September 12, 2017

Q.1) Which of the following are examples of Endorheic basin?

- 1. Aral Sea
- 2. Caspian Sea
- 3. Pangong Tso
- 4. Lake Urmia

Select the correct code:

- a) 1, 2 and 3
- b) 2, 3 and 4
- c) 1, 2 and 3
- d) All of the above

Q.1) Solution (d)

An endorheic basin is a closed drainage that retains water and does not allow for overflow to other external bodies such as the rivers and or oceans. The endorheic basin may form either permanent or seasonal lakes or swamps that equilibrate only through evaporation. The basin is also commonly referred to as internal drainage system or a closed basin. However, under normal circumstances, the water that accumulates in the drainage basin flows out through rivers or streams or by underground diffusion through permeable rocks and finally ends up in the ocean. This scenario is not common in the endorheic Basin since water that flows into the basin cannot flow out and may only leave the drainage through evaporation or seep into the ground.

The word endorheic is an Ancient Greek word which translates to "to flow within." An Endorheic Basin can either be small or massive depending on the effect of climate and the rate of water removal. Endorheic Basin does not have enough inflow and depends mainly on rainfall. It also has no overflow. Thus any loss of water either by evaporation or seeping leads to immediate shrinking of the lake. Most of the Endorheic lakes such as Lake Chad and Lake Urmia have been reduced to smaller remnants of their former sizes while other lakes such as Tulare and Fucine are completely gone. The basins which have disappeared have left behind salt pans and remnant saline lakes.

Endorheic lakes do not flow into an ocean or a sea like most of the lakes whose waters find their ways to the ocean or sea through a network of rivers or streams. Endorheic lakes are located in a watershed where the topography does not allow their drainage into the oceans. These watersheds are often referred to as terminal lakes or sink lakes. Endorheic lakes are located in the interior of the land mass far from oceans or seas and also in areas that experience low rainfall. When the waters from Endorheic lakes evaporate a large

September 12, 2017

concentration of minerals and other inflow erosion products are left behind. The mineral deposits and erosion material left behind may cause the lake to become saline over time. Because of lack of an outlet, Endorheic lakes are more sensitive to environmental pollutants than lakes which have access to the oceans or sea. Endorheic lakes can either be permanent or seasonal and can form in endorheic basin.

Endorheic basins can occur in any climate but are most common in deserts with low rainfall or stream flow. In areas of high rainfall, erosion is likely to curve the drainage channel or cause water in the terminal basin to rise thereby finding an outlet into the sea or ocean. Endorheic regions are far inland places whose boundaries are defined by mountains and other geographical features which block their access to other water bodies. Australia has the highest concentration of endorheic regions followed by North America at 21% and 5% concentration respectively. About 18% of the earth drains into Endorheic lakes. Some of the notable Endorheic basins and lakes include Lake Vanda, Lake Bonney, and Lake Hoare in Antarctica, the Caspian Sea, Lake Urmia, Lop Lake, and Sistan Basin in Asia, Lake Eyre Basin, and Lake George in Australia, and Chad Basin, Lake Turkana, Lake Chilwa, and Lake Rukwa in Africa.

Read More - http://www.unep.or.jp/ietc/publications/short_series/lakereservoirs-2/10.asp

Q.2) 'AngioChip' which was in news recently is related to

- a) Increasing shelf life of fruits exported to western countries
- b) Predictive Maintenance for Metal Casting Furnace
- c) IoT Solutions for Manufacturing Sector in India
- d) None of the above

Q.2) Solution (d)

The AngioChip is a tiny patch of heart tissue with its own blood vessels and heart cells beating with a regular rhythm.

Scientists have developed an injectable tissue bandage smaller than a postage stamp that can repair damaged hearts.

Repairing heart tissue destroyed by a heart attack or medical condition with regenerative cells usually requires invasive open-heart surgery.

Source: http://www.thehindu.com/todays-paper/tp-national/an-injectable-patch-to-repair-hearts/article19499786.ece

September 12, 2017

Q.3) Consider the following statements about 'Versius'

- 1. It is the world's smallest surgical robot
- 2. It mimics the human arm

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.3) Solution (c)

British scientists have developed the world's smallest surgical robot which could transform everyday operations for tens of thousands of patients.

The robot, called Versius, mimics the human arm and can be used to carry out a wide range of laparoscopic procedures – including hernia repairs, colorectal operations, and prostate and ear, nose and throat surgery – in which a series of small incisions are made to circumvent the need for traditional open surgery. This reduces complications and pain after surgery and speeds up recovery times for patients.

The robot is controlled by a surgeon at a console guided by a 3D screen in the operating theatre.

Although surgical robots already exist, the new creation is much easier to use, takes up about a third of the space of current machines and will be no more expensive than non-robotic keyhole surgery.

Source: http://www.dnaindia.com/technology/report-world-s-smallest-surgical-robot-created-2536035

Q.4) Consider the following statements

- United Nations Office for South-South Cooperation (UNOSSC) was established to promote, coordinate and support South-South and triangular cooperation globally and within the United Nations system.
- 2. Triangular cooperation is collaboration in which traditional donor countries and multilateral organizations facilitate South-South initiatives through the provision of

September 12, 2017

funding, training, management and technological systems as well as other forms of support.

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.4) Solution (c)

The United Nations Office for South-South Cooperation (UNOSSC) was established to promote, coordinate and support South-South and triangular cooperation globally and within the United Nations system.

UNOSSC, hosted by UNDP since 1974, was established by the UN General Assembly with a mandate to advocate for and coordinate South-South and triangular cooperation on a global and UN system-wide basis. UNOSSC receives policy directives and guidance from the General Assembly and through its subsidiary body, the High-level Committee on South-South Cooperation. UNOSSC submits its strategic planning frameworks to the UNDP, UNFPA and UNOPS Executive Board for approval and funding. The Director reports to the UNDP Administrator and has also been appointed Envoy of the Secretary-General on South-South Cooperation.

The United Nations Office for South-South Cooperation:

- mainstreams South-South cooperation across the UN system and throughout the
 international development community by leveraging its global reach as well as its
 policy and institutional capacities to assist UN agencies and developing countries in
 strengthening their South-South cooperation capacities. It works to support
 countries' efforts to manage, design and implement South-South cooperation
 policies and initiatives through the identification, sharing and transfer of successful
 Southern-generated development solutions. It also advocates for support to South-South
 initiatives, including through its organization of the UN Day for South-South
 Cooperation;
- engages a wide range of partners, including Member States, UN entities, multilateral bodies and private-sector and civil society organizations in order to provide the most efficient, effective and comprehensive support for South-South cooperation;

September 12, 2017

- innovates by continually seeking, showcasing and transferring forward-thinking Southern development solutions to development partners to meet the critical development challenges of today;
- enables countries of the South emerging, middle income and least developed to work together to use their wealth of resources, tangible and intangible, in support of national, regional and global development efforts;
- serves as the secretariat to the High-level Committee (HLC) on South-South
 Cooperation, a subsidiary body of the General Assembly, which provides policy
 directives and guidance and reviews worldwide progress in South-South
 cooperation. In this context, it monitors trends in South South cooperation among
 UN agencies as well as globally, preparing reports for various intergovernmental
 bodies, including the report of the Secretary-General on the state of South-South
 cooperation; and
- manages the UN Fund for South-South Cooperation and the Pérez-Guerrero Trust
 Fund for Economic and Technical Cooperation among Developing Countries.

Background

• In 1974, the United Nations General Assembly, in its resolution 3251 (XXIX), endorsed "the establishment of a special unit within the United Nations Development Programme to promote technical co-operation among developing countries". With the endorsement of the Buenos Aires Plan of Action (BAPA) for Promoting and Implementing Technical Cooperation among Developing Countries by the General Assembly in 1978 (resolution 33/134), the Special Unit was strengthened in order to fulfil its primary mandate, set forth in BAPA. Its name was then changed to the United Nations Office for South-South Cooperation (UNOSSC) by High-level Committee decision 17/1 of 2 April 2012 and endorsed by the General Assembly in its resolution 67/39.

South-South cooperation is a broad framework of collaboration among countries of the South in the political, economic, social, cultural, environmental and technical domains. Involving two or more developing countries, it can take place on a bilateral, regional, intraregional or interregional basis. Developing countries share knowledge, skills, expertise and resources to meet their development goals through concerted efforts. Recent developments in South-South cooperation have taken the form of increased volume of South-South trade, South-South flows of foreign direct investment, movements towards regional integration, technology transfers, sharing of solutions and experts, and other forms of exchanges.

Triangular cooperation is collaboration in which traditional donor countries and multilateral organizations facilitate South-South initiatives through the provision of funding, training, management and technological systems as well as other forms of support.

September 12, 2017

Source: http://timesofindia.indiatimes.com/india/india-unossc-launch-partnership-fund-to-promote-sustainable-development/articleshow/59065236.cms

Q.5) Abyei is located in

- a) Somalia
- b) Along Sudan and South Sudan border
- c) Syria
- d) Rakhine State of Myanmar

Q.5) Solution (b)

Abyei Area in Sudan accorded "special administrative status" by the 2004 Protocol on the Resolution of the Abyei Conflict (Abyei Protocol) in the Comprehensive Peace Agreement (CPA) that ended the Second Sudanese Civil War. The capital of Abyei Area is Abyei Town. Under the terms of the Abyei Protocol, the Abyei Area was declared, on an interim basis, to be simultaneously part of the states of South Kurdufan and Northern Bahr el Ghazal.

