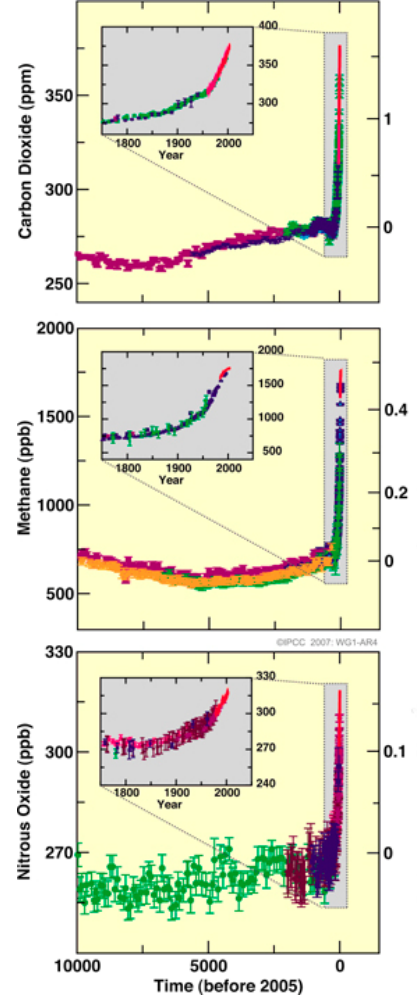


### Global and Regional Climate Change Pre-test

All answers should be concise and succinct.

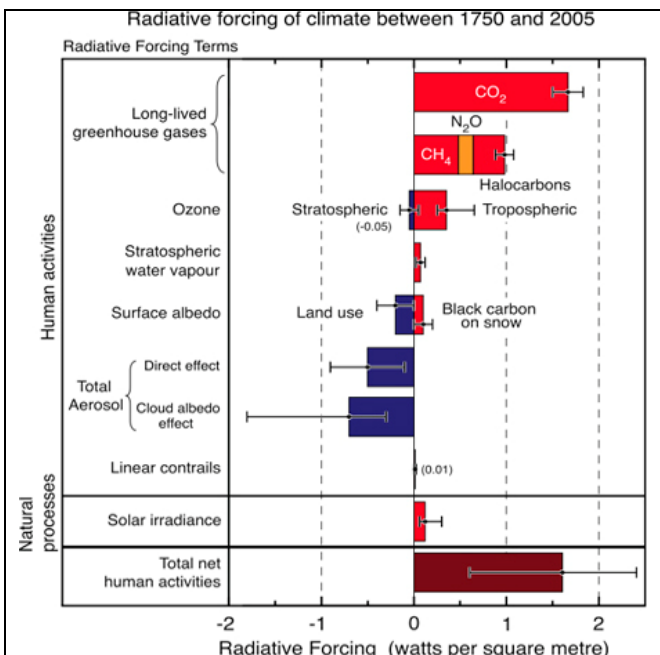
1) Please refer to the IPCC figure on the right (SPM.1) and state the relationship between carbon dioxide, methane gas, and nitrous oxide, including any patterns you notice during the last 200 years.



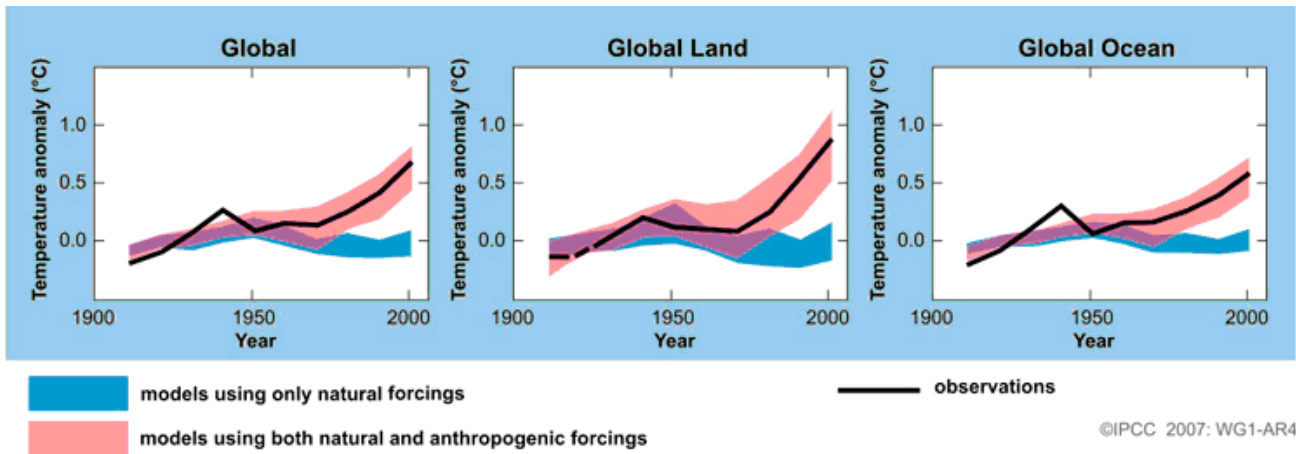
2) Based on your current knowledge, please provide a brief definition for the following terms:

- anthropogenic
- albedo
- contrails
- irradiance
- aerosols
- radiative forcing

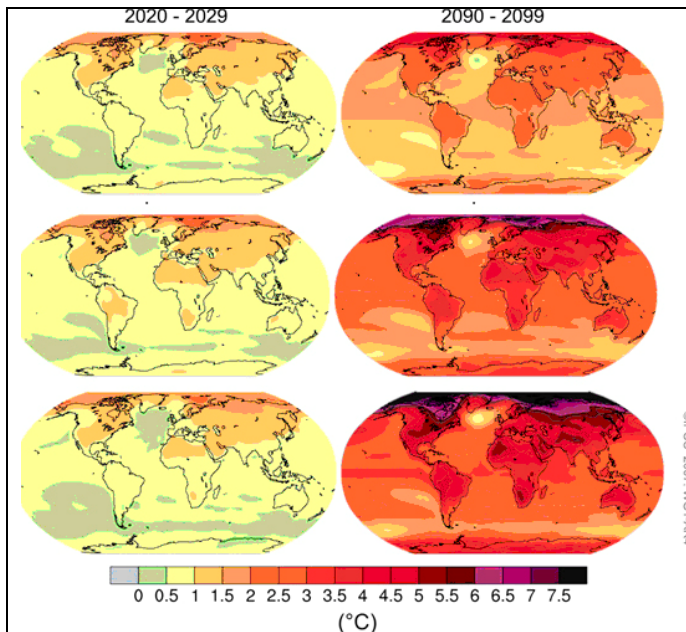
3) What is the significance of the adjacent IPCC figure? (FAQ 2.1)



4) State what “W m<sup>-2</sup>” stands for and why you think this might be a useful unit of measurement.

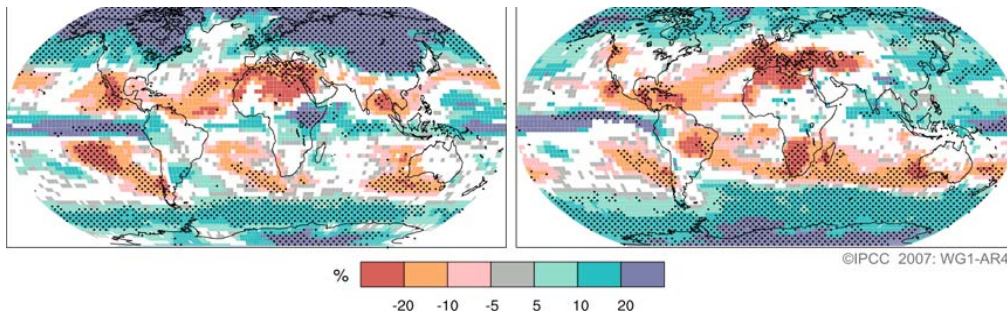


5) Refer to the IPCC figure above (SPM.4) that plots observed and modeled data. What does this graph tell you about the relationship between recent global warming and natural processes?



6) Refer to the graphs to the left from the IPCC report and list a few locations where computer models predict that warming will be the greatest:

7) Why might this be the case?



8) Refer to the IPCC precipitation graphic above (figure SPM.7) and list three places where climate models predict drier than normal conditions in the next 100 years:

- 9) What is the most abundant greenhouse gas?
- 10) Which greenhouse gas is of most concern to climate scientist studying warming?
- 11) What constitutes the bulk of the mass in any single tree?
- 12) What is the biggest force behind climate change prior to the industrial revolution?
- 13) What was the first creature added to the endangered species list because of human-induced global warming?

TRUE or FALSE

- 14) The Ozone Hole contributes to global warming.
- 15) Global Warming is accelerated by the melting of snow and ice cover surfaces.
- 16) Melting of Arctic snow and ice will likely result in rising sea levels.
- 17) Melting of snow and ice in Antarctica will likely result in rising sea levels.

MULTIPLE CHOICE

- 18) How long does it take for CO<sub>2</sub> in the atmosphere to disperse?  
20, 50, 75, or 100 yrs
- 19) According to the IPCC report, how many inches could sea levels rise by 2100?  
1-4 inches, 4-7inches, 7-24inches

20) Refer to the adjacent IPCC graph (figure SPM.3.) This figure shows the change in the global average temperature (top), the change in the global average sea level (middle) and the change in the Northern Hemisphere snow cover (bottom) since the year 1850. What are the trends in these three variables? Can you explain the connection(s) between an increase in air temperatures and Northern Hemisphere snow cover? Can you explain the connection(s) between an increase in air temperatures and global average sea level?

