

Physical Geography (H2)

Section A

Answer **all** the questions in this section.

Questions 1, 2 and 3 carry 12 marks and question 4 carries 14 marks.

You should allocate your time accordingly.

Lithospheric Processes, Hazards and Management

- 1 Photograph 1 shows a type of mass movement in a temperate region.
- (a) (i) Briefly describe the mass movement shown in the photograph. [3]
 - (ii) Compare the mass movement shown, in the photograph, to another type that may be common in the region. [4]
 - (b) Outline how you would observe the processes of soil movement on a slope and describe the methods you would use to examine these processes. [5]

Atmospheric Processes, Hazards and Management

- 2 Figs 1A and 1B show the rainfall and temperature figures for Cherapunji in Meghalaya, India.
- (a) (i) Describe the climate of Cherapunji, Meghalaya India using Figs 1A and 1B. [3]
 - (ii) Account for the variations in rainfall and temperature in Cherapunji, Meghalaya India. [5]
 - (b) Explain how aspect influences the temperature of a region. [4]

Hydrologic Processes, Hazards and Management

- 3 Fig. 2 shows the Hjulstrom Diagram
- (a) (i) Describe the relationship between velocity and diameter as shown in the Hjulstrom Diagram. [3]
 - (ii) Account for the velocity required to erode particles which are 0.01mm and 10mm in diameter as shown in Fig. 2. [4]
 - (b) What are the limitations of the Hjulstrom Diagram? [5]

Lithospheric and Hydrologic Processes, Hazards and Management

- 4 Photograph 2 shows a river regime in an alpine (mountainous) area.
- (a) Draw a fully labeled field sketch to identify the principal slope and fluvial features shown in the photograph. [6]
 - (b) Explain how the processes acting upon the slopes can :
 - (i) change the nature of the slope and,
 - (ii) influence the processes occurring in the river [8]

Section B

Answer **two** questions, each from a different topic. All questions carry 25 marks.

Lithospheric Processes, Hazards and Management

5 EITHER

- (a) Distinguish between each of the following pairs of terms.
 - (i) Convergent and Divergent Boundaries
 - (ii) Carbonation and Oxidation
 - (iii) Shear Strength and Shear Stress [9]
- (b) Assess the strategies used to mitigate and respond to the effects of mass movement. [16]

OR

- (a) Explain the formation of the various rock types. [9]
- (b) Assess the strategies used to mitigate and respond to the effects of volcanic eruptions. [16]

Atmospheric Processes, Hazards and Management**6 EITHER**

- (a) Describe and account for the structure and composition of the atmosphere. [9]
- (b) Account for how the urban environment leads to micro-climatic variations. [16]

OR

- (a) Account for the forces influencing air movement. [9]
- (b) Assess the strategies used to manage the effects of tropical cyclones. [16]

Hydrologic Processes, Hazards and Management**7 EITHER**

- (a) Explain the factors that affect channel morphology. [9]
- (b) With the use of labeled diagrams, describe the formation, characteristics and differences between braided and meandering channels. [16]

OR

- (a) Describe and explain the factors that affect channel competency and capacity. [9]
- (b) Evaluate the strategies used to resolve conflicts that occur between riparian states. [16]