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(GEOGRAPHY DEPARTMENT)**

B.A. PART - 1 (PHYSICAL GEOGRAPHY : PAPER - 1)

TOPIC : RELIEF OF THE INDIAN OCEAN FLOOR

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Indian Ocean, body of salt water covering approximately one-fifth of the total ocean area of the world. It is the smallest, geologically youngest, and physically most complex of the world's three major oceans. It stretches for more than 6,200 miles (10,000 km) between the southern tips of Africa and Australia and, without its marginal seas, has an area of about 28,360,000 square miles (73,440,000 square km). The Indian Ocean's average depth is 12,990 feet (3,960 metres), and its deepest point, in the Sunda Deep of the Java Trench off the southern coast of the island of Java (Indonesia), is 24,442 feet (7,450 metres).

The Indian Ocean is bounded by Iran, Pakistan, India, and Bangladesh to the north; the Malay Peninsula, the Sunda Islands of Indonesia, and Australia to the east; Antarctica to the south; and Africa and the Arabian Peninsula to the west. In the southwest it joins the Atlantic Ocean south of the southern tip of Africa, and to the east and southeast its waters mingle with those of the Pacific Ocean.

The Indian Ocean: Key Points

- Indian Ocean is the third largest of the world's oceanic divisions.
- Smaller and less deep than the Atlantic Ocean.

Submarine ridges

- Submarine ridges in this ocean include the **Lakshadweep-Chagos Ridge**, the **Socotra-Chagos Ridge**, the **Seychelles Ridge**, the **South Madagascar Ridge**, **Carlsberg Ridge** etc..
- These ridges divide the ocean bottom into many basins. Chief among these are the Central Basin, Arabian Basin, South Indian Basin, Mascarene Basin, West Australian and South Australian Basins.

Islands

- Most of the islands in the Indian Ocean are **continental islands** and are present in the north and west.
- These include the Andaman and Nicobar, Sri Lanka, Madagascar and Zanzibar. The **Lakshadweep** and **Maldives** are **coral islands** and **Mauritius** and the **Reunion Islands** are of volcanic origin. The eastern section of the Indian Ocean is almost free from islands

Continental Shelf

- The ocean's continental shelves are narrow, averaging 200 kilometres (120 mi) in width.
- An exception is found off Australia's northern coast, where the shelf width exceeds 1,000 kilometres (620 mi).
- The average depth of the ocean is 3,890 m (12,762 ft).

Trenches

- **Linear deeps are almost absent.** Few exceptions are **Sunda Trench**, which lies to the south of the island of Java and **Diamantina Trench**, west of Australia.
- Its deepest point is **Diamantina Deep in Diamantina Trench**, at 8,047 m. Sunda Trench off the coast of Java is also considerably deep.

Straits

- Most of the straits in Indian Ocean are important trade routes.
- The major choke points include *Bab el Mandeb*, *Strait of Hormuz*, the **Lombok Strait**, the *Strait of Malacca* and the **Palk Strait**.

Marginal seas

- Arabian Sea
- Persian Gulf
- Red Sea
- Gulf of Oman
- Gulf of Aden
- Strait of Bab-el-Mandeb connecting Arabian Sea
- Gulf of Kutch
- Gulf of Khambat
- Palk Strait connecting Arabian Sea and Bay of Bengal
- Bay of Bengal
- Andaman Sea
- Malacca Strait
- Mozambique Channel
- Great Australian Bight

- Gulf of Mannar
- Laccadive Sea

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