

11. VEGETATION

1. a) - Pampas of Argentina

- Veldt of S. Africa
- Downs of Australia
- Steppe of Asia
- Prairies of N. America

b) State three characteristics of temperate grasslands.

b) - Almost airless except along water courses

- Grass is tall and nutritious in most areas
- Grass is shorter, tougher & less nutritious in drier areas
- Grass withers in autumn
- It sprouts in spring

ii) stems - Some trees are umbrella shaped to reduce evaporation below the stems

- Some plants have long roots to reach the water table below
- Some plants have thick/ fleshy/ succulent leaves to store water
- Some plants/ grass wither in absence of rainfall but have abiding to recover quickly when rain falls
- Some plant seeds remain dormant for long periods awaiting the start of rainfall
- Some plants have thin leaves/ spiky/ waxy needle like leaves to reduce water loss

2. a i) X-rainforest

Y-bamboo forest

Z-heath and moorland

ii) - it consist of a mixture of tree and grass

- in wetter areas the grass are tall and close to each other
- in drive areas the grass are shorter and tufted
- grass dominate the vegetation
- trees are shorter and more scattered
- trees are umbrella shaped
- acacia trees are a dominant species
- some trees i.e. bamboo have thick barks
- river valleys have trees and thick bushes
- during drought grass withers/trees shed their leaves

b i) Areas on leeward slope of mountains have different vegetation from those on wind

ward slope because they received different amount of rainfall√√

ii) Settlement, farming and mining interferes with original vegetation leading to growth of

secondary and dissertation√√

c i) south Africa√

ii) Argentina√

iii) New Zealand√

. d) The frequent outbreak of bush fires destroys the grass retarding its regeneration√√

the increasing human population is encroaching into the grasslands replacing them with settlement and cultivated land√√

pests such as army worms /locust destroy the grass and the vegetation degenerations into a semi- desert type√√

wild and domestic animals overgraze and cause stunted growth of grass√√

3. a i) -Natural vegetation is the plant cover that exists in an area without the interference

of external modifying influence especially people and their animals

ii) -Temperature

-Precipitation(rainfall)

-Sunlight

-Wind

b i) -The prairies (of N. America)

-The veid (of S Africa)

-The pampas (of Argentina)

-The downs (of Australia and New Zealand)

ii) -They are conical in shape

-They have needle-shape leaves

-In most coniferous forests a thick carpet of mosses occur

-Forest species are generally few and large tracts of forests can consist of only one or

two species of tree(occurs in pure stands)

-Most of the species are softwoods which mature faster

-Most species are evergreen but a few she their leaves eg fir,pine and larch.

- Trees have a widely spread shallow root system for utilizing moisture from the top soil

since most of the time subsoil is permafrosted

c) -some plants have thick leaves and banks for storing water.

- some plants produce seeds which lie dormant for along time and germinates when the rain falls
 - some plants sheds leaves during the onset of the dry season to reduce loss of water through transpiration
 - trees in the region have long roots to tap water from the water table below
 - tress in the region are umbrella shaped to provide shade that reduces the rate of evaporation around the stem
- . d) - Frequent outbreak of bush fires destroy grass and retard its regeneration

- frequent drought destroy the grass and so the vegetation degeneration into a semi-desert type.
- overgrazing of domestic and wild animals causes stunted growth of grasses
- human activities due to increased population which encroaches grasslands
- pests such as army worms and locusts destroy the grass, thus reducing the rate of growth

4. a) X - Veldt
Z - Stepper

b) - Some plants have a short life-cycle this enables them to survive during the short period of wetness.

- Most are salt tolerant (Halophytes) to enable them survive in the saline soils of the deserts.
- Most plants have succulent leaves that store water to enable them survive the long drought period.
- Some plants have fibrous stems which they use as breathing surface.
- Most have deep roots to reach the deeper water table.
- Some have spines/thorns which protect them from browsing animals.
- Some are drought resistant & deciduous which enable them shed their leaves during dry season.

5. a i) L is savanna (park savanna)

ii) - The vegetation is tropical rainforest/ equatorial forest

- The forest consist of mixed variety of tree species
- The trees shed their leaves at different times of the year/ ever green
- The trees are tall with large trunks
- The trees have broad; leaves/ drip tipped leaves
- The trees take long to mature
- The tree species are mainly hard woods
- The forest trees grow close together
- The forest has numerous lianas/ climbing plants/ epiphytes
- Some of the trees have buttress roots
- The forest has crowns that form three distinct canopies/ layers

b i) - Some plants have thick/ fleshy/ succulent leaves/ barks to enable them store water

- Some have long roots to tap the ground water
- Some have no leaves/ have thin/ spiky/ waxy/ needle- like leaves to reduce transpiration
- Some plants have shiny surfaces to reflect light
- Plant seeds remain dormant awaiting the short rains
- Some plants have thick/ hard barks to reduce transpiration
- Some plants wilt in the absence of moisture that have a quick recovery ability
- Some plants have thorns to protect themselves from browsing animals
- Most plants are stunted/ dwarf like due to the harsh conditions
- Some plants are quick sprouting to take advantage of the short lived desert rays
- Some plants have underground bulbs that remain dormant awaiting short the rains

c i) - The temperatures are too low to support vegetation

- The surface is mainly bare rock, so no soil has formed to support vegetation

- Water is always in a frozen state, i.e. snow, so it is not available to plants

ii) - Vegetation is of aesthetic value as it adds beauty to the landscape

- Vegetation binds soil together using its roots. Its aerial parts reduce the impact of raindrops on the soil. In this way, it protects the soil against erosion

- Plant remains decay to become humus. This improves the fertility of the soil

- Some plants are of medicinal value to people. Their leaves, barks or roots are extracted and prepared into medicines, both traditional and modern

- Some trees are used in the manufacture of paper while others are used for the manufacture of plywood, veneer or production of timber

- Some plants are eaten by people e.g. bamboo shoots

6. a i) - Natural vegetation

- Derived vegetation
- Cultivated vegetation

ii)- altitude✓

- aspect✓
- terrain and drainage

b i) A-health and moorland

B-bamboo forest✓

C-rain forest✓

D-savanna grassland

ii) -too cold for plants to survive covered by snow✓

- rocky surface

c i) prairies

Pampas

ii) - Grazing the plenty tall and short grasses are used for grazing livestock and wild animals

- Reduces soil erosion-savanna vegetation act as soil cover hence reduces soil erosion

- Habitat for bees and wild animals-trees in savanna are habitat for bees which provide honey and home for wild animals e.g. gazelles, giraffe

- Some shrubs and herbs growing in the savanna are used as medicine

- Fuel-trees provide wood fuel and fuel wood for the people in the tropics

- Gross increases humus in the soil making areas suitable for cereal farming e.g. wheat and maize

d)- some plants have long roots to enable them tap water far deep the ground✓✓

- some plants have shallow root system which enables them to take moisture from the soil layers

- some plants have sunken stomata and waxy leaves to reduce rate of transportation✓✓

- some plants have succulent stems to allow them store water✓✓

- some plants are short lived i.e. Complete their cycle within the short wet period√√

- some plants e.g. tubers and corns remain dormant during dry spell until wet period

stimulate

7. a i) S- Steppes

T- Pampas

Y – Savanna

Z – Downs

ii) - the vegetation consists of a continuous cover of grass, the grass is tufted

- The grass is interspersed/mixed with bulbous/leguminous plants/shrubs

- The grass is nutritious. Grass is tall in moist area

- The grass is short and tough in drier areas about 15-30cm in height

- The grass is green in spring/brownish yellowish and strow like in summer/Grass

withers in autumn and die in winter/rare grass sprouts in spring/Trees are only found

along rivers/ rive rine trees/ trees found in hollows where rain water collects.

- common grass varieties are gamma graze/buffalo grass

- In drier, areas, the short grasses form bunches separated by bare soil

- Tress found along river courses are temperate trees like popler, willo adler

8. a i) - It is a plant cover existing naturally in a place but has been interfered with by man

ii) - Altitude

- Aspect

- Soil

- Climate/ temperature/ rainfall

- Man's activities

b) i) - Savanna vegetation

- Rainforest

- Bamboo forests

- Health and moorland

ii) - prairies

- steppes

- downs

- veld

iii) - some have thick/fleshy/succulent leaves /barks

- some have long tap roots
- some have no leaves /have thin/spiky/waxy/needle like leaves
- some plants have thick/hard barks
- some plants have thorns
- some plants are stunted/dwarf like
- shrubs are common
- some plants spout during wet seasons (short time)

9. a) - fire-often ,large areas of forests are destroyed by accidental and sometimes

intended fire. such forests takes long to recover

- diseases causes by pests and parasites attack mainly the planted forests causing many trees to die
- human activity /settlement /charcoal burning/logging have destroyed many forests areas of which are transformed in to farms and grasslands
- over-exploitation leads to depletion of certain tree species such as Meru oak, camphor and Elgon teak. these trees take long to mature
- government policy of degazetting of some forests made people free to clear many forested areas
- prolonged droughts lead to degeneration of forests some of which take long to recover

(b) Rain forest have closely set trees with these districts canopies.

- This crowns and closeness of the trees form a dense shade for the lower layer which makes arvesting cumbersome.
- Most trees are tall, and have huge trunks. This makes them cumbersome to be harvested and most of them are heavy to be transported.

High amount of rainfall.

- This forest lies within the equatorial climatic region where high amount of rainfall is received throughout the year.
- This means that harvesting of trees can not take place throughout the year because of the very dump condition in the forest and general disturbance caused too much rains.

Tree species are not found in pure stands

- Rainforest do not have pure stand and this become a problem if one need to harvest only one species meaning moving from one part of the forest to another as one harvest.

Majority of the species are hardwood.

- These species are hard to be cut and also heavy to be transported