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## UPSC CSE (PRE) 2023 (GENERAL STUDIES PAPER - I)

## **ANSWER KEY & EXPLANATION**



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## UPSC CSE PT-2023

## GS PAPER-I ANSWER KEY SET-A

1	Α	21	D	41	Α	61	Α	81	Α
2	В	22	Α	42	В	62	С	82	В
3	В	23	Α	43	В	63	D	83	Α
4	В	24	Α	44	D	64	D	84	Δ
5	D	25	В	45	D	65	С	85	U
6	D	26	В	46	В	66	D	86	U
7	C	27	С	47	В	67	Α	87	C
8	A	28	С	48	Α	68	С	88	Δ
9	D	29	В	49	В	69	A	89	A
10	D	30	C	50	D	70	Α	90	Α
11	C	31	С	51	В	71	D	91	В
12	C	32	A	52	С	72	С	92	A
13	Α	33	C	53	Α	73	D	93	D
14	В	34	В	54	С	74	В	94	U
15	C	35	Α	55	В	75	В	95	В
16	D	36	D	56	Α	76	С	96	В
17	Α	37	Α	57	D	77	Α	97	D
18	С	38	В	58	D	78	D	98	D
19	В	39	Α	59	С	79	С	99	C
20	С	40	С	60	С	80	Α	100	С

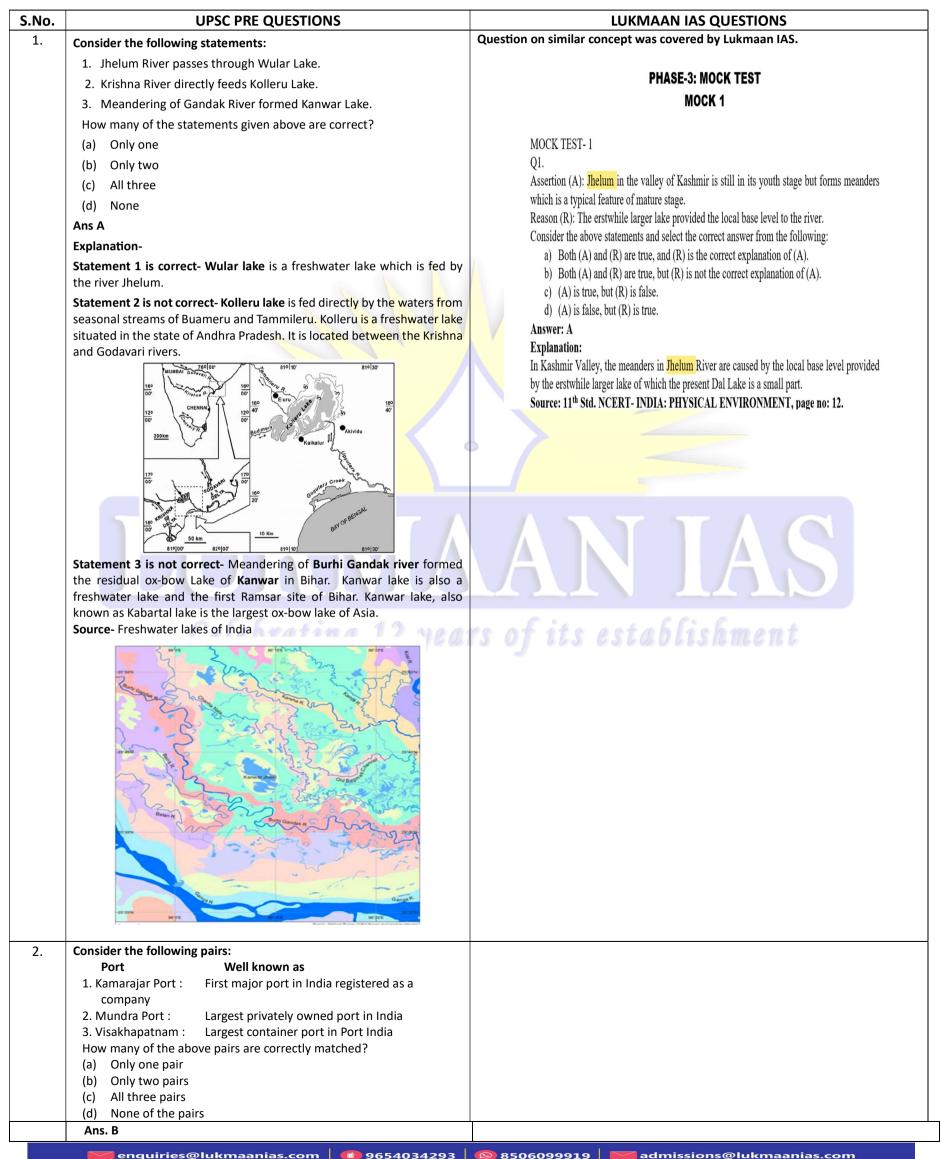
PT-2023 Paper Analysis & Discussion Scan to Join Live On Youtube



## **UPSC CSE (PRE) 2023**

#### **GENERAL STUDIES PAPER -I**

**ANSWER KEY AND EXPLANATION: SET- A** 



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#### **Explanation-**

- is correctly matched- Kamarajar port is the 12th major port of India, and the first port in India which is a public company. The Kamarajar Port Limited is the only corporatised major port and is registered as a company.
- 2 is correctly matched- In 2014, Mundra Port surpassed Kandla in cargo handling and became the largest private port of India.
- 3 is not correctly matched- In 2021, Mundra Port became the largest container port in India.



#### 3. Consider the following trees:

- 1. Jackfruit (Artocarpus heterophyllus)
- 2. Mahua (Madhuca indica)
- 3. · Teak (Tectona grandis)

How many of the above are deciduous trees?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

#### Ans. B

#### **Explanation-**

**Jackfruit** is an evergreen tree native to tropical Asia. In 2018, jackfruit was declared the State fruit of Kerala

Whereas mahua and teak are deciduous trees.

#### Forests and their types have been covered in phase 1 of LukmaanIAS Study plan

Q7. 'This type of forest covers vast areas of India, where rainfall ranges between 70 -100 cm. These forests are found in rainier areas of the Peninsula and the plains of Uttar Pradesh and Bihar. As the dry season begins, the trees shed their leaves completely and the forest appears like vast grassland with naked trees all around. Tendu, palas, amaltas, bel, khair, axlewood, etc. are the common trees of these forests.'

Which of the following vegetation types is being described in the given paragraph?

- a) Tropical evergreen forest
- b) Tropical semi-evergreen forest
- c) Tropical moist deciduous forest
- d) Tropical dry deciduous forest

#### Answer: D

#### Explanation

- Dry deciduous forest covers vast areas of the country, where rainfall ranges between 70 -100
- On the wetter margins, it has a transition to the moist deciduous, while on the drier margins
  to thorn forests.
- These forests are found in rainier areas of the Peninsula and the plains of Uttar Pradesh and

  Piles

  Output

  Discussion

  Discussion
- In the higher rainfall regions of the Peninsular plateau and the northern Indian plain, these
  forests have a parkland landscape with open stretches in which teak and other trees
  interspersed with patches of grass are common.
- As the dry season begins, the trees shed their leaves completely and the forest appears like a
  vast grassland with naked trees all around.

#### 4. Consider the following statements:

- 1. India has more arable area than China.
- 2. The proportion of irrigated area is more in India as compared to China.
- 3. The average productivity per hectare in Indian agriculture is higher than that in China:

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

#### Ans. B

#### **Explanation-**

Parameter for comparison	China	India
Arable land	120 million	156 m ha
	hectares	
Irrigated area	41%	48%
Agricultural	\$1,367 billion	\$407 billion
output		

Based on the information given above, it can be concluded that **India outpaces China** in terms of **arable area** and proportion of **irrigated area**, yet has **lower average productivity per hectare than that of China.** 

Even with much lesser land under cultivation, China produces agricultural output valued at \$1,367 billion—more than three times that of India's \$407 billion.

Therefore, statements 1 and 2 are correct.

Statement 3 is incorrect.

**Source-** <u>India can learn agri-policy lessons from China | The</u> Financial Express

This topic was covered in the daily current affairs by LukmaanIAS.

Business News / Opinion / India Can Learn Agri Policy Lessons From China

## India can learn agri-policy lessons from China

Both have adopted modern technologies in agriculture, starting with High Yielding Variety (HYV) seeds in the mid-1960s, increased irrigation cover, and use of more chemical fertilisers to get more food from this limited land.

Written by <u>Guest</u> October 29, 2019 02:10 IST Follow Us





#### By Ashok Gulati & Sakshi Gupta

India and China are the most populous countries in the world, having a population size of 1.35 billion and 1.39 billion, respectively, in 2018. With limited arable land (about 120 million hectare (m ha) in China, and 156 m ha in India), both face the challenge of producing enough food, fodder, and fibre for their population. Both have adopted modern technologies in agriculture, starting with High Yielding Variety (HYV) seeds in the mid-1960s, increased irrigation

- 5. Which one of the following is the best example of repeated falls in sea level, giving rise to present-day extensive marshland?
  - (a) Bhitarkanika Mangroves
  - Marakkanam Salt Pans (b)
  - Naupada Swamp (c)
  - Rann of Kutch (d)

#### Ans. D

**Explanation- Repeated tidal activity** is most notable phenomenon in the Rann of Kutch region that causes repeated falls in sea level and transforms the landscape to present-day extensive marshlands. This supports the salt-manufacturing in the region, thus providing livelihood to the Agariya community in Gujarat.

Marakkanam beach is located in the coastal region of Tamil Nadu which is popular for Salt Pans. This area experiences tides but not as frequent



as those in Rann of Kutch.

Naupada Swamp located in Andhra Pradesh renowned for production of raw salt, locally called Gappu Uppu. The

salt manufacturing in Naupada is majorly driven by evaporation process and not extreme/frequent tides unlike the Gulf of Kutch region.

- 6. Ilmenite and rutile, abundantly available in certain coastal tracts of India, are rich sources of which one of the following?
  - (a) Aluminium
  - (b) Copper
  - (c) Iron
  - (d) Titanium

#### Ans. D

**Explanation**- Ilmenite and rutile are the ores of Titanium.

Ilmenite and rutile along with other heavy minerals are important constituents of beach sand deposits found right from Saurashtra coast (Gujarat)in the west to Digha coast, West Bengal in the east.

Source- Ilmenite & Rutile 2020 as on 21.10.2021.pmd (ibm.gov.in) No private company can exportbeach sand minerals any more - The Hindu Rare earth metals are of much prominence from perspective of Industrial revolution 4.0. UPSC has previously asked questions on uranium reserves. Mineral ores and distribution must be given attention.

- 7. About three-fourths of world's cobalt, a metal required for the manufacture of batteries for electric motor vehicles, is produced by.
  - (a) Argentina
  - (b) Botswana
  - (c) The Democratic Republic. of the Congo
  - (d) Kazakhstan

Explanation- Democratic Republic of the Congo is by far the highest producer of cobalt with 70% share in global cobalt production.

#### **Source- Electric Vehicles policy**

Electric vehicles use lithium-ion batteries in which cobalt is a vital component apart from the Lithium. It speeds up the charging and extends the life of Li-ion battery.

- 8. Which one of the following is a part of the Congo Basin?
  - (a) Cameroon
  - (b) Nigeria
  - (c) South Sudan
  - (d) Uganda

#### Ans. A

Explanation- The Congo Basin spans across six countries—

- Cameroon
- Central African Republic
- Democratic Republic of the Congo
- Republic of the Congo
- **Equatorial Guinea and Gabo**



Congo basin is the sedimentary basin of the river Congo located in the equatorial, central Africa.

Uganda, South Sudan and Nigeria are not a part of the Congo basin.

Note that **Nigeria** and Cameroon are part of the **Sahel region** in Africa. **Uganda is part of the Nile basin.** 

**Source-** <u>Journey into the Congo Basin – The Lungs of Africa and Beating Heart of the World (worldbank.org)</u>

9.

#### **Consider the following statements:**

- 1. Amarkantak Hills are at the confluence of Vindhya and Sahyadri Ranges.
- 2. Biligirirangan Hills constitute the easternmost part of Satpura Range.
- 3. Seshachalam Hills constitute the southernmost part of Western Ghats.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

#### Ans. D

#### **Explanation-**

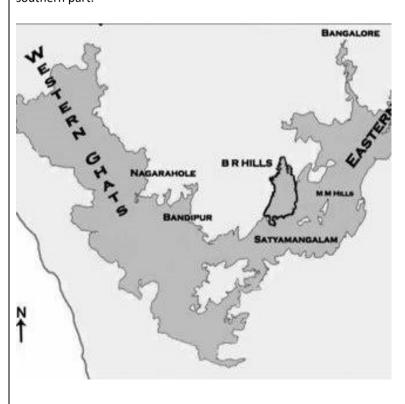
**Statement 1 is not correct- Maikal Hills** (Chattisgarh) constitute the fulcrum of Amarkantak hills and are at the confluence of Vindhya and Sahyadri Ranges.

**Statement 2 is not correct-Maikal hills** run in North-South direction and form the easternmost base of the Satpura range. These hills are located in the state of Madhya Pradesh.

Note that **Biligirirangan hills** are situated in **Karnataka** and are renowned for being **conjuncture for the Eastern and the Western Ghats.** 

**Statement 3 is not correct- Cardamom hills** constitute the southernmost part of the Western Ghats which are also known as Sahyadris. Also, it should be noted that **Seshachalam hills are part of the Eastern Ghats**, hence this option can be eliminated easily.

**Seshachalam hills** are located in the state of Andhra Pradesh in the southern part.





- 10. With reference to India's projects on connectivity, consider the following statements:
  - 1. East-West Corridor under Golden Quadrilateral Project connects Dibrugarh and Surat.
  - 2. Trilateral Highway connects Moreh in Manipur and Chiang Mai in Thailand via Myanmar.
  - 3. Bangladesh-China-India-Myanmar Economic Corridor connects Varanasi in Uttar Pradesh with Kunming in China.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

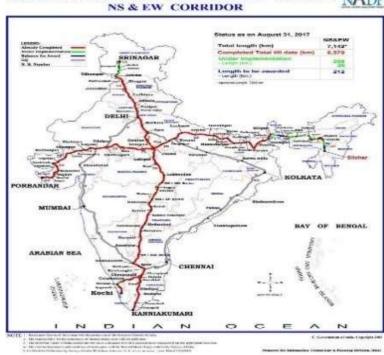
Ans. D

#### **Explanation-**

**Statement 1 is not correct- East-West corridor** connects **Porbandar** (Gujarat) and **Silchar** (Assam).

Golden Quadrilateral is a network of highways connecting India's four top

NATIONAL HIGHWAYS DEVELOPMENT PROJECT NADP

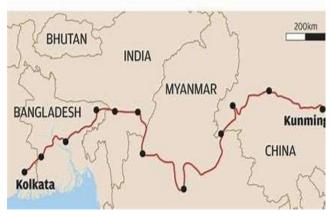


metropolitan cities, namely Delhi, Mumbai, Chennai and Kolkata, thereby, forming a quadrilateral. The largest highway project in India, the Golden Quadrilateral project was launched in 2001 as part of National Highways Development Project (NHDP).

**Statement 2 is not correct- Trilateral Highway** connects Moreh in Manipur and Mae Sot in Thailand via Myanmar.



Statement 3 is not correct- BCIM(Bangladesh-China-India-Myanmar) corridor connects Kolkata in West Bengal with Kunming in China.





#### 11. Consider the following statements:

Statement-1: · India, despite having uranium deposits, depends on coal for most of its electricity production.

Statement-2: Uranium, enriched to the extent of at least 60%, is required for the production of electricity.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-1 and Statement-2 are correct and Statement-2 is the correct explanation for Statement-1
- (b) Both Statement-1 and Statement-2 are correct and Statement-2 is not the correct explanation for Statement-1
- (c) Statement-1 is correct but Statement-2 is incorrect
- (d) Statement 1 is incorrect but Statement-2 is correct

#### Ans. C

#### **Explanation-**

Statement 1 is correct- India has about 0.7% of the global share of uranium reserves but hosts 5<sup>th</sup> largest reserves of coal in the world. Due to various limitation of uranium such as limited reserves, radioactive waste generation, and slow progress on third stage of India's nuclear programme, nearly 60% of the electricity production is done using coal. Nuclear energy makes up roughly 2% of the share in India's energy basket

**Statement 2 is not correct-** Enrichment of uranium decides its purpose of exploitation. If enriched up to 3-5%, uranium facilitates electricity production. Therefore, nuclear reactors use Low-Enriched Uranium for electricity generation.

Enrichment of uranium to more than 20% is referred to as Highly-Enriched Uranium is weapon-grade uranium.

**Source-** What is Low Enriched Uranium (LEU) and how it is stored at the IAEA LEU Bank? | IAEA

#### 12. Consider the following statements:

Statement 1: Marsupials are not naturally found in India.

Statement 2: Marsupials can thrive only in montane grasslands with no predators.

Which one of the following is correct in respect of the above statements?

- (a) Both statement 1 and statement 2 are correct and statement 2 is the correct explanation for statement 1.
- (b) Both statement 1 and statement 2 are correct and statement 2 is not the correct explanation for statement 1.
- (c) Statement 1 is correct but statement 2 is not correct.
- (d) Statement 1 is incorrect but statement 2 is correct.

#### Ans. C

Explanation- Marsupials include kangaroo, koalas, opossums, wombats, wallabies, bandicoots and Tasmanian Devil.

**Statement 1 is correct-** Marsupials are mammals that are endemic (naturally found in) to Australia, New Guinea, Tasmania, Solomon Islands, Southern USA, and Central and South America.

They are not found in India naturally.

**Statement 2 is incorrect-** The **habitat** of Marsupials ranges from trees to the forest floor to open bush and shrub drylands.

The majority of **Australian marsupials** live in dry desert and shrub habitats, and generally avoid colder climates.

In South America, marsupials live in forests or tropical rainforests.

Marsupials can be **burrowing species**, such as wombats; **terrestrial**,

such as kangaroos; **semiaquatic**, such as the water opossum; or **arboreal**, such as the koala.

Therefore, marsupials have diverse range of habitat, and are not found in montane grasslands with no predators.

They mostly prefer arid and semi-arid environment.

## 13. 'Invasive Species Specialist Group' (that develops Global Invasive Species Database) belongs to which one of the following organizations?

- (a) The International Union for Conservation for Nature
- (b) The United Nations Environment Programme
- (c) The United Nations World Commission for environment and Development
- (d) The World Wide Fund for Nature

#### Ans. A

**Explanation-** The Invasive Species Specialist Group (ISSG) is a global network of scientists and policy experts on invasive species, organised under the auspices of Species Survival Commission of the International Union for Conservation of nature(IUCN).

The **Global Invasive Species Database** is a free online, searchable source of information about alien invasive species that negatively impact the biodiversity. It is **managed by the ISSG** of the IUCN. It was developed between 1998 and 2000 as part of the global initiative on invasive species led by the erstwhile Global Invasive Species Programme.

The Invasive Species Specialist Group aims to reduce threats to natural ecosystems and the native species. It engages in increasing awareness of invasive alien species and of ways to prevent, control or eradicate them. The ISSG promotes and facilitates exchange of information and knowledge about invasive species across the globe so that decision-making and policy-formulation is well-informed.

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its establishment

#### 14. Consider the following fauna-

- 1. Lion-tailed Macaque
- 2. Malabar Civet
- 3. Sambar Deer

How many of the above are generally nocturnal or most active after sunset?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) None

#### Ans. B

**Explanation**- Nocturnal species are creatures of the night which rest during the day but remain active during the night after sunset. They wander in search of water or prey preferably in the dark.

Some of the nocturnal species of fauna from India are listed below-

- Cat family is generally known to have the best night vision. The
  Asiatic lion, leopard, desert cat, jangle cat, civets, rusty cat, snow
  leopard and Indian Bengal Tiger are among the nocturnal wild cats
  of India.
- Sambar deer- These deer are most active at night, or during sunrise and sunset. They communicate with one another using scent marking, but can vocalize when in danger or alarmed.
- Sloth bear- Himalayan brown bear, Asiatic Black Bear and sun bear
- Indian pangolin
- Indian giant flying squirrel
- Indian hedgehog
- Indian wolf
- Bats
- Owls
- Indian nightjar
- Fishing cat

About lion-tailed macaque- It is a diurnal species which implies it remains active exclusively in daylight. It rests at night. It is endemic to the Western Ghats of India; this species was once known as 'Wanderloo' locally. It lives in the rainforests in the upper canopies of trees. Unlike other macaques, it typically avoids humans when possible.

## 15. Which of the following organisms perform waggle dance for others of their kin to indicate the direction and distance to a source of their food?

- (a) Butterflies
- (b) Dragonflies
- (c) Honeybees
- (d) Wasps

#### Ans. C

#### **Explanation-**

Honeybees possess one of the most complicated examples of nonhuman communication. Through waggle dance, they convey the direction, distance and quality of a resource to the bee's nestmates.

#### 16. Consider the following statements:

- 1. Some mushrooms have medicinal properties.
- 2. Some mushrooms have psycho-active properties.
- 3. Some mushrooms have insecticidal properties.
- 4. Some mushrooms have bioluminescent properties. How many of the above statements are correct?
- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

#### Ans. D

#### **Explanation-**

Statement 1 is correct- Medicinal Properties of Mushrooms: Mushrooms are rich source of protein, vitamin D, vitamin B12 and antioxidants, help balance the blood sugar levels and enhance the immunity of humans. About 700 edible mushrooms have been found to have therapeutic properties and serve as rich source of bioactive compounds for the pharmaceutical industry. Polysaccharide is one of the main bioactive compounds in edible mushrooms rendering health benefits such as anti-inflammatory, anti-bacterial, anti-tumour, anti-diabetes, anti-hyperlipidemia, anti-virus, anti-oxidation effects etc. which have potential medicinal value.

Guchhi mushrooms (or morel mushrooms) from Doda district of J&K that received GI tag in 2021 are known to possess medicinal value. GI tag sought for India's costliest mushroom - The Hindu BusinessLine

Statement 2 is correct- Psychoactive properties of mushrooms: Magic mushrooms contain psilocybin, a naturally-occurring psychoactive and hallucinogenic compound. Psilocybin was first isolated in 1958 by Dr. Albert Hofmann although some cultures are known for using hallucinogenic properties of mushroom since centuries. Magic mushrooms prove promising in treatment of depression - The Hindu

Statement 3 is correct- Insecticidal properties of mushroom: Certain mushroom species are known to be toxic to insects due to the protein they have. Various studies throughout the world have been carried out that underline the use of mushrooms as bioinsecticide and biopesticide.

its establishment

<u>Can Mushrooms and Their Derivatives Be Efficient Bioalternatives to Conventional Synthetic Insecticides? (Review) - PubMed (nih.gov) Insecticidal properties of mushroom and toadstool carpophores - ScienceDirect</u>

https://reset.me/story/all-natural-mushroom-based-pesticide-could-revolutionize-agriculture/

Statement 4 is correct- Bioluminescent properties of mushrooms: A new variety of mushroom was discovered in Meghalaya with unique characteristic of bioluminescence. This mushroom species was named as Roridomyces phyllostachydis. Such mushroom was found for the first time in India. Rare exotic glowing mushrooms discovered in Meghalaya, Meghalaya - Times of India Travel (indiatimes.com)

**Source:** Mushrooms are often in highlights due to one reason or the other that underscores the point to have basic understanding about them and latest developments, if any. MDMA, magic mushrooms could be the hottest entry in psychiatry, researchers hopeful - India Today

- 17. Consider the following statements regarding the Indian squirrels:
  - 1. They build nests by making burrows in the ground.
  - 2. They store their food materials like nuts and seeds in the ground.
  - 3. They are omnivorous.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

#### Ans. A

#### **Explanation-**

**Statement 1 is incorrect-** Indian squirrels are arboreal species that prefer building their nests on trees so as to protect themselves from their predators.

The Indian giant squirrel is an upper-canopy dwelling species, which rarely leaves the trees, and requires "tall profusely branched trees for the construction of nests.

Statement 2 is incorrect- Instead of storing nuts and seeds in larders underground, Indian giant squirrels create caches of food high up in the treetops.

https://www.nationalgeographic.co.uk/animals/2019/04/giant-purple-squirrels-do-exist-and-they-have-an-odd-behaviour

https://allthatsinteresting.com/indian-giant-squirrel

**Statement 3 is correct-** As **omnivorous animals**, the Indian giant squirrels and Indian palm squirrels consume a wide variety of food, including fruits, flowers, nuts, bark, eggs of birds, and insects.

Indian Giant Squirrel - Facts, Diet, Habitat & Pictures on Animalia.bio https://animalia.bio/indian-palm-squirrel

**Source:** <u>Virudhunagar district's own Grizzled Squirrel is mascot of its first book fair - The Hindu</u>

Postal dept unveils cancellation on endangered squirrel | Goa News - Times of India (indiatimes.com)

#### 18. Consider the following statements:

- 1. Some microorganisms can grow in environments with temperature with temperature above the boiling point of water.
- 2. Some microorganisms can grow in environments with temperature with temperature below the freezing point of water.
- 3. Some microorganisms can grow in highly acidic environment with a pH below 3.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

#### Ans. C

**Explanation-Extremophiles** occupy habitats characterized by extremes of temperature, pH, salinity, hydrostatic pressure, ionizing radiation, desiccation and high concentrations of metals. Most are **Bacteria or Archaea** and possess numerous molecular adaptations that allow them to withstand these conditions.

**Statement 1 is correct- 1. Thermophiles** are such microorganisms that can grow in environments with temperature with temperature above the boiling point of water.

**Statement 2 is correct- Psychrophiles** are such microorganisms that can grow in environments with temperature with temperature below the freezing point of water.

**Statement 3 is correct- Acidophiles** are such microorganisms which can grow in highly acidic environment with a **pH below 3** whereas **alkaliphiles** can tolerate pH largely exceeding neutrality.



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There are some microorganisms in the category of piezophiles which tolerate pressure as high as 1000 atm. Halophiles are capable of withstanding salt concentrations, in some cases, higher than 300 g l-1

Source- Extremophile - an overview | ScienceDirect Topics

Hot waters of Dholera hotbed of microbes | Ahmedabad News - Times of India (indiatimes.com)

The mystery of Mariana Trench: World's deepest, darkest crevice with 'alien' life - Times of India (indiatimes.com)

- 19. Which one of the following makes a tool with a stick to scrape insects from a hole in a tree or a log of wood?
  - (a) Fishing cat
  - (b) Orangutan
  - (c) Otter
  - (d) Sloth bear

Ans. B

Explanation- Orangutans exhibit a variety of geographically variable innovative behaviours, some of which are considered cultural. Among these behaviours are certain forms of tool-use, including the modification of sticks by a population of Sumatran orangutans to open Neesia fruits and more efficiently harvest their seeds. Thus, they use this stick tool to scape the insects from tree holes when there is scarcity of fruits that form its primary diet.

Source- Orangutan | Smithsonian's National Zoo (si.edu)

- 20. Consider the following:
  - Aerosols
  - 2. Foam agents
  - 3. Fire retardants
  - 4. Lubricants

In the making of how many of the above are hydrofluorocarbons used?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

#### Ans. C **Explanation-**

Hydrofluorocarbons (HFCs) are entirely man-made. They are potent greenhouse gas. They are primarily used for the purposes of refrigeration, air-conditioning, insulating foams and aerosol propellants, with minor uses as solvents and for fire protection.

Consider the following statements:



https://www.ccacoalition.org/en/slcps/hydrofluorocarbons-hfcs

Source- Press Information Bureau (pib.gov.in)- Cabinet approves Ratification of Kigali Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer for phase down of Hydrofluorocarbons. Government puts curbs on exports of hydrofluorocarbons- The **New Indian Express** 

India imposes antidumping duty on 5 Chinese goods for 5 years -Times of India (indiatimes.com)

Interest income from the deposits in Infrastructure Investment Trusts

Reconstruction of Financial Assets and Enforcement of Security Interest-

(InvITs) distributed to their investors is exempted from tax, but the

InvITs are recognized as borrowers under the "Securitization and

Which one of the following is correct in respect of the above

#### Consider the following statements regarding Asset Reconstruction Company:

- It takes over a portion of the debts of the bank that qualify to be recognized as Non-performing assets.
- It is registered under Securities and Exchange Board of India.

of its establishment

- It is regulated under the SARFAESI Act 2002.
- Qualified buyers registered under SEBI are the only person from whom ARC can raise funds.

Which of the statements given above is/are correct?

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

#### Answer:

Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I

(a) Both Statement-I and Statement-II are correct and Statement-II is

(c) Statement-I is correct but Statement-II is incorrect

the correct explanation for Statement-I

(d) Statement-I is incorrect but Statement-II is correct

#### Ans: D

#### **Explanation:**

Statement-I:

statements?

dividend is taxable.

Statement 1 is incorrect: Both dividend and interest income from the deposits in Infrastructure Investment Trusts (InvITs) distributed to their investors is completely taxable.

#### **Explanation:**

Statement 1 is correct: It takes over portion of the debts of the bank that qualify to be recognized as non-performing assets.

C

Statement 2 is incorrect: It is registered under Reserve Bank of India.

#### **Statement 3 is correct:**

It is regulated under SARFAESI Act 2002.

Statement 4 is correct: Qualified buyers registered under SEBI are the only person from whom ARC can raise funds.

Additional information:

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21.

Statement 2 is correct: InvITs are recognized as borrowers under the "Secuntization and Reconstruction of Financial Assets and Enforcement of Security Interest-Act, 2002. Infrastructure Investment Trusts have gained significant momentum over the last two years. The Securities and Exchange Board of India (SEBI) came out with the initial set of guidelines for such structures in July 2014 and this has made InvITs more amenable to both lenders and investors.

- An asset reconstruction company is a special type of financial institution that buys the debtors of the bank at a mutually agreed value and attempts to recover the debts or associated securities by itself. Thus, ARCs are engaged in the business of asset reconstruction or securitization or both.
- All the rights that were held by the lender (the bank) in respect of the debt would be transferred to the ARC. The required funds to purchase such debts can be raised from Qualified Buyers.

#### 22. **Consider the following statements:**

#### Statement-I:

In the post-pandemic recent past, many Central Banks worldwide had carried out interest rate hikes.

#### Statement-II:

Central Banks generally assume that they have the ability to counteract the rising consumer prices via monetary policy means.

Which one of the following is correct in respect of the above statements?

- (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

#### Ansr:A

#### **Explanation:**

Statement 1 is correct: In the post-pandemic recent past, many Central Banks worldwide had carried out interest rate hikes. Central banks in both advanced and emerging market economies took unprecedented measures to ease financial conditions and support the economic recovery by interest rate hikes to tame inflation.

Statement 2 is correct: Central Banks generally assume that they have the ability to counteract the rising consumer prices via monetary policy means. Central banks use monetary policy to manage economic fluctuations and achieve price stability to make inflation low and stable. Central banks use tools such as interest rates to adjust the supply of money to keep the economy humming.

#### Consider the following statements regarding Expansionary and Contractionary **Monetary Policy:**

- 1. Expansionary monetary policy utilized to control inflation while Contractionary monetary policy leads to higher inflation.
- Expansionary policy lowers unemployment while Contractionary policy increases unemployment.
- 3. Expansionary monetary policy can be achieved by raising interest rates while contractionary policy can be achieved by lowering interest rates.

Which of the statements given above is/are incorrect?

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

#### Ans:B

#### **Explanation:**

Statement 1 is incorrect: Contractionary monetary policy utilized to control inflation while Expansionary monetary policy leads to higher Statement 2 is correct: Expansionary policy lowers unemployment while Contractionary policy increases unemployment.

Statement 3 is incorrect: Contractionary monetary policy can be achieved by raising interest rates while Expansionary policy can be achieved by lowering interest rates.

#### 23. Consider the following statements:

Statement 1- Carbon markets are likely to be one of the most widespread tools in the fight against climate change.

Statement 2- Carbon markets transfer resources from the private sector to the state.

Which one of the following is correct in respect of the above statements?

- (a) Both statement 1 and statement 2 are correct and statement 2 is the correct explanation for statement 1.
- (b) Both statement 1 and statement 2 are correct and statement 2 is not the correct explanation for statement 1.
- (c) Statement 1 is correct but statement 2 is incorrect.
- (d) Statement 1 is incorrect but statement 2 is correct.

#### Ans. A

#### **Explanation-**

Statement 1 is correct- In order to meet their NDCs, one mitigation strategy is becoming popular with several countries— carbon markets. Article 6 of the Paris Agreement provides for the use of international carbon markets by countries to fulfil their NDCs.

Carbon markets are essentially a tool for putting a price on carbon emissions— they establish trading systems where carbon credits or allowances can be bought and sold. A carbon credit is a kind of tradable permit that, per United Nations standards, equals one tonne of carbon dioxide removed, reduced, or sequestered from the atmosphere.

Statement 2 is correct- Carbon markets transfer resources from the private sector to the state since businesses have to pay the regulators for the right to release a tonne of carbon dioxide into the atmosphere. The revenue which government(State) generates from the sale pf carbon permits can be reinvested in renewable energy or other green projects.

Source- Carbon markets are going global (economist.com)

#### Consider the following statements:

- Carbon market is a trading platform under UNFCCC, to buy and sell carbon
- Value of one carbon credit is different for different countries.

Which of the statements given above is/are correct?

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

#### Ans: A

#### **Explanation:**

- In order to meet their NDCs, one mitigation strategy is becoming popular with
- countries, carbon markets. Article 6 of the Paris Agreement provides for the
- international carbon markets by countries to fulfil their NDCs.
- Carbon markets are essentially a tool for putting a price on carbon emission, they establish
- trading systems where carbon credits or allowances can be bought and sold.
- A carbon credit is a kind of tradable permit that, per United Nations standards, equals one
- tonne of carbon dioxide removed, reduced, or sequestered from the atmosphere. Carbon allowances or caps, meanwhile, are determined by countries or governments according to their emission reduction targets.

#### Which one of the following activities of the Reserve Bank of India is 24. considered to be part of 'sterilization'?

- (a) Conducting 'Open Market Operations'
- (b) Oversight of settlement and payment systems
- (c) Debt and cash management for the Central and State Governments

#### Consider the following statements regarding Open Market Operations of Central Bank (OMO):

- 1. It is selling and purchasing of only government securities by RBI.
- 2. Selling of government securities will reduce the liquidity in market while buying will increase the liquidity.

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(d) Regulating the functions of Non-banking Financial Institutions

**Explanation:** Conducting 'Open Market Operations' is considered to be part of Sterlization.

Sterilization is a form of monetary action in which a central bank seeks to limit the effect of inflows and outflows of capital on the money supply. Sterilization most frequently involves the purchase or sale of financial assets by a central bank and is designed to offset the effect of foreign exchange intervention.

Steps in the sterilisation process are:

- decision of the monetary authority to intervene by substituting foreign currency with domestic currency in case of excess capital inflows, and
- 2. decision to intervene further in the bond or money market to substitute domestic currency so released out of the intervention in forex market with bonds or other eligible paper. While open market operations (OMO) involving sale of securities constitute the commonly used instrument of sterilisation, there are several other instruments available to offset the impact of capital inflows on domestic money supply. However, there are occasions when it is difficult to distinguish the normal liquidity management operations of a central bank from its sterilisation operations.
  - Other Options like Oversight of settlement and payment systems, Debt and cash management for the Central and State Governments and Regulating the functions of Nonbanking Financial Institutions are not part of sterilisation process of RBI.
  - Open market operations, or OMOs, are the purchase and sale of G-Secs by the Reserve Bank of India (RBI) on the Centre's behalf to streamline money supply and interest rates. In case of excess liquidity in the market, RBI issues these securities via auction. They are one of the three major monetary tools (besides reserve ratio and policy rates) to influence money supply in the market and achieve the desired trend in interest rate. There is an inverse relationship between bond prices and interest rates. Thus, purchase of bonds via an OMO raises the price of bonds and reduce rates. Open market purchases increase money supply, thus making money less valuable resulting in reduction of rates in the money market and vice versa. Monetary tools such as reporate, reverse repo, marginal standing facility rate and bank rate are policy rates while CRR and SLR are the reserve ratios.

3. All scheduled commercial banks and financial institutions can participate in OMO.

Which of the statements given above is/are correct?

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

#### Ans: D

#### **Explanation:**

**Statement 1 is incorrect**: It is selling and purchasing of both government securities and treasury bills by RBI.

**Statement 2 is correct**: Selling of government securities will reduce the liquidity in market while buying will increase the liquidity.

Statement 3 is correct: All scheduled commercial banks and financial institutions



#### 25. Consider the following markets:

- 1. Government Bond Market
- Call Money Market
- Treasury Bill Market
- Stock Market

How many of the above are included in capital markets?

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

#### Ans: B

#### **Explanation:**

Capital Market: The term capital market refers to facilities and institutional arrangements through which long-term funds, both debt and equity are raised and invested. It consists of a series of channels through which savings of the community are made available for industrial and commercial enterprises and for the public in general.

#### Instruments of capital market

Government bond: A government bond is a type of debt-based investment, where you loan money to a government in return for an agreed rate of interest. A government bond is a debt instrument issued by the central and state government of the country to finance their needs and also to regulate the money supply.

Stock market: The stock market is a component of a free-market economy. It allows companies to raise money by offering stock shares and corporate bonds and allows investors to participate in the financial achievements of the companies, make profits through capital gains, and earn income through dividends.

Money Market: The money market is a market for short term funds which deals in monetary assets whose period of maturity is upto one year.

#### Instruments of money market:

Treasury Bill market: A Treasury bill is basically an instrument of shortterm borrowing by the Government of India maturing in less than one year. They are also known as Zero Coupon Bonds issued by the Reserve Bank of India on behalf of the Central Government to meet its short-term requirement of funds.

Call money market: Call money is short term finance repayable on demand, with a maturity period of one day to fifteen days, used for interbank transactions. Commercial banks have to maintain a minimum cash balance known as cash reserve ratio.

Source: https://ncert.nic.in/ncerts/l/lebs210.pdf



#### Which one of the following best describes the concept of 'Small Farmer 26. Large Field'?

- (a) Resettlement of a large number of people, uprooted from their countries due to war, by giving them a large cultivable land which they cultivate collectively and share the produce.
- Many marginal farmers in an area organize themselves into groups and synchronize and harmonize selected agricultural operations.
- (c) Many marginal farmers in an area together make a contract with a corporate body are surrender their land to the corporate body of a fixed term for which the 6. onDorate body makes a payment of agreed amount to the farmers.
- (d) A company extends loans, technical knowledge and material inputs to a number of small farmers in an area so that they produce the agricultural commodity required by the company for its manufacturing process and commercial production.

#### Ans: B

**Explanation:** The concept of 'Small Farmer Large Field' refers to many marginal farmers in an area organize themselves into groups and synchronize and harmonize selected agricultural operations.

As doubling farmers income has become the National agenda in India, therefore strategic engagement with small and marginal farmers has been prioritized. The basics of the model are that smallholders join and decide to grow a crop of one or two arieties, synchronize all the agricultural operations (seed to seed) as a group/community and gain higher bargaining power while dealing with service providers, dealers, and paddy traders/millers. The overall findings from the project are-

#### Consider the following money market instruments:

Money market **Explanation** Certificate of Deposit issued only by Reserve Bank of India

generated by a

company to raise short

only issued by the

term funds

Treasury Bills central government

issued only by

Repurchase Agreements Reserve Bank of India

How many pairs given above are correctly matched?

(a) Only one pair

**Commercial Paper** 

- (b) Only two pairs
- (c) Only three pairs
- (d) All four pairs

#### Ans: C **Explanation:**

#### Given below is correctly matched pair:

Money market **Explanation** Certificate of Deposit issued by scheduled commercial bank, regional

rural banksand small finance

Commercial Paper generated by a

company to raise short term

funds

banks

only issued by the Treasury Bills

> central government issued only by Reserve Bank of India

#### Additional information:

Repurchase Agreements

Certificate of Deposit: Lending substantial financial resources to an organization can be done against a certificate of deposit. The operating procedure is similar to that of a fixed deposit, except the higher negotiating capacity, as well as lower liquidity of the former.

Commercial Paper: This type of money market instrument serves as a promissory note generated by a company to raise short term funds. It is unsecured, and thereby can only be used by large-cap companies with renowned market reputation. The maturity period of these debt instruments lies anywhere between 7 days to one year, and thus, attracts a lower interest rate than equivalent securities sold in the capital market.

Treasury Bills: These are only issued by the central government of a country when it requires funds to meet its short-term obligations. These securities do not generate interest but allow an investor to make capital gains as it is sold at a discounted rate while the entire face value is paid at the time of maturity.

Treasury bills are an optimal investment tool for novice investors looking for options having minimal risk associated with it. Since treasury bills are backed by the government, the default risk is negligible, thus serving as an optimal investment tool for risk-averse investors.

Repurchase Agreements: Commonly known as Repo, is a short term borrowing tool where the issuer availing the funds guarantees to repay (repurchase) it in the future. Repurchase agreements generally involve the trading of government securities. They are subject to market interest rates and are backed by the government.

Source: https://ncert.nic.in/ncerts/l/lebs210.pdf

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reduced cost of production of paddy, increased grain yield, comparatively higher price over prevailed market price, enhanced farmers gross income and net profit.

#### Source:

https://epubs.icar.org.in/index.php/IndFarm/article/view/120639

#### Consider the following statements: 27.

- 1. The Government of India provides Minimum Support Price for niger (Guizotia abyssinica) seeds.
- 2. Niger is cultivated as a Kharif crop.
- 3. Some tribal people in India use niger seed oil for cooking. How many of the above statements are correct?
- (a) Only one
- (b) Only two
- (c) All three
- (d) None

#### Ans: C

#### **Explanation:**

Statement 1 is correct: The Government of India provides Minimum Support Price for niger (Guizotia abyssinica) seeds.

Minimum Support Price (MSP) is the assured price at which foodgrains are procured from farmers by the central and state governments and their agencies, for the central pool of foodgrains. The central pool is used for providing foodgrains under the Public Distribution System (PDS) and other welfare schemes, and also kept as reserve in the form of buffer stock. The central government notifies MSP for 22 crops every year before the Kharif and Rabi seasons based on the recommendations of the Commission for Agricultural Costs and Prices, an attached office of the Ministry of Agriculture and Farmers' Welfare. These crops include foodgrains such as Paddy, Bajra, Jowar, Maize, Arhar, Ragi, Moong, Groundnut-in-shell, Urad, Soyabean, Nigerseed, Sunflower, Sesamum, Cotton, Barley, Wheat, Gram, Rapeseed/Mustardseed, Masur (lentil), Jute, Copra and Safflower.

**Statement 2 is correct:** Niger is cultivated as a Kharif crop.

Statement 3 is correct: Some tribal people in India use niger seed oil for

According to All India Coordinated Research Project, 2013, the primary reason such a sparsely grown crop is part of the exclusive MSP list is because niger seed has traditionally "been the lifeline of tribal agriculture and economy in several states across India. The tribal population uses niger seed oil for cooking, the press cake posts oil-extraction as livestock feed, and also consume the seeds as a condiment. Niger seed oil has medicinal properties, which is the reason for its commercial demand by

the cosmetics, perfumeries and other allied industries.

- 28. Consider the investments in the following assets: 1. Brand recognition
  - 2. Inventory
  - 3. Intellectual property
  - Mailing list of clients

How many of the above intangible investments?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

#### Answer: C

A tangible asset is an asset that has physical substance. Examples include inventory, a building, rolling stock, manufacturing equipment or machinery, and office furniture.

Intangible assets are enterprises that frequently expend resources, or incur liabilities, on the acquisition, development, maintenance or enhancement of intangible resources such as scientific or technical knowledge, design and implementation of new processes or systems, licences, intellectual property, market knowledge and trademarks (including brand names and publishing titles). Common examples of items encompassed by these broad headings are computer software, patents, copyrights, motion picture films, customer lists, mortgage servicing rights, fishing licences, import quotas, franchises, customer or supplier relationships, customer loyalty, market share and marketing rights. Goodwill is another example of an item of intangible nature which either arises on acquisition or is internally generated.

Source: <a href="https://www.mca.gov.in/Ministry/notification/pdf/AS">https://www.mca.gov.in/Ministry/notification/pdf/AS</a> 26.pdf

Consider the following statements regarding Procurement Price and Minimum **Support Price(MSP):** 

- Procurement Price is declared before sowing while MSP is declared after harvesting.
- Procurement Price is lower than open market price but higher than Minimum support Price.

Which of the statements given above is/are correct?

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

#### Answer: B

#### **Explanation:**

Statement 1 is incorrect: MSP is declared before sowing while Procurement Price is declared after harvesting.

Statement 2 is correct: Procurement Price is lower than open market price but higher than Minimum support Price and procurement price is the price at which the actual procuration of crops takes place.

Additional information: Procurement Price for each agricultural marketing season, the government announces a set of prices at which it guarantees to procure wheat and rice if market prices fall below the announced price. the commission for agricultural costs and prices (cacp) makes price recommendations to the government on the basis of long-run average costs of production of various crops, in a manner that covers costs of most farmers and rewards efficient farmers. these prices were meant to prevent distress sales in years of glut, and keep prices for consumers at an affordable level. over time, support prices have become a guaranteed.



The 15th Finance Commission adopted new parameters for addressing the horizontal disparity between the states in the wake of adoption of population census 2011 in place of 1971. In this respect, which one of the following is part of

#### the new parameters? (a) Income Distance

- (b) Area
- (c) Demographic performance
- (d) Tax Effort

Ans: C

#### Consider the following: 29.

- 1. Demographic performance
- 2. Forest and ecology
- 3. Governance reforms
- 4. Stable government 5. Tax and fiscal efforts

For the horizontal tax devolution, the Fifteenth Finance Commission used how many of the above as criteria other than population area and

- income distance? (a) Only two
- (b) Only three
- (c) Only four

(d) All five

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#### Ans: B

#### **Explanation:**

Governance reforms and the Stable government are not the criteria mentioned by the Fifteenth Finance Commission for the horizontal tax devolution; hence Option 3 and 4 are eliminated.

Other three Options viz Demographic performance, Forest and ecology & Tax and fiscal efforts are the correct options. **Hence Option B is correct.** 

#### Explanation: Demographic performance is the new parameter along with

Parameter	14" FC	15" FC
Population (1971)	17.5%	0
Population (2011)	10%	15%
Area	15%	15%
Forest and Ecology	7.5%	10%
Income Distance	50%	45%
Tax and fiscal efforts	0	2.5%
Demographic performance	0	12.5%
ource: Reports of the 14th and 15th Finance Comm	nissions	

#### 30. Consider the following infrastructure sectors:

- 1. Affordable housing
- 2. Mass rapid transport
- 3. Health care
- 4. Renewable energy

On how many of the above does UNOPS Sustainable Investments in Infrastructure and Innovation (S3i) initiative focus for its investments?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

#### Ans: C

#### **EXPLANATION:**

- The United Nations Office for Project Services (UNOPS) is a United Nations agency dedicated to implementing infrastructure and procurement projects for the United Nations System, international financial institutions, governments and other partners around the world. The organization's global headquarters is located at the UN City campus in Copenhagen, Denmark.
- The S3i "Sustainable Investments in Infrastructure and Innovation" initiative was established to leverage UNOPS' mandate and core strengths in infrastructure, procurement and project management to channel public and private financing into large-scale infrastructure projects in regions that have struggled to attract capital.
- UNOPS' S3i is prioritizing Affordable housing, Health care, and Renewable energy. Mass Rapid transport was not their investment focus. Hence, option C is the correct answer.

#### Natural justice is mainly premised on which one of the following principles?

- (a) The principle of natural Justice
- (b) The procedure established by law.

In essence, what does 'Due Process of Law' means?

- (c) Fair application of law
- (d) Equality before law

#### Ans: C

**Explanation:** 

31.

32.

The Doctrine of Due Process of law prohibits the state from taking actions that shall deprive an individual from their rights to safety, liberty or life. It also advocates for the fair application of the Law.

The Procedure established by law is just the part of the broader picture of fair application of law.

In the Indian Constitution, there is not a single mention in any of the clauses of the phrase "due process of law." It has thus broken out of the golden triangle formed by Articles 14, 19, and 21.

The Maneka Gandhi v. Union of India (1978) case serves as the precedent for what is known as "due process of law." The Supreme Court ruled that no law created to deny someone their life and personal freedom in accordance with Article 21 should be arbitrary, unfair, or unreasonable.

#### Hence Option C is correct.

Consider the following statements:

**Statement-I:** In India, prisons are managed by State Governments with their own rules and regulations for the day-to-day administration of prisons.

**Statement-II:** In India, prisons are governed by the Prisons Act, 1894 which expressly kept the subject of prisons in the control of Provincial Governments.

## Which one of the following is correct in respect of the above statements?

- (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.

#### Ans: A

#### **Explanation:**

**Prisons Act, 1894** makes it expressly clear that States would have general and specific control over prisons in India. It is also important to note that the Subject of Prisons is mentioned as Entry 4 in List II in Seventh Schedule.

Prison Act of 1894 defines a 'prison' as any jail or place used permanently or temporarily under the general or special orders of a State Government for the detention of prisoners. Also, as per the provisions of the Constitution, 'prisons' and 'persons detained therein' fall under the

- (a) Equality
- (b) Conflict of interest
- (c) Fairness
- (d) Merit

#### Ans: C

#### **Explanation:**

The natural justice is premised on the fairness principle or justice as fairness. Natural justice on the other hand is an expression of English common law and involves a procedural requirement of fairness. The principles of natural justice have great significance in the study of administrative law. It is also known as **substantial justice or fundamental justice or Universal justice or fair play in action.** 

#### This principle is based on the following rules:

- Fairness in decision
- No one should be a judge in his/her own case.

Everyone should he heard adequately

#### Which one of the following is correct related to granting of *furlough*?

- (a) It is a legal right of a prisoner to be released on furlough.
- (b) The court may not deny granting furlough to a prisoner.
- (c) It is a mandatory remedy under the Prisons Act 1894.
- (d) It is granted to break the monotony of imprisonment and to enable the convict to maintain continuity with family life.

#### Ans: D

#### Explanation:

## **Option D is correct and all other the first three options are incorrect**. The following are the details of the furlough:

The  ${\bf Prisons}~{\bf Act}~{\bf of}~{\bf 1894}~{\bf deals}$  with furlough given to a prisoner.

- The Supreme Court in 2021 stated that the law doesn't confer a legal right on a prisoner to be released on furlough.
- The grant of furlough is regulated by Rule 3 and Rule 4. While Rule 3 provides the eligibility criteria for grant of furlough for prisoners serving different lengths of imprisonment, Rule 4 imposes limitations.
- The use of the expression "may be released" in Rule 3 indicates the absence of an absolute right. This is further emphasised in Rule 17 which states that said Rules do not confer a legal right on a prisoner to claim release on furlough.

Thus, the grant of release on furlough is a discretionary remedy circumscribed.

State List. This means that the responsibility of prison management and administration solely vests with the state government, which alone is competent to make appropriate legislative provisions in this regard.

#### 33. Which one of the following statements best reflects the Chief purpose of the 'Constitution' of a country?

- It determines the objective for the making of necessary laws.
- It enables the creation of political offices and a government. (b)
- (c) It defines and limits the powers of government.
- It secures social justice, social equality and social security. (d)

#### Ans: C

#### **Explanation:**

Constitution sets the generic and broad objectives for making a law. A chief aim of the Constitution is to create a government with enough power to act on enshrined principles, and also to limit those powers so as to protect the society from the arbitrariness of the government.

The content and nature of a particular Constitution, as well as how it relates to the rest of the legal and political order, varies considerably between countries, and there is no universal and uncontested definition of a constitution. Nevertheless, any broadly accepted working definition of a constitution would likely describe it as a set of fundamental legalpolitical rules that defines and limits the powers of government.

#### 34. In India, which one of the following Constitutional Amendments was widely believed to be enacted to overcome the judicial interpretations of the Fundamental Rights?

- (a) 1st Amendment
- (b) 42nd Amendment
- (c) 44th Amendment
- (d) 86th Amendment

#### Ans. B

#### **Explanation:**

- The Constitution of India came into force on January 26, 1950. The enactment of the Constitution was an ambitious political experiment with universal adult franchise, federalism in a diverse multi-ethnic region and social revolution in a deeply unequal society. It was equally a unique achievement in terms of constitutional design.
- In its early years, the Supreme Court adopted a textualist approach, focusing on the plain meaning of the words used in the Constitution. A.K. Gopalan v. State of Madras (1950) was one of the early decisions in which the Court was called upon to interpret the fundamental rights under Part III. The Supreme Court decided that each of those articles covered an entirely different subject matter and were to be read as separate codes rather than being read together. Amongst the most controversial questions in Indian constitutional law has been whether there are any limitations on Parliament's power to amend the Constitution, especially fundamental rights. In its early years, the Court read the Constitution literally, concluding that there were no such limitations.
- However, in the second phase, the Supreme Court began exploring other methods of interpretation. Appeals to the text of the Constitution were gradually overtaken by appeals to the Constitution's overall structure and coherence. In the leading case of Kesavananda Bharati v. State of Kerala (1973), the Court concluded that Parliament's power to amend the Constitution did not extend to altering its "basic structure" — an open-ended catalogue of features that lies within the exclusive control of the Court. When Parliament attempted to overturn this decision by amending the Constitution yet again, the Court, relying on structuralist justifications, decisively rejected that attempt.
- Hence it is clear that 42nd Amendment was widely believed to be enacted to overcome the judicial interpretations of the **Fundamental Rights.**

#### Which of the following is the most appropriate explanation of the term "constitutional government"?

- (a) Government formed by majority in the legislature.
- (b) Existence of parliamentary sovereignty.
- Governmental powers drawn from a written Constitution.
- Proscription of powers of the government.

#### Ans: D

#### **Explanation:**

A constitutional government is a government whose powers are limited by the constitution whether written or unwritten. Hence the constitution prohibits or proscribes some actions and decisions which the government cannot take. Thus, a constitutional government means a government which does not have unlimited power. In other words, a limited government is a constitutional government, and a constitutional government is a limited government.



#### 35. Consider the following organization/bodies in India:

- The National Commission for Backward Classes
- The National Human Rights Commission
- The National Law Commission
- The National Consumer Disputes Redressal Commission.

#### How many of the above are constitutional bodies?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

#### Ans. A

#### **Explanation:**

The National Commission for Backward Classes-Constitutional Body

The National Human Rights Commission-Statutory Body The National Law Commission-Created by an Executive Order

The National Consumer Disputes Redressal Commission-Statutory

#### Which of the following are statutory bodies?

- Competition Commission of India.
- 2. University Grant Commission.
- Law Commission of India. 3.
- 4. National Commission for Minority Educational Institutions.

#### Select the correct answer using the code given below:

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

#### Ans. C

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#### **Explanation:**

Statement 1 is correct: The Competition Commission of India (CCI) is the chief national competition regulator in India. It is a statutory body within the Ministry of Corporate Affairs and is responsible for enforcing the Competition Act, 2002, in order to promote competition and prevent activities that have an appreciable adverse effect on competition in India.

Statement 2 is correct: The University Grants Commission of India (UGC India) is a statutory body set up by the Department of Higher Education, Ministry of Education, Government of India in accordance with the UGC Act 1956 and is charged with coordination, determination and maintenance of standards of higher education. It provides recognition to universities in India and disbursements of funds to such recognized universities and colleges.

Statement 3 is incorrect: Law Commission of India is neither a constitutional body nor a statutory body, it is an executive body established by an order of the Government of India. Its major function is to work for legal reforms. Statement 4 is correct: National Commission for Minority Educational Institutions (NCMEI) was established to protect and safeguard the educational institutions which are established by the minorities in India. It is a statutory body established by National Commission for Minority Educational Institutions Act (NCMEI) 36. **Consider the following statements:** Consider the following statements with reference to the election of the President 1. If the election of the President of India is declared void by the of India: Supreme Court of India, all acts done by him/her in the performance 1. All doubts and disputes in connection with the election of the President are of duties of his/her office of President before the date of decision inquired into and decided by the Supreme Court. become invalid. 2. Election for the post of the President of India can be postponed on 2. If the election of a person as President is declared void by the Supreme Court, the ground that some legislative Assemblies have been dissolved and acts done by him before the date of such declaration of the Supreme Court elections are yet to take place. are invalidated. When a Bill is presented to the President of India, the Constitution Which of the statements given above is/are correct? prescribes time limits within which he/she has to declare his/her assent. (a) 1 only How many of the above statements are correct? (b) 2 only (a) Only one (c) Both 1 and 2 Only two (b) (d) Neither 1 nor 2 (c) All three (d) None Ans. D **Explanation:** Statement 1 is incorrect: If the election of the President of India is declared void by the Supreme Court of India all acts done by him/her in the performance of duties of his/her office of President during the tenure in the Office do not become invalid. Statement 2 is incorrect: Election for the post of the President of India is scheduled in such a way that all the legislative Assemblies are in functioning and none of them is dissolved. Statement 3 is incorrect: The Constitution does not prescribe any time limit within which the President has to take a decision with respect to a bill presented to him for his assent. 37. With reference to Finance Bill and Money Bill in the Indian Parliament, Consider the following: consider the following statements: 1. A private member cannot introduce a Money Bill in the Lok Sabha. 1. When the Lok Sabha transmits Finance Bill to the Rajya Sabha, it can 2. The Rajya Sabha cannot propose amendments to a Money Bill. 3. The Annual Financial Statement is deemed to be a Money Bill. amend or reject the Bill. When the Lok Sabha transmits Money Bill to the Rajya Sabha, it Which of the above given statements are incorrect? cannot amend or reject the Bill, it can only make recommendations. (a) 1 and 2 only 3. In the case of disagreement between the Lok Sabha and the Rajya (b) 2 and 3 only Sabha, there is not joint sitting for Money Bill, but a joint sitting (c) 1 and 3 only becomes necessary for Finance Bill. (d) 1, 2 and 3 How many of the above statements are correct? Ans. D Only one **Explanation:** (a) Only two Statement 1 is incorrect: A private member can introduce a Money Bill in the Lok (b) All three (c) Statement 2 is incorrect: The Rajya Sabha can discuss as well as suggest (d) None Ans. C amendments to a Money Bill Explanation: Statement 3 is incorrect: The Annual Financial Statement is not deemed to be a Money Statement 1 is correct: If Finance Bill is certified as a a Money Bill by the Speaker of the Lok Sabha, then we know that a Money Bill cannot be s of its establishment amended or rejected in the Rajya Sabha, though it can make recommendations for amendments in the Money Bill which are not binding on the Lok Sabha. If it is not certified as a Money Bill then it can be amended or rejected by the Rajya Sabha. Statement 2 is correct: When the Lok Sabha transmits Money Bill to the Rajya Sabha, it cannot amend or reject the Bill, it can only make recommendations. Statement 3 is correct: There is also no provision of convening a joint sitting for Money Bill but in case of disagreement between the Lok Sabha and the Rajya Sabha over a Finance Bill which is not certified by the Speaker of the Lok Sabha as a Money Bill then there can be joint sitting. 38. **Consider the following statements:** Once the Central government notifies an area as a 'Community reserve' 1. The Chief Wildlife Warden of the State becomes the governing authority of such forest. Hunting is not allowed in such areas. 3. People of such areas are allowed to collect non-timber forest produce. 4. People of such are allowed traditional agricultural practices. How many of the above statements are correct? (a) Only one (b) Only two (c) Only three (d) All four Ans. D **Explanation-**Statement 1 is not correct- The Honorary Wildlife Warden of the State who is elected by the Community Reserve Management Committee (constituted by the State government) becomes the governing authority of such forest.

Statements 2 and 4 are correct. After a forest has been made into a community reserve, people cannot hunt there, nor can they use it for agricultural practices, leave alone jhum cultivation. Community reserves: Are they forest department's backdoor entry into North East India (downtoearth.org.in)

**Statement 3 is correct**- Collection of non-timber forest produce by people is allowed in community reserve.

The provisions of the WLPA apply to an area once it has been declared a community reserve.

### 39. With reference to 'Scheduled Areas' in India, consider the following statements:

- 1. Within a State, the notification of an area as Scheduled Area takes place through an Order of the President.
- 2. The largest administrative unit forming the Scheduled Area is the District and the lowest is the cluster of villages in the Block.
- 3. The Chief Ministers of the concerned States are required to submit annual reports to the Union Home Ministry on the administration of Scheduled Areas in the States.

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

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

#### Ans. A

#### **Explanation:**

**Statement 1 is correct:** The specification of "Scheduled Areas" in relation to a State is by a notified order of the President, after consultation with the State Government concerned. The same applies in the case of any alteration, increase, decrease, incorporation of new areas, or rescinding any Orders relating to "Scheduled Areas".

**Statement 2 is not correct:** It is not necessary that the largest administrative unit forming the Scheduled Area is the District and the lowest is the cluster of villages in the Block.

**Statement 3 is not correct:** In case of the Scheduled Areas the Governor of the concerned States are required to submit annual reports to the President on the administration of Scheduled Areas in the States.

#### 40. Consider the following statements:

Statement-I: The Supreme Court of India has held in some judgments that the reservation policies made under Article 16(4) of the Constitution of India would be limited by Article 335 for maintenance of efficiency of administration.

**Statement-II:** Article 335 of the Constitution of India defines the term 'efficiency of administration'.

## Which one of the following is correct in respect of the above statements?

- (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

#### Ans. C

#### Explanation:

Statement 1 is correct: The Court has held in several judgments (Indra Sawhney and Others v Union of India and Others 1993; M Nagaraj and Others v Union of India and Others 2006) that the reservation policies made under Article 16(4)1 of the Constitution would be limited by Article 335,2 which provides for "maintenance of efficiency of administration," while considering the claims of the Scheduled Castes (SCs) and the Scheduled Tribes (STs) in the making of appointments to public services and posts. This was done while the Constitution does not define the term "efficiency of administration." This gap in interpretation was filled by a two-judge bench in the B K Pavitra (II) v Union of India (2019), as it held that "efficiency of adminis-tration in the affairs of the union or of a state must be defined in an inclusive sense, where diverse segments of society find representation as a true aspiration of governance by and for the

**Statement 2 is incorrect:** Article 335 of the Constitution of India merely mentions of the term 'efficiency of administration' but does not define it.

## 41. In which one of the following regions was Dhanyakataka, which flourished as a prominent Buddhist centre under the Mahasanghikas, located?

- (a) Andhra
- (b) Gandhara
- (c) Kalinga
- (d) Magadha

Ans. A

#### Which of the following statements is not correct regarding the Scheduled Areas?

- (a) The Governor of the State is empowered to declare an area as a Scheduled Area.
- (b) Centre can give directions to the states regarding the administration of the Scheduled Areas.
- (c) Every state having a Scheduled Area is required to establish a tribal advisory council.
- (d) Governor of a state is empowered to direct any act of the Parliament not to be applied to such Scheduled Areas in that particular state.

#### Δns. Δ

#### **Explanation:**

**Option A is incorrect:** The normal administrative machinery of a state is not extended to the Scheduled Areas and the central government has special responsibility for such areas. The President is empowered to declare any area to be a scheduled area. He can also increase or decrease the areas, alter the boundaries or make fresh orders for such redesignation on an area in consultation with the Governor of the state concerned.

**Option B is correct:** Centre can give directions to the states regarding the administration of the Scheduled Areas. Also the governor is required to submit a report to the President regarding the administration of such areas.

**Option C is Correct:** Every state having a Scheduled Area is required to establish a tribal advisory council to advise on the welfare and advancement of the scheduled tribes. It consists of 20 members, three fourths of whom are to be the representatives of the scheduled tribes in the state legislative assembly.

**Option D** is correct: The Governor of the state is empowered to direct that any particular act of the Parliament or the state legislature does not apply to the scheduled areas or apply with specific modifications or exceptions. The Governor can also make regulations for the peace and good government of a scheduled area after consulting the tribal advisory council.

# ment-II is ment-II is of its establishment.

The central concern of Q 41 is location of 'Dhanyakataka', also referred to as Dharanikota in Buddhist sources.

**86 of Takkar Yearlong Integrated Test Series, Test-1 of History section** helps you to get correct answer of this question. The question is given below:

#### Q86. Consider the following pairs:

Stupa- MonasteriesLocations1. MrigadavaTaxila2. DharmarajikaKashi3. SanchiVidisha4. AmaravatiDharanikotaHow many pairs given above are correctly matched?

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#### Only one pair Only two pairs (b) Only three pairs (c) (d) All four pairs Ans. B **Explanation:** Mrigadava- Kashi Dharmarajika stupa- Taxila Sanchi- Vidisha Amaravati- Dharanikota (the Satavahana capital) Nagarjunakonda- Vijayapuri (the Ikshvaku capital) Hence, option B is correct. So, after reading the question, you will find that Dharanikota was an important Buddhist site and the capital of Satavahana which is located in Andhra region. The Faculty while taking the discussion of the test series has also told about the term 'kataka', which is suffix in the word Dhanyakataka. It refers to military camps, set up in the Satavahana Empire, and by using this logic, you can arrive at. 42. With reference to ancient India, consider the following statements: Q32 of All India Open Mock Test Series of Takkar, Test-2, has a question related Stupa 1. The concept of Stupa is Buddhist in origin. architecture, and if one carefully reads the explanation of the answer, one can easily 2. Stupa was generally a repository of relics. solve the question. 3. Stupa was a votive and commemorative structure in Buddhist Which of the following represent the features of Stupa architecture during its initial stage? How many of the statements given above are correct? Chhatri (a) Only one 2. Medhi Harmika (b) Only two 3. All three (c) 4. Torana (d) None Select the correct answer using the code given below: Ans. B 1 and 3 only Statements 2 and 3 are correct and 1 is incorrect. 2 and 4 only (b) 1 and 2 only (c) (d) 2 and 3 only Ans. A **Explanation:** The word stupa is derived from the root stu which means to worship and praise. In Buddhism, it denotes a mound where the relics of the Buddha, his disciples and famous monks are encased. Initially, their building plan was very simple. It consisted of a hemispherical mound made of bricks enshrining the relics. Its top had a chhatri within a small railing known as harmika. The stupa was surrounded by a railing known as vedica. The space enclosed by it was meant for circumambulation. During the post-Mauryan period several Sculpture and Architecture stupas were also enlarged and modified under the patronage of different royal dynasties, traders and artisans. The hemispherical dome was enlarged. On this dome an additional terrace medhi was built for an additional circumambulation round. It was provided with a lintel gateway (torana/toranadvara) that was beautifully decorated with reliefs of Buddhist motifs and iconography placed at cardinal positions of the vedica. The bestpreserved examples are located at Bharhut, Bodhgaya, Sanchi and Amravati. TAKKAR PT 100 TOPICS ... Celebrating 12 year △ Subscribed ∨ 43. With reference to ancient South India, Korkai, Poompuhar and Muchiri Q10, Takkar Test Series, Phase-2, history test-2, provides the readymade answer to this question. You do not even need to read the entire question. Have a look! were well known as: (a) capital cities Arrange the following ports of early historical South India from north to south: (b) ports 1. Nirppeyaru (c) centres of iron-and-steel making 2. Puhar 3. Korkai (d) Shrines of Jain Tirthankaras Ans. B 4. Muchiri The correct order is: (a) 2-4-1-3 (b) 3-1-4-2 (c) 1-3-2-4 (d) 1-2-4-3 Ans. D The first line of the question itself, gives the answer to the question.

## 44. Which one of the following explains the practice of 'Vattakirutal' as mentioned in Sangam poems?

- (a) Kings employing women bodyguards
- (b) Learned persons assembling in royal courts to  $\cdot$  discuss religious and philosophical matters
- (c) Young girls keeping watch over agricultural fields and driving away birds and animals.
- (d) A king defeated in a battle committing ritual suicide by starving himself to death.

#### Ans. D

Now, after reading the question of UPSC, and then seeing our question, Q84 of Takkar Test Series Phase 1 of History Test-1, you will say and think (Ye kya Ho gaya! (How is it possible!). Take a look.

#### Q84. The term vattakirutal refer to:

- (a) Worship of memorial
- (b) Funerary practices
- (c) Suicide by starving oneself to death.
- (d) Agricultural activities

#### Ans. C

#### **Explanation:**

Sangam poems are pervaded with a warrior ethic. The goal of the hero of the puram poems was pukal (glory, fame) and a heroic death was greatly valued. It was believed that the spirit of a warrior who died in battle dwelt in paradise. A poem in the Purananuru suggests that the bodies of warriors who did not die in battle were cut with swords before the funerary rites, to simulate death in battle. The practice of vattakirutal was one in which a defeated king committed ritual suicide by starving himself to death, accompanied by those who had been close to him during his lifetime. The worship of memorial stones (natukal) was a corollary of the importance of the heroic ideal. Memorial stones were erected in honour of heroes who died fighting valiantly in battle; the spirit of the fallen hero was believed to reside in these stones.

There is no need for any explanation further. Read and understand.

#### 45. Consider the following dynasties:

- 1. Hoysala
- 2. Gahadavala
- 3. Kakatiya
- 4. Yadava

How many of the above dynasties established their kingdoms in early eighth century AD?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) None

#### Ans. D

## Although not a direct match, but if you the read the question given below, which was Q16 of Takkar History Phase-2, Test-4, you can find the answer of UPSC question by reading the explanation. Let's have a look.

Rulers

C. Bhillama V

#### Match the following:

#### Principalities/Kingdoms

## Yadavas Kakatiyas B. Ballala II

- Pandyas
   Hoysalas
- D. Maravaraman Sundara

#### The correct match is:

(a)	1-D	2-A	3-C	4-B
(b)	1-C	2-A	3-D	4-B
(c)	1-A	2-B	3-D	4-C
(d)	1-A	2-C	3-B	4-D

#### Ans. B

#### **Explanation:**

- Bhillama V (1175-1191), the feudatory of the Chalukya ruler, Somesvara IV (1181- 1189), acquired independent status in CE 1187 and laid the foundation of the Yadava rule.
- The Kakatiyas were the feudatories of the Chalukyas of Kalyani. Kakati Rudradeva (Prataprudra I), the founder of the Kakatiya state, succeeded in overpowering the Chalukya ruler, Tailapa III, during the second half of the 12th century (c. 1162). Ganapati (1199-1262), Rudrambe (1262-95) and Prataprudra II (1295- 1326) were other important rulers of the dynasty.
- The Hoysalas ruled over parts of the present Karnataka and most of the Tamil region. The first independent ruler of the kingdom was Ballala II (1173-1220).
- The Pandya kingdom included parts of modern Tamil Nadu and almost the whole of the present Kerala. The first independent king was Maravaraman Sundara Pandya (1216-1238).

The question was framed in such manner to ask the founder of the kingdoms. Three of the kingdoms asked in UPSC question matches with the question of Lukmaan IAS. When you read the explanation you will find, the year of the foundation of the empire was mentioned, which helps the student to arrive at the correct answer.

# DOMANA ...Celebrating 12 years

#### 46. With reference to ancient Indian History, consider the following pairs:

#### Literary work Author

Devichandragupta : Bilhana
 Hammira-Mahakauya : Nayachandra Suri
 Milinda-panha : Nagarjuna
 Nitiuakyamrita : Somadeva Suri

- How many of the above pairs are correctly matched? (a) Only one
- (b) Only two(c) Only three
- (d) All four
- Ans. B

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A very easy question. Devichandragupta was authored by Vishakdatta and Milindapanha by Nagasena. So, options 1 and 3 are incorrectly matched. While other two options are correctly matched. Hence, correct answer is option b.

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(d) All four

#### Ans B

**Statement 1 is incorrect:** It is a safe motherhood intervention of National Health Mission.

**Statement 2 is correct:** Its objective is reduce maternal and neonatal mortality among poor pregnant women.

**Statement 3 is correct:** It aims to promote institutional delivery among poor pregnant women.

**Statement 4 is incorrect**: Building on the progress of this safe motherhood scheme, another major initiative Janani Shishu Suraksha Karyakaram (JSSK) was launched in June 2011 to eliminate out-of-pocket expenses for both pregnant women and sick infants upto one year of age. **Source**:

https://nhm.gov.in/index1.php?lang=1&level=3&lid=309&sublinkid=841 https://nhm.gov.in/index1.php?lang=1&level=3&sublinkid=842&lid=308

- 52. Consider the following statements in the context of intervention being undertaken under Anaemia Mukt Bharat Strategy:
  - 1. It provides prophylactic calcium supplementation for pre-school children, adolescents and pregnant women.
  - 2. It runs a campaign for delayed cord clamping at the time of childbirth.
  - 3. It provides for periodic deworming to children and adolescents.
  - 4. It addresses non-nutritional causes of anemia in endemic pockets with special focus on malaria, hemoglobinopathies and fluorosis.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

#### Ans. C

#### **Explanation:**

Statement 1 is incorrect: It provides prophylactic iron supplementation for pre-school children, adolescents and pregnant women. Statement 2 is correct: It runs a campaign for delayed cord clamping at the time of childbirth.

**Statement 3 is correct**: It provides for periodic deworming to children and adolescents.

**Statement 4 is correct**: It addresses non-nutritional causes of anemia in endemic pockets with special focus on malaria, hemoglobinopathies and fluorosis.

Source: https://anemiamuktbharat.info/interventions/

#### 53. Consider the following statements:

- 1. Carbon fibres are used in the manufacture of components used in automobiles and aircrafts.
- 2. Carbon fibres once used cannot be recycled.

Which of the statements given above is/are correct?

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

#### Ans. A

#### EXPLANATION:

Carbon Fibre is a polymer and is sometimes known as graphite fibre. It is a very strong material that is also very lightweight. Carbon fibre is five-times stronger than steel and twice as stiff. Though carbon fibre is stronger and stiffer than steel, it is lighter than steel; making it the ideal manufacturing material for many parts. This reinforced composite materials are used to make aircrafts, spacecraft part, racing car bodies etc. Hence the statement 1 is correct.

It can be recycled, Though the carbon fibre recycling initiative is still in its early stages to introduce and develop recycled material for new industrial products. Recycling carbon fibre is seen as a potential resolution to minimise the gaps formed between carbon fibre supply and demand, but it does have a few challenges. One of the challenges is that carbon fibre cannot simply be melted and reshaped using moulds, much like aluminium. Hence, the aim of this review paper is to explore possible ways of recycling carbon fibre, provide methods of reinforcement, as it is commonly known that the recycled material will tend to have worse properties overall, and finally to discuss expected degradation studies on this material so that its safety can be ensured before being used in specific industrial applications. Therefore, the statement 2 is incorrect.

years of its establishment

#### 54. Consider the following actions:

- 1. Detection of car crash/collision which results in the deployment of airbags almost instantaneously.
- 2. Detection of accidental free fall of a laptop towards the ground which results in the immediate turning off of the hard drive
- 3. Detection of the tilt of the smartphone which results in the rotation of display between portrait and landscape mode.

In how many of the above actions is the function of accelerometer required?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) None

#### Ans. C

#### Explanation:

An accelerometer is a device that measures the vibration, or acceleration of motion of a structure. The force caused by vibration or a change in motion (acceleration) causes the mass to "squeeze" the piezoelectric material which produces an electrical charge that is proportional to the force exerted upon it. Since the charge is proportional to the force, and the mass is a constant, then the charge is also proportional to the acceleration. These sensors are used in a variety of ways from space stations to handheld devices, and there's a good chance you already own a device with an accelerometer in it.

- For example, almost all smartphones today house an accelerometer. They help the phone know whether it undergoes acceleration in any direction, and it's the reason why your phone's display switches on when you flip it.
- A car crash is an excellent example of dynamic acceleration. Here, the acceleration change is sudden when compared to its previous state. The theory behind accelerometers is that they can detect acceleration and convert it into measurable quantities like electrical signals.
- Accelerometers in laptops protect hard drives from damage. If the laptop were to suddenly drop while in use, the accelerometer would detect the sudden free fall and immediately turn off the hard drive to avoid hitting the reading heads into the hard drive platter.

Therefore, option C is the answer.

## 55. With reference to the role of biofilters in Recirculating Aquaculture System consider the following statements.

- 1. Biofilters provide waste treatment by removing uneaten fish feed.
- 2. Biofilters convert ammonia present in fish waste to nitrate.
- 3. Biofilters increase phosphorus as nutrient for fish in water.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

#### Ans. B

#### **Explanation:**

- Biofiltration is an air pollution control technology which utilizes microorganisms to biologically degrade odours and other volatile air pollutants contained in waste air streams. The microorganisms exist on the surface and in a thin water film surrounding the surface of the biofilter material. During the biofiltration process the contaminated air is slowly pumped through the biofilter material.
- Used water from fish tanks contains uneaten food material, fish faecal matter, algae and other microorganisms. This in turn increases demand of fresh water for fish tanks, thereby increasing energy bills for pumping fresh water. If used water is treated and reused, it will save wastage of water. Wastewater treatment should remove all impurities which will help in healthy growth of fish. In the recirculating aquaculture system (RAS) used water from fish tanks is treated and sent back for its reuse. Thus, RAS helps in reducing water requirements and space for producing marine foods. Hence, the statement 1 is correct.
- Biofilters are a key component in the filtration portion of a recirculating aquaculture system (RAS). They house the nitrifying bacteria and are the primary site where biological nitrification occurs. The biofilters convert ammonia present in fish waste to nitrate. Hence, the statement 2 is correct.

Biofilters do not increase phosphorus as nutrient for fish in water. Therefore, statement 3 is incorrect.

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56. **Consider the following pairs:** 

Objects in space

Cepheids Giant clouds of dust and gas in space
 Nebulae Stars which brighten and dim

periodically.

Description

3. Pulsars Neutron stars that are formed when

massive stars run out of fuel and

collapse.

How many of the above pairs are correctly matched?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

### Ans. A Explanation:

#### A Cepheid variable is a type of variable star that pulsates radially, varying in both diameter and temperature. It changes in brightness, with a well-defined stable period and amplitude.

- A nebula is a giant cloud of dust and gas in space. Some nebulae (more than one nebula) come from the gas and dust thrown out by the explosion of a dying star, such as a supernova. Other nebulae are regions where new stars are beginning to form.
- A pulsar (from pulsating radio source) is a highly magnetized rotating neutron star that emits beams of electromagnetic radiation out of its magnetic poles.

Therefore, Option A is the correct answer.

## 57. Which one of the following countries has its own Satellite Navigation System?

- (a) Australia
- (b) Canada
- (c) Israel
- (d) Japan

#### Ans. D

#### Explanation:

The Quasi-Zenith Satellite System (QZSS), also known as Michibiki, is a four-satellite regional time transfer system and a satellite-based augmentation system developed by the Japanese government to enhance the United States-operated Global Positioning System (GPS) in the Asia-Oceania regions, with a focus on Japan.

#### Which of the following statements is/are correct about navigational satelite?

- 1. At present, four global navigation satelite systems are operational in world.
- 2. India's Navic is one of the four global navigational satelite system.
- 3. Quasi-Zenith system is a joint collobration of India and Japan.
- (a) 1 only
- (b) 1 and 2 only
- (c) 2 only
- (d) 2 and 3 only

Ans. The Indian Space Research Organisation (Isro), in the third launch of the year, will fly NVS-01 to augment the seven-satellite navigation constellation NavIC on May 29. Not only will it be the first launch of a navigational satellite under the new moniker NVS, but it will also beat the space agency's record during the three pandemic years.

Statement 1 is correct: At present, there are four major global navigation systems—the US global positioning system, the Russian GLONASS, the European Galileo, and the Chinese Beidou.

Statements 2 and 3 are incorrect: There are two regional navigational systems

#### 58. Consider the following statements:

- 1. Ballistic missiles are jet-propelled at subsonic speeds throughout their flights, while cruise missiles are rocket-powered only in the initial phase of flight.
- 2. Agni-V is a medium-range supersonic cruise missile, while BrahMos is a solid-fuelled intercontinental ballistic missile.

Which of the statements given above is/are correct?

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

#### Ans. D

#### **Explanation:**

- Strategic missiles are either of the cruise or ballistic type.
   Cruise missiles are jet-propelled at subsonic speeds throughout their flights, while ballistic missiles are rocket-powered only in the initial (boost) phase of flight, after which they follow an arcing trajectory to the target. Hence, the statement 1 is incorrect.
- Agni-V is a land based nuclear capable intercontinental ballistic missile ICBM developed by the Defence Research and Development Organisation of India. The missile has a range of more than 7,000 kilometers. The BrahMos (also designated as PJ-10)[14] is a medium-range Ramjet Supersonic Cruise Missile that can be launched from submarine, ships, airplanes or land. The BrahMos is notably the fastest supersonic cruise missile in the world.[15] It is a joint-venture between the Indian Defence Research and Development Organisation (DRDO) and the Russian Federation's. Hence, the statement 2 is also incorrect.

Therefore, option D is the answer.



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#### 59. Consider the following statements regarding mercury pollution:

- 1. Gold mining activity is a source of mercury pollution in the world.
- 2. Coal-based thermal power plants cause mercury pollution.
- 3. There is no safe level of exposure to mercury.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

#### Ans. C

**Explanation- Statements 1 and 2 are correct:** Human activity is the **main cause of mercury releases,** particularly **coal-fired power stations**, residential coal burning for heating and cooking, industrial processes, waste incinerators and as a result of **mining for mercury, gold** and other metals

Statement 3 is correct- There is no known safe exposure level for elemental mercury in humans, and effects can be seen even at very low levels. This has been mentioned in the Minamata Convention on Mercury. Minamata Convention on Mercury at a glance\_COP1 2017 EN.pdf (mercuryconvention.org)

**Source-** Mercury contamination at Maya sites reveals historic legacy - The Hindu

Mercury pollution: Parties to Minamata Convention discuss non-binding declaration but can it help (downtoearth.org.in)

#### 3. In the context of mercury, consider the following statements:

- 1. Ethylmercury is harmless, so it is used as a preservative in some vaccines.
- 2. Volcanoes and weathering of rocks are natural sources of mercury.
- 3. Biomagnification of methylmercury affects the aquatic food chain adversely.
- Despite the harmful effects of mercury, there is no international treaty to address the risks from mercury.

#### Which of the statements given above are correct?

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

Answer: D

#### Explanation

Context- High levels of mercury, cadmium & arsenic were found in the urine samples of people living in river basins of Corrientes, Pastaza, Tigre & Maranon near the oilfields of Peruvian Oilfields.

**Statement 1 is correct-** Methylmercury is very different to Ethyl mercury. **Ethyl mercury** is used as a preservative in some vaccines and does not pose a health risk. Therefore, Ethyl mercury is harmless

Statement 2 is correct- Mercury occurs naturally in the earth's crust. It is released into the environment from volcanic activity, weathering of rocks and as a result of human activity.

Human activity is the main cause of mercury releases, particularly coal-fired power stations, residential coal burning for heating and cooking, industrial processes, waste incinerators and as a result of mining for mercury, gold and other metals.

Statement 3 is correct- People are mainly exposed to methylmercury, an organic compound, when they eat fish and shellfish that contain the compound. It is methylmercury that has the biomagnification potential, therefore, affecting the whole food chain.

Once in the environment, mercury can be transformed by bacteria into methylmercury. Methylmercury then bioaccumulates (bioaccumulation occurs when an organism contains higher concentrations of the substance than do the surroundings) in fish and shellfish.

#### 60. With reference to green hydrogen, consider the following statements:

- 1. It can be used directly as a fuel for internal combustion.
- 2. It can be blended with natural gas and used as fuel for heat or power generation.
- 3. It can be used in hydrogen fuel cell to run vehicles.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Ans. C

#### **Explanation-**

**Statement 1 is correct-** Studies have proven the direct use of green hydrogen is possible in both spark-ignition (SI) and compression-ignition (CI) engines. A review on production and implementation of hydrogen as a green fuel in internal combustion engines - ScienceDirect

Statement 2 is correct- NTPC has started the first green hydrogen blending operation in the Piped Natural Gas network, thus green hydrogen can be blended with natural gas and used as fuel for heat or power generation. Green hydrogen when blended with natural gas reduces CO2 emissions keeping the net heating content the same. PNG Network: NTPC starts India's first green hydrogen blending operation in PNG network - The Economic Times (indiatimes.com)

Statement 3 is correct- Hydrogen is a clean fuel which when consumed in a fuel cell, produces only water. India's first truly indigenously developed Hydrogen Fuel Cell Bus developed by KPIT-CSIR was launched in Pune in 2022. Press Information Bureau (pib.gov.in)

Source-Experimental and Numerical Investigation on Hydrogen Internal Combustion Engine (sae.org)

#### Concept of green hydrogen and its uses has been covered in LukmaanIAS

- 2. Which of the following is/are the benefits of hydrogen fuel?
- 1. Hydrogen can be produced from diverse domestic resources with the potential for near-zero greenhouse gas emissions.
- Once produced, hydrogen generates electrical power in a fuel cell, emitting only water vapor and warm air.
- 3. It holds promise for growth in both the stationary and transportation energy sectors.

Select the correct answer using the code given below:

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

Answer: D Explanation:

Context: The global shift towards clean and sustainable energy sources is gaining momentum as countries strive to reduce greenhouse gas emissions and combat climate change. In this context, India has proposed a discussion on global standards for 'green, clean, and low carbon' hydrogen at the recent G20 Energy Transition Working Group meeting.

Statement 1 is correct: Hydrogen can

#### 61. Consider the following countries:

- 1. Bulgaria
- 2. Czech Republic
- 3. Hungary
- 4. Latvia
- 5. Lithuania
- 6. Romania

How many of the above-mentioned countries share a land border with Ukraine?

- (a) Only two
- (b) Only three
- (c) Only four
- (d) Only five

#### Ans. A



Explanation- Ukraine shares land border with the following countries-

- Russia
- Belarus
- Poland
- Slovakia
- Hungary
- Romania
- Maldova

Source- Ukraine is caught up in conflict with Russia due to its intended NATO membership which is viewed by Russia as threat to its territorial integrity and security. The war between Ukraine and Russia is still ongoing.

## 62. With reference to the Earth's atmosphere, which one of the following statements is correct?

- (a) The total amount of insolation received at the equator is roughly about 10 times of that received at the poles.
- (b) Infrared rays constitute roughly two-thirds of insolation.
- (c) Infrared waves are largely absorbed by water vapour that is concentrated in the lower atmosphere.
- (d) Infrared waves are a part of the visible spectrum of electromagnetic waves of solar radiation.

#### Ans. C

#### Explanation-

**Statement 1 is not correct-** The total amount of insolation received at the equator is roughly 5 times of that received at the poles.

Insolation rises sharply from approximately 50 joules at the poles to 275 joules at the equator. <u>Latitude and energy balance - Global heat budget - Higher Geography Revision - BBC Bitesize</u>

**Statement 2 is not correct**- Infrared rays constitute roughly 50% of insolation. Sunlight in space at the top of Earth's atmosphere at a power of 1366 watts/m2 is composed (by total energy) of about 50% infrared light, 40% visible light, and 10% ultraviolet light. <a href="climate models - Which part of solar radiation">climate models - Which part of solar radiation</a> (VIS, NIR) keeps Earth warm? - Earth Science Stack Exchange

**Statement 3 is correct-** Infrared waves are largely absorbed by water vapour that is concentrated in the lower atmosphere. Water vapour is a dominant greenhouse gas which absorbs more infrared radiation than any other gas because of the different ways the molecule can vibrate. Lesson 6: water vapour absorption – scientificquaker

**Statement 4 is not correct-** Infrared waves are not a part of visible spectrum of electromagnetic waves of solar radiation. The variations in their wavelength and energy distinguish the two different types of waves in the electromagnetic spectrum.

Wavelength of Infrared waves: 780 nano meters(nm)- 1 nm

#### **Geography Section**

#### Panchsutra Test-1

#### 28. Consider the following countries:

- Belarus
- Russia
   Hungary
- 4. Romania
- Komanii
   Austria

#### Which of the above countries share a border with Ukraine?

- a. 1, 2 and 5 only
- 1, 2, 3 and 5 only
- a. 1, 2, 3 and 4 only

#### a. 1, 2, 3, 4 and 5 Answer: C

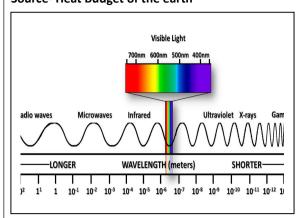
#### Explanation

- Ukraine has been in the news for the last year due to the Ukraine-Russia war.
- Austria does not share its border with Ukraine (If you know this information, you can use the elimination method and mark the correct answer).
- Please refer to the given map to understand which all countries share borders with Ukraine:



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Wavelength of visible band: 380-700 nm Source- Heat Budget of the earth



63. Consider the following statements.

Statement-1: The soil in tropical rain forests is rich in nutrients.

**Statement-2:** The high temperature and moisture of tropical rain forests cause dead organic matter in the soil to decompose quickly.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-1 and Statement-2 are correct and Statement-11 is the correct explanation for Statement-!
- (b) Both Statement-1 and Statement-2 are correct and Statement-11 is not the correct explanation for Statement-!
- (c) Statement-1 is correct but Statement-2 is incorrect
- (d) Statement-1 is incorrect but Statement-2 is correct

#### Ans. D

#### **Explanation-**

**Statement 1 is incorrect-** The soil in tropical rain forest is **deficient in nutrients** due to the **leaching** of nutrients in the wake of high rainfall.

**Statement 2 is correct-** The high temperature and moisture of the tropical rainforests cause the dead organic matter in the soil to decompose quickly. The hot and humid conditions are ideal for the microbial activities which leads to faster decomposition of humus in such environment.

64. Consider the following statements: Statement-1: The temperature contrast between continents and oceans is greater during summer than in winter.

**Statenient-2:** The specific heat of water is more than that of land surface. Which one of the following is correct in respect of the above statements?

- (a) Both Statement-1 and Statement 2 are correct and Statement-2 is the correct explanation for Statement-1
- (b) Both Statement-1 and Statement-2 are correct and Statement-2 is not the correct explanation for Statement-1
- (c) Statement-1 is correct but Statement-2 is incorrect
- (d) Statement-1 is incorrect but Statement-2 is correct

#### Ans. D

**Explanation- Statement 1 is incorrect-** The temperature contrast between continents and oceans is greater during the winter than in summer.

**Statement 2 is correct-** The specific heat of water is more than that of the land surface. This explains the statement 1.

Land has the general tendency to rapidly gain and lose heat whereas water takes time to heat as well as to lose heat through radiation.

#### Source- NCERT

#### Purely a conceptual question.

- 65. Consider the following statements:1. In a seismograph, P waves are recorded earlier than S waves.
  - 2. In P waves, the individual particles vibrate to and fro in the direction of wave propagation whereas in S waves, the particles vibrate up and down at right angles to the direction of wave propagation.

Which of the statements given above is/are correct?

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

#### Ans. C

#### Explanation-

#### Panchsutra Test -2

Q28. The Ocean water surface absorbs heat slowly as compared to the land surface. Which of the following factors is/are responsible for it?

- 1. The specific heat of water is greater than that of dry soil.
- 2. The ocean water surface is more transparent compared to the land surface.
- The ocean water is in continuous motion.Select the correct answer using the code given below:
- a. 1 only
- a. 1 and 2 only
- a. 2 and 3 only
- a. 1, 2 and 3
  Answer: D

4. Consider the following statements about the properties of the earthquake waves:

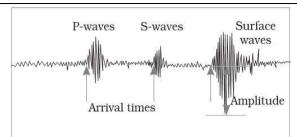
- 1. The Primary waves vibrate perpendicularly to the direction of the wave.
- 2. The Secondary waves create density differences in the material through which they pass.
- 3. The Surface waves are transverse waves with long wavelengths.

Which of the statements given above is/are incorrect?

- a. 1 only
- a. 2 only
- a. 3 only
- a. 1 and 2 only

Answer: D

Statement 1 is correct- In a seismograph, P waves are recorded earlier than S waves since P waves are the fastest



seismic waves and they are the first to be released when energy is released at the epicentre.

**Statement 2 is correct-** In P waves, the individual particles vibrate to and fro in the direction of wave propagation because P waves (analogous to sound waves) are longitudinal in nature.

In S waves, the particles vibrate up and down at right angles to the direction of wave propagation due to the transverse nature of S waves which are analogous to light waves.

## 66. With reference to coal-based thermal power plants in India, consider the following statements:

- 1. None of them uses seawater.
- 2. None of them is set up in water-stressed district.
- 3. None of them is privately owned.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

#### Ans. D

#### **Explanation:**

 Mundra Thermal Power Project is a coal-based thermal plant with a power generating capacity of 4,620MW. The plant is located in the Kutch district of Gujarat in India near Mundra Port in Mundra Power Special Economic Zone (MPSEZ).

The plant uses a sea-water-based closed-cycle induced draft circulating cooling water system. It sources sea water from the Gulf of Kutch through large diameter glass reinforced pipes. Hence, the Statement 1 is incorrect.

According to recent research by WRI (World Resources Institute), 40 percent of India's thermal power plants are situated in regions experiencing significant water stress. This poses a challenge as these plants rely on water for cooling purposes. The scarcity of water is already causing disruptions in electricity generation in these areas, with 14 out of India's 20 largest thermal utilities having experienced at least one shutdown between 2013 and 2016 due to water shortages. Hence, Statement 2 is incorrect.

India has a total of 269 Thermal Power Plants, with 138 of them being owned by the public sector and the remaining 131 owned by the private sector. Hence, the Statement 3 is also incorrect.

## 67. 'Wolbachia method' is sometimes talked about with reference to which one of the following?

- (a) Controlling the viral diseases spread by mosquitoes
- b) Converting crop residues into packing material
- (c) Producing biodegradable plastics
- (d) Producing biochar from thermos chemical conversion of biomass

#### Answer: A

#### **Explanation:**

 Dengue is the most common arboviral infection of humans, responsible for a substantial disease burden across the tropics. Traditional insecticide-based vector control programmes have limited effectiveness, and the one licensed vaccine has a complex and imperfect efficacy profile.

Strains of the bacterium Wolbachia deliberately introduced into Aedes aegypti have been shown to be able to spread to high frequencies in mosquito populations in release trials, and mosquitoes infected with these strains show markedly reduced vector competence. Thus, Wolbachia represents an exciting potential new form of biocontrol for arboviral diseases, including dengue.

#### 68. Consider the following activities:

- 1. Spreading finely ground basalt rock on farmlands extensively
- 2. Increasing the alkalinity of oceans by adding lime
- 3. Capturing carbon dioxide released by various industries and pumping it into abandoned subterranean mines in the form of carbonated waters.

How many of the above activities are often considered and discussed for carbon capture and sequestration?

(a) Only one

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

#### Ans. C

Explanation- Carbon capture and sequestration is widely discussed as vital measure for carbon offsetting through creation of carbon sinks and to meet the targets of Paris Climate agreement of COP15, UNFCCC.

Statement 1 is correct- Spreading finely ground basalt rock on farmlands extensively is being considered an effective long-term way of removing CO2 from the atmosphere since the chemical reactions that degrade the rock particles lock the greenhouse gases into carbonates for months. It is called as the ROCK DUST APPROACH or ENHANCED ROCK WEATHERING technique. Spreading rock dust on fields could remove vast amounts of CO2 from air | Greenhouse gas emissions | The Guardian

Statement 2 is correct- 'OCEAN ALKANIZATION' entails increasing the alkalinity of oceans by adding lime to accelerate the ocean's natural carbon sink. It works by converting the dissolved inorganic CO2 in seawater into bicarbonates and carbonates which are stable forms of carbon with a lifespan of about 10,000 years. Ocean Visions | Ocean-**Based Carbon Dioxide Removal** 

Statement 3 is correct- Capturing carbon dioxide released by various industries and pumping it into abandoned subterranean mines in the form of carbonated waters is the most widely known technique for carbon capture and storage.

#### 69. 'Aerial metagenomics' best refers to which one of the following situations?

- (a) Collecting DNA samples from air in a habitat at one go
- (b) Understanding the genetic makeup of avian species of a habitat
- (c) Using air-borne devices to collect blood samples from moving
- Sending drones to inaccessible areas to collect plant and animal samples from land surfaces and water bodies

#### Ans. A

#### **Explanation:**

"Aerial metagenomics" refers to the collection and analysis of genetic material (DNA, RNA) directly from environmental samples. In the context of "aerial" metagenomics, it would specifically refer to collecting these samples from the air in a given habitat.

#### 70. 'Microsatellite DNA' is used in the case of which one of the following?

- (a) Studying the evolutionary relationships among various species of
- (b) Stimulating 'stem cells' to transform into diverse functional tissues.
- (c) Promoting clonal propagation of horticultural plants
- (d) Assessing the efficacy of drugs by conducting series of drug trials in a population

#### Ans. A

#### **Explanation:**

- Microsatellite, as related to genomics, refers to a short segment of DNA, usually one to six or more base pairs in length, that is repeated multiple times in succession at a particular genomic location. These repeating units, which are typically 1-6 base pairs in length, are repeated in tandem, and the number of repetitions varies between individuals. The number of repeats at a certain microsatellite locus might vary greatly between people in a population because microsatellite DNA is highly variable.
- Researchers can analyse the genetic structure, population dynamics, and evolutionary relationships among various species of animals by analysing microsatellite DNA. Microsatellite markers are very valuable in population genetics, conservation genetics, and phylogenetic research.

#### 71. Consider the following statements with reference to India:

- 1. According to the 'Micro, Small and Medium Enterprises Development (MSMED) Act, 2006', the 'medium enterprises' are those with investments in plant and machinery between Rs. 15 crore and Rs. 25 crores.
- All bank loans to the Micro, Small and Medium Enterprises qualify under the priority sector.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only

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(c) Both 1 and 2

Consider the following pairs of classification of the Micro, Small and Medium Enterprises (MSME) with respect to their composite criteria:

#### **MSME Composite Criteria**

s of its establishment

1. Micro Investment should be below 1 Crore and Annual Turnover should be

below 5 Crores.

2. Small Investment should be above 10 Crores and Annual Turnover should

be above 50 Crores.

enquiries@lukmaanias.com 🚺 9654034293 🔘 8506099919 🔀 admissions@lukmaanias.com CLASSROOM ADDRESS: 17A/20, 3RD FLOOR, NEAR WESTSIDE SHOWROOM, KAROL BAGH, NEW DELHI-110005 (d) Neither 1 nor 2

#### Ans. D

#### **Explanation:**

Statement 1 is incorrect: According to the 'Micro, Small and Medium Enterprises Development (MSMED) Act, 2006', the 'medium enterprises' are those with investments in plant and machinery should not be more than Rs.50 crore and annual turnover should not more than Rs. 250 crores.

Revised Classification applicable w.e.f 1st July 2020

Composite Criteria: Investment in Plant & Machinery/equipment and Annual Turnover

CLASSIFICATION	MICRO	SMALL	MEDIUM
Manufacturing Enterprises and Enterprises rendering Services	Investment in Plant and Machinery or Equipment: Not more than Rs.1 crore and Annual Turnover; not more than Rs.5 crore	Investment in Plant and Machinery or Equipment: Not more than Rs.10 crore and Annual Turnover; not more than Rs. 50 crore	Investment in Plant and Machinery or Equipment: Not more than Rs.50 crore and Annual Turnover; not more than Rs. 250 crore

Statement 2 is incorrect: Priority Sector means those sectors which the Government of India and Reserve Bank of India consider as important for the development of the basic needs of the country and are to be given priority over other sectors. The banks are mandated to encourage the growth of such sectors with adequate and timely credit.

The categories of priority sector are as follows:

- 1. Agriculture
- Micro, Small and Medium Enterprises
- **Export Credit** 3.
- Education 4.
- Housing 5.
- Social Infrastructure 6.
- 7. Renewable Energy

However, All loans from MSME does not qualify under the priority

Source: https://msme.gov.in/know-about-msme

3. Medium Investment should be above 50

Crores and Annual Turnover should

Be above 250 Crores.

Which of the pairs given above is/are correctly matched?

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

#### Ans. A

#### **Explanation:**

Given below are the correctly matched pairs:

MSME	Composite Criteria
Micro	Investment should not be more than 1 Crore and Annual Turnover should be not more than 5 crore.
Small	Investment should be below 10 Crores and Annual Turnover should be below 50 Crores
Medium	Investment should be below 50 Crores and Annual Turnover should be below 250 Crores

#### **Additional Information:**

- The Union Ministry of Micro, Small and Medium Enterprises (M/o MSMEs) has issued a Gazette notification to pave the way for implementation of the upward revision in the definition and criteria of MSMEs in the country.
- The new definition and criterion will come into effect from 1<sup>st</sup> July, 2020. After 14 years since the MSME Development Act came into existence in 2006, a revision in MSME definition was announced in the Atmanirbhar Bharat package on 13th May, 2020.

The existing criterion of definition of MSMEs is based on the MSMED Act, 2006. Also, a new composite formula of classification for manufacturing and service units has been notified. Now, there will be no difference between manufacturing and service sectors.

#### 72. With reference to Central Bank digital currencies, consider the following statements:

- 1. It is possible to make payments in a digital currency without using US dollar or SWIFT system.
- 2. A digital currency can be distributed with a condition programmed into it such as a time-frame for spending it.

With of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2 Colo brating 12

#### Ans. C

CBDC is potentially a new form of digital central bank money that can be distinguished from reserves or settlement balances held by commercial banks at central banks. There are various design choices for a CBDC, including: access (widely vs restricted); degree of anonymity (ranging from complete to none); operational availability (ranging from current opening hours to 24 hours a day and seven days a week); and interest bearing characteristics (yes or no).

Statement 1 is correct: It is possible to make payments in a digital currency without using US dollar or SWIFT system. Statement 2 is correct: A digital currency can be distributed with a condition programmed into it such as a time-frame for spending it.

Source: https://www.bis.org/cpmi/publ/d174.pdf

#### With reference to the 'Central Bank Digital Currency (CBDC)', consider the following statements:

- 1. It appears as a liability on the central bank's balance sheet.
- 2. It is freely convertible against commercial bank money and cash.
- 3. It is a fungible legal tender for which holders need not have a bank account. Which of the statements given above statements is/are INCORRECT?
- (a) 2 only
- (b) 3 only
- (c) 1 and 2 only
- (d) None of the above

#### Ans. D

#### Explanation:

The Central Bank Digital Currency (CBDC) is a legal tender issued by a central bank in a digital form. It is

the same as a sovereign currency and is exchangeable at par with the fiat currency and accepted as a

medium of payment. It will be referred as e₹.

#### The Features of CBDC include:

- CBDC is sovereign currency issued by Central Banks in alignment with their monetary policy.
- It appears as a liability on the central bank's balance sheet. So, statement 1 is correct.
- It must be accepted as a medium of payment, legal tender, and a safe store of value by all
  - citizens, enterprises, and government agencies.
- It is freely convertible against commercial bank money and cash. So, statement 2 is correct.
- It is a fungible legal tender for which holders need not have a bank account. So, statement 3 is correct.
- It is expected to lower the cost of issuance of money and transactions. Hence, option D is correct.

Source: Reserve Bank of India

#### 73. In the context of finance, the term 'beta' refers to.

- (a) the process of simultaneous buying and selling of an asset from different platforms
- (b) an investment strategy of a portfolio manager to balance risk versus reward
- (c) a type of systemic risk that arises where perfect hedging is not possible.
- (d) a numeric value that measures the fluctuations of a stock to changes in the overall stock market

#### Ans. D

**Explanation:** Beta is a numeric value that measures the fluctuations of a stock to changes in the overall stock market.

Beta measures the responsiveness of a stock's price to changes in the overall stock market. On comparison of the benchmark index for e.g. NSE Nifty to a particular stock return, a pattern develops that shows the stock's openness to the market risk. This helps the investor to decide whether he wants to go for the riskier stock that is highly correlated with the market (beta above 1), or with a less volatile one (beta below 1). Beta is the key factor used in the Capital Asset Price Model (CAPM) which is a model that measures the return of a stock. The volatility of the stock and systematic risk can be judged by calculating beta. A positive beta value indicates that stocks generally move in the same direction with that of the market and the vice versa.

**Source:** https://economictimes.indiatimes.com/definition/beta

#### 74. Consider the following statements:

- The Self-Help Group (SHG) programme was originally initiated by the State Bank of India by providing microcredit to the financially deprived.
- 2. In an SHG, all members of a group take responsibility for a loan that an individual member takes.
- 3. The Regional Rural Banks and Scheduled Commercial Banks support SHGs.

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

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

#### Ans. B

#### **Explanation:**

Statement 1 is incorrect: Since 1987 'Mysore Resettlement and Development Agency' (MYRADA) has promoted Credit Management Groups (CMGs). CMGs can be identified as early-stage concept on the lines of self-help groups. The basic features of this concept promoted by MYRADA are Affinity, Voluntarism, Homogeneity and limited membership. Aim of the CMG is to bestow social empowerment to women. In 1991-92 NABARD started promoting self-help groups on a large scale. And it was the real take-off point for the 'SHG movement'. In 1993, the Reserve Bank of India also allowed SHGs to open saving accounts in banks.

**Statement 2 is correct:** SHGs promote small savings among their members which are deposited with the bank. This is the common fund in the name of the SHG. The SHG gives small loans to its members from its common fund. Also, in an SHG, all members of the group take responsibility for a loan that an individual member takes.

**Statement 3 is correct:** Not only Regional Rural Banks and Scheduled Commercial Banks but even the private banks support SHGs.

#### 75. Consider the following statements:

**Statement-I:** India's public sector health care system largely focuses on curative care with limited preventive, promotive and rehabilitative care.

**Statement-II:** Under India's decentralized approach to health care delivery, the States are primarily responsible for organizing health services.

## Which one of the following is correct in respect of the above statements?

- (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.

#### Ans. B

#### Identify the principles governing the concept of Self Help Group (SHG) in India:

- 1. Principle of Homogeneity
- 2. Principle of Voluntarism
- 3. Principle of Self-Governance
- 4. Principle of Empowerment
- 5. Principle of Mutuality

#### Select the correct answer using the code given below:

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

#### Ans. D

#### **Explanation:**

The SHG concept is built on the principles of Homogeneity, Voluntarism



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#### **Explanation:**

**Statement 1 is correct:** The primary objective of India's health care system is to improve the health status through a concerted policy action in all sectors and expand the limited preventive, promotive, curative, palliative and rehabilitative services provided through the public health sector with focus on quality. Largely it remains curative in nature and doctor centric

**Statement 2 is correct:** Under India's decentralized approach to health care delivery, the States are primarily responsible for organizing health services. Also under State List of the SEVENTH SCHEDULE Entry 6 is 'Public health and sanitation; hospitals and dispensaries' hence the primary responsibility of the public health services lies with the States.

But Statement-II is not the correct explanation for the Statement-I

#### Hence Option B is correct.

#### 76. Consider the following statements:

#### Statement-1:

According to the United Nations 'World Water Development Report, 2022', India extracts more than a quarter of the world's groundwater withdrawal each year.

#### Statement-2:

India needs to extract more than a quarter of the world's groundwater each year to satisfy the drinking water and sanitation needs of almost 18% of world's population living in its territory.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-1 and Statement-2 are correct. and Statement-2 is the correct explanation for Statement-1
- (b) Both Statement-1 and Statement-2 are correct, and Statement-2 is not the correct explanation for Statement-1
- (c) Statement-1 is correct, but Statement-2 is incorrect
- (d) Statement-1 is incorrect, but Statement-2 is correct

#### Ans. C

#### **Explanation:**

Statement 1 is correct. According to the United Nations World Water Development Report 2022, with an estimated 251 km3 annual withdrawal from an estimated 20 million wells and tube wells, India is the world's greatest groundwater user. This accounts for more than a quarter of the total groundwater extracted internationally.

**Statement 2 is incorrect.** India uses about 89% of this groundwater for irrigation. Major share of total groundwater extracted by India is utilized for irrigation purposes and not for drinking and sanitation purposes.

#### 77. Consider the following statements:

- 1. According to the Constitution of India, the Central Government has a duty to protect States from internal disturbances.
- 2. The Constitution of India exempts the States from providing legal counsel to a person being held for preventive detention.
- 3. According to the Prevention of Terrorism Act, 2002, confession of the accused before the police cannot be used as evidence.

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

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

#### Answer: A

Explanation: Statement 1 is

**Statement 1 is correct:** According to the Article 355 of the Constitution of India, it shall be the duty of the Union to protect every State against external aggression and internal disturbance and to ensure that the government of every State is carried on in accordance with the provisions of this Constitution.

**Statement 2 is incorrect:** Constitution of India does not exempt the states from providing legal counsel to a person being held for preventive detention.

**Statement 3 is incorrect:** Prevention of Terrorism Act, 2002, under Section 32 mentions of the provisions for certain confessions of the accused before the police to be used as evidence.

of its establishment

- 78. Which one of the following countries has been buffering from decades of civil strife and food shortages and was in news in the recent past for its very severe famine?
  - (a) Angola
  - (b) Costa Rica
  - (c) Ecuador
  - (d) Somalia

#### Ans. D

#### **Explanation:**

For the first time ever, Somalia is pushed to the top of the International Rescue Committee's Emergency Watchlist, as a devastating drought, coupled with the effects of three decades of conflict, have created a catastrophic food crisis. Also, Somalia is in the midst of its fifth consecutive failed rainy season. By mid-2023, over 8 million people—nearly half of the population—will be living through crisis levels of food insecurity as the country faces an impending famine.

#### 79. Consider the following statements:

- 1. In India, the Biodiversity Management Committees are key to the realization of the objectives of the Nagoya Protocol
- 2. The Biodiversity Management Committees have important functions in determining access and benefit sharing, including the power to levy collection fees on the access of biological resources within its jurisdiction.

Which of the statements given above is/are correct?

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

#### Ans. C

Explanation- The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (ABS) to the Convention on Biological Diversity is a supplementary agreement to the Convention on Biological Diversity (UNCBD). It was adopted on 29 October 2010 in Nagoya, Japan and entered into force on 12 October 2014.

India in compliance with the Nagoya protocol, enacted its legislation Biological Diversity Act,2002 with the intent to realise the objectives of fair and equitable sharing of benefits arising from the utilisation of genetic resources. An institutional framework comprising National Biodiversity Authority (NBA), State Biodiversity Boards and Biodiversity Management Committees has been envisaged under this.

**Statement 1 is correct-** In India, the Biodiversity Management Committees are key to the realization of the objectives of the Nagoya Protocol

**Statement 2 is correct-** The Biodiversity Management Committees have important functions in determining access and benefit sharing, including the power to levy collection fees on the access of biological resources within its jurisdiction. (Section 41(3) clearly mentions this function).

Chapter 10 of the Biological Diversity Act,2002 deals with the Biodiversity Management Committees.

#### 41. Constitution of Biodiversity Management Committee. —

 Every local body shall constitute a Biodiversity Management Committee within its area for the purpose of promoting conservation,

sustainable use and documentation of biological diversity including preservation of habitats, conservation of land races, folk varieties and cultivars, domesticated stocks and breeds of animals and microorganisms and chronicling of knowledge relating to biological diversity.

Explanation. —For the purposes of this sub-section,—

- (a) "cultivar" means a variety of plant that has originated and persisted under cultivation or was specifically bred for the purpose of cultivation;
- (b) "folk variety" means a cultivated variety of plant that was developed, grown and exchanged informally among farmers;
- (c) "landrace" means primitive cultivar that was grown by ancient farmers and their successors.
- (2) The National Biodiversity Authority and the State Biodiversity Boards shall consult the Biodiversity Management Committees while taking any decision relating to the use of biological resources

LukmaansIAS has covered all important environmental legislations of India including.

Q7. With reference to Biodiversity Act, 2002, consider the following statements:

- Under this Act, the State Government, in consultation with the NBA (National Biodiversity Authority), shall notify threatened species and prohibit or regulate their collection, rehabilitation and conservation.
- 2. The Act envisages a two-tier structure to regulate access to biological resources.
- 3. The Act stipulates all offences under it as cognizable and non-bailable.

Which of the statements given above is/are incorrect?

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

#### Answer: B

**Explanation:** 

The Biological Diversity Act, 2002 was born out of India's attempt to realize the objectives enshrined in the United Nations Convention on Biodiversity, 1992.

#### Objectives:

- Conservation of Biological diversity
- Sustainable use of its components
- Fair and equitable sharing of the benefits arising from the utilization of genetic resources
- The Act is implemented through a three-tiered institutional structure: National Biodiversity Authority, State Biodiversity Boards, and Biodiversity Management Committees at the local body level.
- The Act provides these authorities with special funds and a separate budget in order to carry out any research project dealing with the biological natural resources of the country.
   It shall supervise any use of biological resources and the sustainable use of them and shall take control over the financial investments and their return and dispose of those capitals as correct.
  - Under this Act, the Central Government in consultation with the NBA:
    - Shall notify threatened species and prohibit or regulate their collection, rehabilitation and conservation
    - Designate institutions as repositories for different categories of biological resources
  - The Act stipulates all offences under it as cognizable and non-bailable.

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- and knowledge associated with such resources occurring within the territorial jurisdiction of the Biodiversity Management Committee.
- (3) The Biodiversity Management Committees may levy charges by way of collection fees from any person for accessing or collecting any biological resource for commercial purposes from areas falling within its territorial jurisdiction.

Source- 200318.pdf (indiacode.nic.in)

<u>Puducherry forms biodiversity management committees, extends financial aid | Puducherry News - Times of India (indiatimes.com)</u>

India aims to have People's Biodiversity Register in every village, verification campaign launched in Goa | India News - Times of India (indiatimes.com)

- 80. Consider the following statements in respect of election to the President of India:
  - The members nominated to either House of Parliament or the Legislative Assemblies of States are also eligible to be included in the Electoral College.
  - 2. Higher the number of elective Assembly seats, higher is the value of vote of each MLA of that State.
  - 3. The value of vote of each MLA of Madhya Pradesh is greater than that of Kerala.
  - 4. The value of vote of each MLA of Puducherry is higher than that of Arunachal Pradesh because the ratio of total population to total number of elective Puducherry is greater as compared to Arunachal Pradesh.

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

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

#### Ans. A

#### **Explanation:**

Statement 1 is incorrect: The members nominated to either House of the Parliament or the Legislative Assemblies of States are not included in the Electoral College.

Statement 2 is incorrect: Higher the number of elective Assembly seats, lower is the value of vote of each MLA of that State.

#### Statement 3 is incorrect:

State: Madhya Pradesh	State: Kerala	UT: Puducherry
Vote value of each MLA:	Vote value of each MLA:	Vote value of each
131	152	MLA: 16
Number of MLAs: 230	Number of MLAs: 140	Number of MLAs: 30
Total Vote Value: 30130	Total Vote Value: 21280	Total Vote Value: 480

#### Statement 4 is correct:

#### Hence Option A is correct.

- 81. With reference to the Indian History, Alexander Rea, A. H. Longhurst, Robert Sewell, James Burgess and Walter Elliot were associated with.
  - (a) archaeological excavations
  - (b) establishment of English Press in Colonial India
  - (c) establishment of Churches in Princely States
  - (d) construction of railways in Colonial India

#### Ans. A

After seeing this question, one can understand that this was an exceptional question, and here the UPSC has followed its tradition of asking at least one question which is out of box. In these types of questions, candidates should take a call, whether they have studied this aspect of question, and should restrain from guess work (tukkabazi!)

Here the correct answer is option A. These personalities are renowned historians, archaeologists, civil servants, etc who have immensely contributed through their work for the study of Indian history. They are associated with colonial period.

82. Consider the following pairs:

Site Well known for

Besnagar: Shaivite cave shrine
 Bhaja: Buddhist cave shrine
 Sittanavasal: Jain cave shrine

How many of the above pairs are correctly matched?

(a) Only one

(b) Only two

(c) All three

(d) None

#### Ans. B

An easy question, where elimination will work (tuqqa wala nahi, knowledge wala). When we study the Post- Mauryan history, there is mention of Besnagar Pillar which was erected by Heliodorus, in honour of Vishnu (Vasudeva). So, it is not related to Shiava shrine.

Other two options Bhaja and Sittanavasal are famous Buddhist and Jain shrine respectively.

Bhaja is one of the examples of the earliest phase of rock- cut buddhist monasteries in the Western Ghats.

Sittanavasal is Jaina cave shrine in Tamil Nadu, having seven inscriptions mentioning the name of donors who gifted this cave shelters to Jaina ascetics.

#### 83. Consider the following statements:

#### Statement-I:

7th August is declared as the National Handloom Day.

#### Statement-II:

It was in 1905 that the Swadeshi Movement was launched on the same

Which one of the following is correct in respect of the above

- (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

#### Ans. A

Consider the following statements in respect of the National Flag of India according to the Flag Code of India, 2002:

Statement-I: One of the standard sizes of the National Flag of India is 600 mm \* 400 mm.

Statement-II: The ratio of the length to the height (width) of the Flag shall be 3:2

Which one of the following is correct in respect of the above statements?

**Both Statement-I** and Statement-II are correct and Statement-II is the correct explanation for Statement-I

**Both Statement-I** and Statement-II are correct and Statement-II is not the correct explanation for Statement-I

Statement-I is correct but Statement-II is incorrect

Statement-I is incorrect but Statement-II is correct

#### Ans. D

#### **Explanation:**

**Statement 1 is incorrect:** The different standard sizes mentioned in the Flag Code of India for the national Flag are:

Flag Size No 1 – Dimensions in mm = 6300 x 4200

Flag Size No 2 – Dimensions in mm = 3600 x 2400

Flag Size No 3 – Dimensions in mm = 2700 x 1800

Flag Size No 4 – Dimensions in mm = 1800 x 1200

Flag Size No 5 – Dimensions in mm =  $1350 \times 900$ Flag Size No 6 – Dimensions in mm =  $900 \times 600$ 

Flag Size No 7 – Dimensions in mm = 450 x 300

Flag Size No 8 – Dimensions in mm = 225 x 150

Flag Size No 9 – Dimensions in mm = 150 x 100

**Statement 2 is correct:** The ratio of the length to the height (width) of the Flag shall be 3:2 according to the Flag Code of India.

Both these questions has roots from one of the campaigns started by Gol, 'Har Ghar Tiranga Campaign'.

#### Consider the following statements regarding the Flag Code of India:

- 1. Khadi or hand-spun cloth is the only material allowed to be used for the flag.
- 2. There is no restriction on the display of the National Flag by general public and private organizations consistent with the dignity and honour of the National Flag.
- 3. National flag is based on the Swaraj flag, which is designed by Pingali Venkayya.

#### Which of the statements given above is/are correct?

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

#### Ans. D

#### Explanation:

**Statement 1 is incorrect:** Khadi or hand-spun cloth was the only material allowed to be used for the flag. Now, the National Flag shall be made of hand-spun, handwoven or machine-made cotton/polyester/ wool/silk/khadi bunting, as per the amended flag code.

**Statement 2 is correct**: There is no restriction on the display of the National Flag by general public and private organizations consistent with the dignity and honour of the National Flag.

**Statement 3 is correct:** The National flag is based on the Swaraj flag, which is designed by Pingali Venkayya.

Additional information: The government launched 'Har Ghar Tiranga'— a nationwide campaign to encourage people to hoist the Tricolour at their homes to mark the 75th Independence Day. According to officials in the Ministry of Culture, the plan is to reach out to more than 20 crore homes across the country by August 15, the 75th Independence Day. The Flag code of India brings together all laws, conventions, practices, and instructions for the display of the National Flag. It governs the display of the National Flag by private, public, and government institutions. The Flag Code of India took effect on January 26, 2002. As per Clause 2.1 of the Flag Code of India, there shall be no restriction on the display of the National Flag by members of the general public, private organizations.

Q29, Takkar Test Series, Phase 1, History Test 3 had one question related to National Flag, and both these questions answer lies in there. Let's have a look,

#### 

- The use, display, hoisting and prevention of insults to the National Flag are guided by the Flag Code of India 2002.
- 2. As per clause 2.2 of the Flag Code of India, whenever the National Flag is on display at an individual's home or in any individual's motor car, it must occupy the position of honour and should be distinctly placed.

Which of the statements given above is/are correct?

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

#### Answer: D

#### **Explanation:**

The Flag Code of India brings together all laws, conventions, practices, and instructions for the display of the National Flag. It governs the display of the National Flag by Private, Public, and Government Institutions. The Flag Code of India took effect on 26 January 2002. The rules for the prevention of insults to the National Flag are in accordance with "The Prevention of Insults to National Honour Act, 1971. Hence, statement 1 is incorrect.

The privilege of hosting the National Flag on motor cars is only limited to the following persons as per Clause 3.44 of the Flag Code of India.

- President
- Vice-President
- Governors and Lieutenant Governors
- Heads of Indian Missions/Posts
- Prime Minister
- Cabinet Ministers, Minister of State, and Deputy Ministers of the Union
- Chief Minister and Cabinet Minister of a State or Union Territory
- Speaker of the Lok Sabha, Deputy Chairman of Rajya Sabha, Deputy Speaker
  of Lok Sabha, Chairman of Legislative Councils in States, Speakers of the
  Legislative Assemblies in States and Union Territories, Deputy Chairman of
  Legislative Council in States, Deputy Speakers of Legislative Assemblies in
  States and Union Territories
- Chief Justice of India
- Judges of Supreme Court
- Chief Justice of High Courts
- Judges of High Courts

As per Clause 2.1 of the Flag Code of India, there shall be no restriction on the display of the National Flag by members of the general public, private organizations, educational institutions, etc., inconsistent with the dignity and honour of the National Flag. As per paragraph 1.3 & 1.4 of the Flag Code of India, the National Flag shall be rectangular in shape. The Flag can be of any size but the ratio of the length to the height (width) of the National Flag shall be 3:2. Hence, statement 2 is incorrect.

After reading the question, you will get the answer of the question. Also, while taking the discussion of the test, Faculty has also explained the relevance of National Handloom Day.

So, for Q83, option A is the correct answer and for Q84, option D is the correct answer.

85. Consider the following statements in respect of the Constitution Day:

**Statement-I:** The Constitution Day is celebrated on 26th November every year to promote constitutional values among citizens.

**Statement-II:** On 26th November, 1949, the constituent Assembly of India set up a Drafting Committee under the Chairmanship of Dr. B. R. Ambedkar to prepare a Draft Constitution of India.

Which one of the following is correct in respect of the above statements?

- (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

#### Ans. C

#### **Explanation:**

**Statement 1 is correct:** Constitution Day also known as 'Samvidhan Divas', is celebrated on 26th November every year to commemorate the adoption of the Constitution of India.

Statement 2 is incorrect: On 26th November 1949, the Constituent Assembly of India adopted the Constitution of India, which came into effect from 26th January 1950.

Which of the following Ministries notified the decision to celebrate 26 day of November as 'Constitution Day' to promote constitutional values among citizens?

- (a) Ministry of Law and Justice.
- (b) Ministry of Social Justice and Empowerment.
- (c) Ministry of Home Affairs.
- (d) Ministry of Statistics and Programme Implementation.

#### Ans. B

**Explanation:** Constitution Day also known as **'Samvidhan Divas'**, is celebrated in our country on 26th November to commemorate the adoption of the Constitution of India. On 26th November 1949, the Constituent Assembly of India adopted the Constitution of India, which came into effect from 26th January 1950.

The Ministry of Social Justice and Empowerment on 19th November 2015 notified the decision of Government of India to celebrate the 26th day of November every year as 'Constitution Day' to promote Constitution values among citizens.

#### 86. Consider the following statements:

**Statement-1:** Switzerland is one of the leading exporters of gold in terms of value

**Statement-2**: Switzerland has the second largest gold reserves in the world

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-1 and Statement-2 are correct and Statement-2 is the correct explanation for Statement-1
- (b) Both statement-1 and Statement-2are correct and Statement-2 is not the correct explanation for Statement-1
- (c) Statement-1 is correct, but Statement-2 is incorrect
- (d) Statement-1 is incorrect but Statement-2 is correct

#### Ans.

#### **Explanation:**

Statement is 1 correct: Switzerland's gold exports amounted to a
value of nearly 87 billion U.S. dollars in 2021. Switzerland is
consistently the world's leading gold exporting country based on
value.

**Statement 2 is incorrect:** Switzerland has the seventh-largest reserves of gold in the world. Its reserves of 1,040.0 tons account for 6.3% of its foreign reserves. So, statement 2 is not correct.

#### 87. Consider the following statements:

**Statement-1:** Recently, the United States of America (USA) and the European Union (EU) have launched the Trade and Technology Council'. **Statement-2:** The USA and the EU claim that through this they are trying

**Statement-2:** The USA and the EU claim that through this they are trying to bring technological progress and physical productivity under their control.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-1 and Statement-2 are correct and Statement-2 is the correct explanation for Statement-1
- (b) Both Statement-1 and Statement-2 are correct and Statement-2 is not the correct explanation for Statement-1
- (c) Statement-1 is correct but Statement-2 is incorrect.
- (d) Statement-1 is incorrect but Statement-2 is correct.

#### Ans. C

#### **Explanation:**

**Statement 1 is correct:** The Trade and Technology Council is a transatlantic political body which serves as a diplomatic forum to coordinate technology and trade policy between the United States and European Union. It approaches to key global trade, economic, and technology issues and to deepen transatlantic trade and economic relations based on these shared values. It was established during the EU-US Summit on 15 June 2021 in Brussels.

**Statement 2 is incorrect:** Through the Council, the EU and the US are working together to:

- ensure that trade and technology serve our societies and economies, while upholding our common values
- strengthen our technological and industrial leadership.
- expand bilateral trade and investment.

But through this Council, USA and EU not claiming to bring the technological progress and physical productivity under their control.

#### 88. Consider the following statement:

#### Statement – I:

India accounts for 3.2% of global export of goods.

#### Statement-II:

Many local companies and some foreign companies operating in India have taken advantage of India's 'Production-linked Incentive' scheme.

Which one of the following is correct in respect of the above statements?

- 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.

#### Ans. D

#### Explanation:

**Statement 1 is incorrect:** "In 2022, India's share in global merchandise trade stood at 1.8 per cent. As per WTO data, India's share in global exports for merchandise was less than 2 per cent and in global imports it was less than 3 per cent.

**Statement 2 is correct:** Many local companies and some foreign companies operating in India have taken advantage of India's 'Production-linked Incentive' scheme. The central government has approved financial support for 61 out of the 67 applicants under the production linked



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incentive (PLI) scheme for textiles, Of 61 proposals, seven are from foreign companies.

#### Source:

https://www.tribuneindia.com/news/nation/india-fifth-largest-economy-but-lags-in-global-trade-428377

https://www.livemint.com/news/india/govt-approves-61-proposals-out-of-67-received-under-pli-scheme-for-textiles-11649936191878.html

#### 89. Consider the following statements:

The 'Stability and Growth Pact' of the European Union is a treaty that.

- limits the levels of the budgetary deficit of the countries of the European Union
- makes the countries of the European Union to share their infrastructure facilities
- enables the countries of the European Union to share their technologies

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

#### Ans. A

**Explanation:** The Stability and Growth Pact (SGP) is a set of rules designed to ensure that countries in the European Union pursue sound public finances and coordinate their fiscal policies. Also, the corrective arm of the Stability and Growth Pact ensures that Member States adopt appropriate policy responses to correct excessive deficits (and/or debts) by implementing the Excessive Deficit Procedure (EDP). **Hence the statement 1** is correct so option A is the answer.

#### Which of the following sectors are covered under PLI scheme?

- Food Products
- 2. White Goods
- 3. Textile Products
- 4. Medical Devices
- Speciality steel

Select the correct answer from the code given below:

- (a) 1,2 and 3
- (b) 2,3 and4
- (c) 1,3,4 and 5
- (d) 1,2,3,4 and 5

#### Answer: D

#### **Explanation:**

#### Sectors under PLI Scheme are:

- 1. Mobile Manufacturing and Specified Electronic Components
- 2. Critical Key Starting materials/Drug Intermediaries & Active Pharmaceutical Ingredients
- 3. Manufacturing of Medical Devices
- 4. Automobiles and Auto Components
- 5. Pharmaceuticals Drugs
- 6. Specialty Steel
- 7. Telecom & Networking Products
- 8. Electronic/Technology Products
- 9. White Goods (ACs and LEDs)
- 10. Food Products
- 11. Textile Products: MMF segment and technical textiles
- 12. High-efficiency solar PV modules
- 13. Advanced Chemistry Cell (ACC) Battery
- 14. Drones and Drone Components

Source: https://www.pib.gov.in/PressReleasePage.aspx?PRID=1710134

#### 90. Consider the following statements:

- Recently, all the countries of the United Nations have adopted the first-ever compact for international migration, the 'Global Compact for Safe, Orderly and Regular Migration (GCM)'.
- 2. The objectives and commitments stated in the GCM are binding on the UN member countries.
- 3. The GCM addresses internal migration or internally displaced people also in its objectives and commitments.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

#### Ans. D

#### **Explanation:**

**Statement 1 is incorrect:** The UN General Assembly endorsed the adopted Global Compact for Safe, Orderly and Regular Migration (GCM), the first-ever international cooperation framework for effectively addressing issues that concern the world's 258 million people on the move and countries of origin, transit and destination. It was not adopted by all the UN members, countries such as Czech Republic, Hungary, Israel, Poland, United States are against the resolution.

**Statement 2 is incorrect:** The Global Compact for Migration is the first-ever UN global agreement on a common approach to international migration in all its dimensions. The global compact is non-legally binding. **Statement 3 is incorrect:** The global compact comprises 23 objectives for better managing migration at local, national, regional and global levels. But GCM does not address internal migration.



91.

#### With reference to Home Guards, consider the following statements:

- 1. Home Guards are raised under the Home Guards Act and Rules of the Central Government.
- 2. The role of the Home Guards is to serve as an auxiliary force to the police in maintenance of internal security.
- To prevent infiltration on the international border/coastal areas, the Border Wing Home Guards Battalions have been raised in some States.

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

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

#### Ans. B

#### **Explanation:**

**Statement 1 is incorrect:** Home Guards are raised under the Home Guards Act and Rules of the States/Union Territories (not central Government).

**Statement 2 is correct:** The role of Home Guards is to serve as an auxiliary Force to the Police in maintenance of internal security situations, help the community in any kind of emergency such as an air-raid, fire, cyclone, earthquake, epidemic etc., help in maintenance of essential services, promote communal harmony and assist the administration in protecting weaker sections, participate in socio-economic and welfare activities and perform Civil Defence duties.

Statement 3 is correct: In border States, Border Wing Home Guards (BWHG) Bns. have been raised, which serve as an auxiliary to the Border Security Force. The organization is spread over in all States and Union Territories except in Kerala. Fifteen Border Wing Home Guards (BWHG) Battalions have been raised in the border States viz. Punjab (6 Bns.), Rajasthan ( 4 Bns.), Gujarat (2 Bns.) and one each Battalion for Meghalaya, Tripura and West Bengal to serve as an auxiliary to Border Security Force for preventing infiltration on the international border/coastal areas, guarding of VA/VPs and lines of communication in vulnerable area at the time of external aggression.

#### Hence Option B is correct.

#### 92. With reference to India, consider the following pairs:

### Action : The Act under which it is covered 1. Unauthorized wearing of police or military uniforms:

- The Official Secrets Act, 1923
- Knowingly misleading or otherwise interfering with a police officer
- or military officer when engaged in their duties:
  The Indian Evidence Act, 1872
- 3. Celebratory gunfire which can endanger the personal safety of others : The Arms (Amendment) Act, 2019

#### How many of the above pairs are correctly matched?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

#### Ans. B

#### **Explanation:**

**Pair 1** is correct: Under Section 6 of the Official Secrets Act, 1923 unauthorized wearing of police or military uniforms is prohibited and is presumed guilty.

**Pair 2 is incorrect:** Section 7(1) of the Official Secrets Act, 1923 says that no person in the vicinity of any prohibited place shall obstruct, knowingly mislead or otherwise interfere with or impede, any police officer, or any member of the Armed Forces of the

Union engaged on guard, Sentry, patrol, or other similar duty in relation to the prohibited place.

**Pair 3 is correct:** The Arms Act Amendment of 2019 adds news offences such as forcefully taking a firearm from police or armed forces and using firearms in a celebratory gunfire which endangers human life or personal safety of others.

Hence Option B is correct.



#### 93. Consider the following pairs:

Regions often mentioned in news Reason for being in news.

- 1. North Kivu and Ituri: War between Annenia and Azerbaijan
- 2. Nagorno-Karabakh
- 3. Kherson and Zaporizhzhia: Insurgency in Mozambique: Dispute between Israel and Lebanon

How many of the above pairs are correctly matched?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

#### Ans. D

#### **Explanation-**

North Kivu and Ituri: Extremist rebellion in Democratic Republic of Congo



Nagorno-Karabakh : War between Armenia and Azerbaijan



Kherson and Zaporizhzhia : parts of Ukraine annexed by Russia in the ongoing Ukraine-Russia war.

Apart from the above-mentioned regions of Ukraine, Donetsk and Luhansk have also been occupied by Russia.

Source- Current affairs

#### 94. Consider the following statements:

**Statement-1:** Israel has established diplomatic relations with some Arab States

**Statement-2:** The 'Arab Peace Initiative' mediated by Saudi Arabia was signed by Israel.

and Arab League.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-1 and Statement-2 are correct, and Statement-2 is the correct explanation for Statement-1
- (b) Both Statement-1 and Statement-2 are correct, and Statement-2 is not the correct explanation for Statement 1.
- (c) Statement-1 is correct, but Statement-2 is incorrect.
- (d) Statement-1 is incorrect, but Statement-2 is correct.

#### Ans. C

 The development of open, friendly relations between Israel and some Gulf Arab states has emerged as a significant new dynamic of the 21st century Middle East. Hence, statement 1 is correct.

Arab Peace Initiative also referred to as the Saudi Peace Plan and Abdullah Plan. On March 27, 2002, participants of the Arab League summit in Beirut adopted the Saudi-proposed Arab Peace Initiative, calling for "full Israeli withdrawal from all the Arab territories occupied since June 1967, in implementation of [United Nations] Security Council Resolutions 242 and 338 and Israel's acceptance of an independent Palestinian state with East Jerusalem as its capital, in return for the establishment of normal relations in the context of a comprehensive peace with Israel." The plan also called for a "just settlement" of the Palestinian refugee issue based on UN General Assembly Resolution 194. The Israeli government rejected the initiative immediately, calling

#### 2. Consider the following pairs:

Territories/Regions in news

Countries to the dispute

Nagorno-Karabakh
 Demchok

Armenia-Iran Japan-China

2. Demcho 3. Gaza

Israel-Palestine

4. Donetsk and Luhansk

Russia-Ukraine

#### How many pairs given above are correctly matched?

its establishment

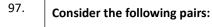
- a) Only one pair
- b) Only two pairs
- c) Only three pairs
- d) All four pairs

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it a "non-starter," though the Quartet on the Middle East endorsed the Initiative in 2003. Therefore, Statement is II is incorrect. 95. Consider the following pairs with regard to sports awards. 1. Major Dhyan Chand Khel Ratna Award For the most spectacular and outstanding performance by a sportsperson over period of last four years. Arjuna Award For the lifetime achievement by a sportperson Dronocharya Award To honour eminent coaches who have 3. successfully trained sportsperson or teams Rashtriya Khel Protsahan Puraskar To recognize the contribution made by sportspersons even after their retirement How many of the above pairs are correctly matched? (a) Only one (b) Only two (c) All three (d) All four Ans. B Major Dhyan Chand Khel Ratna Award: The spectacular and most outstanding performance in the field of sports by a sportsperson over a period of four years immediately preceding the year during which award is to be given shall be honoured with the Major Dhyan Chand Khel Ratna Award for excellence in Sports & Games at international level i.e. Olympic/Asian/ Commonwealth/World Games/Championships/World Cup and equivalent recognized international tournaments. Arjuna Award: The Arjuna Award was instituted in 1961 by the Government of India to recognise outstanding achievement in national sports events. Dronacharya Award: It was instituted in 1985 by the Government of India to recognise excellence in sports coaching. Rashtriya Khel Protsahan Puruskar: It was instituted in the year 2009. This award is given to both individuals as well as private or public organisations for "playing a visible role in the area of sports promotion and development" over the period of last three years. 96. Consider the following statements in respect of the 44th Chess Olympiad, 2022: 1. It was the first time that Chess Olympiad was held in India. 2. The official mascot was named Thambi'. 3. The trophy for the winning team in the open section is the Vera Menchik Cup. 4. The trophy for the winning team in the women's section is the Hamilton-Russell Cup. How many of the statements given above are correct? (a) Only one (b) Only two Only three (d) All four Ans. C **Explanation: All statements are correct.** Statement 1 is correct: The FIDE Chess Olympiad is held in India for the first time since the inaugural tournament in 1927. This edition is the first in Asia in 30 years. **Statement 2 is correct:** The Official Mascot of 44th Chess Olympiad is 'Thambi'. The word 'Thambi' in Tamil language means - little or younger brother. Statement 3 is incorrect: The trophy for the winning team in the open section is the Hamilton-Russell Cup. Statement 4 is incorrect: Vera Menchik (1906-44) was a Russian, Czech, and a English chess player. The first women's world champion in chess history, she was by far the best female player of her time. The trophy for the winning team at the Women's Chess Olympiad is named the Vera Menchik Cup in her honour.



#### (Area of conflict mentioned in news) (Country where it is located)

Donbas Syria
 Kachin Ethiopia
 Tigray North Yemen

How many of the above pairs are correctly matched?

(a) Only one

(b) Only two

(c) All three

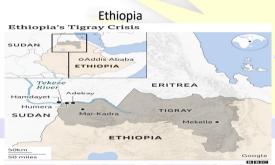
(d) None

Ans. D

#### **Explanation-**



Myanmar Tigray



Source- Current affairs

In the recent years Chad, Guinea, Mali and Sudan caught the international attention for which one of the following reasons common to all of them?

- (a) Discovery of rich deposits of rare earth elements
- (b) Establishment of Chinese military bases.
- (c) Southward expansion of Sahara Desert
- (d) Successful coups

#### Ans. C

#### Explanation:

All four countries have experienced successful coups in recent years.

- Chad: In West Africa, the cycle of coups began in Chad. The military did not allow a transition to civilian rule after the death of President Idriss Deby in April 2021.
- Guinea: On 5 September 2021, President of Guinea Alpha Condé
  was captured by the country's armed forces in a coup d'état after
  gunfire in the capital, Conakry. Special forces commander Mamady
  Doumbouya released a broadcast on state television announcing
  the dissolution of the constitution and government.
- Mali: Mali has witnessed two military coups within a span of 18 months. The last coup took place in August 2020.

Sudan: On 25 October 2021, the Sudanese military, led by General Abdel Fattah al-Burhan, took control of the Government of Sudan in a military coup.

Disputed regions have been discussed thoroughly in LukmaanIAS classes.





#### 99. Consider the following heavy industries:

- 1. Fertilizer industry
- 2. Oil refineries
- 3. Steel plants

Green hydrogen is expected to play a significant role in decarbonizing how many of the above industries?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

#### Ans. C

**Explanation-** A new report released today by NITI Aayog 'Harnessing Green Hydrogen: Opportunities for Deep Decarbonisation in India' highlights that green hydrogen can substantially spur industrial decarbonisation of harder-to-abate sectors such as,

- fertilisers
- refining
- methanol
- maritime shipping
- iron & steel and
- transport.

Green hydrogen is produced through electrolysis of water using renewable energy sources unlike the other forms of hydrogen (such as grey hydrogen, turquoise hydrogen or blue hydrogen) which rely on fossil fuels (methane or coal) for their production. Green hydrogen is an ecofriendly energy resource. Press Information Bureau (pib.gov.in)

Source- <u>Press Information Bureau (pib.gov.in)</u>- National Hydrogen Mission was approved by the Cabinet to make India a Global Hub for production, utilization and export of Green Hydrogen and its derivatives.

#### 100. Consider the following statements about G-20:

1. The G-20 group was originally stablished as a platform for the Finance Ministers and Central

Bank Governors to discuss the international economic and financial issues.

2. Digital public infrastructure is one of India's G-20 priorities.

Which of the statements given above is/are correct?

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

#### Ans. C

**Statement 1 is correct:** The G20 was founded in 1999 after the Asian financial crisis as a forum for the Finance Ministers and Central Bank Governors to discuss global economic and financial issues.

**Statement 2 is correct**: G20 will focus on global priority areas such as green development, climate finance, inclusive growth, digital economy, **public infrastructure**, technology transformation, and reforms for women empowerment for socio-economic progress. All these steps are taken to accelerate progress towards the Sustainable Development Goals and secure a better future for the generations to come.



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Marks 292



PRIYANSHA GARG AIR 31 | CSE 2022

Marks 292



**PRIYANKA GOEL** AIR 369 | CSE 2022

Marks 290



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Workshop on 5th June 2023 @ 5:30 PM

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A STATE OF THE PARTY AND ADDRESS OF THE PARTY	September 1 to the second of t
Anthro. Foundation Course	15th June 2023
Anthro. Mains Test Series	18th June 2023
Anthro. Crash Course	22nd June 2023
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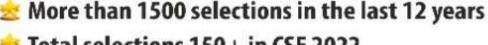


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**UMA HARATHI N** AIR-3 (CSE 2022)

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10th June 2023 at 4:00 PM

**Essay Test Series** 17th June 2023 at 4:00 PM

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AIR-31

AIR-60

PRIYANSHA GARG

AIR-03 **UMA HARATHI N** 

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SANSKRITI SOMANI SPARSH YADAV

MALIYE SRI PRANAV ANIRUDHA PANDEY UTKARSH UJJWAL PALLAVI MISHRA

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AIR-51

AIR-68

AIR-22 G V S PAVANDATTA

**AIR-24** SANDEEP KUMAR

AIR-53 **MUDRA GAIROLA** 

**AIR-73** 

AIR-54 RICHA KULKARN

AIR-79 **ANJALI GARG** 

#### Marks Matter

ETHICS HIGHEST TOPPERS' MARKS

PRADEEP SINGH Marks:157 CSE-2019

DEEPTI GARG Marks:146 CSE-2019

ATHAR AAMIR Marks:147 CSE-2015

ESSAY HIGHEST TOPPERS' MARKS

Marks: 130 | DIVYA PANT (CSE-2022)

AVNINDRA KUMAR Marks:160 CSE-2017

MANUJ JINDAL Marks:158 CSE-2016

SURAJ K RAI Marks: 156 CSE-2017

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