



CA Revision Module - Test 22 (November 2023)

1. Consider the following statements

Statement-I: In India, Governor of the state has the power to reserve a money bill for the consideration of the President.

Statement-II: Once President approves, the Governor can give assent to the money bill and thus it becomes an act.

Select the correct answer using the codes given below:

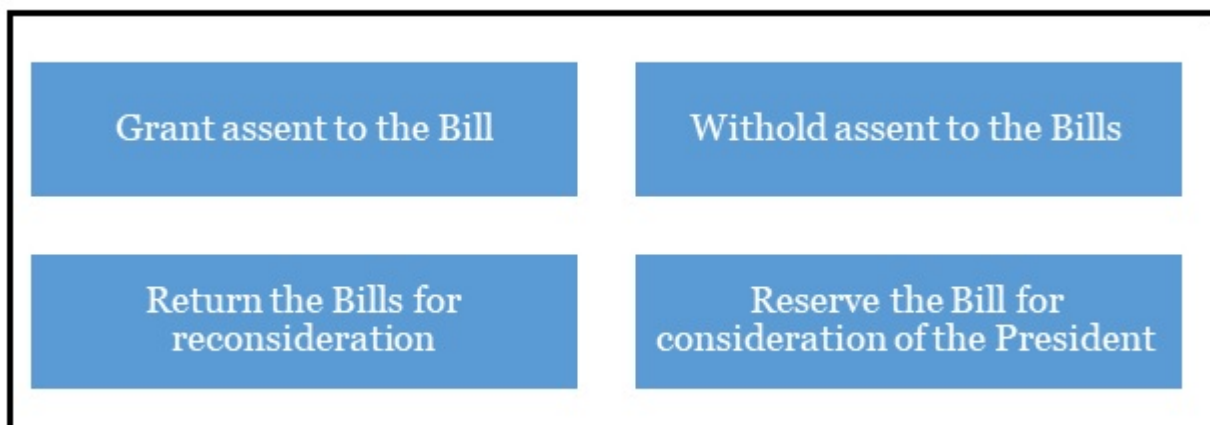
- a. Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I
- b. Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
- c. Statement-I is correct but Statement-II is incorrect
- d. Statement-I is incorrect but Statement-II is correct

Answer : c

Governor's grant of assent to Bills

Recently, the Tamil Nadu government has challenged the actions of its Governor, R.N. Ravi, in the Supreme Court.

- **Article 200** - When a Bill passed by the legislature of a State is presented to the Governor, he/she has 4 options.



- **Legislature's overriding powers** - If the bill returned by the governor is passed again by the assembly with or without amendments, then the governor must give his assent to the bill.
- The Governor enjoys only a 'suspensive veto'.
- **Money Bills** - He has 3 alternatives
 - Give his assent to the bill.

- Withhold his assent to the bill, which then ends there.
- **Reserve the bill for the consideration of the president** but President cannot return it for the reconsideration of State legislature.
- He cannot return a money bill for the reconsideration of the state legislature.
- **Reservation for President** - It is done when the governor feel that the provisions of the Bill will contravene the provisions of the Constitution.
 - Bills reducing the power of the High Court
 - Bills on concurrent list that are repulsive to a Union law based on ministerial advice.
- **Governor will not have any further role** when the bill is reserved for President's consideration.
- **Shamsher Singh Case** - The Governor does not exercise their discretionary powers while withholding assent or returning a bill.
- **Rameshwar Prasad Case** - Governor's refusal to give assent to the bill is subjected to judicial scrutiny and can be struck down as unconstitutional.
- **Nabam Rebia case** - The discretionary powers of the Governor to withhold assent are amenable to judicial review.

2. Arrange the following from North to South:

1. Gulf of Suez
2. Port Said
3. Port Al Qantara
4. Port Suez

Select the correct answer using the code below:

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



Answer : d

Suez Canal

Israel has come up with plans to create an alternative to the Suez Canal.

- **Suez Canal** - A man-made canal that connects the Mediterranean Sea to the Red Sea.
- **Need** - A crucial shortcut for shipping between Europe and Asia.
- **Geography** - It cuts north-south across the Isthmus of Suez in Egypt.
- **North to south** - **Port Said, Port Al Qantara**, Port Ismailia, Port Fai'd, **Port Suez and Gulf of Suez**.
- **Year of construction** - Began in 1859 and got completed in 10 years.
- **Owned and maintained by** - Suez Canal Authority (SCA), which is under the government of Egypt.
- **Convention of Constantinople**- Signed in 1888 by the maritime powers, it stated that the canal should be open to ships of all nations in times of both peace and war.
- **Monopoly** - Egypt's control over the waterway has been a source of conflict for almost 70 years now.
- **Ben Gurion Canal Project** - A proposal to create an alternate to Suez Canal.
- It passes through the Negev Desert in Israel, connecting the Gulf of Aqaba and the Eastern Mediterranean.



3. Consider the following statements with respect to Central Adoption Resource Authority (CARA)
1. It is a statutory body established by the Juvenile Justice (Care and Protection of Children) Act, 2015.
 2. It deals with both intra-country and inter-country adoption of Indian children.

How many of the above statements is/are **incorrect**?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : d

Central Adoption Resource Authority (CARA)

- It is a **statutory body** of Ministry of Women & Child Development, Government of India.
- **Enacted under - Juvenile Justice (Care and Protection of Children) Act, 2015.**
- *India became a signatory to the Hague Convention on Protection of Children and Co-operation of 1993 and India ratified the convention in 2003.*

Functions of CARA

- **Adoption**
 - To promote **in-country adoptions**
 - To facilitate inter-state adoptions in coordination with State Agency
 - To regulate **inter-country adoptions**
- **Regulations** - To frame regulations on adoption and related matters from time to time as may be necessary
- **Monitor** - It regulates bodies like
 - State Adoption Resource Agency (SARA)
 - Specialised Adoption Agency (SAA)
 - Authorised Foreign Adoption Agency (AFAA)
 - Child Welfare Committees (CWCs) and
 - District Child Protective Units (DPUs)

4. Consider the following statements with respect to Other Backward Class (OBC) commissions

1. None of the recommendation of Kaka Kalelkar Commission were implemented.
2. Mandal Commission recommended 27% reservation for about 52% of the OBC population.
3. Article 341 of Indian Constitution provides for the appointment of a Commission to investigate the conditions for the improvement of socially and educationally backward class.

How many of the above statements is/are **not** correct?

- a. Only one
- b. Only two
- c. All three
- d. None of the above



Answer : d

OBC Commissions

Recently, the Minister for Backward Classes Welfare in Andhra Pradesh said that the state will begin a backward class census.

- **OBC** - It was coined to denote backward/ marginalised communities and castes that were not Scheduled Castes (SCs) or Scheduled Tribes (STs).
- **Article 340** - It provides for the appointment of a Commission to investigate the conditions for the improvement of socially and educationally backward class.

1st OBC Commission

- It was formed in 1953, headed by **Kaka Kalelkar**.
- **Objective** - To identify socially and educationally backward classes
- **Report** - It prepared a list of 2,399 backward castes or communities in the country, categorised 837 of them as “most backward”.
- **Recommendations** - Enumerating castes in the 1961 census
- Providing 25-40% reservation at different levels of government jobs
- 70% reservation for admission to technical and professional institutions
- **Outcome** - It was never discussed in the Parliament and **never implemented**.

2nd OBC Commission

- It was formed in 1979 by B.P.Mandal
- **Findings** - Identified 3,743 castes and communities as OBCs
 - Estimated their **population at 52%**
- **Recommendations** - **27% reservation** in government jobs and admissions to all government-run scientific, technical, and professional institutions
- **Outcome** - Within the 27% reserved for Socially and Economically Backward Castes, preference shall be given to candidates belonging to the poorer sections of the SEBCs.

3rd OBC Commission

- It was formed in 2017, headed BY Justice G.Rohini.
- Objectives - To examine the inequitable distribution of reservation benefits among OBCs in the Central List.
 - To work out the mechanism, criteria, norms and parameters in a scientific approach
 - To identify the respective castes and classify them into their *respective sub-categories*
- **Recommendations** - It suggested breaking the caste groups into broad categories,
 - With the dominant castes getting the smallest share of the 27% reservation
 - The historically crowded-out caste groups getting the largest share of the reservation pie.

5. 'Reverse flipping', sometimes seen in the news recently, refers to?

- a. It is the trend of overseas start-ups shifting their domicile to India and listing on Indian stock exchanges.
- b. It refers to a situation where a private company becomes a public company by purchasing control of the public company.
- c. It is a strategic business practice, involves outsourcing tasks to neighboring or nearby countries rather than distant offshore locations.
- d. It refers to sudden shift in economic phase from the state of inflation to the state of recession.

Answer : a

Reverse Flipping

Economic Survey 2023-24 acknowledged the concept of reverse flipping and this trend has been gaining attention in the recent years.

- **Flipping** - The process of *transferring the entire ownership of an Indian company to an overseas entity*, accompanied by a transfer of intellectual property rights and data owned by the Indian company.
- Indian company becomes a 100% subsidiary of a foreign entity, with the founders and investors retaining the same ownership via the foreign entity, having swapped all shares.
- **Reasons for flipping** - Taxation benefits, ease of setting up in places like Singapore, the US and ease of attracting foreign capital
- **Reverse flipping** - It is the trend of **overseas start-ups shifting their domicile to India** and listing on Indian stock exchanges.
- **Reasons for reverse flipping to India** - India's favourable economic policies (tax breaks, funding assistance), expanding domestic market and growing investor confidence in the country's start-up ecosystem.
- **Reverse Merger** - It refers to a situation where a private company becomes a public company by purchasing control of the public company.
- **Nearshoring** - It is a strategic business practice, involves outsourcing tasks to neighbouring

or nearby countries rather than distant offshore locations.

6. "Emission Gap Report" is published annually by?
- UN Environment Programme
 - World Meteorological Organization
 - United Nations Carbon Offset Platform
 - Intergovernmental Panel on Climate Change

Answer : a

Emission Gap Report 2023

The Emission Gap Report 2023 has revealed that the world is set to get warmer by at least 3 degree Celsius by the end of the century with the current climate policies of the countries.

- It is an **annual assessment**.
- **Published by - United Nations Environment Program (UNEP)**
- **Aim** - To evaluate the gap between the amount of global greenhouse gas emissions now and what is necessary to meet the objectives of the Paris Agreement.
- It **tracks the greenhouse gas emission projection for 2030** and **what is necessary to limit global warming to well below 2°C** or 1.5°C.
- The report assessed countries' Nationally Determined Contributions (NDCs), which they are required to update every 5 years.
- **2023 Theme** - "Broken Record - Temperatures hit new highs, yet world fails to cut emissions (again)".
- **2023 Report** - The planet-warming GHG emissions must fall by 42% by 2030 to hold warming at 1.5 C.
- GHG emissions across the G20 also increased by 1.2 % in 2022.
- India accounts for 18% of the world population, but to date only contributed 5% of warming.

7. UNESCO's 2003 Convention for Safeguarding of the Intangible Cultural Heritage proposes which of the following domains that manifest intangible cultural heritage?

- Oral traditions and expressions
- Performing arts
- Social practices, rituals and festive events
- Knowledge and practices concerning nature and the universe
- Traditional craftsmanship

Select the correct code

- All five
- All except 4
- All except 5
- All except 4 & 5

Answer : a

Intangible Cultural Heritage of UNESCO

Ramlila is featured in the list of the Intangible Cultural Heritage of UNESCO.

- It includes traditions or living expressions inherited from our ancestors and passed on to our descendants.

- **UNESCO's 2003 Convention** for the Safeguarding of the Intangible Cultural Heritage proposes 5 broad 'domains'
 - **Oral traditions and expressions**, including language as a vehicle of the intangible cultural heritage
 - **Performing arts**
 - **Social practices, rituals and festive events**
 - **Knowledge and practices concerning nature** and the universe
 - **Traditional craftsmanship**
- **Features** - It also includes contemporary rural and urban practices in which diverse cultural groups take part.
- It is not merely valued as a cultural good, on a comparative basis, for its exclusivity or its exceptional value.
- It thrives on its basis in communities.
- It can only be heritage when it is recognized as such by the communities, groups or individuals that create, maintain and transmit it.
- **Ramlila** - It is a performance of Ramayana epic in a series of scenes that include song, narration, recital and dialogue.
- This staging of the Ramayana is based on the Ramacharitmanas, composed by Tulsidas in the 16th century in a form of Hindi in order to make the Sanskrit epic available to all.

8. Consider the following statements:

1. Chavittu Natakam is a theatre form that flourished in Tamil Nadu with the spread of Christianity.
2. Pahari painting is a style of miniature painting.
3. Basohli painting is a school of Pahari painting that flourished in the Indian hill states.

How many of the above statements is/are correct?

- a. Only one
- b. Only two
- c. All three
- d. None of the above



Answer : b

Chavittu Natakam

- It is a colourful, vigorous **theatre form** that flourished in **Kerala with the spread of Christianity**.
- Portuguese are considered to have introduced this art form here.
- **Influenced from** - Opera, Kathakali and Kalaripayattu.
- **Stamping Drama**- The artists produce resonating sounds by stamping the floor while dancing.
- Stage is named as 'thattu', which is laid with planks of wood.
- **Instruments used** - Chenda, Padathamber, Maddalam and Ilathalam, provides background music.
- These days Tabala, Fiddle, Flute and Bulbul are also played.

Pahari painting

- Pahari denotes 'hilly or mountainous' in origin.
- It is a **style of miniature painting** that developed in the independent states of the Himalayan foothills in India.
- **Origin** - It goes back to the Buddhist Pala dynasty, which ruled Bengal and Bihar during 8th -

11th century.

- **Features** - It demonstrate challenges in their territorial classification and refers both religious and secular subjects.
- **Themes** - Religious epics such as Mahabharat and Ramayana, Puranas, and Gita were frequently painted in the style.
- **Basohli painting** - A ***school of Pahari miniature painting*** that flourished in the ***Indian hill states*** during the late 17th and the 18th centuries, known for its bold vitality of colour and line.

9. Consider the following pairs

Terms in Sikhism	About
1. Udaasis	- A sect within Sikhism
2. Janamsakhis	- Biographies of Guru Nanak
3. Simran	- Service
4. Dan	- Charity

How many of the above pairs are correct?

- Only one
- Only two
- Only three
- All four

Answer : c

Terminologies related to Sikhism

Recently, the birth anniversary of Guru Nanak was celebrated Guru Nanak Jayanti (Gurpurab).

- Guru Nanak Dev (1469-1539) was the founder of Sikhism.
- Nanak was a Bhakti saint who preached that the most important form of worship is Bhakti, or devotion to Waheguru.

Terminologies related to Sikhism

Udaasis	It is a <i>religious, ascetic sect</i> , focus on the teachings of its founder, Sri Chand , son of Guru Nanak Dev.
Nagar Kirtan	Sikhs celebrate Guru nanak jayanti with a procession called Nagar Kirtan.
Janamsakhis	<i>Biographies of Guru Nanak</i>
Kaba	It is a cube-shaped structure in Mecca that is considered holy.
Langar	It is a place where people contribute their labour and help the needy through acts such as cooking food for them at the gurudwaras.
Angad	Meaning - My own limb, Guru Nanak Dev said that Lehna (one of his disciple) as Angad instead of his own son who is not inclined towards spirituality.
Ntim	Word
Dan	<i>Charity</i>
Isniin	Ablution
Sevii	<i>Service</i>
Simran	<i>Prayer</i>

10. "Nidirana Noadihing", sometimes seen in the news, is related to?

- a. A festival celebrated annually in the State of Nagaland.
- b. A martial art practised in the State of Manipur.
- c. A Meghalaya based dance-drama that was recognised as an important cultural heritage by the state.
- d. A new species of music frog discovered in Arunachal Pradesh.

Answer : d

Nidirana Noadihing

Nidirana Noadihing is a new species discovered in Arunachal Pradesh.

- It is called as a '**music frog**'
- **Features** - Both the male and female are vocal.
- It has a unique call pattern consisting of two-three notes.
- Nidirana are known to inhabit swamps, ponds and paddy fields, and they often construct nests to lay their eggs.



11. Consider the following

1. Oman
2. Yemen
3. Qatar
4. Bahrain
5. United Arab Emirates

Which of the following are members are Gulf Cooperation Council (GCC)?

- a. All five
- b. All except 1
- c. All except 3
- d. All except 2

Answer : d

Gulf Cooperation Council (GCC)

A Qatari court sentenced 8 Indian Navy veterans to death on charges of spying for Israel, thus straining the bilateral relations and also impacting India's relation with GCC countries.

- **GCC** - It is a regional political and economic union.
- **Established in** - 1981.

- **Headquarters** - Riyadh, Saudi Arabia
- **Aim** - To promote cooperation among member states.
- Initially proposed as a “Gulf Union” for deeper coordination, its military arm, the Peninsula Shield Force, was created in 1984.
- **Members** - **6** (**Bahrain**, Kuwait, **Oman**, **Qatar**, Saudi Arabia, and the **United Arab Emirates**).
- **India and Yemen are not a member.**
- **Al-ula declaration** - During the 41st GCC summit, it was signed based on greater cooperation within the Council.
- **Significance** - They have over 8.5 million non-resident Indians, constituting around 65% of total NRIs.



12. “Varaha”, sometimes seen in the news recently, is associated with?

- Chandrayaan-3 Mission
- Samudrayaan Mission
- Western Ghats Spatial Decision Support System
- AGNi (Accelerating Growth of New India’s Innovations)

Answer : b

Varaha

- Varaha is *ocean mining vehicle*, part of [Deep Ocean Mission](#) (or) **Samudrayaan Mission**.
- [MATSYA-6000](#) is also a part of the Deep Ocean Mission.
- Varaha is a self-propelled track-based seabed mining system and operates on the flexible riser technique.
- Flexible riser is a class of flexible pipes, which is used to connect subsea pipelines to floating offshore installations.
- Varaha is lowered to the ocean bed from a surface ship using a high-strength flexible cord system.
- Once the vehicle reaches the ocean bed, it will be able to move around while the surface ship moves in tandem.

13. Consider the following statements with respect to Road Accidents in India Report, 2022

1. The report is released annually by the Ministry of Road Transport and Highways.

2. Road accidents and accident-related killings are higher in rural areas than urban areas.
3. Tamil Nadu recorded the highest number of road accidents on National Highways in 2022.

How many of the statement(s) given above is/are correct?

- a. Only one
- b. Only two
- c. All three
- d. None of the above

Answer : c

Road Accidents in India Report, 2022

The **Ministry of Roads, Transport and Highways** recently released the Road Accidents in India Report, 2022 which indicate that the number of accidents in 2022 have increased by 11.9% compared to 2021.

- This report is based on the data/information received from police departments of States/UTs on calendar year basis.
- The data provided are in conducive with standardized formats provided in Asia Pacific Road Accident Data (APRAD) base project.
- *Asia Pacific Road Accident Data (APRAD) base project is under United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP).*

Key highlights of the report

- **Tamil Nadu** recorded the highest number of road accidents on National Highways in 2022, whereas, the *number of persons killed in road accident was the highest in Uttar Pradesh.*
- Both road accidents and accident-related killings are more of a rural phenomenon than an urban phenomenon.
- In 2022, **about 68%** of road accidents death took place in **rural area** where as **urban area** accounted for **32%** of total accidents death in the country.
- Among vehicle categories involved in road accidents, **two-wheelers** for the second consecutive year, accounted for the highest share in total accidents and fatalities during 2022.
- **The Electronic Detailed Accident Report (e-DAR)** is a portal developed by the Ministry of Roads, Transport and Highways (MoRTH).
- e-DAR project is aided by *World Bank Assistance* to provide an integrated and systemic solution to problem of accidents in line with international practice.

14. Consider the following statements with respect to National Efficient Cooking Programme:

1. It aims to promote affordable and energy-efficient coking coal.
2. It is an initiative of Ministry of Petroleum and Natural Gas (MOPNG).

Which of the above statement(s) is/are **incorrect**?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : c

National Efficient Cooking Programme

Recently the Union Minister for Power and New & Renewable Energy unveiled the National Efficient Cooking Programme to revolutionize cooking practices in India.

- The National Efficient Cooking Programme (NECP) introduces induction-based cook-stoves, offering a cost advantage of 25-30% over traditional cooking methods.
- It aims to promote both energy savings and cost-effective cooking solutions by introducing affordable and energy-efficient induction-based cook stoves.
- It was launched by the **Energy Efficiency Services Limited (EESL)**, which is under **Ministry of Power and New & Renewable Energy**.
- EESL seeks to reduce the environmental impact of cooking methods, ensuring cleaner air and improved health for citizens.
- EESL has also partnered with Modern Energy Cooking Services (MECS) for the large-scale deployment of induction cooktops.
- **Energy Efficient Fans Programme (EEFP)** focuses on deploying **energy-efficient ceiling fans**, which was also launched along the NECP.

15. Consider the following pairs:

Reports/ Indices		Organisations
1. Adaptation Gap Report	-	UNEP
2. Composite Water Management Index	-	NITI Aayog
3. Global Plastics Outlook	-	OECD

How many of the pair(s) given above is/are correctly matched?

- Only one
- Only two
- All three
- None of the above



Answer : c

Adaptation Gap Report 2023

- The report identifies 7 ways to increase financing, including through domestic expenditure and international and private sector finance.
- **The Adaptation Gap Report 2023 was released by the United Nations Environment Programme (UNEP).**
- The cost of adaptation is the amount needed for planning, preparing for, facilitating and implementing measures to reduce harm or exploit beneficial opportunities arising from climate change.
- Adaptation measures such as river flood protection, infrastructure and coastal protection demand the highest adaptation costs in regions of East Asia, Pacific and Latin America and the Caribbean.
- The Climate adaptation finance flows from public multilateral (like World Bank) and bilateral sources (from a developed to a developing nation) declined by 15 % to around USD 21 billion in 2021.
- *Domestic budgets seem to be the largest source of funding for adaptation in many developing countries.*

Composite Water Management Index (CWMI)

- **The index is released by the NITI Aayog and upgraded version has not been released by the Niti Aayog.**
- *The index is the first comprehensive collection of countrywide water data in India, based on in-depth structured questionnaires followed by focus group discussions to generate qualitative*

information.

- The first edition of the index was published in 2018.
- The Index has been developed in close collaboration with multiple national and state stakeholders and involved a robust data validation process.
- It ranks states in terms of efficacy based on 28 parameters.
- **The index, published by NITI Aayog**, was prepared in association with three ministries that includes Water Resources, Drinking Water & Sanitation and Rural Development.
- The Index comprises 9 themes (each having an attached weight) with 28 different indicators.

9 themes	Source augmentation and restoration of waterbodies
	Source augmentation (Groundwater)
	Major and medium irrigation
	Watershed development
	Participatory irrigation practices
	Sustainable on - farm water use practices
	Rural drinking water
	Urban water supply and sanitation
	Policy and governance

Global Plastics Outlook: Policy Scenarios to 2060 Report

The Global Plastics Outlook: Policy Scenarios to 2060 Report was recently released by the Organisation for Economic Co-operation and Development (OECD)

- The report states that if the present trends persist, *the global plastic production will triple and exceed 1 billion tonnes by the year 2060.*
- The report indicates that the plastic pollution will rise in almost threefold increase in plastics use driven by rising populations and incomes without any radical action taken.
- The report estimates that almost 2/3rd of plastic waste in 2060 will be from short-lived items such as packaging, low-cost products and textiles.
- Globally, plastic leakage to the environment is seen doubling to 44 million tonnes (Mt) a year.
- The build-up of plastics in lakes, rivers and oceans will more than triple, as plastic waste balloons from 353 Mt in 2019 to 1,014 Mt in 2060.
- The incineration and landfilling of plastic waste will continue to account for around 20% and 50% of plastic waste respectively.

16) UNESCO Michel Batisse Award, sometimes seen in the news is related to which of the following?

- To recognize operations that have a significant impact on the humanitarian assistance provided during war.
- For a political person who provide Policy leadership for conservation of the nature.
- Highest civilian award by UNESCO for person in any field of human endeavour.
- For outstanding achievement in management of biosphere reserves across the globe.

Answer : d

UNESCO Michel Batisse Award

The director of Gulf of Mannar biosphere reserve was selected for UNESCO Michel Batisse Award for 2023.

- UNESCO Michel Batisse Award is a 12,000 USD award that is given every 2 years during the [Man and the Biosphere Programme \(MAB\)](#) Council, in memory of Dr Michel Batisse.
- It is awarded for outstanding achievements in the **management of the biosphere reserves** in line with the recommendations of the Seville Strategy.
- The *Seville Strategy* provides recommendations for developing effective biosphere reserves and for setting out the conditions for the appropriate functioning of the World Network of Biosphere Reserves.

17. Consider the following statements with respect to the Advocate-on-Record System

1. Advocate-on-Record (AoR) are a pool of Delhi-based lawyers and only they are allowed to file cases before the Supreme Court.
2. AOR system is being governed by the Supreme Court Rules, 2013.
3. Advocate-on-Record (AoR) can be appeared only before the Supreme Court and are barred to appear before the other courts.

Which of the above statement(s) is/are **incorrect**?

- a. Only one
- b. Only two
- c. All three
- d. None of the above

Answer : a

Advocate-on-Record System



Recently the Supreme Court recently stopped an Advocate-on-Record (AoR) for filing a frivolous case and dismissed the public interest litigation.

- Advocate-on-Record (AoRs) are a pool of elite Delhi-based lawyers whose legal practice is mostly before the Supreme Court.
- **They can appear before other courts too.**
- **Only an AoR can file cases before the Supreme Court.**
- An AoR might engage other lawyers including senior counsels to argue before the Court but the AoR is essentially the link between the litigant and the highest court of the country.
- **The Supreme Court Rules, 2013 prescribe eligibility criteria for an AoR.**
- An advocate has to clear an examination set by the Court itself, the advocate has to meet specific criteria to be eligible to appear for the exam.
- According to Section 30 of the Advocates Act of 1961, any lawyer enrolled with the Bar Council is entitled to practice law before any Court or tribunal in the country.
- **Article 145** of the Constitution states that the Supreme Court is empowered to make rules and regulate its own procedure for hearing cases.
- The AoR system is broadly based on the British practice of barristers and solicitors.

18. Consider the following pairs:

Volcanoes

Countries

1. Mount Etna - Greece
2. Fagradalsfjall - Hawaii, USA
3. Kilauea - Iceland
4. Dukono - Indonesia

How many of the pair(s) given above is/are correctly matched?

- a. Only one
- b. Only two
- c. Only three
- d. All four

Answer : a

Volcanoes

- They are openings, or vents where lava, tephra (small rocks), and steam erupt onto the Earth's surface.
- Volcanoes can be on land and in the ocean and formed through the movement and collision of tectonic plates.
- There are 4 main types of volcanoes that includes:
 1. Cinder cones
 2. Composite or stratovolcanoes
 3. Shield volcanoes
 4. Lava domes
- Some of the most active volcanoes are located in the Pacific Ring of Fire, which includes New Zealand, Southeast Asia, Japan and the western coast of the Americas.
- About 90% of all earthquakes worldwide strike within [Pacific Ring of Fire](#).
- **Italy's Mount Etna** - Is one of the world's most active volcanoes, was causing public concern as it started erupting the year before.
- It is the Europe's most active volcano and one of the largest in the world.
- **Fagradalsfjall** - Located in the **Iceland**.
- **Kilauea** - It is located in **Hawaii, United States**.
- **Dukono** - Located in **Indonesia** started erupting in August 1933 and is continuing.

19. Identify the characteristic features of 'Tantalum' from the options given below:

1. Low density
2. Critical mineral
3. Low melting point
4. High corrosion resistance

Select the answer using the code given below:

- a. 1 and 3 only
- b. 2 and 4 only
- c. 1, 2 and 4
- d. 1, 2, 3 and 4

Answer : b

Tantalum

Researchers from the Indian Institute of Technology (IIT), Ropar has found the presence of tantalum, a rare metal, in the Sutlej River.

- Tantalum is a **rare metal** that was discovered in 1802 by the Swedish chemist Anders Gustaf Ekeberg.
- It is bright, very hard, silver-grey metal of Group 5 of the periodic table.

- It is characterized by its **high density**, *extremely high melting point*, and excellent resistance to all acids except hydrofluoric at ordinary temperatures.
- It has *3rd highest melting point* next to tungsten and rhenium.
- As tantalum has a high melting point, it is frequently used as a **substitute for platinum**, which is more expensive.
- It possesses **high corrosion resistance**, because when exposed to air, it forms an oxide layer that is extremely difficult to remove, even when it interacts with strong and hot acid environments.
- Pure tantalum is ductile, meaning it can be stretched, pulled, or drawn into a thin wire or thread without breaking.
- It is almost completely immune to chemical attack at temperatures below 150°C and is attacked only by hydrofluoric acid, acidic solutions containing the fluoride ion and free sulphur trioxide.
- **Tantalum is one of the Critical Minerals.**
- It is mined in many places including Australia, Canada and Brazil.
- **Uses** - *One of the main uses of tantalum is in the production of electronic components.*

20. Consider the following statements with respect to 'E Prime Layer'

1. It is a new earth layer that is formed in the inner most part of the earth's core.
2. It is formed as a result of surface water penetrating deep into the planet which alters the composition of liquid core's outermost region.
3. It is characterized by high silicon content and low hydrogen concentration.

How many of the statements given above are correct?

- a. Only one
- b. Only two
- c. All three
- d. None of the above



Answer : a

E Prime Layer

Researchers revealed the formation of a new enigmatic layer - E prime layer at the outermost part of Earth's core.

- Earth comprises 4 primary layers that includes:
 1. An 'inner core' at the planet's centre
 2. 'Outer core' that surrounds the inner core
 3. Mantle
 4. Crust
- A new enigmatic layer or E prime layer is formed at the **outermost part** of Earth's core.
- It is formed as a result of **surface water penetrating deep into the planet** altering the composition of the metallic liquid core's outermost region.
- The material exchange between the core and mantle is small, however, the experiments revealed that when water reaches the core-mantle boundary, it reacts with silicon in the core, forming silica.
- It is a **hydrogen-rich, silicon-depleted layer.**
- **Layer formation process** - Tectonic plates carrying surface water have transported it deep into the Earth over billions of years.
- Upon reaching the core-mantle boundary about 1,800 miles below the surface, this water initiates significant chemical changes, influencing the core's structure.
- This reaction leads to the formation of a hydrogen-rich, silicon-depleted layer at the outer

core, resembling a film-like structure.

- Silica crystals generated by this process ascend and blend into the mantle, impacting the overall composition.
- These modifications in the liquid metallic layer could potentially result in reduced density and altered seismic characteristics.

