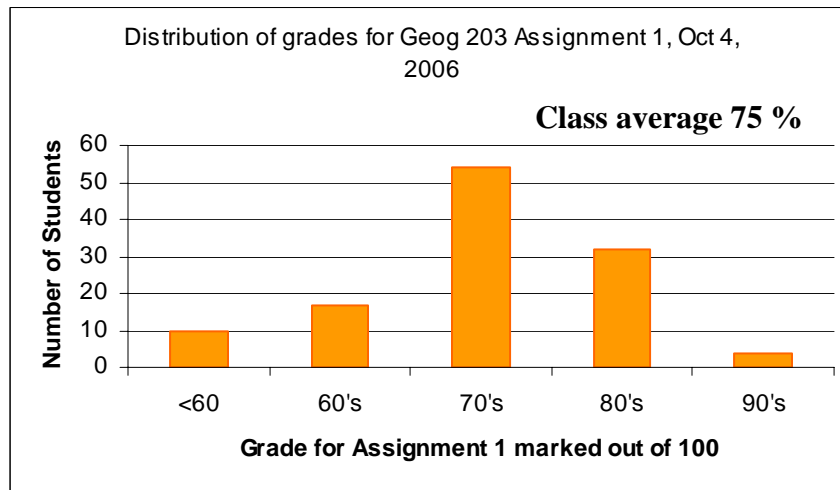


# Geography 203

## Overall feedback on Assignment 1

Make sure you add up your marks for each section. The assignment was marked out of 100, and was then converted to a value out of 10 marks (towards the 100 final course marks).



## Part I: Climate

### Q1: Graphs (10 marks)

Below are the typical problems where many students lost marks:

- Did not include a Figure number (so you can refer to the fig. by no. in your other parts)
- Did not include a Title describing each of your graphs
- Did not include the average values for both temperature and precipitation, which should have been written on the graph.

### Q2: Table (10 marks)

Below are the typical problems where many students lost marks:

- Did not include a Table number
- Did not include a Title describing the Table
- Did not include a column for the range (max-min), as asked for in the question.

### Q3: Describe the charts and table (10 marks)

READ QUESTIONS CAREFULLY. No interpretation of climate controls (based on Pressure systems, winds etc) was required here, that is done in Q4, just describe the patterns.

Here it is not sufficient to just repeat the numbers that you have included in the table (max was..., min was.. ), We wanted you to compare and contrast: i.e. to describe the main interesting features of the T and P patterns as they differ between and within city pairs.

It would have been logical to separate this answer into two sections, one section for each city pair.

When describing the patterns, be specific, use numbers. It's very vague to just say that one value was larger or smaller than another, better to insert the actual number from your table. See below:

**For example:**

‘‘The mean annual precipitation for city 1 (longitude:latitude) is **only 53 mm** when compared to city 2 (long:lat), which **had as much as 200 mm** of annual precipitation (or 3.8 times more) ‘‘

Is much better than:

‘The mean annual precipitation for city 1 was ‘**way less than**’ city 2.’

**Q4: Explain the processes responsible for the observed climate patterns you just described in question 3. (30 marks).**

Names of climate Zones should be used (as per relevant sections in chap. 10 and 11):

Some forgot to name the climate types:

Cairo: Dry (even arid) Tropical

Cape Town: Mediterranean

Lungi: Monsoon and trade wind coastal

Addis Ababa: Highland variant of Dry Tropical

Answers should be presented in a clear and logical manner.

Below is an example of how one could compare and contrast Cairo and Cape Town:

Cairo(30N) : occurs in a desert in a Dry Tropical climate and is almost year round under the influence of a subtropical high pressure zone, so has very little (25 mm) annual Precip. Cape Town has a Mediterranean type climate with a clear sky, hot dry season (its S hemisphere summer: nov-jan) and a cooler wetter, winter season . This produces much higher annual P (612mm vs 25mm) and much more monthly P range (90mm) than Cairo (range 6mm). Although the Cape at 34S is located only 4 degrees further from equator than Cairo, this matters: the Cape is under the alternating influence of dryness from High Pressures in its summer season (nov-jan: 15 to 25 mm P per month only) while it feels the influence of midlatitude storms along the southern polar front in its winter (May-aug: 80-105mm per month) when the HP system shifts further north of Cape Town.

The Cape is located close to Atlantic coast and has a more maritime (only 8 deg C annual T range) climate than Cairo (range 16°C) which is much further (100km) inland from the Mediterranean coast . Cairo's mean T (21°C) is higher than Cape (17°C) because of lack of cloudiness and fewer latent heat losses (dry soils, water rare). The difference in hemispheres explains the opposite time of peak T.

## **Part II: Hydrology**

### **Q1: and Q2:**

You should include actual values while describing and contrasting. Pay attention to details, and identify which year (1972), or range of years (1965 to 1969) you are specifically describing. Try not to contradict yourself, so it's important to think about the order you present your information. For Q2, you needed to explain what happened to the ratio in both years of high or low precipitation to convince us that precipitation did (or did not) have an effect on the runoff ratio between W2 : W3.

### **Q3:**

Explain with the help of the water budget equation, (based on the data given, where  $Et=P-R$ ) why you came to the conclusion that ET in W2 decreased in 1966. A change in the R ratio (W2:W3) can be attributed to changes in one or the other basin, W2 or W3. So an increase in the ratio (RW2:RW3) could mean:

- a decrease in ET from basin W2, OR
- an increase in ET from basin W3

So why did you conclude that ET did not increase in basin W3? To do this, you need to relate your observations to each of the graphs you made, and explain that the relationship between precipitation and runoff in W3 did not change. It would have been a bonus if you explained here that W3 acted as a control to which the affected site (W2) could be compared, any year.

Once you clearly identify that logging in W2 caused a decrease in ET (in W2), explain how the hydrological processes within W2 altered as a result of this logging. Include a brief description of how plants use water, and where that water comes from (mostly from the soil). This will show that you understand how logging has shifted the balance between two possible fates for precipitation, stream discharge R and ET