

BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF SCIENCE EDUCATION

DEPARTMENT: CURRICULUM AND EDUCATIONAL MANAGEMENT STUDIES

PROGRAMME: DIPLOMA IN SCIENCE EDUCATION IN MATHEMATICS AND  
GEOGRAPHY (DipScEdMG)

COURSE CODE: DG005 (02) NARRATION: CLIMATOLOGY

DURATION: 3 HOURS

TOTAL MARKS: 75

OCT 2024

INSTRUCTIONS TO CANDIDATES:

- Answer any **three** questions.
- Each question should begin on a new page
- Each question carries 25marks.
- Use illustrations and diagrams where relevant.

1. Figure 1 below shows the structure and composition of the atmosphere.

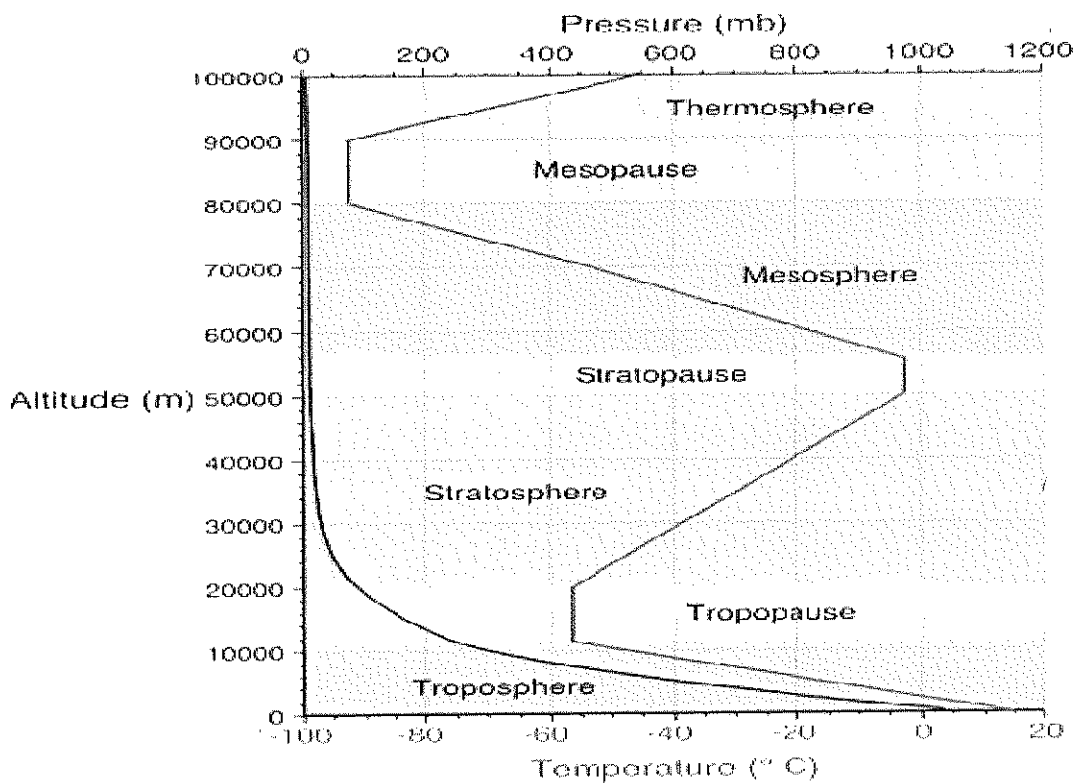


FIGURE 1: Structure and Composition of the atmosphere

- Using Fig.1 above,
- a) Describe the vertical structure of the atmosphere [10]
  - b) Describe the relationship between the altitude and
    - (i) temperature variations and, [10]
    - (ii) pressure variations across the atmosphere. [05]
2. Assess the influence of urbanization on energy exchange in the earth-atmosphere system.  
[25]
3. Describe the processes leading to the formation of the following forms of precipitation  
A. Clouds  
B. Fog  
C. Dew [25]
4. Explain the variations in global solar radiation.  
[25]
5. A. Describe the development of tropical cyclones.  
[15]
- B. Explain the vulnerability of Southern Africa countries to tropical cyclones.  
[10]

**END OF PAPER**