

**SECTION A [25 MARKS]**  
**ANSWER ALL QUESTION**

**Question 1**

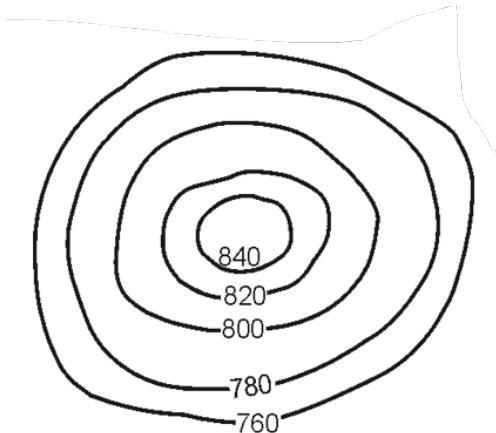
**[15]**

**Direction: For multiple choice questions, there are four alternatives: A, B, C, and D. Choose the correct alternative and circle it. Do not circle more than ONE alternative. If there is more than one choice circled, No score will be awarded.**

i. Which latitudinal line is considered as Great Circle? **[1]**

- A Equator
- B Arctic Circle
- C Antarctic Circle
- D Tropic of Cancer

ii. A circular contour as shown in the diagram indicates **[1]**



- A uneven surface.
- B flat surface.
- C round hill.
- D Valley.

iii. In this stage, the river flows sluggishly through relatively flat land. The volume is high but the velocity is low. Which stage of the river is described in the above statement? **[1]**

- A source
- B old stage
- C youth stage
- D middle stage

iv. A thin layer of gas in the lower part of the stratosphere protects us from getting Melanornia and eye problems. Which of the following matches with the above statement? [1]

A Argon  
B Ozone  
C Oxygen  
D Nitrogen

v. In a given population over two years, there were 50 births, 30 immigrants, 20 deaths, and 20 emigrants. How much did the population change? [1]

A It increased by 40.  
B It decreased by 40.  
C It increased by 30.  
D It decreased by 30.

vi. The Disaster Management Cycle contains four attributes. Which of the following is organised **CORRECTLY**? [1]

A Mitigation → Recovery → Response → Preparedness  
B Response → Recovery → Mitigation → Preparedness  
C Preparedness → Mitigation → Recovery → Response  
D Preparedness → Response → Recovery → Mitigation

vii. Which of the following statement about natural hazards is **NOT** true? [1]

A Hazards become disasters when they harm many people.  
B Some hazards can be predicted, but usually can't be stopped.  
C Hazards are natural processes that harm people on a regular basis.  
D Hazards are natural processes that can be dangerous, but have not yet caused damage.

viii. Considering the settlement pattern, observe and analyse the characteristics of the settlement given in the diagram below: [1]

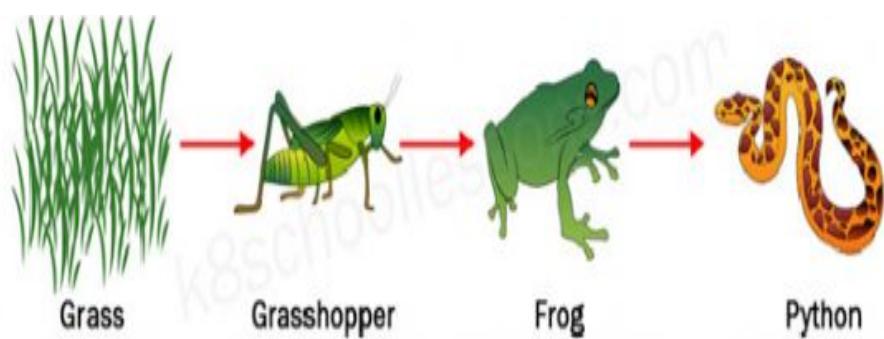


- A functions as shops or hotels to serve the travellers
- B large area of cultivated lands between the houses
- C houses are surrounded by agricultural land
- D people here practice terrace farming

ix. Global warming is a common talk among countries as it triggers climate change. Moreover, our food habits further make the situation worse. Therefore, as an individual what kind of eating habit you should adopt to combat climate change? [1]

- A Depend on fruits and vegetables
- B Consume dairy products
- C Take more junk foods
- D Eat beef and lamb

x. In the food chain below, which of the following organisms has the correct set of labels? [1]



- A Frog: consumer, autotroph, carnivore
- B Grass: consumer, heterotroph, omnivore
- C Python: consumer, heterotroph, carnivore
- D Grasshopper: consumer, heterotroph, carnivore

xi. You are a father of three children and the place where your family live is not suitable for you to earn and secure your children's future. Thus, you have planned to move to a new place for a better life. Which of the following settlement pattern do you think would serve your purpose? [1]

A Linear  
B Circular  
C Terraced  
D Dispersed

xii. Bhutan is categorised into different seismic zone. Which of the following places fall under high risk zone? [1]

A Paro, Samtse and Zhemgang  
B Tsirang, Chhukha and Dagana  
C Thimphu, Punakha and Bumthang  
D Haa, Trashigang and Tashiyangtse

xiii. Grasslands are known by different names in different countries. If you are a resident of Australia you would be calling a grassland as [1]

A Veld.  
B Downs.  
C Prairies.  
D Savannah.

xiv. It is estimated that the temperature decreases by 1 degree Celsius for every 165 meters of ascent. If place A located at 1000 meters above sea level has a temperature of 23°C, predict the temperature of place B located at 1990 meters. [1]

A 15°C  
B 16°C  
C 17°C  
D 18°C

xv. If a cricket match is scheduled at 6 p.m. in New Orleans (90°West). At what time people living in Bhutan would watch the same match?

[1]

- A 5 pm
- B 5 am
- C 6 pm
- D 6 am

**Question 2**

[5]

**Direction: Write True or False against each statement.**

Question	Answer	
i. River deposits the lightest materials first, followed by heavy and lastly the heaviest materials.		
ii. Altitude is one of the elements that determine the type of weather and climate of a place.		
iii. A pH value below 7 is alkaline while above 7 is acidic.		
iv. The National Risk Management Framework for Bhutan was adopted in 2006.		
v. In the urban settlements, most of the people are engaged in tertiary activities.		

**Question 3****[5]**

**Direction:** Match each item in column I against the most appropriate item in column II. Write the correct alphabet in the space provided under the 'answer' column.

<b>Answer</b>	<b>Column I</b>		<b>Column II</b>	
	i.	Midnight sun	a.	levee
	ii.	Art of map making	b.	atmospheric pressure
	iii.	Natural or artificial wall	c.	cartography
	iv.	1.03kg per square cm	d.	venus flytrap
	v.	Insect eating plant	e.	arctic region
			f.	equatorial region
			g.	delta

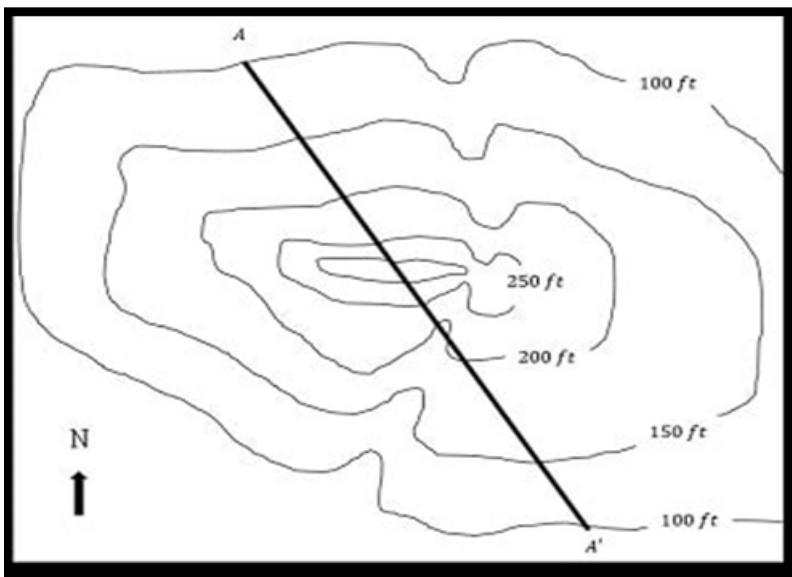
**SECTION B [45 MARKS]**  
**Answer all questions****Question 4**

a) The earth rotates 1600km per hour on average, however as we move away from the equator the speed of the rotation decreases. Give a valid hypothesis to support the given statement.

**[2]**


b) Draw a cross-section profile using the contour given below.

[2]



c) Which stage of a river is common in Bhutan? Give **TWO** reasons to support your answer. [2]


d) Human-wildlife conflict is a problem and becoming rampant in the villages. As an educated person, how would you address this issue? Give at least **TWO** suggestions. [2]


e) Explain a dormant volcano with an example. [1]


**Question 5**

a) If your friend is planning for a hike to a new place, what type of map would you suggest to carry? Recommend **TWO** points. [2]


b) What would happen to the Earth if it was without atmosphere? Give **TWO** reasons. [2]


c) Would you prefer to live in the rural or urban settlement? Give **THREE** justifications to support your choice. [2]


d) Conservation is the act of conserving or protecting the environment, plants and animals. Why is this important? What are some of the things you can do to help conserve our environment? [2]

e) What is a food web? [1]


## Question 6

a) Write any **TWO** characteristics of a contour. [2]

b) When it is 5 hours in Thimphu, it is already 5 hours 4 minutes in Bumthang. What will be the longitude of Thimphu if Bumthang lies at  $90.6^{\circ}$  East? Find the direction of Thimphu from Bumthang.

[3]

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c) "One man's trash is another man's treasure", analyse the line with regard to waste management.

[2]


d) How natural resources such as soil, vegetation and water influence the distribution of population? [2]


**Question 7**

a) The world is divided into Three Heat Zones. Which heat zone would you prefer? [2]  
Justify your answer.


b) Why is the river at lower course known as old stage? How is this phenomenon related with the life of human beings? [2]


c) Bhutan lies in the earthquake prone area and would experience frequent earthquakes. [2]  
Moreover, we do not have any control over it but we can reduce the impact.  
Therefore, suggest some ways to minimise the effects of earthquake.


d) If the statement scale of a map is 2cm represents 5km, what will be the R.F? [2]

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e) Write the difference between abiotic and biotic components. [1]

<b>Abiotic components</b>	<b>Biotic components</b>	

## Question 8

a) Draw a diagram to illustrate the three stages of a river and explain the characteristics of each stage. [3]

b) Distinguish between troposphere and stratosphere. Write at least **TWO** differences. [2]

<b>Troposphere</b>	<b>Stratosphere</b>

c) Rural-urban migration is a global issue that requires consultation among the relevant stakeholders in order to curb it. Analyse the factors that force people to move from rural to urban areas.

[3]

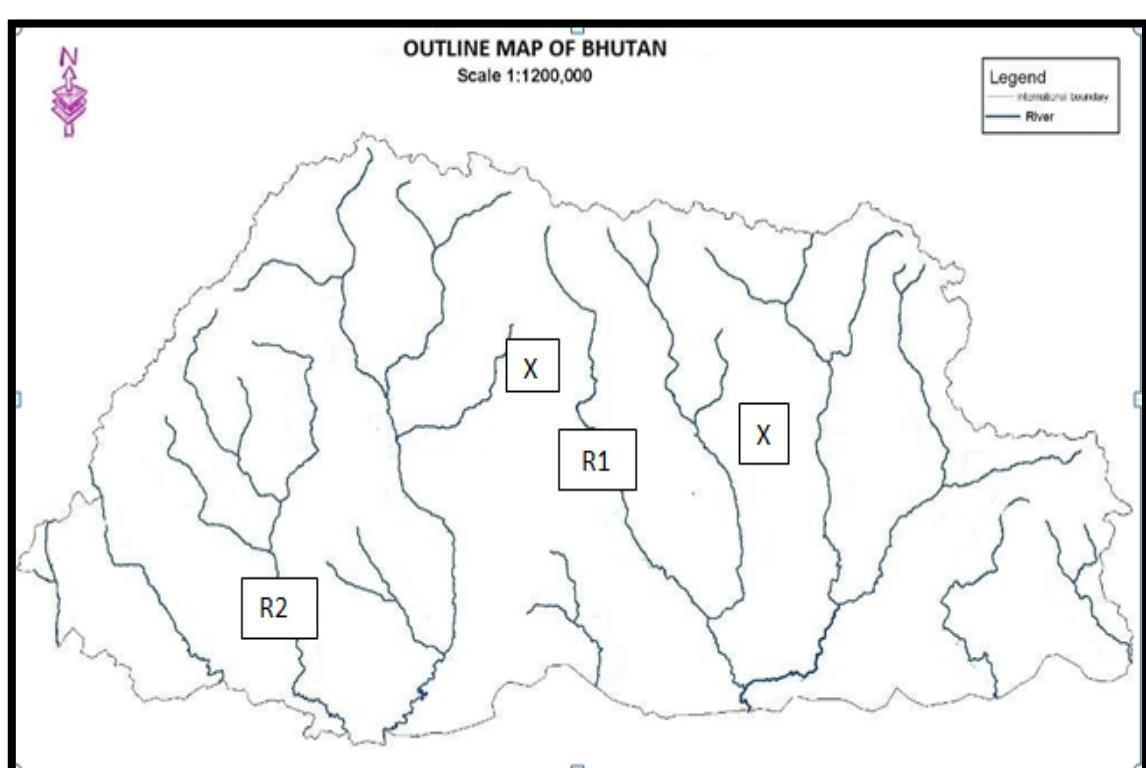

d) What is epicenter?

[1]


### SECTION C (10 MARKS)

a) **In the outline map of Bhutan given below:**

- i. Locate Jhomolhari and Gangkarphuensum using the symbol ( $\Delta$ ). [1]
- ii. Name the rivers R1 and R2. [1]
- iii. Mark with a thick dot ( $\bullet$ ) and name Samtse and Gelephu. [2]
- iv. Shade (////) over a densely populated dzongkhag and (.....) over a sparsely populated dzongkhag. [1]
- v. Name the passes marked (X). [1]



R1 \_\_\_\_\_

R2 \_\_\_\_\_

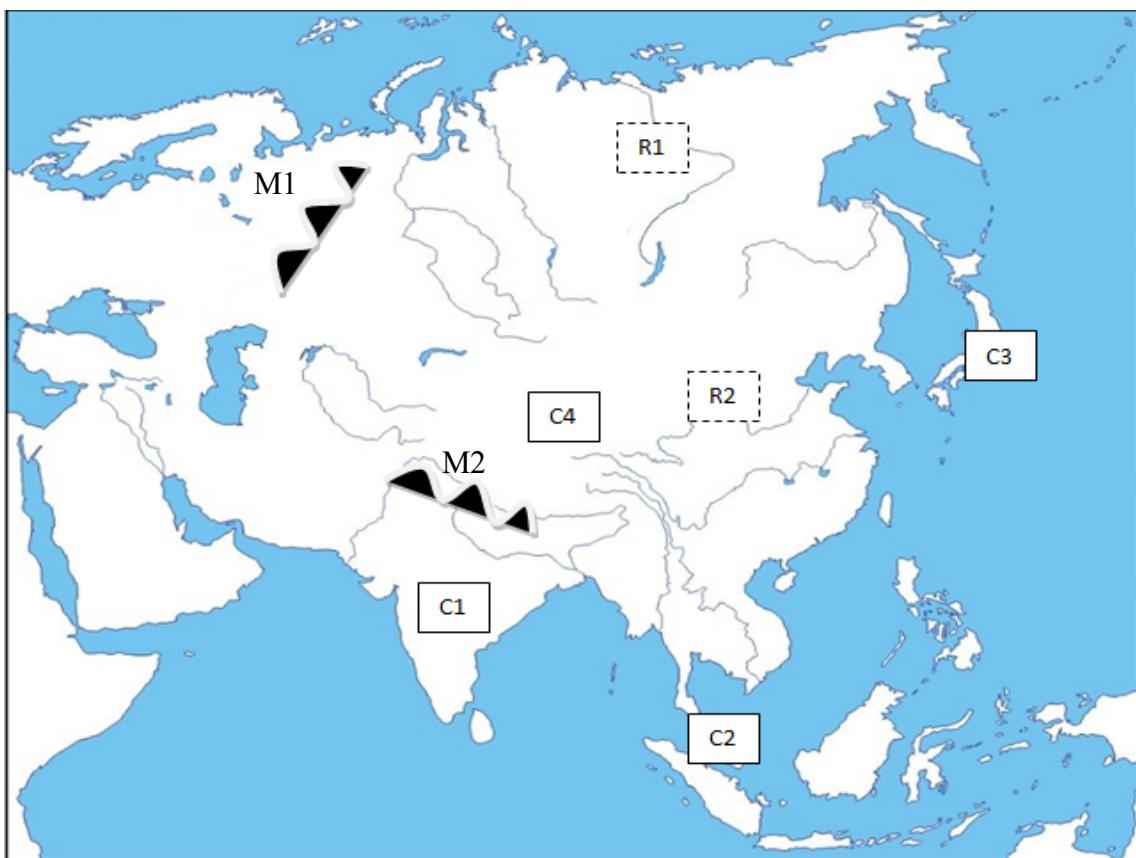
X \_\_\_\_\_

b) In the outline map of Asia given below:

i. Name the countries marked C1, C2, C3 and C4. [2]

ii. Name the rivers marked R1 and R2. [1]

iii. Name the mountains marked M1 and M2. [1]



C1 \_\_\_\_\_

C2 \_\_\_\_\_

C3 \_\_\_\_\_

C4 \_\_\_\_\_

R1 \_\_\_\_\_

R2 \_\_\_\_\_

M1 \_\_\_\_\_

M2 \_\_\_\_\_

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