

GLACIATION

1.
 - a) Is large continuous mass of ice which covers vast areas of lowland
 - b)
 - Initially ice collects in shallow hollows on the mountain sides
 - The hollows are enlarged by the plucking action of the ice to form cirques
 - More ice accumulate in the hollows leading to further erosion
 - The cirques recede until a knife edged rock called arête separates them.
 - c)
 - (i) S- Medial moraine
T-Lateral moraine
V-terminal moraine
 - (ii)
 - Alluvial fans and outwash plain have fertile soils exploited for agriculture.
 - Fjords coastline provide good fishing grounds because they are deep and sheltered.
 - Lakes and rivers form channels for development of route ways
 - Rivers provide water for domestic and industrial uses.
 - Some features attract tourists earning foreign exchange
2.
 - a)(i) Is a mass of ice of limited width which moves outwards from a central area of ice accumulation.
 - (ii) Valley glaciated mountain while ice sheets are large expanses of ice covering large areas of permafrost land.
3.
 - a) P- Pyramidal peak/horn
Q- Arete

R- Hanging valley

- b)
 - A pre-existing U-Shaped valley is filled with ice/glacier.
 - The glacier erodes the valley by abrasion or plucking
 - The end of spurs are truncated/cut
 - Ice melts away leaving behind a U-shaped valley
- 4. a) Formation of pyramidal peak
 - Ice exerts pressure on the hollows
 - Plucking actions of ice enlarges the hollow allowing more ice to collect in them.
 - Freeze-thaw action leads to expansion of cracks/hollows making them large basins.
 - Moving ice plucks off loose rock materials from the basin enlarging them further.
 - Nivation eats into the back wall of basins making them recede into the mountains side
 - Steep-sided knife edged ridges are formed separating the basins.
 - Three or more these ridges/arêtes converge at the mountain top forming a jagged peak known as pyramidal peak/horn.
- b) Significance of upland glaciated features to human activities.
 - The upland glaciated valleys are suitable for livestock farming
 - Glacial upland areas forms magnificent features that encourage recreation and tourism.

- Glaciated mountains encourage the growth of forests hence lumbering is practiced.
 - Waterfalls formed in glaciated uplands provide suitable sites for hydro-electric power production.
 - U-shaped valleys form a natural route way
 - Flooded coastline form deep well sheltered natural harbours/good fishing grounds.
- c)
- i) Why it is difficult to carry out field study of glaciated feature.
 - Climbing the mountain is difficult due to rugged terrain.
 - Features are found far from the schools/settlements
 - Time may be inadequate
 - Poor weather conditions i.e. rainfall and low temperatures
 - Thick forest and dangerous animals which makes it difficult to access such areas.
 - It is difficult to conduct a previsit
 - Avalanches
 - ii) How students would use the photograph of Mt. Kenya to identify the glaciated features.
 - By dividing it into parts
 - By observing and identifying the features in each part of the photograph
 - By recording the features observed
 - By drawing sketches of the features observed
 - By labeling the features observed.

5. A snout is the lower part of glacier where it begins to melt while a snow niche is a smaller niche mass laying on a steeply sloping hollow, gulley or bench in the high mountains.
6.
 - Lewis glacier (between Lenana and Nelion)
 - Tyndall Glacier (North of Lenana peak)
7. It is caused by Glacier as it erodes vertically and laterally. The sub-glacial moraines scrub the floor while the lateral moraine scrubs the walls. The trough is thus broad, flat bottomed, and steep sided with a U-shaped cross-section.
8. It is a permanent cover of ice on the land surface extending to a small area of land
9. Pyramidical peaks e.g Lenana, Batian, Nelion Cirques e.g Teleki tarn, Hogley Gorges, Aretes
10. It is a shallow pre-glacial depression that has progressively enlarged. A patch of snow produces alternate freezing and thawing on rocks around the margins which then cause them to rot and disintegrate. Melt water helps to remove the resulting debris thus forming nivation hollow.