

The second hour exam covers these principal topics: circulation of the earth's atmosphere, weather and climate, moisture, stability and clouds.

What is high pressure? Low Pressure? How do these relate to convergence and divergence?

What is a simple thermal circulation cell (Land and Sea Breeze)? What is the day pattern? The night pattern?

How is the Asian Monsoon a simple thermal circulation cell?

What are the four principal air masses? What is the source region for each? How do they change with the seasons?

What is a mid-latitude cyclonic storm system (MLCSS)? Why is it the weather-maker for mid-latitude locations?

What are the principal features in a MLCSS? What are its dynamics?

How is its formation and direction of movement related to the jet stream?
What is a trof? A ridge? An anticyclone?

What are the stages in the life cycle of a MLCSS?

What is relative humidity? What is it relative to? Why is the day-night cycle in relative humidity opposite to that of temperature?

What is a stable atmosphere? An unstable atmosphere? What type of weather is associated with each? What type of pressure is associated with each?

What are the four basic types of clouds? What do the prefixes cirro, alto and strato mean?

What are the components in the hydrological (water) cycle?

Who was Koeppen? What is the Koeppen climatic classification scheme? Why has it remained the principal way to classify climates for 80 years? What are the characteristics of **A** climates, **B** climates, **C** climates **D** climates, and **E** climates?

What are the principal controls on climate? What does each letter in the acronym **LACEMOPS** represent?

What is the rain shadow effect? How is it an effective control on climate?