

GS Foundation Program 2024 | D11 | Benchmark Assignment #100

Subjective Questions:

Q.1) Give an account of the differences between the Himalayan and Peninsular drainage systems.

Q.2) Explain with examples the difference between Vulnerability, Hazard and Disaster. Briefly discuss the Disaster Management Cycle.

Objective Questions:

Q.1) Consider the following statements about Malwa Plateau:

1. Vindhyan Hills lie at the southern edge of the plateau.
2. The plateau has drainage systems, both, towards the Arabian Sea and the Bay of Bengal.
3. The plateau is covered with black soils.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Q.2) Which of the following river forms Inland drainage basin?

1. Kantu river
2. Sukri River
3. Sabarmati River
4. Ghaggar river
5. Kakni river

Select the correct answer using the code given below:

- a) 1 and 5 Only
- b) 2, 3 and 5 Only
- c) 1, 2, 3 and 4 Only
- d) 1, 2, 4 and 5 Only

Q.3) Arrange the following west flowing rivers from north to south.

1. Kalinadi River
2. Mandovi River
3. Kajavi River
4. Ambika River

Which of the following sequence of rivers is correct?

- a) 3-4-1-2
- b) 2-3-4-1
- c) 4-3-2-1
- d) 3-4-2-1

Q.4) With reference to the physiographic features in the Himalayan region, consider the following statements:

1. River Indus flows between Zaskar ranges and Ladakh ranges.
2. K-2, the second highest peak in the world is located in the Ladakh Ranges.
3. Kailash Range is an extension of Trans- Himalayas.

Which of the statements given above is/are correct?

- a) 1 and 2 Only
- b) 2 and 3 Only
- c) 1 and 3 Only
- d) 1, 2 and 3

Q.5) Consider the following pairs

River	Cultural Significance
1. Cauvery River	Aadi Perukku Festival
2. Pamba River	Mandala- Makaravilakku Festival
3. Shipra River	Kumbh Mela

Which of the statements given above is/are correct?

- a) 1 and 2 Only
- b) 2 and 3 Only
- c) 1 and 3 Only
- d) 1, 2 and 3

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Subjective Questions:

Q.1) Give an account of the differences between the Himalayan and Peninsular drainage systems.

Himalayan Rivers are the water bodies that emanate from the north of Himalayan mountain ranges. On the other extreme, Peninsular Rivers include those watercourses that arise from, Western Ghats or Central Highlands.

BASIS FOR COMPARISON	HIMALAYAN RIVERS	PENINSULAR RIVERS
Meaning	Himalayan Rivers are the rivers that originate from Himalayan ranges and flows throughout the year.	Peninsular Rivers include those rivers that arises from Western Ghats and receive water only during a particular period.
Nature	Perennial	Non-perennial
Form	Delta	Some rivers form delta while others form Estuary
Shape	Meandering	Straight
Rocks	Bed rocks are soft, sedimentary and easily erodible	Bed rocks are hard, resistant and not easily erodible
Fed by	Snow and rain	Rain
Drainage basin	Large	Small
Irrigate	Northern Plains	Deccan Plateau
Valley	V-shaped valley is formed	U-shaped valley is formed



Himalayan rivers are perennial and come from high altitude with high speed, and have large and deep courses. **Indus , Ganga, Brahmaputra** are the main rivers of the Himalaya Rivers System. Peninsular Rivers are broad, stable and flow through shallow valleys. **Narmada, Tapi, Godavari, Krishna, Cauvery and Mahanadi** are the main Peninsular Rivers.

The Himalayan and Peninsular drainage systems differ in terms of their geological origin, river courses, river characteristics, basin sizes, and sediment transport. While the Himalayan rivers are young, fast-flowing, and carry abundant sediment, the Peninsular rivers are more mature, exhibit complex patterns, and have smaller river basins. Understanding these differences is crucial for assessing water availability, flood management, and harnessing the potential of these river systems for various purposes.

Q.2) Explain with examples the difference between Vulnerability, Hazard and Disaster. Briefly discuss the Disaster Management Cycle.

Answer: Disaster management is a process of effectively preparing for, responding to, and recovering from disasters. It involves strategically organizing resources to lessen the harm that disasters cause. The concepts of vulnerability, hazard, and disaster stand as pillars of understanding and responding to the complex dynamics of risk management.

Each term carries distinct meanings and implications, contributing to a comprehensive understanding of the challenges and opportunities inherent in disaster management.

1. **Hazard:** A hazard is a **potential source of harm** or adverse effect. It refers to the inherent danger or threat posed by natural, technological, or human-induced events.
 - **Examples of hazards** include earthquakes, floods, hurricanes, chemical spills, and even things like fire or disease outbreaks. For instance, a river located near a populated area is a hazard because it has the potential to flood and cause damage to homes and infrastructure.
2. **Vulnerability:** Vulnerability refers to the **susceptibility of people, communities, or systems to the impacts of hazards**. It takes into account their level of preparedness, resilience, and ability to cope with the adverse effects of a hazard.
 - Vulnerability is influenced by factors such as socio-economic conditions, access to resources, education, infrastructure, and governance.
 - **For example**, a poverty-stricken neighborhood with inadequate infrastructure and limited access to healthcare facilities would be more vulnerable to the spread of a contagious disease.
3. **Disaster:** A disaster occurs when a **hazardous event exceeds the capacity of a community or society to cope**, resulting in significant damage to property, loss of life, and disruption of normal functioning. A disaster is characterized by widespread and severe impact.
 - **For instance**, a powerful earthquake hitting a densely populated city could lead to building collapses, loss of electricity, disruption of communication networks, and widespread panic,

Disaster management cycle:



The Disaster Management Cycle is a continuous process that involves various phases to effectively prepare for, respond to, recover from, and mitigate the impacts of disasters. It consists of four main phases:

1. **Mitigation:** This phase aims to reduce the risk of disasters and minimize their impact. Activities include enacting and enforcing building codes, conducting hazard mapping, promoting public awareness and education, and implementing land-use planning. For example, a city vulnerable to hurricanes might invest in building resilient infrastructure to withstand high winds and flooding.
2. **Preparedness:** During this phase, communities and organizations develop plans and build capacities to respond effectively when a disaster strikes. Preparedness activities include creating emergency response plans, conducting drills and exercises, stockpiling emergency supplies, and establishing communication networks. For instance, schools might conduct regular fire drills to ensure that students and staff know how to evacuate safely.
3. **Response:** When a disaster occurs, the response phase involves immediate actions to save lives, protect property, and provide emergency assistance. Activities include search and rescue operations, medical care provision, setting up emergency shelters, and coordinating resources. For instance, emergency services mobilize quickly to evacuate people and provide medical aid after a building collapse.
4. **Recovery:** After the immediate crisis is managed, the recovery phase focuses on restoring normalcy, rebuilding infrastructure, and assisting affected individuals and communities in regaining their livelihoods. This includes debris removal, reconstruction of damaged buildings, providing mental health support, and helping businesses resume operations. For example, after a wildfire destroys homes, the recovery phase involves rebuilding houses and helping families find temporary housing.

In a world marked by ever-evolving hazards and potential disasters, comprehending the interplay between vulnerability, hazard, and disaster is paramount for crafting effective disaster management strategies. From the latent dangers posed by hazards to the underlying susceptibilities of vulnerable communities, the path to resilience requires a multi-faceted approach. The Disaster Management Cycle, with its proactive mitigation measures, responsive preparedness strategies, swift response mechanisms, and dedicated recovery initiatives, provides a structured roadmap to navigate the intricate terrain of crises.

Objective Questions:

Q.1) Consider the following statements about Malwa Plateau:

1. Vindhyan Hills lie at the southern edge of the plateau.
2. The plateau has drainage systems, both, towards the Arabian Sea and the Bay of Bengal.
3. The plateau is covered with black soils.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Ans) d

Exp) Option d is correct.

Statement 1 is correct – Vindhyan hills form the southern edge of the Malwan plateau. The plateau is bounded by the Aravali Range in the west and Madhya Bharat Pathar to the north and Bundelkhand to the east.

Statement 2 is correct – This plateau has two systems of drainage; one towards the Arabian sea (The Narmada, the Tapi and the Mahi), and **the other towards the Bay of Bengal** (Chambal and Betwa, joining the Yamuna).

Statement 3 is correct – The plateau is composed of extensive lava flow and is covered with black soils.

Q.2) Which of the following river forms Inland drainage basin?

1. Kantu river
2. Sukri River
3. Sabarmati River
4. Ghaggar river
5. Kakni river

Select the correct answer using the code given below:

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- c) 1, 2, 3 and 4 Only
- d) 1, 2, 4 and 5 Only

Ans) d

Exp) Option d is correct

Inland drainage basin is formed by rivers pouring their waters in a lake or an inland sea. Inland Drainage Basin Rivers do not enter a sea or ocean. They are found in different parts of North and South India.

Statements 1, 2 and 5 are correct: Area of Inland drainage in Rajasthan extends over states of Haryana and Rajasthan. Small rivers which form inland drainage are named as the **Kantu, the Kakni, the Ghugri and the Sukri**.

Statement 3 is incorrect: The **Sabarmati River** which is originated in Rajasthan and flows through Gujarat State before **entering into the Gulf of Khambhat in the Arabian Sea**. It is not an inland drainage basin. It is **Luni River** which is located in western Rajasthan. It starts its journey from the Pushkar valley of the Aravalli ranges and moves through Thar desert to disappears into the marshy lands of Rann of Kutch, Gujarat.

Statement 4 is correct: **Ghaggar River** is also an inland drainage basin river. It **originates from the Shivalik hills of Himachal Pradesh** at an elevation of about 1,927 meters above mean sea level. It flows through Indian states of Punjab and Haryana to at last enter into Rajasthan.

Q.3) Arrange the following west flowing rivers from north to south.

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2. Mandovi River
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Which of the following sequence of rivers is correct?

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- b) 2-3-4-1
- c) 4-3-2-1
- d) 3-4-2-1

Ans) c

Exp) Option c is correct

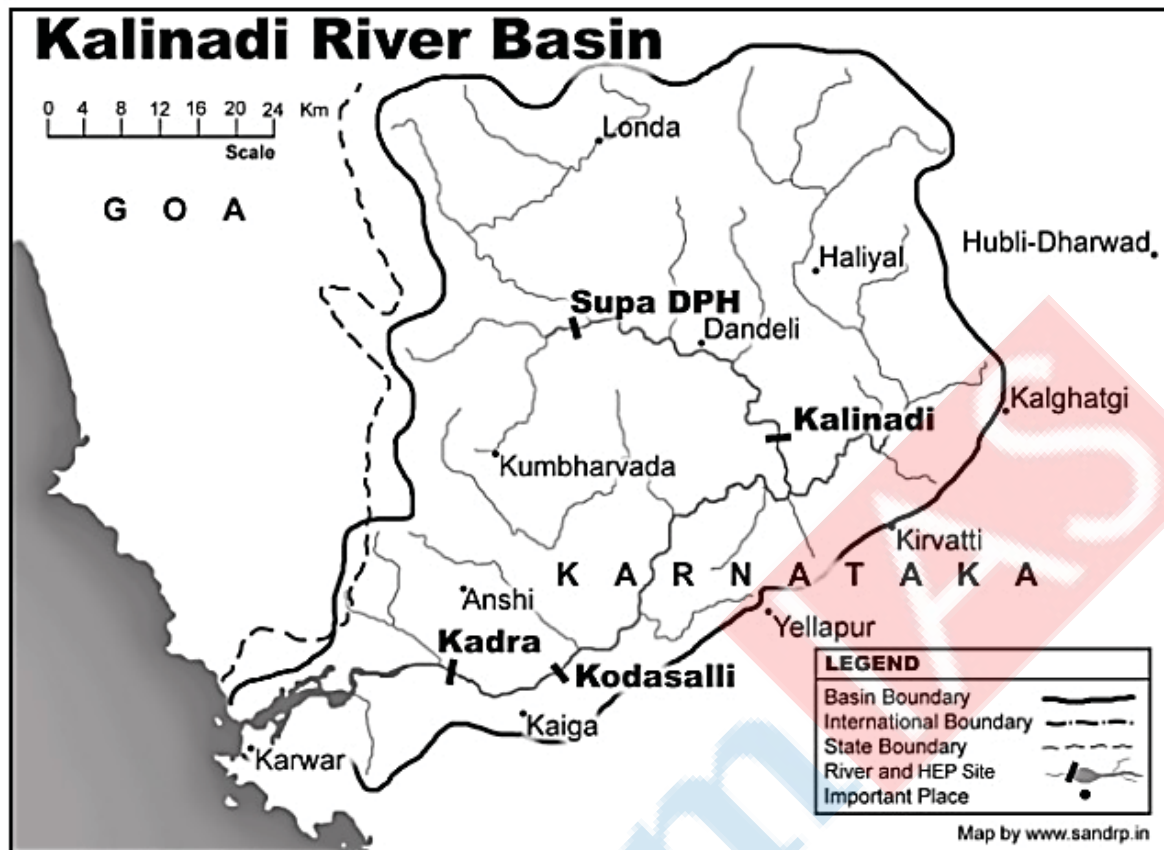
The correct sequence of the rivers from North-South is given below

1. Ambika River is one of the important west flowing rivers with its catchment in Gujarat and Maharashtra. It originates from Saputara Hill ranges near village Kotambi of Surgana taluka in the Nasik district of Maharashtra. After flowing for a length of 136 km it drains in to the Arabian Sea.

2. The Kajavi River is a west flowing river which rises in the Vishalghat region of Sahyadri hills and flows West ward and joins the Arabian Sea near Ratnagiri port, Maharashtra. It forms a 10 km. long creak named Bhatya Creak has been formed.

3. The Mandovi River is one of the main West Flowing Rivers of Goa State. The river runs in the North- East direction for about 5 km and then follows in the West ward direction.

4. The Kali River or Kali Nadi is a west flowing river. The river originates near Kushavali, a small village in Uttar Kannada district. It further flows through Uttara Kannadadistrict of Karnataka state.



Q.4) With reference to the physiographic features in the Himalayan region, consider the following statements:

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3. Kailash Range is an extension of Trans- Himalayas.

Which of the statements given above is/are correct?

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- b) 2 and 3 Only
- c) 1 and 3 Only
- d) 1, 2 and 3

Ans) c

Exp) Option c is correct

The Himalayas is the highest mountain system of the world. It extends in arc shape for a distance of about 2500 km from west to east along the northern boundary of India.

Statement 1 is correct: The river Indus flows towards northwest between Zaskar range and Ladakh range. A Himalaya range which is located to the north and runs almost parallel of the Himadri/Great Himalayas is Zaskar range. Further, to the north of Zaskar range is the Ladakh range. Further, North of the Ladakh range lie the Karakoram. Many scholars treat Zaskar and Ladakh ranges as parts of the Great Himalayas and include them in Kashmir Himalayas.

Statement 2 is incorrect. K2 (8611m) is the second highest peak of the world, next only to Mt. Everest. **It is also the highest peak of the Karakoram Mountains.**

Statement 3 is correct. The three major ranges of the Himalayas are the Great Himalayan Ranges/Himadri, Lesser Himalayan Ranges/the Himachal and the Siwalik ranges. Further, to the north of Great Himalayas, The Zaskar, the Ladakh and the Karakoram ranges along with their eastern extension, **Kailash in Tibet** are considered as the **trans Himalayan ranges.**

Q.5) Consider the following pairs

River	Cultural Significance
1. Cauvery River	Aadi Perukku Festival
2. Pamba River	Mandala- Makaravilakku Festival
3. Shipra River	Kumbh Mela

Which of the statements given above is/are correct?

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Ans) d

Exp) Option d is correct

Statement 1 is correct: Aadi Perukku is a distinctive event and a remarkable festival of Tamil Nadu. In this Mother Nature is worshipped by the people of state in the form of Amman deities. **They also express gratitude to the river Kaveri during this time.** It is to thank nature for showering its grace, peace and prosperity. In this, people worship lakes and all perennial river sources of the state.

Statement 2 is correct: Kerala's famous Sabarimala temple is well known for the Mandala-Makaravilakku (Makar Sankranti) festival, which lasts for almost two months. It is celebrated in The Lord Ayyappa temple at Sabarimala. **Sabarimala temple dedicated to Lord Ayyappa is located on the banks of the river Pamba.**

Statement 3 is correct; Kumbh Mela is the largest Hindu fair held in India. It is held every fourth year at four different places. - the banks of the Godavari River in Nashik, the Ganga River in Haridwar, the **Shipra (Kshipra) River in Ujjain**, and at confluence of the Ganges, Yamuna and Saraswati in Allahabad (now known as Prayagraj).