mark, key 0.5 mark, XY-axes 1mark and graph 3marks

TOTAL 06marks

MERITS OF DIVIDED PERCENTAGE BAR GRAPH.

i. It shows many items
ii. It shows good visual impression
iii. It shows comparisons between items **2points each 1 mark**

DEMERITS OF DIVIDED PERCENTAGE BAR GRAPH.

i. Its time consuming
ii. Its tiresome due to mathematical calculations
iii. Its difficult to interpret **2points each 1 mark**

2, Meaning of vertical aerial photograph… are photographs taken while the camera is tilted vertically downward while fixed in an aircraft flying or balloon (1 mark)

a) Several aids for interpretation include the following (@ 2marks) any four points

- ✓ **Association,** some objects are so commonly associated with one another that aid identification of features
- ✓ **Texture** is the frequency of change and arrangement of tones.
- ✓ **Shadows** Tree identification can be aided by an examination of the shadows thrown. Shadows can also inhibit interpretation.
- ✓ **Pattern** is the spatial arrangement of objects. Patterns can be either man-made or natural. Pattern is a macro image characteristic.
- ✓ **Shape** of the feature or objects can provide diagnostic clues that aid in identification

b) clarity refers to how a photograph clear it is when seen or observed (1 mark)

factors affecting clarity includes the following (@ I mark) any four points

- ✓ Time when the photograph was taken
- ✓ Skills of the photographer
- ✓ Quality of the camera used in taking photographs

- ✓ Material used to print the photograph may also affect clarity of the printed image
- ✓ Weather of the day when the photography was captured

3, **Introduction**

Giving the meaning of chain or tape survey **1 mark**

Main body applicability of tape survey/how is it important

i. To set out engineering structures such as roads, railways, dams
ii. To divide plot of land into a number of smaller units
iii. To update an existing large-scale map
iv. To restore lost boundary
v. To determine the area of surveyed land
vi. To prepare an account plan of a plot of land

Any six, **@2marks**

conclusion any relevant conclusion **1mark**

SECTION B

4. Chemical weathering is the breakup of rocks by being decomposed by chemical reaction. For the chemical weathering to be successful, the chemical nature of the rock is transformed from its original/primary mineral compounds into secondary/new mineral compounds. This chemical transformation/reaction of rocks is highly facilitated by water. **3marks**

Role of water in the chemical weathering

(i) Carbonation; the carbonic acid formed by the reaction of water and Carbon dioxide gas, reacts with the calcium carbonate($CaCo_3$) rocks such that $CaCo_3$ is converted into calcium bicarbonate ($Ca(HCo_3)_2$)

$$CaCo_3 + H_2O + CO_2 \longrightarrow Ca(HCO_3)_2$$

(ii) Hydration; this is the process in which certain minerals absorb water and expand causing fracturing of the rocks. As minerals absorb water, they swell/ expand as a result fractures develop on the rock surfaces hence rock disintegration. This process is also called Slaking.

(iii) Solution; this is a process in which the minerals in the rocks directly dissolve in water without their chemical composition being altered, such that it is a direct chemical change. This is the process in which some soluble mineral like salt (rock salt) dissolve in water naturally leading to the disappearance of the rock.

(iv) Oxidation; this is the process which involves a reaction between metallic ions such as calcium magnesium or iron and oxygen to form oxides. This is more common in Iron (Fe) bearing minerals, since iron can have several oxidation states. The new minerals formed by oxidation are easily attacked by other weathering process.
The oxidation of Iron completely breaks down rock structures where iron and silicate are joined.

(v) Hydrolysis; is the process whereby hydrogen in the water combines with certain metal irons in a mineral to form different chemical compounds. It occurs when acidic water reacts with rock forming minerals such as feldspar and breaks it down to produce clay and salts that are removed in solution.

Any 5points@3marks = 15 marks

conclusion

Therefore, the secondary rocks formed can be the source of building materials, fertile soil for crops production and minerals for industrial development. **2marks**

5. "Soil is made up of interacting substances existing in three states of solid, liquid and gaseous" Justify

- Introduction**- 1mark**
- Main body**- Each part well explained 6marks**

(i)Solid part -Solid portion (Organic and inorganic)

-Organic (living and decayed plants and animal materials like plant root, fungi, bacteria worms insects and rodents

- Inorganic (Colloidal particles of organic matter and inorganic matter

(**ii)Liquid part**- Soil solution (solution of chemical compounds. Soil without water cannot have chemical reaction nor can it support life as plants absorb nutrients in a liquid form

(**iii) Gaseous part**-gases in the pore spaces of the soil. Gasses from the atmosphere and gases resulting from biological and chemical activities in the soil

- Conclusion **- 1mark**

6. Introduction

Give the meaning of water scarcity **1mark**

Main body

The roles of water to living organisms

- Water is used as raw materials for photosynthesis process in production of food in plants
- Support respiration process
- Support digestion in animals
- It helps plant growth
- Water is habitat for some organisms
- It is a component of blood used in transporting minerals and nutrients in human body
- Used to cool animal body during hot season/ temperature regulation

Any six points @3marks

Conclusion

Any relevant conclusion **1mark**

7. **Introduction 1mark**

   A candidate should define **micro-climate**

   Being the atmospheric conditions of a small area recorded for a long period of time like 35 years and above.

   This area experiences the climate which is quite different from the climate of the large area within the same latitude, it includes areas like mountains, forests, towns and Island

   Main body;

   A candidate should explain the reasons for the uniqueness of the mountainous areas to have their own climatic conditions

   - Altitude of the area
   - Aspect (side of the mountain facing the sun)
   - Humidity
   - Precipitation (orographic rain)
   - Vegetation distributions
   - Leeward and wind ward sides of the mountains
   - Difference in pressure/strong wind

   Any six points **@3marks**

   Conclusion

Any relevant conclusion **1mark**