

FIRST YEAR HIGHER SECONDARY EXAMINATION – 2025
GEOGRAPHY – ANSWER KEY
FY – 337
VERSION - A

Q.No.	Sub. Qn	Value Points	Split Score	Total Score
1		b) Normal Lapse Rate		1
2		a) Gravity		1
3		c) Nilgiri biosphere reserve		1
4		d) Biodiversity		1
5		a) Albedo		1
6		b) Anaimudi		1
7		To define greenhouse effect To identify any 2 greenhouse gases All the processes that warm the atmosphere are collectively termed as the greenhouse effect. Greenhouse Gases – Carbon Dioxide, Nitrous Oxide, Ozone, Methane, Chlorofluorocarbons	1 1	2
8		1. Orogenic processes 2. Epeirogenic processes 3. Earthquake 4. Plate tectonics	1/2 * 4	2
9		A - Regional Studies B - Regional Analysis C - Micro Regional Studies D - Urban planning	1/2 * 4	2
10		Origin – Chhemayung Dung glaciers Tributaries – Subansiri, Manas, Dihang, Dibang, Lohith (Any 2)	1 1	2
11		Cracking, sliding, collapse, fire, tsunami, falling objects, flood etc. (Or any other relevant points)	1/2 * 4	2
12		a) Heating by solar energy b) Wind c) Gravity d) Coriolis force	1/2 * 4	2
13		(i) cirrus - Thin feathery appearance (ii) cumulus - Look like cotton wool (iii) Stratus – layered cloud covering large portion of the sky (iv) Nimbus - Black or dark grey in colour	1/2 * 4	2

14	* Carbon dioxide is meteorologically a very important gas * CO₂ is transparent to the incoming solar radiation but opaque to the outgoing terrestrial radiation * It absorbs a part of terrestrial radiation and reflects back some part of it towards the earth's surface * Carbon Dioxide is largely responsible for the greenhouse effect (Any 2 points)	1+1	2
15	i) Analysis of properties of matter ii) Meteors iii) Gravitation iv) Magnetic field v) Seismic activity v) Earthquake (Any 4 points)	1/2 * 4	2
16	- B - Topography - C - Climate - D - Biological Activity - E - Time (Arrange in any order)	1/2 * 4	2
17	<u>To identify Tropical Deciduous forests</u> * These are the most widespread forests in India. * They are also called the monsoon forests * found in monsoon rainfall areas- annual rainfall between 70-200cm * Types - a) Moist deciduous forest b) Dry deciduous forest (Any 2 relevant points)	1	2
18	* Running water – V shaped valley – Ox bow lake * Wind – Mushroom rock - Barchan	1	2
19	<u>1. Latitude</u> / <u>അക്ഷാംശം</u> <u>ഇന്ത്യയിലെ കേന്ദ്ര ഭാഗം</u> <u>കടലിലൂടെ</u> <u>അറബിക്ക്</u> <u>ടാക്കി</u> <u>പോകുന്നു.</u> <u>score</u> The Tropic of Cancer passes through the central part of India in east-west direction. Thus, northern part of the India lies in sub-tropical and temperate		

zone and the part lying south of the Tropic of Cancer falls in the tropical zone

2. The Himalayan Mountains

The lofty Himalayas in the north along with its extensions act as an effective climatic divide. The towering mountain chain provides an invincible shield to protect the subcontinent from the cold northern winds

1 + 1 + 1

3. Distribution of land and water

India is flanked by the Indian Ocean on three sides i.e. the south and girdled by a high and continuous mountain wall in the north which make difference in air pressure causes reversal in the direction of monsoon winds

4. Distance from the Sea

With a long coastline, large coastal areas have an equable climate. Areas in the interior of India are far away from the moderating influence of the sea. Such areas have extremes of climate.

5. Altitude

Temperature decreases with height. Due to thin air, places in the mountains are cooler than places on the plains

6. Relief

The physiography or relief of India also affects the temperature, air pressure, direction and speed of wind and the amount and distribution of rainfall. The windward sides of Western Ghats and Assam receive high rainfall

(Explain any 3 factors)

3

20

I. Divergent Boundaries

II. Convergent Boundaries

III. Transform Boundaries

I. Divergent Boundaries or

Constructive Margins

- * Area where two plates pull away from each other
- * As a result new crust is generated
- The sites where the plates move away from each other are called **spreading sites**
- * The best example - Mid-Atlantic Ridge

III. Convergent Boundaries

- * Area where two plates moving towards each other
- * As a result, the crust is destroyed as one plate dived under another
- * The location where sinking of a plate occurs is called a **subduction zone**

III. Transform Boundaries

- * Area where **plates slide horizontally** past each other
- * Crust is neither produced nor destroyed
- * **To identify plate boundaries**
- * **To Explain each boundary**

1 1/2

1 1/2

3

21

STRUCTURE OF THE EARTH

The Crust

- * It is the outermost solid part of the earth
- * It is brittle in nature
- * Oceanic crust is thinner as compared to the continental crust

The Mantle

- * The portion of the interior beyond the Crust
- * The boundary separating Crust from Mantle: Mohorovicic Discontinuity
- * The mantle extends from Moho's discontinuity to a depth of 2,900 km
- * The upper portion of the mantle is called asthenosphere

The Core

- * Inner most layer
- * The core is made up of very heavy material

		* Referred as NIFE layer (Nickel + Iron) (Answer any 2 points in each layer) To identify each layer To explain each layer	1 1/2 1 1/2	3
22		1. Conduction When two bodies of unequal temperature are in contact with one another, there is a flow of energy from the warmer to cooler body. This process is called conduction 2. Convection The process of vertical heating of atmosphere is known as Convection. 3. Advection The processes of the transfer of heat through horizontal movement of air is called advection	1 + 1 + 1	3
23	a)	A – Stalactite	1	
		B – Pillar	1	
	b)	Underground water	1	3
24		<u>Andaman and Nicobar island</u> * Andaman and Nicobar island located in Bay of Bengal * They are volcanic origin * The Barren Island is the only active volcano in India (Nicobar Island) * There are approximately 572 islands * Capital - Port Blair * The Andaman in the north and the Nicobar in the south are separated by a water body which is called the Ten degree channel * Mountain Peak: Saddle peak * To identify island group * To write Any 2 relevant points	1 1 + 1	3
25		Stage 1 In the beginning, all matter forming the universe existed in one place in the form of a "tiny ball" (singular atom) with an unimaginably small volume, infinite temperature and infinite density Stage 2 At the Big Bang the "tiny ball" exploded violently and led to huge expansion which took place 13.7 billion years before the	1 + 1 + 1	3

		present Stage 3 Within 300,000 years from the Big Bang, temperature dropped to 4,500 K (Kelvin) and gave rise to atomic matter		
26	a	Guyots	1	
	b	Atoll	1	
	c	Thermocline	1	3
27		* To identify The Northern Plains * To explain the subdivision <u>1. Bhabar</u> * Narrow belt ranging between 8-10 km * Parallel to the Shiwalik foothills * The streams and rivers coming from the mountains deposit heavy materials of rocks and boulders * Rivers disappear in this zone <u>2. Terai</u> * South of the Bhabar is the Tarai belt * width of 10-20 km * where streams and rivers re-emerge without having any properly demarcated channel creating marshy and swampy conditions * Luxurious growth of natural vegetation and houses a varied wild life <u>3. Alluvial plain</u> * The south of Terai is a belt consisting of Alluvial Plains- Bhangar and Khadar * Bhangar: The old alluvial deposit * Khadar: The new alluvial deposit Known for Sunderban Delta, the largest delta in the world	1 3	 4
28	a	GEOSTROPHIC WIND - The wind blows parallel to isobar is known as Geostrophic Wind.	1	
	b	FRONT - The separating zone between warm and cold air masses is called Front	1	4
	c	WATER SPROUT - Tornado over the sea is called water sprout	1	
	d	SEA BREEZE - During the day the land heats up faster and become warmer than the sea. Thus ,pressure gradient from sea to land is created and the wind blows from sea to land	1	

29

1. Spring tides

* Spring Tides are formed when the sun, the moon and the earth are in a straight line

2

* The height of the tide will be higher

4

* They occur twice a month, one on full moon period and another during new moon period.

2. Neap tides

* When the sun and moon are at right angles to each other and the forces of the sun and moon tend to counteract one another, the neap tides are formed

* There is a seven day interval between the spring tides and neap tides

2

* The height of the tides are comparatively low

30

* To identify Alfred Wegner

1

1. The Matching of Continents (Jig-Saw Fit)

* The shorelines of Africa and South America facing each other have a remarkable and unmistakable match.

* A map produced using a computer programme by Bullard in 1964 shows the Atlantic margins are perfectly matched.

4

2. Rocks of Same Age across the Oceans

* The radiometric dating methods developed in the recent period shows that the belt of ancient rocks of 2,000 million years from Brazil coast matches with those from western Africa.

* It is formed during Jurassic Age.

* This suggests that the ocean did not exist prior to that time

3. Tillite

* Tillite is sedimentary rock formed out of deposits of glaciers.

* The Gondawana systems of sediments

		are found in India have a remarkable match with the sediments from Africa, Falkland Island, Madagascar, Antarctica and Australia.		
		4. Placer Deposits		
		* The placer deposits of Ghana are derived from the gold bearing veins in Brazil plateau when the two countries lay side by side		
		5. Distribution of Fossils		
		* Lemur is found in India, Africa and Madagascar		
		* The only two places where Mesosaurus fossils have been found so far are the Traver Rock Formation in Brazil and the Southern Cape Province of South Africa.		
		* All these indicate that all these landmasses once lay together.	3	
		* To Explain any 3 evidences		
31	a	Focus or Hypocenter:- The point where the energy is released	1	
		Epicenter:- The point on the surface, nearest to the focus (It is the first one to experience the waves)	1	
	b	Types of Earthquakes		
		1. Tectonic Earthquake		
		2. Volcanic Earthquake		
		3. Collapse Earthquake		
		4. Explosion Earthquake		
		5. Reservoir Induced Earthquake		
		(Any 4 types)	2	4
32	a	Palk Strait	1	
	b	Tropic Of Cancer	1	4
	c	Western Ghats	1	
	d	Luni	1	

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5 Copy