

The total of all marks is 40.

Good luck!

Topic 1: Weather Hazards and Climate Change

The Earth's atmosphere is constantly in motion. Study Figure 1 below. Complete Figure 1 by labelling cells A and B. (max 2 marks)

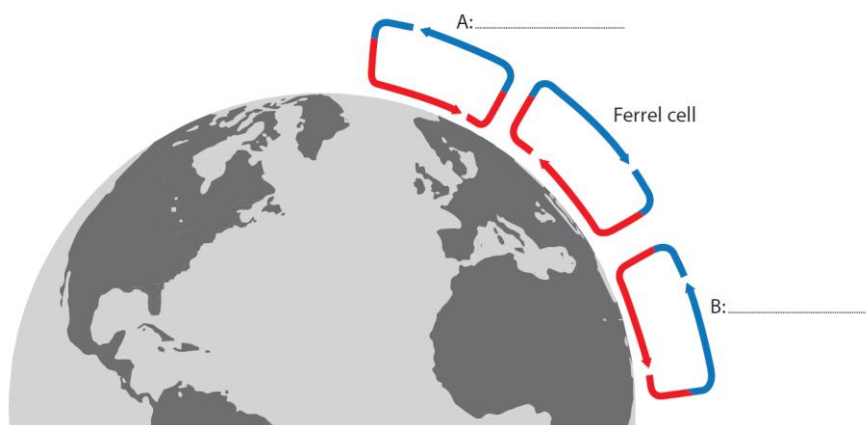


Figure 1. The global atmospheric circulation cells in the northern hemisphere

Study Figure 2. Explain one reason why more heat energy is received at the Equator than at the poles. (max 3 marks)

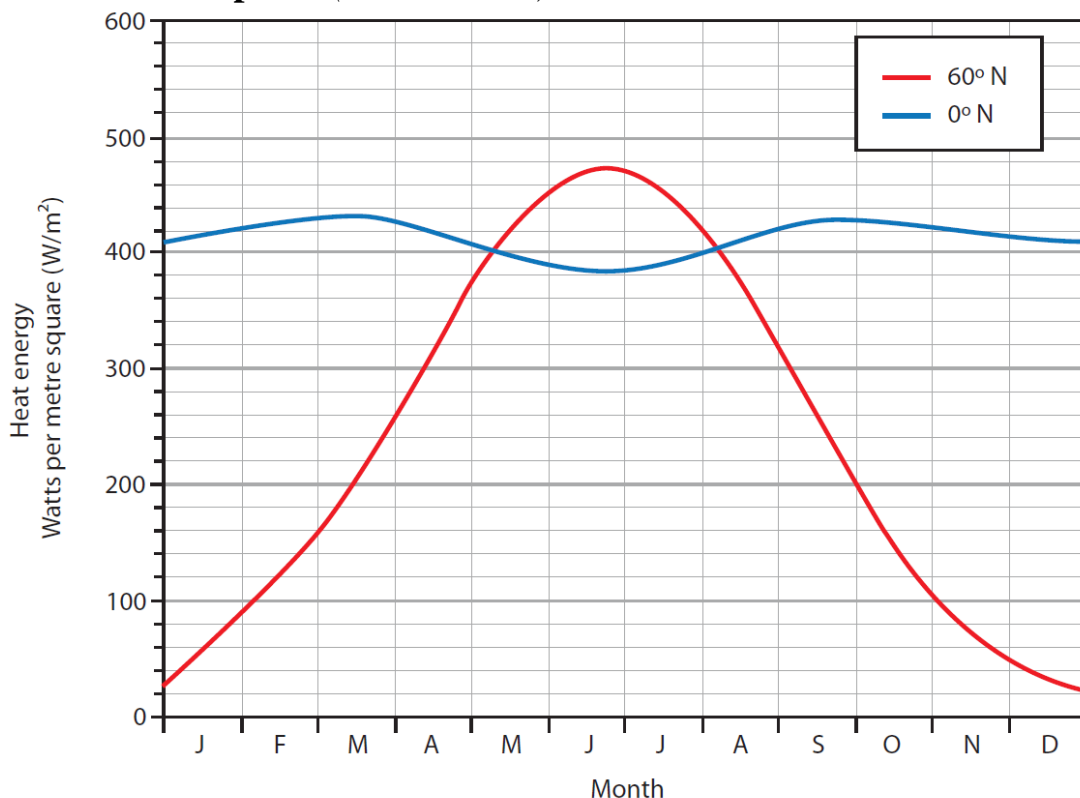


Figure 2. Monthly values of heat energy received from the sun at different latitudes in Watts per metre square (W/m^2)

Your Answer

The global climate was different in the past and continues to change due to natural causes. Study Figure 3. Calculate the range of temperatures shown in Figure 3. You must show your working in the space below. *(max 2 marks)*

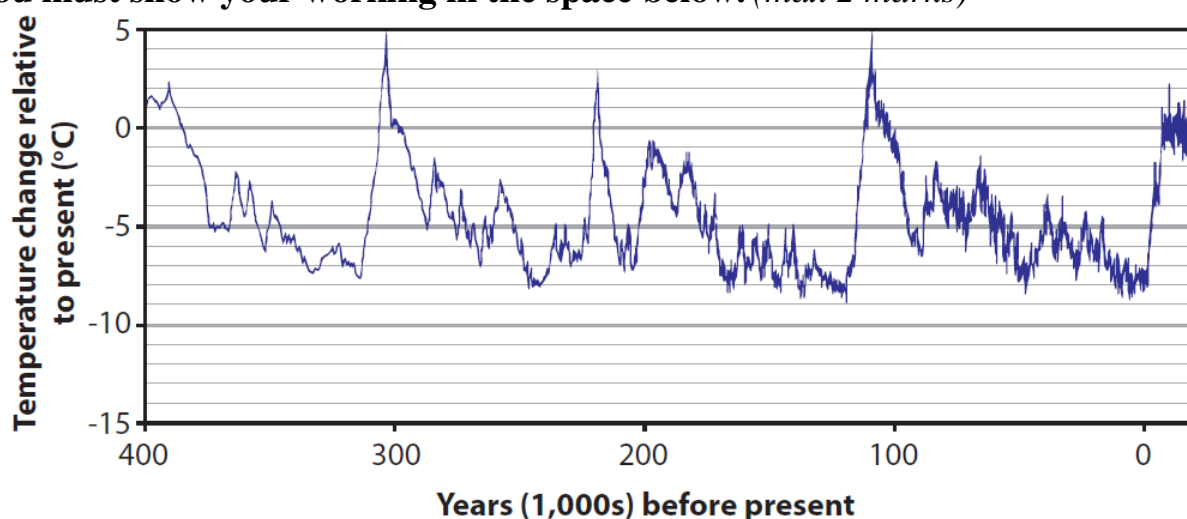


Figure 3. A line-graph showing changes in the average global surface temperature

Your Answer

Historical records such as Figure 3 provide evidence of natural climate change. State two other pieces of evidence of natural climate change. *(max 2 marks)*

Your Answer

Explain one way in which the Milankovitch cycles can affect global temperature.
(max 3 marks)

Your Answer

Tropical cyclones develop under specific conditions and in certain locations.
Study Figure 4. Identify the feature labelled X on Figure 4. (max 1 mark)

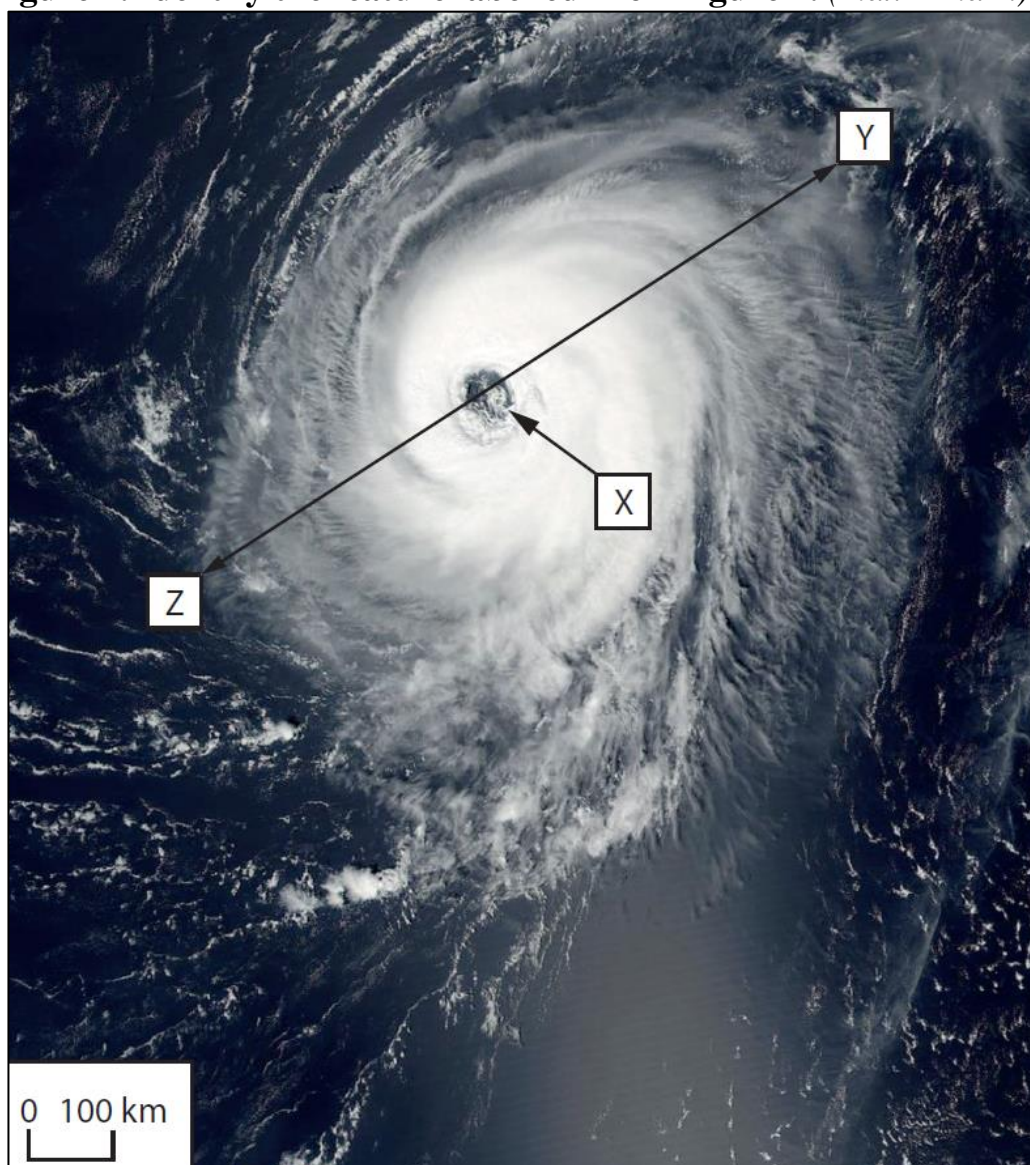


Figure 4. A satellite image showing Typhoon Meranti, 14 September 2016

Your Answer

Calculate the diameter of the tropical cyclone (shown by the line Y-Z) on Figure 4. You must show your workings in the space below. (max 2 marks)

Your Answer

Identify which country is regularly affected by tropical cyclones. (max 1 mark)

- A) Indonesia
- B) Finland
- C) Peru
- D) New Zealand

Hurricane Matthew was the first Category 5 Atlantic hurricane since 2007. Study Figures 5 and 6. With reference to Figures 5 and 6, suggest two reasons for the different impacts of Hurricane Matthew on Florida (USA) and Haiti. (max 4 marks)



It led to 47 deaths in the USA.

The state of Florida planned to evacuate all residents within 100 miles of the coast.

The USA is a developed country with a GNI per capita of US\$ 57,540 (2017).

Figure 5. Evacuation in Florida, USA before the landfall of Hurricane Matthew, October 2016



It led to 546 deaths in Haiti.

In Haiti there were only 576 hurricane shelters available with capacity of 90,000 people for a population of 11 million.

Haiti is a developing country with a GNI per capita of US\$ 1,760 (2017).

Figure 6. Damage caused by Hurricane Matthew in Haiti, October 2016

Your Answer

[illegible]

Topic 2: Challenges of an Urbanising World

Identify which one of the following is a definition of urban primacy. (max 1 mark)

- A) A city with a population of over 1 million people.
- B) A city which is experiencing de-industrialisation.
- C) A city with a much larger influence than the other cities in the country.
- D) A city which is dominated by industries such as mining and fishing.

Define the term megacity. (max 1 mark)

Your Answer

Study Figure 7 which shows data about the urban populations of selected African countries. Suggest one reason for the differences in the annual rate of growth of urban population shown in Figure 7. (max 2 marks)

Country	Annual rate of growth of urban population (%)	Percentage of population which is urban
Angola	4.32	65.5
Burkina Faso	4.99	29.4
Burundi	5.68	13.0
Eritrea	3.86	40.1
Mali	4.86	42.4
South Africa	1.97	66.4

Figure 7.

Your Answer

Study Figure 8 which shows variations in the type of employment for countries at different levels of development.

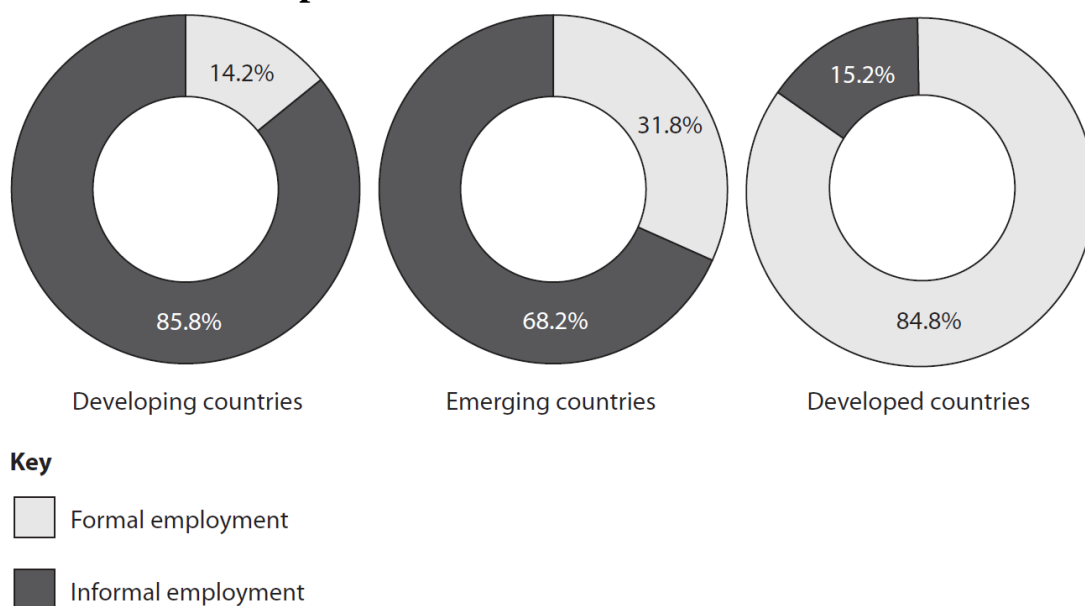


Figure 8.

Identify one characteristic of formal employment. (max 1 mark)

- A) jobs do not have a weekly regular wage.
- B) workers pay taxes on their earnings.
- C) workers have little income protection if they fall sick.
- D) jobs often involve working irregular hours.

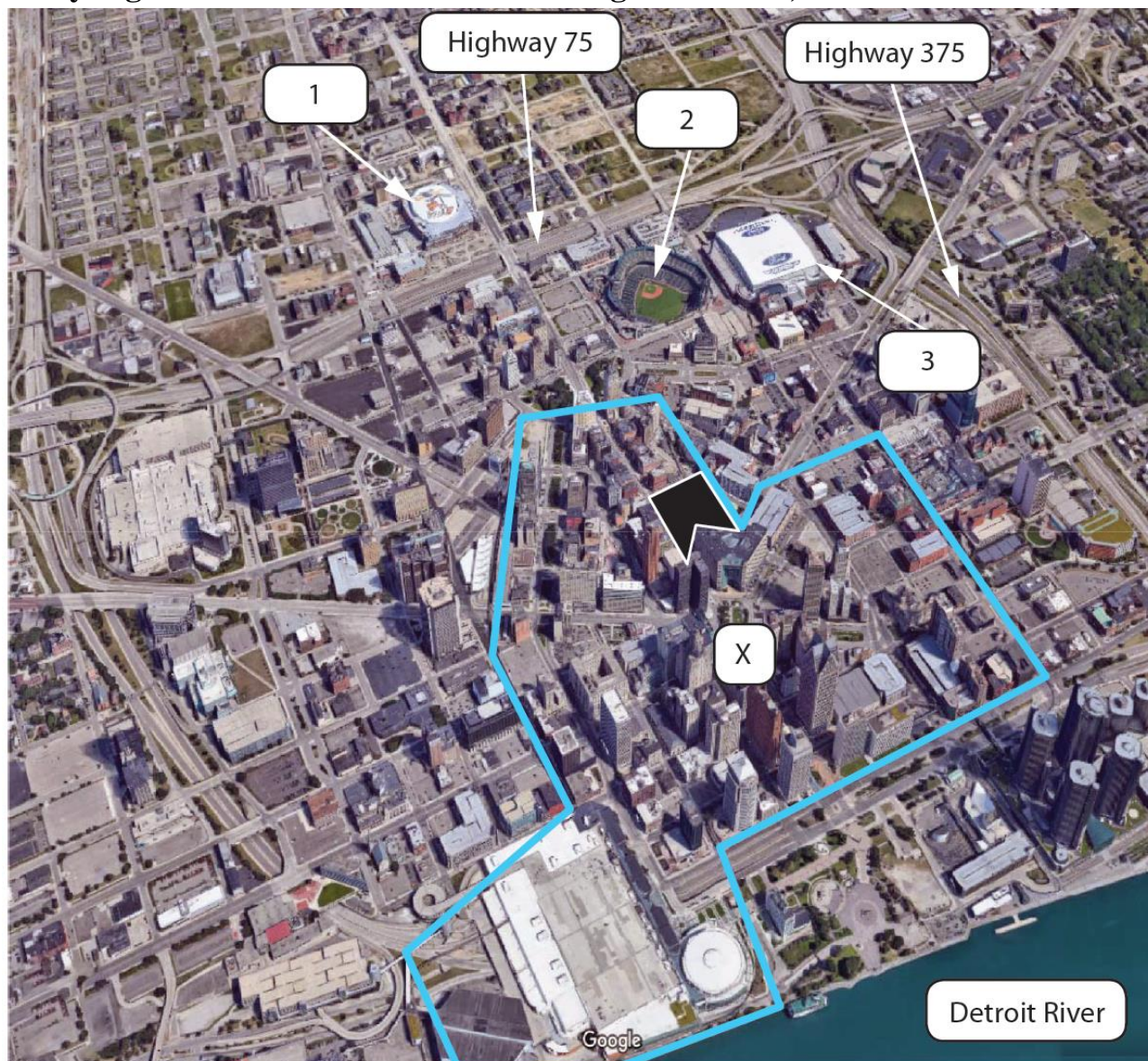
Calculate the difference between the percentage (%) employed in the formal sector in developed and developing countries using Figure 8. (max 1 mark)

Your Answer

Explain two reasons why there is a high percentage of people working in informal employment in cities in developing countries. (max 4 marks)


Your Answer

Study Figure 9 which shows a satellite image of Detroit, USA.



Key

 The boundary of Central Business District (CBD) and route of the Detroit People Mover train system

 Hudson's redevelopment site

 Sporting facilities

0 150 m



Figure 9.

Identify the main type of land use shown in Figure 9 at location. (*max 1 mark*)

- A) residential
- B) industrial
- C) commercial
- D) transport

Describe the distribution of sports facilities in this area. (*max 2 marks*)

Your Answer

Suggest two reasons why the Hudson's redevelopment site may be attractive for future development. (*max 4 marks*)

Your Answer

For Lagos megacity (Nigeria), explain one way its location has influenced its growth. (*max 3 marks*)

Your Answer
