

**University of Colombo**  
**Special Degree Examination in Arts (Geography) – Part I**  
**Mid-Semester Examination -2016/17**  
**GYG 2231- Meteorology and Climatology**  
**Time: Two (02) Hours**

**Answer Four (04) Questions Only**

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1. (i) Explain how a radiosonde balloon could be used for weather forecasting  
(08 Marks)
- (ii) Briefly discuss the problems that could be encountered on weather forecasting in developing countries.  
(12 Marks)
  
2. (i) Briefly explain the major approaches of climatic classifications.  
(08 Marks)
- (ii) Critically evaluate the Thornthwaite's 1948 climatic classification.  
(12 Marks)
  
3. Explain with suitable diagrams how the followings affect on air motions of the Earth's atmosphere.
  - (i) Pressure gradient force
  - (ii) Coriolis force
  - (iii) Frictional force(20 Marks)

4. (i) State the factors that essential for developing a tropical cyclone.

(06 Marks)

(ii) Explain the development process of a tropical cyclone with suitable diagrams.

(14 Marks)

5. Discuss the merits and demerits of the followings when explaining the general circulation of the atmosphere.

(i) Tri-cell Concept

(ii) Dishpan Experiment

(20 Marks)

6. (i) What is meant by “Ekman transport” of an ocean?

(06 Marks)

(iii) Briefly discuss the oceanic influence on weather and climate of the atmosphere.

(14 Marks)