## IAS ACADEMY RUN BY FORMER CIVIL SERVANTS

Daily MCQs: 02-01-2025

# 1. Which of the following places in India have coral reefs?

- A) Lakshadweep, Andaman and Nicobar Islands, Gulf of Kachchh, Sundarbans
- B) Lakshadweep, Andaman and Nicobar Islands, Gulf of Kachchh, Malvan coast of Maharashtra
- C) Lakshadweep, Gulf of Mannar, Gulf of Kachchh, Sundarbans
- D) Lakshadweep, Andaman and Nicobar Islands, Malvan coast of Maharashtra, Sundarbans

# 2. The 'LaQshya' programme was launched by the government with the main objective of?

- A. Setting up of 1.5 lakh Health & Wellness Centres across the country
- B. Setting up of new AIIMS like institutes in underserved regions of the country
- C. Government-backed small savings scheme for the benefit of girl children
- D. Improving quality of care in the labor room and maternity Operation Theatre

## 3. 3D Printing has applications in which of the following?

- 1) Customisation of implants
- 2) Manufacture of hearing aids
- 3) Construction industry

## Select the correct answer using the code given below

- A) 1 and 2 only
- B) 2 and 3 only
- C) 1 and 3 only
- D) 1,2 and 3

# 4. 'Kalapani' is a disputed territory between India and which one of the following countries?

- A) Myanmar
- B) Bangladesh
- C) Pakistan
- D) Nepal

## 5. Consider the following statements about Black Sea

- 1) The Black Sea drains into the Mediterranean Sea.
- 2) River Volga and Ural discharge into Black sea.
- 3) The Black Sea is also connected, to the north, to the Sea of Azov by the Bosphorus Strait.

## How many of the statements given above are correct?

a) Only one

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- b) Only two
- c) All three
- d) None

#### **Solutions:**



#### 1. Answer: B

#### **Explanation:**

- Coral reefs are large underwater structures composed of the skeletons of colonial **marine** invertebrates called coral.
- The coral species that build reefs are known as **hermatypic**, **or "hard," corals** because they extract **calcium carbonate (CaCO3)** from seawater to create a hard, durable exoskeleton that protects their soft, sac-like bodies.
- Other species of corals that does not involve reef building are known as "soft" corals. These types of corals are flexible organisms often resembling plants and trees and include species such as sea fans and sea whips.

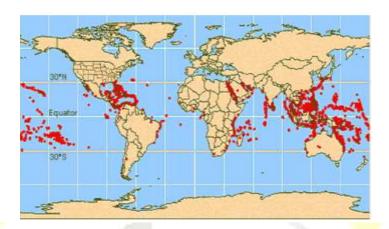
## Symbiotic relationship

- Most reef-building corals contain photosynthetic algae called **zooxanthellae** which live in their tissues. The corals and algae have a **symbiotic relationship**.
- The coral provides the algae with a protected environment and compounds they need for
  photosynthesis. In return, the algae produce oxygen and help the coral to remove wastes.
  The presence of the zooxanthellae also provides coloured pigments to help protect the
  coral's white skeleton from sunlight.

## Significance of Coral reefs

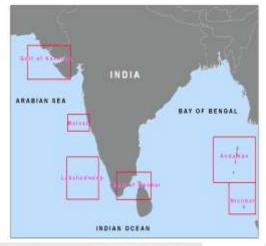
- Coral reefs only occupy 0.1% of the area of the ocean but they support 25% of all marine species on the planet.
- Because of the diversity of life found in the habitats created by corals, reefs are often called the "rainforests of the sea."
- The majority of reef building corals are found within tropical and subtropical waters. These typically occur between **30°N** and **30°S** of the equator.
- The largest of these coral reef systems, the **Great Barrier Reef** in Australia, is more than 1,500 miles long (2,400 km).

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#### Coral reefs in India

• Coral reefs are present in the areas of **Gulf of Kutch**, **Gulf of Mannar**, **Andaman & Nicobar**, **Lakshadweep Islands and Malvan coast of Maharashtra**.



## 2. Answer: D

# **Explanation**

The Ministry of Health and Family Welfare launched the 'LaQshya' (Labour room Quality Improvement Initiative) programme in 2017 which aimed at improving quality of care in the labor room and maternity Operation Theatre (OT).

# **Objectives of LaQshya**

- Reduce maternal and newborn morbidity and mortality;
- **Improve quality of care** during delivery and immediate postpartum period;
- **Enhance satisfaction of beneficiaries**, positive birthing experience and provide Respectful Maternity Care (RMC) to all pregnant women attending public health facilities.

# **Target Beneficiaries**

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- LaQshya program benefits **every pregnant woman and newborn delivering in public health institutions.**
- Program aims to improve quality of care for pregnant women in the labor room, maternity Operation Theatre and Obstetrics Intensive Care Units (ICUs) & High Dependency Units (HDUs).



#### 3. Answer: D

#### **Explanation**

# What is 3D printing?

- 3D printing is a process that uses computer-created design to make three-dimensional objects layer by layer.
- It is an **additive process**, in which layers of a material like plastic, composites or biomaterials are built up to construct objects that range in shape, size, rigidity, and colour.

## How is 3D printing done?

To carry out 3D printing a personal computer connected to a 3D printer is required. A 3D model of the required object is designed on computer-aid design (CAD) software.

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- **3D printers** construct the desired object by using a **layering method**, which is the complete opposite of the subtractive manufacturing processes.
- 3D printers **build from the bottom up by piling on layer after layer** until the object looks exactly like it was envisioned.
- The (3D) printer acts generally the same as a traditional inkjet printer in the direct 3D printing process, where a nozzle moves back and forth while dispensing a wax or plastic-like polymer layer-by-layer, waiting for that layer to dry, then adding the next level.
- It essentially adds hundreds or thousands of 2D prints on top of one another to make a three-dimensional object.

# **Applications**

## All the statements are correct.

- These machines are capable of printing anything from ordinary objects like a ball or a spoon to complex moving parts like hinges and wheels.
- **Medical sciences:** 3D printing is being used to customize implants. It is used in the manufacture of hearing aids.
- **Construction industry:** Companies around the world are making breakthroughs in 3D printing of the materials needed to build homes.

#### 4. Answer: D

# **Explanation**

- The bone of contention is the Kalapani-Limpiadhura-Lipulekh trijunction between Nepal-India
- Located on the **banks of the river Kali** at an altitude of 3600m, the Kalapani territory lies at the **eastern border of Uttarakhand** in India and **Nepal's Sudurpashchim Pradesh in the West.**
- India claims the area is part of Uttarakhand's Pithoragarh district, while Nepal believes it to be part of its Dharchula district.

#### 5. Answer: A

# **Explanation:**

- Statement 1 is correct: The Black Sea drains into the Mediterranean Sea, via the Aegean Sea and various straits.
- The Bosphorus Strait connects it to the Sea of Marmara, and the Strait of the Dardanelles connects black sea to the Aegean Sea region of the Mediterranean.
- **Statement 3 is incorrect:** The Black Sea is also connected, to the north, to the Sea of Azov by the Strait of Kerch.
- **Statement 2 is incorrect:** River Danube, Dnieper, Dniester discharges into Black sea. River Volga, Ural discharges into the Caspian sea.