

GEOGRAPHY
(Two hours and a quarter)

(The first 15 minutes of the examination are for reading the paper only. Candidate must NOT start writing during this time).

Do not write for the first **fifteen minutes**. This time is to be spent reading the questions. After having read the questions, you will be given **two hours** to answer all questions. Attempt **nine** questions. You must attempt **Question 1** which is **compulsory**, **2 questions** from **Section B**, **3 questions** from **Section C** and **all** questions from **Section D**.

Section A

Compulsory: Attempt all the questions

Question 1

Study the extract of the survey of Bhutan Map No. 78E/11 and answer the following questions:

- i). Find the four figure grid reference of **Serbithang**. (1)
- ii). Give the six figure grid reference of the spot height **3082**. (2)
- iii). What is the Index contour of the map. (1)
- iv). What is the flow direction of **Chang Khorlo Rong Chhu**? Give one reason to support your answer. (2)
- v). Name the drainage pattern shown in the four figure grid of **8040**. (1)
- vi). At what height is the **Lhakhang** in **Talakha Goenpa** located. (2)
- vii). Calculate the crow flight distance between the **Lhakhang** at **Tshali Goenpa** and **Talakha Goenpa**. Mention it in KM (2)
- viii). What is the compass direction of **Muthithang** from **Semtokha**. (1)
- ix). What is the mode of transport between **Semtokha** and **Talakha Goenpa**. (1)
- x). Name the kind of settlement pattern you find in **Debtshig**. Identify the occupation of the people living there. (2)

Section B

Attempt any two questions from this section

Question 2

- i). Give two reasons to prove that the Himalayas grew out of the Tethys sea. (2)
- ii). Define the following terms: (1×3 = 3)
 - a) Fossil
 - b) Convergent movement
 - c) Crude oil
- iii). How was the Himalayan mountain formed (2)
- iv). What are the causes of an earthquake? (1)
- v). Why are fossils not found in an igneous rock? (1)
- vi). How was the mid-Atlantic Ridge formed? (1)

Question 3

- i). With the help of a diagram, explain how a spring is formed. (3)
- ii). List four factors affecting the climate of a place (2)
- iii). Differentiate between Sea Breeze and Land Breeze (2)
- iv). State the differences between **Cyclones** and **Anti-cyclones** with the help of a diagram. (3)

Question 4

- i). Differentiate between (2)
 - a). Normal Lapse rate and Temperature Inversion
 - b). Tributaries and Distributaries
- ii). What are prevailing winds? Give examples (2)
- iii). Why are East facing slopes more populated than West facing slopes? (1)
- iv). Define (2)
 - a). Water Logged
 - b). Evapotranspiration
- v). How does an Orographic rainfall occur? (2)
- vi). Why do all rivers do not form deltas (1)

Section C

Attempt any three questions from this section

Question 5

- i). Differentiate between Treeline and Snowline (2)
- ii). What are endangered species? (1)
- iii). How do animals respond to climatic change? (1)
- iv). Where do you find **lemon grass**? Mention two uses of lemon grass oil. (2)
- v). Describe the four Climatic zones (4)

Question 6

- i). What are the main work of rivers in each of the three stages? (3)
- ii). Explain '**Greenhouse Effect**' with the help of a diagram. (3)
- iii). Mention the uses of a river (2)
- iv). With the aid of a diagram, explain how an **Ox bow lake** is formed. (2)

Question 7

- i). With the help of a diagram, explain Karst Topography. (3)
- ii). What are the causes of a volcano? Mention the advantages and disadvantages of a volcano. (3)
- iii). How are the three types of rocks formed? (3)
- iv). Explain the stages of a volcano? (1)

Question 8

- i). Why is navigation not possible in our country? (1)
- ii). List two names for cyclone in other parts of the world. (1)
- iii). Mention two advantages and two disadvantages of mining. (2)
- iv). What are the causes and effects of deforestation? (2)
- v). Why are fossils important?. (1)
- vi). Explain the following terms: (3)
 - a) Drainage basin
 - b) Rapids
 - c) Water table

Section D

Compulsory: Attempt all the questions

Question 9

On the outline map of Asia provided:

(5)

- Mark with thick lines and name the **Himalayas** and **Ural** mountains.
- Name the rivers **Ob** and **Tigris**.
- Shade and name **Caspian Sea** and **Yellow Sea**.
- Shade and name the **Plateau of Iran** and **Great North China Plain**.
- Shade and insert '**HD**' over Hot Desert and '**CT**' over Cold Temperate region.

Question 10

On the outline map of South Asia provided:

(5)

- Mark with a thick line and name **Eastern Ghat** and **Satpura Range**.
- Mark and name the rivers **Krishna** and **Yamuna**.
- Mark and name **Rani of Kutch** and **Deccan Plateau**.
- Mark and locate **Delhi** and **Mumbai**.
- Shade and mark Δ over where **Iron** is found and \square over where **Zinc** is found.

Question 11

On the outline map of Bhutan provided:

(5)

- Mark with a thick line and name **Mt. Jowo Durshing** and **Mt. Gangkhar Phuensum**.
- Mark and name the rivers **Amochhu** and **Mangdechhu**.
- Put a cross and name the passes **Jejela** and **Thrumshingla**.
- Mark with a dot and locate **Punakha** and **Samdrup Jongkhar**.
- Mark with a X and name **Royal Manas Reserve Park** and **Jigme Dorji National Park**.