# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>SL. NO.</th>
<th>TOPIC</th>
<th>PAGE NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>ECONOMY</td>
<td>2</td>
</tr>
<tr>
<td>II</td>
<td>ECOLOGY &amp; ENVIRONMENT</td>
<td>6</td>
</tr>
<tr>
<td>III</td>
<td>GOVERNMENT SCHEMES AND PROGRAMMES</td>
<td>14</td>
</tr>
<tr>
<td>IV</td>
<td>SCIENCE AND TECHNOLOGY</td>
<td>20</td>
</tr>
<tr>
<td>V</td>
<td>INTERNATIONAL RELATIONS AND ORGANIZATIONS</td>
<td>27</td>
</tr>
<tr>
<td>VI</td>
<td>POLITY</td>
<td>32</td>
</tr>
<tr>
<td>VII</td>
<td>HISTORY, ART &amp; CULTURE</td>
<td>44</td>
</tr>
<tr>
<td>VIII</td>
<td>STATES</td>
<td>49</td>
</tr>
<tr>
<td>IX</td>
<td>DEFENCE &amp; SECURITY</td>
<td>51</td>
</tr>
<tr>
<td>X</td>
<td>REPORTS &amp; INDICES</td>
<td>55</td>
</tr>
<tr>
<td>XI</td>
<td>MAPS/ PLACES</td>
<td>60</td>
</tr>
<tr>
<td>XII</td>
<td>Miscellaneous</td>
<td>65</td>
</tr>
</tbody>
</table>
1. Consider the following pairs:

<table>
<thead>
<tr>
<th>Country</th>
<th>Currency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turkey</td>
<td>Lira</td>
</tr>
<tr>
<td>South Africa</td>
<td>Naira</td>
</tr>
<tr>
<td>Argentina</td>
<td>Peso</td>
</tr>
</tbody>
</table>

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

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

Solution: b.

- Naira is Nigerian currency.
- “...The Indian rupee weakened past the 71 mark for the first time ever last Friday, registering a loss of about 10% of its value against the dollar since the beginning of the year. This makes the rupee the worst-performing currency in Asia. Other emerging market currencies, most notably the Turkish lira, the Argentine peso and the South African rand, have suffered much larger losses owing to a serious loss of confidence among investors...”

2. A Public Credit Registry will

1. Provide information on borrowings only from scheduled commercial banks and NBFCs.
2. Help improve India’s ranking in the World Bank’s Ease of Doing Business.

Select the correct answer using the code given below:

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

Solution: b.

- A comprehensive credit information repository covering all types of credit facilities (funded and non-funded) extended by all credit institutions – Commercial Banks, Cooperative Banks, NBFCs, MFIs – and also covering borrowings from other sources, including external commercial borrowings and borrowing from market, is essential to ascertain the total indebtedness of a legal or natural person. With technology acting as an enabler, this repository can make near real-time monitoring of credit risk possible and also address legitimate privacy concerns of the borrowers by making all access to a borrower’s information contained in the repository dependent on the borrower’s consent.

- By having a registry of all loans in the form of a PCR, and recording all material events for each loan during its life-cycle, the credit delivery system can be tuned more efficiently so that the populace not having access to formal credit, or with limited or no credit history, can be brought within its ambit. The resulting increase in credit flow to the MSME sector and the underserved populace could propel the Indian economy to a higher growth path. With a PCR in place, and with full coverage of credit market ensured by mandatory reporting, the ease in getting credit and in turn the ranking of India in the World Bank’s ease of doing business index would also likely to be improved.
3. Consider the following statements about Foreign Portfolio Investment:
   1. It is a part of a country's capital account and shown on its balance of payments.
   2. It is more liquid and risky than Foreign Direct Investment due to its volatile nature.

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

Solution: a.

- **Investopedia**: Foreign portfolio investment (FPI) consists of securities and other financial assets passively held by foreign investors. It does not provide the investor with direct ownership of financial assets and is relatively liquid depending on the volatility of the market.

- FPI is part of a country's capital account and shown on its balance of payments (BOP). The BOP measures the amount of money flowing from one country to other countries over one monetary year. It includes the country's capital investments, monetary transfers, and the number of exports and imports of goods and services.

- FPI lets an investor purchase stocks, bonds or other financial assets in a foreign country. Because the investor does not actively manage the investments or the companies that issue the investments, he does not have control over the securities or the business. However, since the investor’s goal is to create a quick return on his money, FPI is more liquid and less risky than FDI.

- In contrast, FDI lets an investor purchase a direct business interest in a foreign country. For example, an investor living in New York purchases a warehouse in Berlin so a German company can expand its operations. The investor’s goal is to create a long-term income stream while helping the company increase its profits.

**Improvisation:** TH;

4. ‘Damocles’ gauge, recently in the news, is used to assess/measure the

(a) Purchasing power parity between two currencies.
(b) Boom in construction activity which serves as a forewarning of an economic slump.
(c) Quality of investments made by foreign institutional investors.
(d) Risk of exchange rate crises.

Solution: d.

- Seven countries, including Sri Lanka, Pakistan and Turkey, are at risk of exchange rate crises as investors re-assess their risks following the contagion in Argentina and Turkey, a new index by Nomura says.

- According to the global financial services major, emerging markets are under pressure as investors re-assess the risks amid monetary policy normalisation in developed markets, trade protectionism and China’s economic slowdown.

- A score above 100 suggests a country is vulnerable to an exchange rate crisis in the next 12 months, while a reading above 150 signals a crisis could erupt at any time. As per the index Sri Lanka has a score of 175, followed by South Africa (143), Argentina (140), Pakistan (136), Egypt (111), Turkey (104) and Ukraine (100). India’s Damocles score stood at 25.

**TH:**
5. Consider the following statements about Masala bonds, recently in the news:
   1. These are issued by Indian firms in dollar denomination to attract funds from abroad so as to bypass the problem of volatility of the Indian rupee.
   2. The International Finance Corporation was the first to issue a ‘Green Masala Bond’, meant to address climate change in India.

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

Solution: b.

August, 2015 (IFC) – IFC issued a 5-year green Masala bond on the London Stock Exchange, the first green bond issued in the offshore rupee markets. The bond raised 3.15 billion rupees for private sector investments that address climate change in India. The IFC green Masala bond is issued under IFC’s $3 billion offshore rupee Masala bond program.

FE: What are Masala Bonds?

- Masala bonds are the bond which are issued by the Indian firms (in rupee denomination) to foreign investors with an aim to attract funds for projects. The Indian firms have since long availed loans in international credit markets in different foreign currencies. However, a risk is always attached with such borrowings including risk of having to pay more while repaying its debt, or while servicing the interest on such borrowings if the rupee weakened.

- The demand for masala bonds from offshore investors is generally driven by the stability of the rupee. In an environment where the rupee is under pressure, the foreign investor are unlikely to increase portfolio of rupee-denominated assets.

- When masala bonds are issued in the foreign markets, the risk gets transferred to the investors who subscribe to them, taking into account the growth prospects of the country and the issuing company as well as the strength of the rupee. From the issuer’s perspective, it means cheaper borrowings compared to raising funds in India besides diversifying its sources of fund-raising.

6. The current account records
   1. Exports and imports in both goods and services.
   2. All international purchases and sales of stocks and bonds.
   3. Transfer payments.

Select the correct answer using the code given below:

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

Solution: d.

- The current account records exports and imports in goods and services and transfer payments.
- The capital account records all international purchases and sales of assets such as money, stocks, bonds, etc.

NCERT: Introductory macroeconomics, Pg.78 In the news: Current Account Deficit issue
7. Consider the following statements about Algorithmic trading:
   1. Also known as black-box trading, it is the process of using computers programmed to follow a defined set of instructions for placing a trade in order to generate profits at a speed and frequency that is impossible for a human trader.
   2. It is banned in India.

   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

   Solution: a.

   **THL:** Algo trades were introduced in India in 2009. It accounts for 35-40 per cent of turnover on the Indian exchanges.

   **Investopedia:** Algorithmic trading (automated trading, black-box trading or simply algo-trading) is the process of using computers programmed to follow a defined set of instructions (an algorithm) for placing a trade in order to generate profits at a speed and frequency that is impossible for a human trader. The defined sets of rules are based on timing, price, quantity or any mathematical model. Apart from profit opportunities for the trader, algo-trading makes markets more liquid and makes trading more systematic by ruling out the impact of human emotions on trading activities... But they have their flip side too. Algo trades have often been blamed for wild swings and flash crashes in the market.

   Source/Improvisation: TH;
II. ECOLOGY & ENVIRONMENT

1. The Nilgiri Tahr is
   1. A critically endangered species.
   2. Distributed across all states in which the western ghats are spread.

   Select the correct answer using the code given below:
   (a) 1 only
   (b) 2 only
   (c) Both 1 and 2
   (d) Neither 1 nor 2

   Solution: d.

   - The present distribution of the Nilgiri tahr (endangered) is limited to approximately 5% of the Western Ghats in southern India, in Kerala and Tamil Nadu in southern India, although not along the border between these two states. At the beginning of this century the range of tahr probably extended northward at least to the Brahmagiri hills of southern Karnataka. The animals are more or less confined to altitudes of 1,200 to 2,600 meters.

2. The home of the endangered brow-antlered deer in India is
   (a) Andaman and Nicobar Islands
   (b) Keoladeo National Park
   (c) Keibul Lamjao National Park
   (d) Jim Corbett National Park

   Solution: c.

   - WWF: Sangai, or the brow-antlered deer aka dancing deer, was believed to be almost extinct by 1950, but six individuals were spotted in 1953 and the State of Manipur has protected the species to increase the population to 204.

   - TH: Found only Manipur’s Bishnupur district (where the Keibul Lamjao NP is) — their number today is 260, according to a joint census conducted by the Forest Department and wildlife enthusiasts in March 2016.

3. What are the threats posed to the survival of the endangered brow-antlered deer in India?
   1. Inbreeding depression
   2. Habitat loss due to flooding of habitat caused by an artificial reservoir
   3. Poaching
   4. Invasion of non-native plants like Paragrass

   Select the correct answer using the code given below:
   (a) 1, 2 and 3 only
   (b) 1 and 3 only
   (c) 2 and 4 only
   (d) 1, 2, 3 and 4

   Solution: d.
• **Wikipedia:** Inbreeding depression is the reduced biological fitness in a given population as a result of inbreeding, or breeding of related individuals. Population biological fitness refers to an organism’s ability to survive and perpetuate its genetic material. Inbreeding depression is often the result of a population bottleneck.

• **WWF:** Sangai faces threat from steadily degenerating habitat of phumdi as a result of continuous inundation and flooding caused due to artificial reservoir. Water quality of the reservoir is degrading due to pollution and stoppage of nutrient supply. There is also invasion of non-native plants like Paragrass. There has been decrease in area of phumdi from 31.60 km² in 1993 to 23.72 km² in 2010.

• Sangai also faces threats of diseases from the livestock, inbreeding depression and poaching.

Improvisation: TH;

4. Leptospirosis, recently in the news, is
   1. A viral disease.
   2. A neglected tropical disease.
   3. Predominantly transmitted from person-to-person by way of exchange of bodily fluids.

Select the correct answer using the code given below:
(a) 1 and 2 only
(b) 2 only
(c) 1 and 3 only
(d) 1, 2 and 3

**Solution:** b.

• **WHO:** Leptospirosis is a bacterial infection in rodents and other wild and domesticated species, and humans. Rodents are implicated most often in human cases. Humans become infected through direct contact with the urine of infected animals or with a urine-contaminated environment. The bacteria enter the body through cuts or abrasions on the skin, or through the mucous membranes of the mouth, nose and eyes. Person-to-person transmission is rare.

In the news: TH;

5. Consider the following statements about ‘The Ocean Cleanup’, recently in the news:
   1. It is a policy advocacy organisation for governments in the western world for ways and means to reduce plastic waste generation.
   2. The organisation was instrumental in recently getting the UN to adopt a resolution to completely stop plastic waste from entering the oceans.

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

**Solution:** d.

• The **Ocean Cleanup** is a **non-profit organization**, developing advanced technologies to rid the world’s oceans of plastic.

• Every year, millions of tons of plastic enter the ocean. A significant percentage of this plastic drifts into large systems of circulating ocean currents, also known as gyres. Once trapped in a gyre, the plastic will break down into microplastics and become increasingly easier to mistake for food by sea life.
Going after it with vessels and nets would be costly, time-consuming, labor-intensive and lead to vast amounts of carbon emission and by-catch. That is why The Ocean Cleanup is developing a passive system, moving with the currents – just like the plastic – to catch it. The system consists of a 600-meter-long floater that sits at the surface of the water and a tapered 3-meter-deep skirt attached below. The floater provides buoyancy to the system and prevents plastic from flowing over it, while the skirt stops debris from escaping underneath. As the system moves through the water, the plastic continues to collect within the boundaries of the U-shaped system. (Image: On the left is the cross-section of the 600-m long floater; The floater is shown on the right)

6. Which of the following waters are recognized by the International Whaling Commission as whaling sanctuaries?
   1. South Atlantic Ocean
   2. Southern Ocean
   3. Indian Ocean
   4. Arctic Ocean

Select the correct answer using the code given below:

(a) 1 and 2  
(b) 2 and 3  
(c) 3 and 4  
(d) 2 and 4

Solution: b.

A proposal to create a whale sanctuary in the South Atlantic Ocean has been defeated at an International Whaling Commission (IWC) meeting in Brazil. Japan and several other pro-whaling countries voted against the proposal, causing it to fall short of the two-thirds majority it needed to pass. The IWC already recognises two whaling sanctuaries – one in the Indian Ocean and the other in the waters of the Southern Ocean around Antarctica.

7. It has been listed as Critically Endangered by IUCN, and was recently spotted for the third time this century in the East Godavari River Estuarine Ecosystem region. It is identified by the black tips of dorsal, pectoral and Tai fins. It is the

(a) Ganges Shark  
(b) Pondicherry Shark  
(c) Knife-tooth Sawfish  
(d) Large-tooth Sawfish
Solution: b.

- Scientifically known as Carcharinus hemiodon, the Pondicherry Shark belongs to the Carcharhinidae family with a growth of 3.3 feet.

8. Recently in the news, the flightless elephant bird that went extinct about a thousand years ago were a common sight in
   (a) Sri Lanka
   (b) Myanmar
   (c) Madagascar
   (d) Galápagos Islands

Solution: c.

- Elephant birds were once a common sight on Madagascar.
- They weighed at least half a tonne, stood at around 3m tall and laid giant eggs, which were bigger even than those of the dinosaurs (see image: the giant egg is equivalent in volume to 150 chicken eggs).
- The elephant birds, Aepyornis and Mullerornis, lived among other remarkable species on the island, including giant lemurs, which also died out. There are a number of theories about why and when this happened, and how much humans were involved.
- Humans seem to have coexisted with elephant birds and other now-extinct species for over 9,000 years, apparently with limited negative impact on biodiversity for most of this period, which offers new insights for conservation today.

In the news (BBC): Prehistoric humans are under suspicion of wiping out the largest birds that ever lived after fossilised bones were discovered with telltale cut marks. According to scientists, it’s evidence that the elephant birds of Madagascar were hunted and butchered for food. The remains have been dated to about 10,000 years ago. Until now, the first settlers were thought to have arrived on the island about 2,500 to 4,000 years ago. This does push back the date of human arrival by 6,000 years, at least.

9. The C40 Cities group is an umbrella organisation that co-ordinates the climate change activities of 96 major urban centres around the world. Indian cities that are part of this network include
   1. Mumbai
   2. Bengaluru
   3. Kolkata
   4. Chennai
   5. Delhi
   6. Jaipur
Select the correct answer using the code given below:

(a) 1, 3, 4 and 5 only
(b) 2, 4 and 6 only
(c) 1, 2, 3, 4, 5 and 6
(d) None of the above

Solution: c.

These are the six Indian cities (mentioned in the question) that are part of the C40 initiative.

In the news (BBC): With many countries struggling to cut their carbon, new data suggests that major cities are making substantial strides to stem their emissions. Twenty-seven cities (no Indian city is on this list, but these 27 cities are part of the C40 initiative) saw CO$_2$ peak in 2012 and then go into decline. Those emissions are now at least 10% lower than at their zenith. As well as moving to green energy, the cities have provided affordable alternatives to private cars. Emissions declined by 2% every year on average, while their economies expanded by 3% annually.

About C40: It is a network of the world’s megacities committed to addressing climate change. C40 supports cities to collaborate effectively, share knowledge and drive meaningful, measurable and sustainable action on climate change.

C40 Cities:

10. Which one of the following statements about fungi is not true?
   (a) Fungi are in a kingdom of their own but are closer to animals than plants.
   (b) The IUCN Red List has evaluations of the conservation status of some types of fungi.
   (c) Fungi can be used to turn crop waste into bioethanol.
   (d) All known fungi are free-living and not in either parasitic or symbiotic relationship with plants or animals.

Solution: d.

Britannica: Many fungi are free-living in soil or water; others form parasitic or symbiotic relationships with plants or animals.

BBC: Many people are familiar with edible mushrooms or the mould behind penicillin. But fungi have a range of vital roles, from helping plants draw water and nutrients from the soil to medicines that can lower blood cholesterol or enable organ transplants. Fungi also hold promise for breaking down plastics and generating new types of biofuels. But they have a darker side: devastating trees, crops and other plants across the world, and wiping out animals such as amphibians.

Only 56 types of fungi have been evaluated for the IUCN Red List, compared with more than 25,000 plants and 68,000 animals.

11. Consider the following statements about the fall armyworm, a native of the Americas, that has recently been in the news:
    1. The moth is known to be able to fly distances of more than a thousand kilometres.
    2. Biological control of this moth is not possible in India.
    3. It is a pest that particularly affects the paddy crop.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) None of the above
Solution: a.

**TH (from August):** The Indian Council for Agricultural Research (ICAR) has sounded the alarm after the invasive agricultural pest **Fall Armyworm** (*Spodoptera frugiperda*) was discovered in Karnataka this July. A major **maize pest** in North America, the Fall Armyworm arrived in Africa in 2016. Since then, it has threatened the continent’s maize crop, a staple which feeds 300 million people. The Karnataka finding is the first report of the pest in Asia. Even though the pests reported in Karnataka are only feeding on maize and sorghum at the moment, they are likely to spread to other crops. The pest feeds on around 100 different crops, such as vegetables, rice, and sugarcane.

**TH:** There are several reasons why the armyworm is thriving in Africa: it reproduces rapidly, and the continent’s tropical and sub-tropical climates allow it to feed all year round. In contrast, fall armyworms die in Canada’s frigid winters. So, each summer, new populations of the moth migrate to Southern Canada from warmer states in the U.S. like Texas. Such migration isn’t hard for them; the *Spodoptera moth* is known to be able to fly around **1,400 km**. This is another reason why it spread so quickly to new countries after it landed on African shores.... In August this year, the **Directorate of Plant Protection, Quarantine and Storage** issued an advisory to the agricultural departments of the States affected by the fall armyworm. It called for extensive surveys to track the pest’s spread. It also named a parasitoid that could be released to kill the eggs of the caterpillar.

12. Consider the following statements about hornbills in India:
   1. The north-eastern region has the highest diversity of Hornbill species.
   2. No hornbill is critically endangered.

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

Solution: c.

- **No hornbill (In India) is critically endangered.** The north-eastern region has the highest diversity of Hornbill species (In India).

  [http://www.hornbills.in](http://www.hornbills.in): 9 species of hornbills are found in India. Among them, the narcondam hornbill and rufous-necked hornbill are considered endangered.

  **TH:** A citizen science initiative of documenting Indian hornbills is providing valuable inputs for the conservation of the unique bird. The data on hornbill presence outside protected areas would be be crucial in identifying and protecting their habitats from possible threats and development projects, scientists said.

- The **Hornbill Watch initiative** ([www.hornbills.in](http://www.hornbills.in)) is an interactive web interface that allows a person to report on hornbills anywhere in India. People can record the observation of a live hornbill, note its call or report a dead, hunted or captive bird.

13. Primary ecological successions is likely to occur in a region in which
   1. Lava flows have occurred.
   2. Rocks are left from a retreating glacier.
   3. Fires have occurred.

Select the correct answer using the code given below:

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3
Solution: a.

- **Ecological succession**, the process by which the structure of a biological community evolves over time. Two different types of succession—primary and secondary—have been distinguished. Primary succession occurs in essentially lifeless areas—regions in which the soil is incapable of sustaining life as a result of such factors as lava flows, newly formed sand dunes, or rocks left from a retreating glacier. Secondary succession occurs in areas where a community that previously existed has been removed; it is typified by smaller-scale disturbances that do not eliminate all life and nutrients from the environment.

- **Secondary succession** follows a major disturbance, such as a fire or a flood. The stages of secondary succession are similar to those of primary succession; however, primary succession always begins on a barren surface, whereas secondary succession begins in environments that already possess soil.

TH;

14. Consider the following statements about the cocoa plant:
   1. It needs humid tropical climates and the shade of rainforests for its growth.
   2. In India, it is mainly cultivated in Meghalaya and South Indian states.

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

Solution: a.

**BBC**: *Cocoa*, the delicate plant behind chocolate needs **humid tropical climates** and **shades of rainforests**, which limits areas where you can grow it. Leading regions are found in **West Africa**, with **Ivory Coast** and **Ghana** alone contributing to more than 50% of the entire world’s production... India is currently one of the fastest-growing chocolate markets, with demand steadily rising over the past years. In 2016, over 228,000 tonnes were consumed, an increase of 50% in comparison to 2011.

- **Cocoa cultivation in India**: Cocoa plant is a small (4 to 8 m height) **evergreen tree**. In India, it is mainly cultivated in **Karnataka, Kerala** and **Tamil Nadu** mainly as intercrop with Areca nut and Coconut.

- It can be grown up to 300 m above mean sea level. The plants need equitable climate with **well distributed rainfall**. The temperature range of **15°-39°C** with optimum of **25°C** is considered ideal.

- Cocoa requires **deep and well drained soils**. Cocoa was evolved as an under-storey crop in the Amazonian forests. Thus commercial cultivation of cocoa can be taken up in plantations where 50 per cent of light is ideally available. In India, coconut and arecanut gardens are suited best for cultivating Cocoa. Under arecanut 30-50% of sunlight penetrates through their canopy which can be intercepted by cocoa.

15. Which of the following Indian sites have been designated as Wetlands of International importance under the Ramsar Convention?

   1. Sasthamkotta lake
   2. Surinsar-Mansar lakes
   3. Vembanad-Kol wetland
   4. Rangdum wetlands
Select the correct answer using the code given below:

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

Solution: a.

- Rangdum Wetlands is not a Ramsar site. The other three are.

Wikipedia Ramsar Sites India; PDF: Ramsar Sites India; Ramsar Sites Map; In the news: TH;
1. “ARIIA”, recently in the news, is
   (a) The Gaganyaan capsule that will carry Indian astronauts.
   (b) A quick plastic-degrading technology developed by the Indian Institute of Science.
   (c) An innovation-based ranking framework for higher educational institutions.
   (d) A type of bacteria that can digest pesticides.

Solution: c.

- The primary mandate of Innovation Cell is to encourage, inspire and nurture young students by exposing them to new ideas and processes resulting in innovative activities in their formative years fostered through Network of Innovation clubs in Higher Educational Institutions.
- To ensure that Innovation is primary fulcrum of all HEIs, the ‘Atal Ranking of Institutions on Innovation Achievements (ARIIA)’ has been introduced to systematically rank education institutions and universities primarily on innovation related indicators. ARIIA considers all major indicators which are commonly used globally to rank most innovative education institutions/ universities in the world.

PIB;

2. Under Price Support Scheme (PSS), the procurement of which of the following crops is undertaken?
   1. Copra
   2. Groundnut
   3. Pulses
   4. Cotton
   5. Tobacco

   Select the correct answer using the code given below:
   (a) 1, 3, 4 and 5
   (b) 2 and 3 only
   (c) 1, 4 and 5 only
   (d) 1, 2, 3 and 4 only

Solution: d.

This is a clarification for the first question of the quiz on 11th August (Click HERE).

- Under Price Support Scheme (PSS), the procurement of oil seeds (this includes groundnuts and copra), pulses and cotton through Central Nodal Agencies at the Minimum Support Price (MSP) is also undertaken. This scheme is implemented at the request of the concerned State Government which agrees to exempt the procured commodities from levy of mandi tax and assist central nodal agencies in logistic arrangements including gunny bags, provide working capital for state agencies, creation of revolving fund for PSS operations etc. as required under the Scheme guidelines.
The basic objectives of PSS are to provide remunerative prices to the growers for their produce with a view to encourage higher investment and production and to safeguard the interest of consumers by making available supplies at reasonable prices with low cost of intermediation.

PIB (2017): Mechanism to procure bumper crops; NAFED Price Support Scheme; In the news: PM-AASHA;

3. Within the new and overarching policy of PM-AASHA, pulses can be procured under
   1. Price Support Scheme
   2. Price Deficiency Payment Scheme
   3. A scheme for procurement by private agencies

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

Solution: a.

- The umbrella policy — Pradhan Mantri Annadata Aay Sanrakshan Abhiyan (PM-AASHA) clubs together an existing procurement scheme (PSS) with newly introduced options — meant for oilseeds only — of additional procurement by private traders or a cash payment scheme.

In the news: PM-AASHA;

4. Consider the following statements about the Members of Parliament Local Area Development Scheme (MPLADS):
   1. Rupees 5 crore is allotted to each Member of Parliament (MP) once during their term to be spent on projects of their choice in their constituency.
   2. It is funded and administered through the Union Ministry of Home Affairs.

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

Solution: d.

- The MPLADS allots ₹5 crore per year to each Member of Parliament (MP) to be spent on projects of their choice in their constituency. The scheme is funded and administered through the Union Ministry of Statistics and Programme Implementation (MoSPI). Projects are to be recommended to and implemented by the district-level administration.

In the news (TH): Noting that ₹12,000 crore of the Members of Parliament Local Area Development Scheme (MPLADS) funds remains unspent, the Central Information Commission (CIC) has asked the Lok Sabha Speaker and the Rajya Sabha Chairman to come out with a legal framework to ensure its transparency and hold parliamentarians and political parties accountable for their obligations under the scheme.
5. Consider the following statements about the Directorate of Plant Protection, Quarantine and Storage:

1. It has been instituted under the Customs Act of 1962.
2. The Principal Commissioner of Customs at any port of entry into India is the ex-officio officer of Plant Protection, Quarantine and Storage of that port.

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

Solution: d.

- This is relevant because issues related to invasive species have frequently been in the news in recent times.
- The first line of defence against invasive species is a quarantine system, under which imports of grains and plants that can host invasive are inspected at shipping ports, airports and land border crossings. In India, this responsibility lies with the Directorate of Plant Protection, Quarantine & Storage, with its headquarters in Faridabad, Haryana... To get into India, the fall armyworm would have either had to fly here, or make it past India’s plant quarantine system. This system is built around the Plant Quarantine (Regulation of Import into India) Order of 2003. The order, in turn, is notified under an Act that is over a century old: The Destructive Insects and Pests Act of 1914... because the Destructive Insects and Pests Act is subsidiary to the Customs Act, 1962, quarantine officers must wait for customs officers to flag suspicious goods before they can check them. In other words, quarantine officials do not have the power to search and seize in India.

This TH Article throws light on India’s quarantine regime and its deficiencies.

6. The National Technical Board on Nutrition, set up by the Union Ministry of Women and Child Development, is chaired by

(a) The Minister of State, Ministry of Women and Child Development
(b) The Chairperson, Indian Council for Medical Research
(c) The Prime Minister
(d) A member of NITI Aayog

Solution: d.

TH: India’s top nutrition panel has recommended that severely malnourished children must be fed freshly cooked food prepared from locally available cereals, pulses and vegetables, and distributed by anganwadi centres, as part of the country’s first-ever guidelines for nutritional management of children suffering from severe acute malnutrition (SAM).

MoWCD: Constitution of NTBN;

7. The National Digital Communications Policy 2018 aims to

1. Provide 10Gbps connectivity to all Gram Panchayats by 2022.
2. Provide universal broadband connectivity at 50Mbps to every citizen.
3. Expand Internet of Technology ecosystem to 5 billion connected devices.

Select the correct answer using the code given below:

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3
Solution: d.

PIB: The policy aims to

- Provide universal broadband connectivity at 50 Mbps to every citizen;
- Provide 1 Gbps connectivity to all Gram Panchayats by 2020 and 10 Gbps by 2022;
- Ensure connectivity to all uncovered areas;
- Attract investments of USD 100 billion in the Digital Communications Sector;
- Train one million manpower for building New Age Skill;
- Expand IoT ecosystem to 5 billion connected devices;
- Establish a comprehensive data protection regime for digital communications that safeguards the privacy, autonomy and choice of individuals
- Facilitate India’s effective participation in the global digital economy;
- Enforce accountability through appropriate institutional mechanisms to assure citizens of safe and
- Secure digital communications infrastructure and services.

8. Consider the following statements:
   1. AGMARK is legally backed by the Bureau of Indian Standards Act, 1986.
   2. The Directorate of Marketing and Inspection, Ministry of Commerce and Industry is responsible for the implementation of AGMARK certification scheme.

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

Solution: d.

AGMARK is a certification mark employed on agricultural products in India, assuring that they conform to a set of standards approved by the Directorate of Marketing and Inspection, an agency of the Ministry of Agriculture and Farmer Welfare. The AGMARK is legally enforced in India by the Agricultural Produce (Grading and Marking) Act of 1937 (and amended in 1986).

Agritech.tnau; DMI; Improvisation: PIB;

9. The recently launched Jan Dhan Darshak mobile application serves as a
   (a) Locator of financial service touch points
   (b) Grievance redressal mechanism
   (c) Financial literacy tool
   (d) None of the above

Solution: a.

PIB: The Department of Financial Services (DFS), Ministry of Finance and National Informatics Centre (NIC) has jointly developed a mobile app called Jan Dhan Darshak as a part of financial inclusion (FI) initiative. As the name suggests,
this app will act as a guide for the common people in locating a financial service touch point at a given location in the country.

- While locator apps are a common feature for many individual banks and financial service providers, in this era of inter-operable banking services, Jan Dhan Darshak app will be in a unique position to provide a citizen centric platform for locating financial service touch points across all providers such as banks, post office, CSC, etc.

10. Which among the following organisations/events/forums were established with the intention to develop and scale up renewable energy initiatives?

   1. IORA
   2. REINVEST
   3. ISA
   4. IONS

   Select the correct answer using the code given below:

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

Solution: b.

- The Indian Ocean Rim Association is an inter-governmental organisation which was established in 1997. IORA strengthens cooperation and dialogue with Member States by promoting sustained growth and balanced development within the Indian Ocean region.

- REINVEST’s objective is to showcase the Government of India’s commitment to the development and scaling up of renewable energy in India to meet the national energy requirement in a socially, economically and ecologically sustainable manner. RE-Invest will be the first major platform in India for investment promotion in this sector, and will connect the global investment community with renewable energy stakeholders in India.

- ISA is the International Solar Alliance.

- The Indian Ocean Naval Symposium, commonly known as IONS, is a forum to increase maritime cooperation among the littoral states of the Indian Ocean Region.

PIB:

11. NeVA, recently in the news, will enable citizens to access

   (a) Proceedings of all legislatures of the country.
   (b) Employment-related information across all states.
   (c) Information related to services offered by empaneled hospitals.
   (d) Weather forecasts at block-level across all states.

Solution: a.

PIB: National e-Vidhan Application (NeVA), an initiative by the Ministry of Parliamentary Affairs, aims to make all the Legislatures of the country paperless by making the proceedings of the Houses digital. It is an attempt to provide the information about the functioning of House to the common citizen at the click of a button. The NeVA app along with the website, will act as a repository of data related to the business of all Legislatures in the country in a uniform manner.
12. The Ministry of Housing and Urban Affairs, under the aegis of Swachh Bharat Mission – Urban, recently launched the #LooReview campaign in partnership with
(a) Twitter
(b) Google
(c) Sulabh International
(d) Facebook

Solution: b.

PIB: The Ministry of Housing and Urban Affairs, under the aegis of Swachh Bharat Mission – Urban (SBM – U), has partnered with Google to launch the Loo Review campaign to encourage all local guides in India to rate and review public toilets on Google Maps. This campaign is part of a feature which allows all citizens to locate public toilets in their cities on Google Maps, Search and the Assistant and also provide feedback on the same. 500+ cities in India with more than 30,000 toilets with the name of “SBM Toilet” are currently live on Google Maps. Local Guides are people who share reviews, photos, and knowledge on Google Maps.
IV. SCIENCE AND TECHNOLOGY

1. The preservation process employed to create leather from animal hide is a chemical treatment called tanning. Tanning agents include
   1. Bark of some trees
   2. Mineral salts such as chromium
   3. Some fish oils

   Select the correct answer using the code given below:
   (a) 1 and 2 only
   (b) 2 and 3 only
   (c) 1 and 3 only
   (d) 1, 2 and 3

   Solution: d.

   • Britannica: The term hide is used to designate the skin of larger animals (e.g., cowhide or horsehide), whereas skin refers to that of smaller animals (e.g., calfskin or kidskin). The preservation process employed is a chemical treatment called tanning, which converts the otherwise perishable skin to a stable and nondecaying material. Tanning agents include vegetable tannins (from sources such as tree bark), mineral salts (such as chromium sulfate — as much as 85% of the world’s leather production is chrome-tanned using Chromium III salt) and fish or animal oils.

   Improvisation: TH;

2. Residents of the International Space Station witness a sunrise every
   (a) 90 minutes
   (b) 2 hours
   (c) 12 hours
   (d) 24 hours

   Solution: a.

   • The Atlantic: The International Space Station travels at a brisk 17,100 miles per hour. That means it orbits Earth every 90 minutes — so it sees a sunrise every 90 minutes. Thus, every day, the residents of the ISS witness 16 sunrises and 16 sunsets.

   • Additional Information: The International Space Station (ISS) Program's greatest accomplishment is as much a human achievement as it is a technological one — how best to plan, coordinate, and monitor the varied activities of the Program's many organizations. An international partnership of space agencies provides and operates the elements of the ISS. The principals are the space agencies of the United States, Russia, Europe, Japan, and Canada.

   Improvisation: BBC;

3. With reference to the Genetically Modified mustard (GM mustard) developed in India, consider the following statements:
   1. GM mustard has the genes of a soil bacterium that give the plant the property of pest-resistance to a wide variety of pests.
   2. GM mustard has the genes that allow the plant cross-pollination and hybridization.
   3. GM mustard has been developed jointly by the IARI and Punjab Agricultural University.
Which of the statements given above is/are correct?

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

Solution: b.

- While the same question is unlikely to be repeated, it gives us an idea of the depth of information one must be aware of with regard to an issue like this.

- S2: It has mainly two genes (‘barnase’ and ‘barstar’) that allow for cross-pollination and hybridisation in mustard, which is largely a self-pollinating plant because of its individual flowers containing both female and male reproductive organs. Hence, statement 2 is correct.

- S3: GM mustard was developed by scientists at Delhi University and the project was part-funded by the Department of Biotechnology, a division of the Science Ministry.

TH; Q3, CS(P) 2018;

4. ‘Atmospheric Chemical Disequilibrium’, sometimes in the news, is seen in the context of
   (a) Climate change trends
   (b) Detection of extraterrestrial life
   (c) Disruption of the ionosphere
   (d) None of the above

Solution: b.

- The basis for the detection of signs (of what scientists call “biosignatures” in the atmospheres of exoplanets) may lie in James Webb Space Telescope being so sensitive to light that it could pick up so-called “atmospheric chemical disequilibrium”. It may not be a catchy term, but it is an idea with a long heritage, promoted by celebrated scientists James Lovelock and Carl Sagan.

- The reasoning is that if all life on Earth disappeared tomorrow, the many gases which make up our atmosphere would undergo natural chemical reactions, and the atmosphere would slowly revert to a different chemical mixture. It is continually held away from this state by organisms on our planet expelling waste gases as they live.

- Because of this, searching for signs of oxygen (or its chemical cousin ozone) has long been thought to be a good way of finding life. But this does rest on the assumption that extraterrestrial life runs by the same biological rules as our own. It might not. Therefore, assessing atmospheric chemical disequilibrium – looking for other gases and figuring out how far out of kilter from “normal” a planet’s atmosphere sits – could be key to finding alien life of any kind.

BBC; Washington.edu;

5. The James Webb Space Telescope is a successor to the Hubble Space Telescope. As currently scheduled, it will be launched in 2021. It is an international collaboration between NASA and
   1. European Space Agency
   2. Canadian Space Agency
   3. JAXA (Japan)
   4. Roscosmos (Russia)
Select the correct answer using the code given below:

(a) 1, 2 and 3 only
(b) 1 only
(c) 1, 2, 3 and 4
(d) None of the above

Solution: a.

- The James Webb Space Telescope (sometimes called JWST or Webb) will be a large infrared telescope with a 6.5-meter primary mirror (about 6 times larger in area than the Hubble Space Telescope). JWST is led by NASA but is a joint venture with the European and Canadian space agencies.

- JWST will be the premier observatory of the next decade, serving thousands of astronomers worldwide. It will study every phase in the history of our Universe, ranging from the first luminous glows after the Big Bang, to the formation of solar systems capable of supporting life on planets like Earth, to the evolution of our own Solar System.

BBC; NASA: JWST;

6. The Kourou spaceport, wherefrom several European Space Agency satellites are launched, is located in
(a) Italy
(b) Fiji
(c) Spain
(d) French Guiana

Solution: d.

- Kourou is a coastal town in north-central French Guiana. Kourou town assumed some importance after 1970 with the completion nearby of the European Launcher Development Organization’s Equatorial Space Range (subsequently the Guiana Space Centre of the European Space Agency). Available for use by all friendly nations for satellite launchings, it is used for research programs (such as weather studies) and for telecommunications.

Improvisation: BBC; Britannica;

7. Aeolus, launched recently by the ESA, will
   1. Be the first system to gather wind information all across the globe.
   2. Gather wind information from the ground up to 30km in altitude.
   3. Fire a powerful ultraviolet laser down into the atmosphere to enable it to record intended measurements.

Select the correct answer using the code given below:

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

Solution: d.

- At the moment, wind data comes from multiple but patchy sources, such as weather balloons.
• Aeolus will be the first system to gather wind information all across the globe, from the ground up to 30km in altitude. It will do this by firing a powerful ultraviolet laser down into the atmosphere. With the aid of a telescope and a sensitive detector, it will then look for the way the pulsed beam’s light is scattered back off air molecules, water droplets and dust particles.

• This should reveal basic details about air movement and numerical weather models will be adjusted to take account of it. Its maps are expected to bring significant improvements in the accuracy of medium-range forecasts – those that look a few days ahead.

BBC;

8. ICESat, recently in the news, is most appropriately related to
   (a) Neutrinos
   (b) “Commercial Off The Shelf” components
   (c) Polar glaciers and sea-ice
   (d) International Whaling Commission

Solution: c.

• The American space agency is about to put a laser in orbit to measure the condition of Earth’s ice cover. The satellite mission, called ICESat-2, should provide more precise information on how these frozen surfaces are being affected by global warming.

• Antarctica, Greenland and the ice floating on the Arctic Ocean have all lost volume in recent decades. ICESat-2 will track ongoing change in unprecedented detail from its vantage point some 500km above the planet.

• As the name suggests, ICESat-2 is a follow-on project. The original spacecraft flew in the 2000s and pioneered the laser measurement of the height of polar glaciers and sea-ice from space.

• Weighing half a tonne, the new laser system is one of the largest Earth-observation instruments ever built by NASA. It uses a technique called “photon counting”. It fires about 10,000 pulses of light every second. Each of those shots goes down to the Earth and bounces back up on a timescale of about 3.3 milliseconds. The exact time equates to the height of the reflecting surface.

• “We fire about a trillion photons (particles of light) in every shot. We get about one back,” says Cathy Richardson, who works on the team at NASA that developed the instrument. “We can time that one photon when it comes back just as accurately as when it left the instrument. And from that we can calculate a distance to about half a centimetre on the Earth.”

BBC;

9. Two satellites from the United Kingdom – NovaSAR and the S1-4 – were recently put into orbit by ISRO’s PSLV-C42. What specific purpose is the NovaSAR satellite intended to serve?
   (a) Make HD movies of the Earth’s surface.
   (b) Monitoring suspicious shipping activity.
   (c) High-repeat imagery – acquiring views of the same scene several times a day.
   (d) Urban planning and pollution monitoring.

Solution: b.

• NovaSAR has the ability to take pictures of the surface of the Earth in every kind of weather, day or night. The spacecraft will assume a number of roles but its designers specifically want to see if it can help monitor suspicious shipping activity. NovaSAR was joined on its rocket by a high-resolution optical satellite – that is, an imager that sees in ordinary light. Known as S1-4, this spacecraft will discern objects on the ground as small as 87cm across.
• It is important to be able to monitor large areas of the ocean – something we don’t do at the moment. We all saw with the Malaysian airline crash in the Indian Ocean the difficulty there was in monitoring that vast area. We can do that kind of thing with radar and NovaSAR is good for that.

TH; BBC;

10. In what ways is ESA’s Solar Orbiter (SolO) different from NASA’s Parker Solar Probe (Parker) ?
1. Parker will fly nearer to the solar surface than SolO.
2. Both will be taking pictures of the Sun’s surface, but SolO – unlike Parker – will also be taking pictures of the Sun’s poles.

Select the correct answer using the code given below:
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Solution: a.

BBC: SolO is going to fly to within 43 million km of the solar surface. Parker will do it by going even closer than SolO, to within 7 million km of the solar surface.

• SolO can make very similar measurements to Parker from its “gentler” vantage point. But, crucially, it will also be taking pictures. The ESA mission’s heatshield has peepholes that give telescopes an opportunity to spy the Sun’s broiling surface. Parker can’t do this. If any telescope tried to look past its shield, the hardware would rapidly melt in temperatures that exceeded 1,000°C.

• The European satellite is going to use a series of flybys of Venus to gravitationally manoeuvre itself into an inclined orbit so that it can look down on the Sun’s poles. This would be a first – we’ve never had pictures of these regions. Although we can’t see them, the poles are where the Sun’s magnetic field is really important. The Sun’s magnetic field is central to its dynamics; the magnetic field drives all the activity on the Sun.

• And at the end of it all, scientists should have a much clearer idea of the underlying motors for the Sun’s 11-year cycles of behaviour. That’s important because the biggest outbursts from our star will rattle the Earth’s magnetic field. In the process, communications may be disrupted, satellites in orbit around the planet can be knocked offline, and power grids will be vulnerable to electrical surges. Missions like SolO and Parker should improve the tools used for forecasting these kinds of disturbances.

11. The RemoveDebris project is most closely related to
(a) Great Pacific Garbage Patch
(b) Global Warming
(c) Solar storms
(d) Kessler’s syndrome

Solution: d.

• BBC: A British satellite has successfully deployed a net in orbit to demonstrate how to capture space debris. The event took place more than 300km above the Earth. It was part of a series of trials that will showcase different technologies to remove the redundant hardware now circling the Earth. Some 7,500 tonnes is said to be drifting aimlessly overhead, posing a collision hazard to operational missions.

• From earlier this year (TH): The Kessler Syndrome is a theory proposed by scientist Donald J. Kessler in 1978. It is a scenario where two colliding objects in space generate more debris which then cause a chain reaction of
collisions in low Earth orbit to an extent that it could render space activities such as a satellite launch unfeasible for many generations.

12. The terms FIELDS, WISPR, SWEAP and ISOIS mentioned in the news recently, are related to
   (a) Interlinking of rivers
   (b) Conservation of critically endangered species
   (c) Parker Solar Probe
   (d) Precision agriculture

Solution: c.

Instruments aboard the Parker Solar Probe (NASA):

- **Surveyor of the invisible forces**, the FIELDS instrument suite captures the scale and shape of electric and magnetic fields in the Sun’s atmosphere. FIELDS measures the electric field around the spacecraft with five antennas, four of which stick out beyond the spacecraft’s heat shield and into the sunlight, where they experience temperatures of 2,500 F. The 2-meter-long antennas are made of a niobium alloy, which can withstand extreme temperatures.

- The **Wide-Field Imager** for Parker Solar Probe is the only imaging instrument aboard the spacecraft. WISPR looks at the large-scale structure of the corona and solar wind (not the surface of the sun) before the spacecraft flies through it. A corona is an aura of plasma that surrounds the Sun and other stars. *The Sun’s corona extends millions of kilometres into outer space and is most easily seen during a total solar eclipse.*

- The **Solar Wind Electrons Alphas and Protons investigation**, or SWEAP, has two instruments that count the most abundant particles in the solar wind — electrons, protons and helium ions — and measure such properties as velocity, density, and temperature to improve our understanding of the solar wind and coronal plasma.

- The **Integrated Science Investigation of the Sun** — ISOIS, pronounced “ee-sis” and including the symbol for the Sun in its acronym — uses two instruments in one combined scientific investigation to measure particles across a wide range of energies. By measuring electrons, protons and ions, ISOIS will understand the particles’ lifecycles — where they came from, how they became accelerated and how they move out from the Sun through interplanetary space.

In the news: Parker Solar Probe; this mission is important because the spacecraft will fly through the Sun’s atmosphere as close as 3.8 million miles to our star’s surface, well within the orbit of Mercury and more than seven times closer than any spacecraft has come before. (Earth’s average distance to the Sun is 93 million miles.)

13. ‘Ryugu’, a term recently seen in the news, is an
   (a) Asteroid
   (b) Altcoin
   (c) Endangered coral species
   (d) Iceberg

Solution: a.

**BBC:** Japan’s Hayabusa-2 spacecraft despatched a pair of “rovers” to the 1km-wide space rock known as Ryugu. If all goes well, Hayabusa-2 will be the first spacecraft to successfully place robot rovers on the surface of an asteroid. Rover 1A and Rover 1B will move around by hopping in Ryugu’s low gravity; they will capture images of the surface and measure temperatures. The 1km-wide space rock known formally as 162173 Ryugu belongs to a particularly primitive type of asteroid, and is therefore a relic left over from the early days of our Solar System. Studying it could shed light on the origin and evolution of our own planet.

To read more about the mission, refer **BBC:**
14. According to the International Astronomical Union, a “dwarf planet” in the solar system is a celestial body that
(a) Is a satellite.
(b) Has a nearly round shape.
(c) Is not in orbit around the sun.
(d) Has cleared the neighbourhood around its orbit.

Solution: b.

According to the IAU, a “dwarf planet” in our solar system is a celestial body that
• is in orbit around the Sun,
• has sufficient mass for its self-gravity to overcome rigid body forces so that it assumes a hydrostatic equilibrium (that is, it has a nearly round shape),
• has not cleared the neighbourhood around its orbit, and
• is not a satellite.

IAU: Definition of Planet and Dwarf Planet; Source/improvisation: TH;
V. INTERNATIONAL RELATIONS AND ORGANIZATIONS

1. There are four ‘foundational agreements’ that the USA enters into with its defence partners. Which one among these four is India and the USA yet to sign?
   (a) Logistics Exchange Memorandum of Agreement
   (b) General Security Of Military Information Agreement
   (c) Communications and Information Security Memorandum of Agreement
   (d) Basic Exchange and Cooperation Agreement

Solution: d.

- From 2016 (TH): “India and the U.S on Monday signed the bilateral Logistics Exchange Memorandum of Agreement (LEMOA) that will give the militaries of both countries access to each other’s facilities for supplies and repairs…”
- COMCASA is one of the four ‘foundational agreements’ that the U.S. has entered into with India. So India has signed three of the four, the other two being GSOMIA (back in 2002) and LEMOA (2016).

2. Consider the following statements about the International Commission on Irrigation and Drainage:
   1. It maintains the Register of Heritage Irrigation Structures.
   2. It is affiliated to UNESCO.
   3. India is a member.

   Select the correct answer using the code given below:
   (a) 1 and 2 only
   (b) 2 and 3 only
   (c) 1 and 3 only
   (d) 1, 2 and 3

Solution: c.

- About: The International Commission on Irrigation and Drainage (ICID), established in 1950 is a leading scientific, technical, international not-for-profit, non-governmental organization. ICID is a professional network of experts from across the world in the field of irrigation, drainage, and flood management. The main mission is to promote ‘Sustainable agriculture water management’ to achieve ‘Water secure world free of poverty and hunger through sustainable rural development’.
- ICID initiated a few years ago, the Scheme for Recognition of Heritage Irrigation Structures (HIS) along the lines of UNESCO’s World Heritage Sites.

In the news: Heritage tag for 2 irrigation facilities in Telangana;

3. Webi is one of 12 villages in Middle and North Andamans where the minuscule Karen community lives. To set up home here, the Karens migrated some ninety years ago from
   (a) Myanmar
   (b) Thailand
   (c) Indonesia
   (d) Maldives
Solution: a.

- **TH:** The arrival of the Karens to the Andamans was serendipitous. A British priest in Myanmar was sailing back from the U.S. in the 1920s when he decided to stop in Port Blair to meet a cousin, who was then the chief commissioner here. On his return to Myanmar, he published a short note about a British scheme to sponsor a year’s rations for anyone willing to move to the isolated islands to work in the massive timber trade that had been started there.

- It was in April 1925 that the first batch of the Karens landed on these shores. A year later, another 50 families came. Webi, surrounded by forests and rivers, was chosen for its isolation: the community wanted to shield itself from ‘old enemies’ and potential new ones.

- Their isolation and reticence (Karens believe their name derives from the Burmese words for ‘shyness’ and ‘politeness’) have helped them preserve their culture through the tumultuous turns of history that shaped the islands: they have stayed untouched by the brutal, three-year Japanese regime (one elderly Karen said that it could be because “we looked like them, and so they trusted us”), by the skirmishes between the new mainland settlers and indigenous tribes (whose populations dwindled dramatically), by the exit of the British, and by the rapid building of settlements after Independence.

4. Consider the following statements:

   1. Serious breaches of international humanitarian law committed against civilians or enemy combatants during an international or domestic armed conflict, for which the perpetrators may be held criminally liable on an individual basis.

   2. Crimes such as murder, extermination, rape, persecution and all other inhumane acts of a similar character – willfully causing great suffering, or serious injury to body or to mental or physical health – committed as part of a widespread or systematic attack directed against any civilian population, with knowledge of the attack.

   3. Acts – that represent serious violations of the right to life, and the physical or mental integrity of the members of a group – as committed with intent to destroy, in whole or in part, a national, ethnical, racial or religious group, as such.

   In the same order, the statements above respectively describe the terms

   (a) War Crimes, Crimes against humanity and Genocide

   (b) Crimes against humanity, Genocide and War Crimes

   (c) Genocide, War Crimes and Crimes against humanity

   (d) War Crimes, Genocide and Crimes against humanity

Solution: a.

- The term **war crimes** refers to serious breaches of international humanitarian law committed against civilians or enemy combatants during an international or domestic armed conflict, for which the perpetrators may be held criminally liable on an individual basis.

- The notion **Crimes against Humanity** encompasses crimes such as murder, extermination, rape, persecution and all other inhumane acts of a similar character (wilfully causing great suffering, or serious injury to body or to mental or physical health), committed ‘as part of a widespread or systematic attack directed against any civilian population, with knowledge of the attack’.”

- The **crime of genocide** as defined in the Rome statute: “...any of the following acts committed with intent to destroy, in whole or in part, a national, ethnical, racial or religious group, as such.” The definition is followed by a
series of acts representing serious violations of the right to life, and the physical or mental integrity of the members of the group.

Definitions: UN OHCHR; TH;

5. The ‘Rome Statute’, a term seen sometimes in the news, is related to
   (a) Deep sea mining
   (b) The International Whaling Commission
   (c) The International Criminal Court
   (d) Genetics

Solution: c.

- Wikipedia: The Rome Statute of the International Criminal Court (often referred to as the International Criminal Court Statute or the Rome Statute) is the treaty that established the International Criminal Court (ICC). It was adopted at a diplomatic conference in Rome on 17 July 1998 and it entered into force on 1 July 2002.

In the news: TH;

6. India is a member of/has acceded to the
   1. Rome Statute
   2. European Bank for Reconstruction and Development
   3. International Whaling Commission

   Select the correct answer using the code given below:
   (a) 1 only
   (b) 1 and 3 only
   (c) 2 and 3 only
   (d) None of the above

Solution: c.

Earlier this year (TH): India has got the go-ahead to join the European Bank of Reconstruction and Development (EBRD), after shareholders of the London-based multilateral lender agreed to the country becoming its 69th member, enabling Indian companies to undertake joint investments in regions in which the EBRD operates.

Recently in the news (TH): “The Trump administration on Monday threatened tough action against the International Criminal Court should it try to prosecute Americans for alleged war crimes in Afghanistan. .. and India is not party to the Rome Statute (which established the ICC). Refer THIS article if you want to know why India has not ratified this treaty.

Recently in the news (TH): A proposal to create a whale sanctuary in the South Atlantic was defeated at a meeting in Brazil of the International Whaling Commission, amid a clash between countries that think whales can be hunted sustainably and others that want more conservation measures.

IWC members; State Parties to the Rome Statute;

7. The phrase “Ad hoc issue publics” sometimes appears in the news in the context of affairs related to
   (a) Online piracy
   (b) Social media
   (c) Nuclear non-proliferation
   (d) Trade wars
8. The New Southern Policy, often in the news, has been initiated by
   (a) Germany
   (b) USA
   (c) Nepal
   (d) None of the above

Solution: d.

TH: One of the major foreign policy initiatives of President Moon Jae-in of South Korea is the government’s ‘New Southern Policy’, with a goal of deepening ties with South East Asian nations as well as India and building an inclusive regional architecture in Asia.

Also, from July: TH;

9. The two-plus-one mechanism, sometimes in the news, appears in the context of affairs related to which of India’s neighbours?
   (a) Maldives
   (b) Bhutan
   (c) Nepal
   (d) Pakistan

Solution: c.

Until now, this mechanism has been proposed in the context of India-China-Nepal relations.

TH: “Nepal’s decision not to participate in the India-proposed military exercise of the Bay of Bengal group of countries is not a a snub to New Delhi, but rather it signals that a new set of rules need to be evolved that will meld the collective interests of India, Nepal and China, an official source said... the BIMSTEC military drill could have been construed as having an anti-China slant. “Before we participate in such an exercise, it would be prudent if such proposals were channelled through the two-plus-one mechanism that China backs, after the Wuhan informal summit in April between Chinese President Xi Jinping and Prime Minister Narendra Modi,” the source said....”

TH (From June): “The spirit of the Wuhan informal summit echoed strongly last week during the visit of Nepal Prime Minister K.P. Oli to Beijing, with China proposing a new dialogue mechanism that would also involve India.. An official source told The Hindu that the Chinese side proposed to Mr. Oli a “two plus one” format for dialogue. “This is different from a trilateral mechanism. Under the Chinese proposal, China and India can jointly conduct a dialogue with a third regional country,” the source said.. The Chinese initiative is not Nepal-specific. “My impression is that the two-plus one formulation is flexible and can be applied to any other country in South Asia,” the source said...”

10. Panmunjom, sometimes in the news, is mostly mentioned in the news as a/an
   (a) Truce village
   (b) Holy mountain
   (c) Nuclear test site
   (d) None of the above
Solution: a.

*Britannica*: P’anmunjom, a village in central Korea, lies in the demilitarized zone established after the Korean War. It was the location of the truce conference that was held for two years (1951–53) between representatives of the United Nations forces and the opposing North Korean and Chinese armies during the war. Subsequently, it has served as a meeting place for conferences between North and South Korea, including Red Cross conferences to establish means of communication and contact between people on either side of the truce line.

![Image: Seeking peace on the Peninsula]

**NORTH-SOUTH MEETINGS: THE TALE SO FAR**

<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
<th>Leaders</th>
<th>Highlights</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 13-15, 2000, Pyongyang</td>
<td>Kim Dae-jung meets Kim Jong-il</td>
<td>The leaders signed an accord to reduce tensions and boost efforts for reunification. It was the first time South Koreans were able to see live images from the North on television. It later emerged that about $500 million had been paid to the North just prior to the meeting.</td>
<td></td>
</tr>
<tr>
<td>October 2-4, 2007, Pyongyang</td>
<td>Roh Moo-hyun meets Kim Jong-il</td>
<td>Both leaders called for a nuclear-free peninsula and a permanent pact between the two Koreas. They also agreed to step up trade, travel and political exchanges, and to hold summits frequently in the future.</td>
<td></td>
</tr>
<tr>
<td>April 27, 2018, Panmunjom</td>
<td>Moon Jae-in meets Kim Jong-un</td>
<td>Kim briefly crossed to the South, then he and Moon also stepped in to the North before going back to the South. Both leaders confirmed the goal of a nuclear-free Korean peninsula. They also agreed to proceed with family reunion programmes and joint participation in international sporting events.</td>
<td></td>
</tr>
<tr>
<td>May 26, 2018, Panmunjom</td>
<td>Moon meets Kim</td>
<td>Surprise face-to-face meeting between the two leaders. Both agreed to &quot;meet frequently in the future to make dialogue brisk and pool wisdom and efforts&quot;. They also expressed a stand to make joint efforts for denuclearisation.</td>
<td></td>
</tr>
<tr>
<td>September 18, 2018, Pyongyang</td>
<td>Moon meets Kim</td>
<td>Moon has sought to rekindle denuclearisation talks. He expressed gratitude for Kim's &quot;bold decision to open a new era&quot;. Kim said he wanted to produce a &quot;bigger outcome at a faster pace&quot; than the two leaders have achieved so far.</td>
<td></td>
</tr>
</tbody>
</table>

Improvisation and Image source: The Hindu;
VI. POLITY

1. As per Section 124A of the Indian Penal Code, an individual has committed the offence of sedition if he or she, by words either spoken or written, brings or attempts to bring into hatred or contempt or attempts to excite disaffection towards the
   1. Government
   2. Country
   3. Constitution
   4. Legislature and Judiciary

   Select the correct answer using the code given below:

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

**Solution: a.**

- Section 124A (IPC): Sedition.—Whoever, by words, either spoken or written, or by signs, or by visible representation, or otherwise, brings or attempts to bring into hatred or contempt, or excites or attempts to excite disaffection towards, the Government established by law, shall be punished with imprisonment for life, to which fine may be added, or with imprisonment which may extend to three years, to which fine may be added, or with fine.

2. In which of the following forms does regionalism manifest itself in India?
   1. Demand of people of certain states for secession from the Indian Union.
   2. Demand of people of certain areas for separate statehood.
   3. Inter-state boundary disputes.

   Select the correct answer using the code given below:

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

**Solution: d.**

- Regionalism is a country-wide phenomenon which manifests itself in the following six forms:
  - Example for statement 1: Khalistan, Dravid Nad, Mizos, Nagas and so on.
  - Example for statement 2: Telengana, Bodoland, Uttarkhand, Vidharbha, Gorkhaland and so on.
  - Demand of people of certain Union Territories for full-fledged statehood (like Manipur, Tripura, Puducherry, Delhi, Goa, Daman and Diu and so on).
  - Inter-state boundary disputes (like Chandigarh and Belgaum) and river-water disputes (like Cauvery, Krishna, Ravi-Beas and so on).
  - Formation of organisations with regional motives which advocates a militant approach in pursuing its policies and goals (like Shiv Sena, Tamil Sena, Hindi Sena, Sardar Sena, Lachit Sena and so on).
‘Sons of the soil theory’ which advocates preference to local people in government jobs, private jobs, permits and so on. Their slogan will be Assam for Assamese, Maharashtra for Maharashtrians and so on.

Chapter on National Integration, Indian Polity by M Laxmikanth; Improvisation: TH;

3. Major obstacles to national integration with reference to India does not include
   (a) Regionalism
   (b) Casteism
   (c) Linguism
   (d) None of the above

Solution: d.

- Regionalism, Casteism, Communalism and Linguism are regarded as obstacles to national integration.
- Regionalism refers to sub-nationalism and sub-territorial. It implies the love for a particular region or state in preference to the country as a whole. There is also sub-regionalism, that is, love for a particular region in preference to the state of which the region forms a part.
- Communalism means love for one’s religious community in preference to the nation and a tendency to promote the communal interest at the cost of the interest of other religious communities.
- Casteism implies love for one’s own caste-group in preference to the general national. It is mainly an outcome of the politicisation of caste.
- Linguism means love for one’s language and hatred towards other language-speaking. The phenomena of linguism, like that of regionalism, communalism or casteism, is also a consequence of political process.

Chapter on National Integration, Indian Polity by M Laxmikanth; Improvisation: TH;

4. Consider the following events:
   1. Section 377 of the Indian Penal Code first challenged in the courts.
   2. Initiation of struggle for a separate state of Telangana.
   3. First demonetisation in independent India.

Which of the following is the correct chronological sequence of the above events?

   (a) 4-3-1-2
   (b) 4-2-3-1
   (c) 3-4-2-1
   (d) 2-1-4-3

Solution: b.

Factly: In 2001, Naz Foundation (India) Trust, a non-governmental organization challenged Section 377 in the Delhi High Court by filing a lawsuit to allow homosexual relations between consenting adults.

TH: The seeds of Telangana struggle were sown in 1955 when the recommendation of the States Reorganisation Commission to retain Hyderabad as a separate State went unheeded. Telangana leaders accused the people of Andhra of “colonising the region” by grabbing their jobs and land, and the government of not investing in the region’s infrastructure. The State witnessed a violent ‘separate Telangana’ agitation in 1969 and a ‘separate Andhra’ agitation in 1972.
**ToI:** Prior to the 2016 demonetisation, there were two similar instances in India. The first instance was in 1946 and the second in 1978 when an ordinance was promulgated to phase out notes with denomination of Rs 1,000, Rs 5,000 and Rs 10,000.

**Livemint:** The National Register of Citizens (NRC) is the list of Indian citizens of Assam. It was first prepared in 1951, following the census of 1951.

5. The Constitution provides for the abolition or creation of legislative councils in states. Accordingly, the Parliament can abolish a legislative council (where it already exists) or create it (where it does not exist), if the legislative assembly of the concerned state passes a resolution to that effect. In this context, consider the following statements:

1. Such a specific resolution must be passed by the state assembly by a special
2. This Act of Parliament is not to be deemed as an amendment of the Constitution for the purposes of Article 368 and is passed by simple majority.

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

**Solution:** c.

- This Act of Parliament is not to be deemed as an amendment of the Constitution for the purposes of Article 368 and is passed like an ordinary piece of legislation (i.e., by simple majority).
- **Special majority:** A majority of the total membership of the assembly and a majority of not less than two-thirds of the members of the assembly present and voting.

IE: Indian Polity by M Laxmikanth;

6. Which of the following state legislatures are not currently bicameral?

(a) Madhya Pradesh and Tamil Nadu
(b) Telangana and Madhya Pradesh
(c) Maharashtra and Telangana
(d) Tamil Nadu and Maharashtra

**Solution:** a. 

IE: Indian Polity by M Laxmikanth;
7. Which one of the following colours is a visible stripe on the most common variant of the ‘rainbow flag’—a symbol of the LGBT rights movement?
(a) Indigo
(b) Blue
(c) Pink
(d) None of the above

Solution: b.
A similar question was posted here earlier.

- Artist Gilbert Baker, an openly gay man and a drag queen, designed the first rainbow flag in 1978. Baker saw the rainbow as a natural flag from the sky, so he adopted eight colors for the stripes, each color with its own meaning (hot pink for sex, red for life, orange for healing, yellow for sunlight, green for nature, turquoise for art, indigo for harmony, and violet for spirit).

- The first versions of the rainbow flag were flown on June 25, 1978, for the San Francisco Gay Freedom Day parade. Baker and a team of volunteers had made them by hand, and now he wanted to mass-produce the flag for consumption by all. However, because of production issues, the pink and turquoise stripes were removed and indigo was replaced by basic blue, which resulted in the contemporary six-striped flag (red, orange, yellow, green, blue, and violet). Today this is the most common variant of the rainbow flag, with the red stripe on top, as in a natural rainbow. The various colors came to reflect both the immense diversity and the unity of the LGBT community.

8. As the leader of the house in a state legislature, the Chief Minister has powers to
1. Advise the governor with regard to summoning and proroguing of the sessions of the state legislature.
2. Recommend the dissolution of the legislative assembly to the governor at any time.
3. Announce government policies on the floor of the house.

Select the correct answer using the code given below:
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Solution: d.
All statements are correct.

In the news: Dissolution of Telangana assembly. Indian Polity by M Laxmikanth;
9. The Constitution provides for a council of ministers with the chief minister at the head to aid and advise the governor in the exercise of his functions except the discretionary ones. In this context, consider the following statements:

1. If any question arises whether a matter falls within the governor’s discretion or not, the decision of the governor is final.
2. A council of ministers must always exist to advise the governor, even after the dissolution of the state legislative assembly or resignation of a council of

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

Solution: c.

- If any question arises whether a matter falls within the governor’s discretion or not, the decision of the governor is final and the validity of anything done by him cannot be called in question on the ground that he ought or ought not to have acted in his discretion. Further, the nature of advice tendered by ministers to the governor cannot be enquired by any court. This provision emphasises the intimate and the confidential relationship between the governor and the ministers. In 1971, the Supreme Court ruled that a council of ministers must always exist to advise the governor, even after the dissolution of the state legislative assembly or resignation of a council of ministers. Hence, the existing ministry may continue in the office until its successor assumes charge. Again in 1974, the Court clarified that except in spheres where the governor is to act in his discretion, the governor has to act on the aid and advice of the council of ministers in the exercise of his powers and functions. He is not required to act personally without the aid and advice of the council of ministers or against the aid and advice of the council of ministers. Wherever the Constitution requires the satisfaction of the governor, the satisfaction is not the personal satisfaction of the governor but it is the satisfaction of the council of ministers.

Indian Polity by M Laxmikanth;

In the news/improvisation: Governor ESL Narasimhan asks KCR to head a caretaker government.

10. Which among the following rights are included in the recently released ‘Charter of Patient Rights’ by the Ministry of Health and Family Welfare?

1. Right to information
2. Right to a second opinion
3. Right to free or subsidised medical care
4. Right to protection for patients involved in clinical trials

Select the correct answer using the code given below:

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

Solution: d.

Right to

- Information
11. Consider the following statements:
   1. As per Punchhi Commission recommendations, the governor should not have any discretionary powers.
   2. Apart from pardoning powers, the governor’s judicial powers include being consulted by the President while appointing the judges of the concerned state high court.

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

Solution: b.

Apart from pardoning powers, the governor’s judicial powers include:

- Statement 2 (refer question statement)
- He makes appointments, postings and promotions of the district judges in consultation with the state high court.
- He also appoints persons to the judicial service of the state (other than district judges) in consultation with the state high court and the State Public Service Commission.

As per Punchhi Commission report, “Article 163 does not give the Governor a general discretionary power to act against or without the advice of his Council of Ministers. In fact, the area for the exercise of discretion is limited and even in this limited area, his choice of action should not be arbitrary or fanciful. It must be a choice dictated by reason, activated by good faith and tempered by caution.”

Chapters: Centre-State relations, Governor from Indian Polity by M Laxmikanth;
12. Which of the following pardoning powers of President is/are also available to Governors?
   1. He can suspend or commute a death sentence.
   2. He can grant pardon, reprieve, respite, suspension, remission or commutation in respect to punishment or sentence by a court-martial.

Select the correct answer using the code given below:
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Solution: a.

Table 26.3 Comparing Pardoning Powers of President and Governor

<table>
<thead>
<tr>
<th>President</th>
<th>Governor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. He can pardon, reprieve, respite, remit, suspend or commute the punishment or sentence of any person convicted of any offence against a Central law.</td>
<td>1. He can pardon, reprieve, respite, remit, suspend or commute the punishment or sentence of any person convicted of any offence against a state law.</td>
</tr>
<tr>
<td>2. He can pardon, reprieve, respite, remit, suspend or commute a death sentence. He is the only authority to pardon a death sentence.</td>
<td>2. He cannot pardon a death sentence. Even if a state law prescribes for death sentence, the power to grant pardon lies with the President and not the governor. But, the governor can suspend, remit or commute a death sentence.</td>
</tr>
<tr>
<td>3. He can grant pardon, reprieve, respite, suspension, remission or commutation in respect to punishment or sentence by a court-martial (military court).</td>
<td>3. He does not possess any such power.</td>
</tr>
</tbody>
</table>

Improvisation: TH;

13. The Doctrine of Progressive Realisation of Rights and Non-Retrogression was introduced by the Supreme Court in a case related to
   (a) Section 377 of the Indian Penal Code
   (b) Privacy as a fundamental right
   (c) Electoral reforms
   (d) Euthanasia

Solution: a.

- The five-judge Constitution Bench led by Chief Justice of Dipak Misra has introduced the “Doctrine of Progressive Realisation of Rights” to guard against future attempts to reintroduce that part of Section 377 of the Indian Penal Code which had made the entire LGBTQ community “unconvicted felons” without the basic rights of a citizen for over a century.

- The doctrine of progressive realisation of rights mandates that the laws of a country should be in consonance with its modern ethos, it should be “sensible” and “easy to apply”. Using this legal doctrine, as a natural corollary, Chief Justice Misra has held that once a right is recognised and given to the public, it cannot be taken back by the state at a later date. Once a step is taken forward, there is no going back.
14. The ‘Navtej Singh Johar v. Union of India’ case, recently in the news, is related to
   (a) Triple talaq
   (b) Section 377 of Indian Penal Code
   (c) Uniform civil code
   (d) Criminal defamation of Indian Penal Code

Solution: b.

In the news: Section 377 judgment.

15. Known as Razakars, this paramilitary force is associated with which one of the following events of independent India?
   (a) Bihar movement during National Emergency
   (b) Anti-arrack movement of Andhra Pradesh
   (c) Insurgency in Jammu and Kashmir
   (d) Integration of princely states

Solution: d.

- The Nizam wanted an independent status for Hyderabad. He entered into what was called the Standstill Agreement with India in November 1947 for a year while negotiations with the Indian government were going on. In the meantime, a movement of the people of Hyderabad State against the Nizam’s rule gathered force. The peasantry in the Telangana region in particular, was the victim of Nizam’s oppressive rule and rose against him. Women who had seen the worst of this oppression joined the movement in large numbers. Hyderabad town was the nerve centre of this movement.

- The Communists and the Hyderabad Congress were in the forefront of the movement. The Nizam responded by unleashing a para-military force known as the razakars on the people. The atrocities and communal nature of the razakars knew no bounds. They murdered, maimed, raped and looted, targeting particularly the non-Muslims. The central government had to order the army to tackle the situation. In September 1948, Indian army moved in to control the Nizam’s forces. After a few days of intermittent fighting, the Nizam surrendered. This led to Hyderabad’s accession to India.

Class XII, Politics in India Since Independence (NCERT)  Improvisation: TH;

16. Consider the following statements with reference to the ordinance-making power of the President:
   1. This power of the President in India is not found in most of the democratic Constitutions of the world.
   2. Whenever a bill seeking to replace an ordinance is introduced in the House, a statement explaining the circumstances that had necessitated immediate legislation by ordinance should also be placed before the House.
   3. An ordinance like any other legislation, can be retrospective, that is, it may come into force from a back date.
Which of the statements given above is/are correct?

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

Solution: d.
All statements are correct.

Chapter – President, Indian Polity by M Laxmikanth; TH;

17. Described by Dr. Ambedkar as ‘the very soul and the very heart of the Constitution’, it is/are the

(a) Preamble
(b) Right to Freedom – Protection of life and personal liberty
(c) Right to Constitutional Remedies
(d) Directive Principles of State Policy

Solution: c.

- Article 32 confers the right to remedies for the enforcement of the fundamental rights of an aggrieved citizen. In other words, the right to get the Fundamental Rights protected is in itself a fundamental right. This makes the fundamental rights real. That is why Dr Ambedkar called Article 32 as the most important article of the Constitution—‘an Article without which this constitution would be a nullity.

- It is the very soul of the Constitution and the very heart of it’. The Supreme Court has ruled that Article 32 is a basic feature of the Constitution. Hence, it cannot be abridged or taken away even by way of an amendment to the Constitution.

Indian Polity by M Laxmikanth; Improvisation: TH;

18. The Shamsher Singh case, sometimes in the news, is related to

(a) Speaker’s powers under the anti-defection law
(b) Discretionary powers of the governor
(c) Supreme Court’s advisory jurisdiction under Article 143
(d) Scope of Article 32

Solution: b.

TH: In the view of the Supreme Court, speaking through a five-judge Bench in Nabam Rebia and Bamang Felix v. Deputy Speaker (2016), the discretionary power of the Governor is extremely limited and entirely amenable to judicial review. Time and again, the courts have spoken out against the Governor acting in the capacity of an “all-pervading super-constitutional authority”. Even when the exercise of discretion is concerned, a seven-judge Bench of the apex court in Samsher Singh v. State of Punjab (1974) had held that the Governor may do so only “in harmony with his Council of Ministers”. To do so, the Governor is precluded from taking a stand against the wishes of the Council of Ministers.

19. The President of India may, by public notification, declare that article 370 shall cease to be operative from such date as he may specify, provided that it shall be necessary for the President to have received prior recommendation of

(a) The Governor General of India
(b) The Constituent Assembly of Jammu and Kashmir
(c) The legislative assembly of Jammu and Kashmir
(d) The Governor of Jammu and Kashmir
Solution: b.

TH: A petition has been filed in the Supreme Court challenging the continued existence of Article 370, which gives a temporary autonomous status to the State of Jammu and Kashmir and restricts the power of Parliament to make laws for the State.

- The petition especially challenges a particular proviso in Article 370 which mandates that the President should first get the permission of the ‘Constituent Assembly of the State of Jammu and Kashmir’ before declaring the Article null and void.

Article 370 (IndiaKanoon);

20. As per the constitution, a person shall necessarily be disqualified for being elected as member of Parliament

1. Only if the Parliament declares that the holder of a particular office of profit is barred from holding parliamentary membership.
2. If he has been found guilty of certain election offences or corrupt practices in elections.

Select the correct answer using the code given below:

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

Solution: d.

Key terms in the question are “As per the Constitution” and “necessarily”.

Under the constitution, a person shall be disqualified for being elected as member of Parliament

- if he holds any office of profit under the Union or a state government (by default then, the constitution, and not the Parliament, bars any holder of an office of profit from holding parliamentary membership; a minister in the Union or state government is not considered as holding the office of Also, the Parliament can declare that a particular office of profit will not disqualify its holder from parliamentary membership.)
- if he is so disqualified under any law made by Parliament.

The Parliament has laid down the following additional disqualification in the Representation of People Act (1951) – He must not have been found guilty of certain election offences or corrupt practices in the elections. Has been found guilty of certain election offences or corrupt practices in elections.

Improvisation: TH; IndiaKanoon;

21. Which one of the following directions was not issued by the Supreme Court in its recent judgment related to criminalisation of politics?

(a) A contesting candidate is required to inform his/her party about the criminal cases pending against him/her.
(b) A political party shall be obligated to upload on its website information pertaining to candidates having criminal antecedents.
(c) A contesting candidate shall give wide publicity about his/her criminal antecedents.
(d) A political party shall refuse leadership positions to individuals charged with “heinous and grievous” Crimes such as rape, murder and kidnapping.
- The court said Parliament should frame a law that makes it obligatory for political parties to remove leaders charged with “heinous and grievous” crimes, such as rape, murder and kidnapping, to name only a few, and refuse ticket to offenders in both parliamentary and Assembly polls.

**Closing the gaps**
The Supreme Court's directions to candidates and parties

- Each contesting candidate, in the form provided by the Election Commission, will declare criminal cases pending against him/her in bold
- A candidate is required to inform his/her party about the criminal cases pending against him/her
- A political party shall be obligated to put up on its website the information pertaining to candidates having criminal antecedents
- The candidate as well as the political party shall give "wide publicity" in the form of a declaration in newspapers and electronic media about the antecedents of the candidate

**Solution: d.**

**22.** A Committee on Prison Reforms was recently set up by the
(a) Ministry of Home Affairs
(b) Ministry of Social Justice and Empowerment
(c) Ministry of Law and Justice
(d) Supreme Court

**Solution: d.**

**TH:** The Supreme Court on Tuesday formed a Committee on Prison Reforms chaired by former apex court judge, Justice Amitava Roy, to examine the various problems plaguing prisons in the country, from overcrowding to lack of legal advice to convicts to issues of remission and parole.

- The judgment came on a letter from former Chief Justice of India R.C. Lahoti highlighting the overcrowding in prisons, unnatural deaths of prisoners, gross inadequacy of staff and the lack of trained staff.
Justice Lokur, however, said the Amitava Roy Committee need not confine itself to these four issues but can comprehensively examine and respond to the dire necessity of reforms in prisons.
VII. HISTORY, ART & CULTURE

1. Which one of the following foodstuffs does not presently have a geographical indication tag?
   (a) Jhabua Kadaknath Black Chicken Meat
   (b) Haleem
   (c) Banganpalle mango
   (d) Sirarakhong chilli

Solution: d.

- Since 2009, the Sirarakhong village in Manipur’s Ukhrul district has celebrated the Hatei Phanit festival, dedicated to its indigenous, organically-grown chilli called the Sirarakhong, which is slowly gaining popularity for its distinct taste.
- More importantly, however, the Sirarakhong is a source of economic sustenance for the remote Manipuri village. The chillies grow over eight inches in length and are calcium-rich apart from possessing a high Vitamin C content which makes them a fantastic source of nutrients and antioxidants. Their stark red colour is a result of high carotene levels.
- The State Horticultural Department is planning to lobby for the chilli to obtain a GI tag.

Solution: c.

2. Consider the following statements:
   1. The tomb of Itmad-ud-Daulah is the first tomb in India that is entirely made of marble.
   2. Currency bearing the names of Nur Jahan opposite that of Jahangir were in circulation during Jahangir’s reign.

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

Solution: c.

- Itmad-ud-Daulah (Ghiyas Beg) was Nur Jahan’s father.
- Nur Jahan was a poet, an expert hunter and an innovative architect. Her design for her parents’ tomb in Agra later inspired the construction of the Taj Mahal.
- Nur and Jahangir complemented each other, and the emperor never felt uncomfortable with his wife’s burgeoning influence as co-sovereign. Soon after their marriage, she issued her first royal order to protect the land rights of an employee. Her signature in the order read, Nur Jahan Padshah Begum, which translates as Nur Jahan, the Lady Emperor. It was a sign of sovereignty and an indication that her power was growing.
- In 1617, gold and silver coins, which bore her name opposite that of Jahangir, started circulating. Court chroniclers, foreign diplomats, tradesmen and visitors soon started to note her unique status. One courtier described an incident where she surprised many by appearing in the imperial balcony, which was reserved for men only.
3. Consider the following statements:
1. Majuli Island is the nerve centre of the unique Satra system founded by the saint Sankaradeva.
2. The Sattriya dance form serves as a medium for propagation of the Shaivite faith.
3. Majuli island has been shrinking due to regular floods in the Brahmaputra.
Which of the statements given above is/are correct?
(a) 1 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Solution: c.

- Majuli Island is the nerve centre of Vaishnnavite culture developed during the unique Vaishnava Satra system founded by the great saint Srimanta Sankardeva in the 15th century. It is the cultural heritage centre of Vaishnnavite culture of Assam. Today it is home to 22 Vaishnava Satras or monasteries.

- The Sattriya dance form was introduced in the 15th century A.D by saint as a powerful medium for propagation of the Vaishnava faith. The dance form evolved and expanded as a distinctive style of dance later on. This neo-Vaishnava treasure of Assamese dance and drama has been, for centuries, nurtured and preserved with great commitment by the Sattras i.e. Vaishnava maths or monasteries.

- Sankaradeva introduced this dance form by incorporating different elements from various treatises, local folk dances with his own rare outlook.

- Majuli is a fast-disappearing island. Once the largest mid-river deltaic island in the world, with an area of 1,256 sq km, it has now shrunk to less than half its size, to 515 sq km. Regular floods in the Brahmaputra inundate the island and cause erosion, washing away villages and displacing residents. The rate of erosion is so severe that it is likely to submerge the island in the next 15-20 years, according to Majuli Island Protection & Development Council, a non-profit.

CCRT; DTE; TH;

4. Wootz steel or Damascus steel, regarded as one of the wonders of the ancient world, has a characteristic meandering pattern. ‘Wootz’ is derived from the word ‘Urukh’ which belongs to the language
(a) Sanskrit
(b) Tamil
(c) Prakrit
(d) Ladakhi

Solution: b.

- TBI: Though the Damascus swords made from the steel are famous around the world, few seem to realise that the swords were made from ingots forged in India. Way back in the 6th century BC, this finest of alloys being made was in the Chera Kingdom of Tamil Nadu, from where it spread far and wide.

- Developed by the Tamils themselves, the alloy is made by hammering porous iron while it is hot. Then, the metal is sealed in a clay container with wood chips. When heated, the wood turns to carbon, which bonds with the iron to make steel. At least that is how we speculate that they did it. The real technique has been lost to history.

- NCERT (Class 8 Our Pasts III Part 2): Wootz steel when made into swords produced a very sharp edge with a flowing water pattern. This pattern came from very small carbon crystals embedded in the iron. Francis Buchanan who toured through Mysore in 1800, a year after Tipu Sultan’s death, has left us an account of the technique by
which Wootz steel was produced in many hundreds of smelting furnaces in Mysore. In these furnaces, iron was mixed with charcoal and put inside small clay pots. Through an intricate control of temperatures the smelters produced steel ingots that were used for sword making not just in India but in West and Central Asia too. Wootz is an anglicised version of the Kannada word ukku, Telugu hukku and Tamil and Malayalam urukku – meaning steel.

5. What is the village of Likir in Ladakh famous for?
   (a) The last stupa to be constructed in Medieval India was here.
   (b) The craft of pottery that came from Tibet.
   (c) Production of shahtoosh shawls.
   (d) It is the northernmost village in Indian-administered Jammu and Kashmir.

Solution: b.

- Likir, a Village about 50kms from Leh has a monastery, the **Likir Monastery**. It is also known for its **pottery**, a craft that is believed to have come from **Tibet**.

6. Of the following list of UNESCO intangible cultural heritage elements of India, the Indian subcontinent’s only surviving traditional and ancient form of sanskrit theatre is
   (a) Mudiyettu
   (b) Sankirtana
   (c) Kutiyattam
   (d) Ramlila

Solution: c.

- **Kutiyattam, Sanskrit theatre**: **Kutiyattam, Sanskrit theatre**, which is practised in the province of Kerala, is one of India’s oldest living theatrical traditions. Originating more than 2,000 years ago, Kutiyattam represents a synthesis of Sanskrit classicism and reflects the **local traditions of Kerala**. In its stylized and codified theatrical language, **neta abhinaya** (eye expression) and **hasta abhinaya** (the language of gestures) are prominent. They focus on the thoughts and feelings of the main character.

7. Built to commemorate the end of the plague in the city, this structure today is a symbol of the city. Its upper floor has a mosque, while the lower floor was originally used as madrassa. Other examples of similar architecture in this city include the Jami Masjid, the Mecca Masjid and the Toli Masjid. This structure is the
   (a) Charminar
   (b) Buland Darwaza
   (c) Gol Gumbaz
   (d) Hawa Mahal
Solution: a.

- The city of Hyderabad boasts of some fine examples of Qutab Shahi architecture – the Jami Masjid, the Mecca Masjid, Toli Masjid, and of course, the impressive symbol of Hyderabad, the Charminar.

- The Charminar is a massive arch built by Mohammed Quli Qutab Shah, in 1591 to commemorate the end of the plague in the city. The symbol of the city, the Charminar, is an impressive square monument with four minarets. The monument is a magnificent square edifice of granite, built upon four grand arches facing North, South, East and West. These arches support two floors of rooms and gallery of archways. Each minar stands on a lotus-leaf base, a special recurrent motif in Qutub Shahi buildings.

- The first floor was used as a madarasa (college) during the Qutub Shahi period. The second floor has a mosque on the western side.

Knowindia.gov.in: Improvisation: Image of Charminar in newspaper along with THIS article.

8. Tosa Maidan, sometimes in the news, is known for
   (a) Having an airstrip which is the highest altitude airstrip in active use.
   (b) Having once been a site of the Army’s artillery practice.
   (c) Hosting major political rallies, meetings and entertainment events.
   (d) None of the above

Solution: b.

- Booming guns do not break the calm of the meadows of Tosa Maidan in Kashmir anymore. For seven decades, the lush meadows in Budgam district had lost their serenity as the Army used to practise artillery fire in the grass, leaving them out of bounds for locals and tourists. The Army’s decision in 2014 to relocate its 1,809-hectare firing range, where soldiers simulated battlefield conditions, have now left behind a rare island of peace in the Valley. Since the Army moved in, 63 civilians, mainly shepherds and children, lost their limbs during crossfire practice.

- The local population is hoping for the good days to return as the government forms the Tosa Maidan Development Authority to add these meadows to the tourist map of the Valley.
9. He was the Indian born son of a Turkish immigrant. He began his career as a courtier and poet during the reign of Sultan Balban. He became a disciple of Shaikh Nizamuddin Auliya. His poetry was essentially Indian in sentiment though he followed persian models in technique. Thus he created a new style of Persian which came to be known as ‘Sabaq-i Hindi’ or the Indian style. He lived through the reigns of around six sultans of Delhi and was connected with their courts. He is
(a) Abu’l-Fazl
(b) Abul Hasan
(c) Abdul Rahim Khan-I-Khana
(d) Shaikh Najmuddin Hasan

Solution: b.

Abul Hasan was also known as Amir Khusrau.

**Improvisation:**

The appearance of the cavalcade of the king of poets, the poetry of his predecessors became bedimmed like stars at the rise of the sun”. Amir Khusrau (1253-1325) was one of those few Indian writers of Persian poetry whose works have been read and admired beyond their own country. His works represent the beginning of a new trend in Indian-based Persian literature — the trend of the growing familiarity with Indian literature and influence of Indian literature on Persian writings in India.

Amir Khusrau was the Indian born son of a Turkish immigrant. He began his career as a courtier and poet during the reign of Sultan Balban. He became a disciple of Shaikh Nizamuddin Auliya, the famous sufi saint of the Chisti order. He was the court-poet during the reigns of Jalaluddin Khalji and Alauddin Khalji. Later, Sultan Ghiyasuddin Tughluq also patronised him. He lived through the reigns of six Sultans of Delhi and was connected with their courts.

Amir Khusrau was a prolific and versatile writer and is said to have composed half a million verses and ninety-nine works on different themes. His poetry consisted of a great variety of forms — lyric, ode, epic, and elegy. His poetry was essentially Indian in sentiment though he followed Persian models in technique. Thus he created a new style of Persian which came to be known as *sabaq-i Hindi* or the Indian style. Some of
1. Consider the following statements with regard to statistics of spring population across the Himalayas:
   1. In terms of percentage of villages which report having springs, the state of Sikkim has the largest such percentage.
   2. Meghalaya has the largest number of villages that report having springs.

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

Solution: c.

- While Meghalaya with 3,810 villages with springs had the highest number of these water sources in the Himalayan States, Sikkim had the greatest density with 94% of its villages having a spring.

2. Consider the following statements:
   1. In the Indian Himalayan Region (IHR), springsheds often cover more than one watershed.
   2. No state in India has hitherto undertaken a systematic springshed management initiative.

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

Solution: a.

- In the past, most water conservation programmes in the IHR and elsewhere were based on the concept of watershed.

- A watershed is a unit of land where the rain that falls drains out through a common point; in other words, a watershed separates two drainage units. Watersheds are easy to demarcate and hold great appeal for policymakers and implementers alike. However, the watershed concept only accounts for surface water movement over slopes, while movement of spring water which is groundwater, is determined by underlying geology, and the nature and slope of such rocks underneath the surface. The concept of watershed, therefore, cannot account for water which travels outside watershed boundaries, through rock beds that slope towards an adjoining watershed.

- For spring revival, the appropriate unit is the springshed— the unit of land where rain falls (recharge area), and then emerges at discharge point, the spring. Given the folded and faulted nature of Himalayan geology, springsheds often cover more than one watershed; in other words, the recharge area of a spring in one watershed, may as well lie in an adjoining watershed and spring revival programmes have to be cognisant of this. This calls for a paradigm shift from watershed to springshed as an appropriate unit of intervention in the IHR.

- The first systematic springshed management initiative was undertaken through the Dhara Vikas Programme by the Government of Sikkim, even as smaller pilots using the same concept were being undertaken across States like Himachal Pradesh, Nagaland and Uttarakhand as part of Forest Panchayats constituted under the Forest Act.
3. Consider the following statements:
   1. The Himalayas are spread over more than six countries.
   2. States of the Indian Himalayan Region include West Bengal and Tripura.

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

Solution: c.

- The Himalayas span 8 countries viz., Afghanistan, Pakistan, China, India, Nepal, Bhutan, Bangladesh, and Myanmar.
- The Indian Himalayan Region (IHR) spans 10 hill States viz., Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Sikkim, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and two partial hill States – Assam and West Bengal.

Similar to Q58, CSP 2017; NITI Aayog PDF; Improvisation: TH;

4. The Irula tribe, one of India’s oldest indigenous communities, are known for their ancient and intimate knowledge of snakes, and their skills form an important but nearly invisible part of the healthcare system in India. Six companies across India produce around 1.5 million vials of antivenom annually, and most of it is derived from the venom extracted by the Irulas. The home of the Irulas is

(a) Chattisgarh
(b) Tripura
(c) Madhya Pradesh
(d) Tamil Nadu

Solution: d.

- The Irulas live along the north-eastern coast of the state of Tamil Nadu.
- The Irula Snake Catchers Industrial Co-Operative Society was formed in 1978 in Vadanemmeli to capture snakes and extract their venom. Nearly 50,000 people die of snakebites each year in the country, and the only reliable treatment is the prompt administration of antivenom. Six companies across India produce around 1.5 million vials of antivenom annually, and most of it is derived from the venom extracted by the Irulas.

BBC;
IX. DEFENCE & SECURITY

1. The Director General of Civil Aviation (DGCA) recently released the requirements for operation of civil Remotely Piloted Aircraft Systems (RPAS). Key features of the guidelines include:
   1. Classification of drones on the basis of their maximum take-off weight.
   2. Requirement of every operational civilian drone to have obtained a Unique Identification Number from DGCA.
   3. Restricting the operation of drones to daylight only.

Which of the statements given above is/are correct?

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

Solution: c.

- RPAs will be classified on the basis of their maximum take-off weight, as follows: (i) nano (less than or equal to 250 gm), (ii) micro (between 250 gm and 2kg). and so on.
- Nano RPAs intended to fly up to 50 feet are exempted from requiring a UIN.
- RPA operators will prepare standard operating procedures containing information such as: (i) take-off/landing, (ii) collision avoidance, and (iii) local airspace restrictions. RPAs must be operated only during daylight. All RPA operators, except nano, must inform the local police authority before commencing operations.

PRS MPR August 2018;

2. KAZIND 2018 is a joint army exercise between India and
   (a) Kazakhstan only
   (b) Kazakhstan and Tajikistan only
   (c) Kazakhstan and Afghanistan only
   (d) None of the above

Solution: a.

- Indo-Kazakhstan Joint Army Exercise ‘KAZIND’ will be conducted between the Indian and Kazakhstan Army from 10 to 23 Sep 2018 in Otar region, Kazakhstan. This is the third joint military exercise between the two countries. The second edition of the exercise was held in India last year.

PIB;

3. Consider the following statements:
   1. India recently held its first 2+2 dialogue with the USA.
   2. The COMCASA agreement restricts Indian imports of military equipment from Russia.

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
Solution: a.
Statement 2 is incorrect.

- **TH:** India and the United States recently began a new generation of military and security cooperation by signing the Communications Compatibility and Security Agreement (COMCASA). An announcement on the significant agreement came at the end of the inaugural 2+2 ministerial dialogue.

**Additional information:**
- India and the U.S. would also hold a first-ever tri-service exercise on the east coast of India in 2019, Ms. Sitharaman announced.
- An important element of Thursday’s discussion was starting the process of closer private defence industry collaboration that would allow Indian defence manufacturers to join the U.S. military supply chain.
- The two defence ministers also announced their readiness to begin negotiations on an Industrial Security Annex (ISA) that would support closer defence industry cooperation and collaboration. An ISA is required to enable private Indian participation in defence production and is particularly important as India opens up defence manufacturing to the private sector in a big way.

**4.** The Carnegie Endowment for International Peace is a global network of policy research centres in the USA, China, Europe, Middle East (West Asia) and

(a) India and Brazil
(b) South Africa and India
(c) Brazil and Singapore
(d) Russia and India

Solution: d.

- **About:** “The Carnegie Endowment for International Peace is a unique global network of policy research centers in Russia, China, Europe, the Middle East, India, and the United States. Our mission, dating back more than a century, is to advance peace through analysis and development of fresh policy ideas and direct engagement and collaboration with decision makers in government, business, and civil society..” Founded in 1910, Carnegie is the oldest international affairs think tank in the United States.

**Improvisation:** TH; Articles by members affiliated to Carnegie often in the news;

**5.** SLINEX is a bilateral naval exercise between India and

(a) Laos
(b) Singapore
(c) Sri Lanka
(d) Indonesia

Solution: c.

- SLINEX series of bilateral maritime exercises between India and SL that were initiated in 2005. Since then, five successful engagements have been conducted.

PIB;
6. MILEX 18 exercise, BIMSTEC’s first joint military exercise, is meant to help constituent nations plan and conduct:
   (a) Cross-border operations
   (b) Counter terrorist operations
   (c) Humanitarian and Disaster Relief operations
   (d) Non-combatant evacuation operations

Solution: b.

- **TH**: The MILEX 18 exercise, scheduled from September 10 to 16 at the Aundh Military Station in Pune, is aimed at helping the BIMSTEC nations practise “planning and conduct of counter terrorist operations”, according to the Army.

7. The Defence Research and Development Organisation (DRDO) recently successfully flight tested the indigenously developed tactical missile ‘Prahar’. It is an
   (a) Surface-to-surface missile
   (b) Air-to-surface missile
   (c) Underwater-to-surface missile
   (d) Beyond visual range missile

Solution: a.

- **PIB**: ‘Prahar’ is a contemporary weapon system capable of carrying multiple types of warheads and neutralizing a wide variety of targets. The DRDO successfully flight tested this indigenously developed surface-to-surface tactical missile from the Launch Complex at Balasore, Odisha.

8. Consider the following statements:
   1. The cybercrime portal is an initiative under the National Mission for Safety of Women by utilising Nirbhaya funds.
   2. The National Database on Sexual Offenders (NDSO) is accessible only to law enforcement agencies and crime research organisations.

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

Solution: a.

- **cybercrime.gov.in**: The portal “cybercrime.gov.in” – an initiative of Government of India under National Mission for the safety of women by utilising Nirbhaya funds – will receive complaints from citizens (victims or others) on objectionable online content related to, at present, child pornography, child sexual abuse material, sexually explicit material such as rape and gang rape.

- **PIB**: The NDSO is a central database of “sexual offenders” in the country which will be maintained by the NCRB for regular monitoring and tracking by the State Police. The database is accessible only to the law enforcement agencies for investigation and monitoring purpose. The database will include offenders convicted under charges of rape, gang rape, POCSO and eve teasing. At present the database contains 4.4 lakh entries. The State Police have been requested to regularly update the database from 2005 onwards. The database includes name, address, photograph and fingerprint details for each entry. However, the database will not compromise any individual’s privacy.
9. What are the details stored with the National Sex Offenders Registry?
1. Name and photograph of victims of the offence of sexual abuse.
2. Name and fingerprint details only, of those convicted in sexual assault cases.

Select the correct answer using the code given below:

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

Solution: d.

Source: The Hindu;

What are the details stored with the registry?
Name, address, photograph and fingerprint details of those convicted in sexual assault cases

How long will the data be stored by the NCRB?
Will be stored for 15 years for those posing low danger, 25 years for those posing moderate danger, and lifetime for habitual offenders involved in violent crimes like gang-rapes

How many entries have been made so far?
4.4 lakh entries of convicts from year 2005 have been included in the registry till date

Source: The Hindu;
1. As per the India State-level Disease Burden Initiative report,
   1. Over the period from 1990 to 2016, the highest rate of increase in lifestyle diseases such as diabetes and ischemic heart disease is in the less developed states of India.
   2. The suicide death rate (SDR) in India is higher than expected for its socio-demographic index level, especially for women.

Select the correct answer using the code given below:
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Solution: c.

- **TH**: Indians have registered a 50% increase in the prevalence of ischemic heart disease and stroke over the period from 1990 to 2016, with the number of diabetes cases climbing from 26 million to 65 million. In the same period, the number of people ailing from chronic obstructive lung disease went up from 28 million to 55 million. While it is known that NCDs have been increasing in India, a major finding of concern is that the highest rate of increase in ischemic heart disease and diabetes is in the less developed States of India.

- **TH**: India’s proportional contribution to global suicide deaths is high and increasing. India’s contribution to global suicide deaths increased from 25.3% in 1990 to 36.6% in 2016 among women, and from 18.7% to 24.3% among men. **Suicide Death Rate (SDR) in India is higher than expected for its socio-demographic index level, especially for women**, with substantial variations in the magnitude and men-to-women ratio between the states.

2. The India State-level Disease Burden Initiative report is prepared jointly by
   1. Indian Council of Medical Research
   2. Public Health Foundation of India
   3. Institute for Health Metrics and Evaluation
   4. Ministry of Health and Family Welfare

Select the correct answer using the code given below:
(a) 1, 2 and 3 only
(b) 2 and 4 only
(c) 1, 3 and 4 only
(d) 1, 2, 3 and 4

Solution: d.

- The India State-level Disease Burden Initiative is a joint study of the Indian Council of Medical Research (ICMR) and other institutes, including the Public Health Foundation of India and the Institute for Health Metrics and Evaluation in collaboration with the Ministry of Health and Family Welfare.

In the news: **TH1; TH2;**
3. With reference to the NITI Aayog report on the Composite Water Management Index, consider the following statements:
   1. Nearly all of India’s population faces high levels of water stress.
   2. Cities, including Delhi and Bangalore are soon going to run out of groundwater.
   3. If unaddressed, the water crisis will cause upto a 6% loss in the country's GDP by 2050.

Select the correct answer using the code given below:

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

Solution: b.

From June 2018 (TH): NITI Aayog released the results of a study warning that India is facing its ‘worst’ water crisis in history and that demand for potable water will outstrip supply by 2030 if steps are not taken.

- Nearly 600 million Indians faced high to extreme water stress and about 2,00,000 people died every year due to inadequate access to safe water. Twenty-one cities, including Delhi, Bengaluru, Chennai and Hyderabad will run out of groundwater by 2020, affecting 100 million people, the study noted. If matters are to continue, there will be a 6% loss in the country’s Gross Domestic Product (GDP) by 2050, the report says.

Source/improvisation: TH;

4. The world’s first ‘State of the World’s Fungi Report’ was published recently by
   (a) Kew Royal Botanical Gardens
   (b) IUCN
   (c) Conservation International
   (d) Biodiversity International

Solution: a.

- The Kew Royal Botanical Gardens recently released the first ever State of the World’s Fungi report revealing how important fungi are to all life on Earth.

Recently in the news: BBC; To read highlights of this report, click HERE;

5. Which one of the following is not an indicator in measuring the multidimensional poverty index?
   (a) Child morality
   (b) Income
   (c) Improved sanitation
   (d) Cooking fuel

Solution: b.

- The GMPI is an international measure of acute poverty covering over 100 developing countries. It complements traditional income-based poverty measures by capturing the severe deprivations that each person faces at the same time with respect to education, health and living standards.

- The MPI assesses poverty at the individual level. If someone is deprived in a third or more of ten weighted indicators, the global index identifies them as ‘MPI poor’, and the extent – or intensity – of their poverty is measured by the number of deprivations they are experiencing.
• Income is not included in the index due to data constraints.

Improvisation: See image;

6. The State of Working India 2018, a new study, was released recently by
   (a) Centre for Sustainable Employment
   (b) Centre for the Study of Developing Societies
   (c) Tata Institute of Social Sciences
   (d) Centre for Policy Research

Solution: a.

TH: With higher growth rates not having translated into more jobs and increases in productivity failing to spur a commensurate rise in wages, the government ought to formulate a National Employment Policy that takes these
trends into account, the State of Working India 2018, a new study released by Azim Premji University’s Centre for Sustainable Employment, recommends.

- Confirming the spectre of jobless growth, the study contends that this divergence between growth and jobs had increased over time. “If you look back at the 1970s and 80s, when GDP growth was around 3-4%, employment growth was about 2%,” lead author Amit Basole wrote in the study, released on Tuesday. “Currently, the ratio of GDP growth to employment growth is less than 0.1.” That means that a 10% increase in GDP results in a less than 1% increase in employment.

7. The ICT Development Index (IDI), is used to monitor and compare developments in information and communication technology (ICT) between countries and over time. It has been published annually since 2009 by
   (a) International Chamber of Commerce
   (b) International Telecommunications Union
   (c) Federal Communications Union, USA
   (d) World Economic Forum

Solution: b.

PIB: The key objectives of the National Digital Communications Policy 2018 are:

- Broadband for all;
- Creating four million additional jobs in the Digital Communications sector;
- Enhancing the contribution of the Digital Communications sector to 8% of India’s GDP from ~6% in 2017;
- Propelling India to the Top 50 Nations in the ICT Development Index of ITU from 134 in 2017;
- Enhancing India’s contribution to Global Value Chains; and
- Ensuring Digital Sovereignty.

About ITU: ITU is the United Nations specialized agency for information and communication technologies. It allocates global radio spectrum and satellite orbits, develops the technical standards that ensure networks and technologies seamlessly interconnect, and strives to improve access to ICTs to underserved communities worldwide.

8. “Employment Outlook”, which provides employment-related statistics in the formal sector in India, is released by
   (a) Ministry of Labour and Employment
   (b) Ministry of Statistics and Programme Implementation
   (c) UN Development Programme
   (d) World Bank

Solution: b.


- This is the fourth in this series of employment statistics. The Ministry brought out the first release of employment related statistics in the formal sector in April, 2018 covering the period September 2017 to February, 2018, using information on the number of subscribers who have availed benefits under three major schemes, namely, the Employees’ Provident Fund (EPFO), Employees’ State Insurance Scheme (ESIC) and the National Pension Scheme (NPS).
INSIGHTS IAS Mains Test Series 2019

Starts on: 10 Oct’18
Ends on: 25 Jan’19

OFFLINE: Insights IAS Office, Bangalore

1. FULL PACKAGE
   GS + ESSAY
   15 TESTS
   RS. 15,000/-

2. GS PACKAGE
   GS I, II, III, IV
   9 TESTS
   RS. 9,000/-

3. 3 ETHICS & 3 ESSAY
   6 TESTS
   RS. 6,000/-

4. ETHICS PACKAGE
   3 TESTS
   RS. 3,000/-

5. ESSAY PACKAGE
   3 TESTS
   RS. 3,000/-

Available: ONLINE / OFFLINE

www.insightsias.com
mains@insightsias.com
mains.insightsias.com
XI. MAPS/ PLACES

1. Often in the news, the Syrian Idlib province borders
   (a) Iraq
   (b) Turkey
   (c) Lebanon
   (d) Israel

Solution: b.

![Map of the Middle East](image)

In the news: TH;

2. Consider the following statements:

   The Aravalli range
   1. Is spread across more than two states.
   2. Gives rise to several rivers including Luni and Sabarmati.

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

Solution: c.

- **IE**: Spread over an area of 692 km, the Aravallis cover the states of Gujarat, Rajasthan, Delhi and Haryana.

- **Britannica**: The system is divided into two sections: the Sambhar-Sirohi ranges, taller and including **Guru Peak** on Mount Abu, the highest peak in the Aravalli Range (5,650 feet [1,722 metres]); and the Sambhar-Khetri ranges, consisting of three ridges that are discontinuous. The Aravalli Range is rich in natural resources (including minerals) and serves as a check to the growth of the western desert. It gives rise to several rivers, including the Banas, Luni, Sakhi, and Sabarmati.
3. With which one of the following neighbours is the length of our land borders the least?
(a) Nepal
(b) Myanmar
(c) Pakistan
(d) Bangladesh

**Solution:** b.

<table>
<thead>
<tr>
<th>Name of the country</th>
<th>Length of the border (in kms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>4,096.7</td>
</tr>
<tr>
<td>China</td>
<td>3,488.0</td>
</tr>
<tr>
<td>Pakistan</td>
<td>3,323.0</td>
</tr>
<tr>
<td>Nepal</td>
<td>1,751.0</td>
</tr>
<tr>
<td>Myanmar</td>
<td>1,643.0</td>
</tr>
<tr>
<td>Bhutan</td>
<td>699.0</td>
</tr>
<tr>
<td>Afghanistan</td>
<td>106.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15,106.7</strong></td>
</tr>
</tbody>
</table>

*Table source: MHA Annual Report; Improvisation: TH;*

4. The first of six ISRO space technology incubation centres was launched in
(a) Jaipur
(b) Agartala
(c) Surat
(d) Mangalore

**Solution:** b.

- The fact that such space tech incubation centres are being set up, is important. Of additional relevance is to be aware of the first city that has such a centre.

**TH:** The Indian Space Research Organisation (ISRO) launched a space technology incubation centre in Tripura capital Agartala on Tuesday. It is the first of six such centres planned nationally to build capacity in new locations.

- More such space research activities will be splashed in a big way across small cities to tap their talent and include them in the space footprint, ISRO Chairman K. Sivan, said. The space agency’s new Capacity Building Programme directorate will also invest ₹2 crore in incubation facilities in Jalandhar, Bhubaneswar, Tiruchi, Nagpur and Indore.

5. The Satkosia Tiger Reserve is located in
(a) Madhya Pradesh
(b) Odisha
(c) Chhattisgarh
(d) Jharkhand

**Solution:** b.

**WIIEnvis:** Satkosia and Simlipal are the two tiger reserves located in Odisha. **TH:**
6. Arrange the following capes as they would appear on a world map from west to east:
   1. Cape Horn
   2. Cape Leeuwin
   3. Cape of Good Hope

Select the correct answer using the code given below:
(a) 1-2-3
(b) 3-2-1
(c) 1-3-2
(d) 3-1-2

Solution: c.

7. Point Nemo, the so-called “oceanic pole of inaccessibility”, is located in the
   (a) Southern Indian Ocean
   (b) Southern Pacific Ocean
   (c) Central Pacific Ocean
   (d) Southern Atlantic Ocean

Solution: b.

BBC: Loneliness is part of being a long-distance yachtsman, but the spot where Mr Tomy was stranded was not the most isolated in the world’s oceans, in terms of distance from any land. In 1992, Croatian-Canadian survey engineer Hrvoje Lukatela worked out that the so-called “oceanic pole of inaccessibility” – since named Point Nemo – was in the southern Pacific.
8. Known as Silver Tips Imperial, it’s only plucked by expert pickers from the world’s first biodynamic tea farm on clear, full-moon nights when the planets align to produce optimal harvest conditions. This mystical Oolong, sold at a price of $1,850 per kg, is the most expensive tea ever produced in India. This tea farm is located in
(a) Munnar, Kerala
(b) Nilgiris, Tamil Nadu
(c) Darjeeling, West Bengal
(d) Jorhat, Assam

Solution: c.

**BBC**: Silver Tips Imperial can only be picked four to five times during the season. Before each harvest, hundreds of Makaibari workers (at the Makaibari tea estate) adorned in West Bengal dresses gather on the estate’s slopes just after dusk. As men beat hand drums, women dance and chant Vedic prayers for good fortune and protection under the light of the full moon. Onlookers light tallow torches fuelled by animal fat – not just to help the pickers see, but to help ward off wild leopards.

- After 20:00 when the moon is at its brightest, some 80 to 100 specially trained tea-pickers take to the hills to quickly pluck two leaves and the bud from each Camellia sinensis plant and place them in a large woven basket strapped around their heads. If the sunlight touches the leaves, it is thought to alter the tea’s aroma and consistency, so workers must race to finish the harvest by midnight so that the plucked plants can be processed before dawn that following morning.

- This smooth, elixir-like effect is what led buyers in the UK, US and Japan to pay $1,850 for a kg of the stuff during an especially powerful planetary alignment in 2014. In recent years, the brew has also cast a spell on Queen Elizabeth II, who received a packet of it as a gift from Indian Prime Minister Narendra Modi. It was also sold at the FIFA World Cup in 2014.
9. India’s hundredth airport, recently inaugurated by the Prime Minister, is located in
   (a) Pakyong, Sikkim
   (b) Gangtok, Sikkim
   (c) Tezu, Arunachal Pradesh
   (d) Itanagar, Arunachal Pradesh

**Solution: a.**

**PIB:** The Prime Minister recently inaugurated the Pakyong Airport in Sikkim. This is the first airport in the Himalayan State, and the 100th airport in the country. The Prime Minister said that Pakyong Airport would greatly ease connectivity to Sikkim. He said that in order to ensure that it is useful to the common man, this airport is part of the UDAN scheme.

Image source: [BBC](https://www.bbc.com);
XII. Miscellaneous

1. Why is it that “unconventional” reservoirs can produce gas cost-effectively only by using special stimulation techniques such as hydraulic fracturing?
   (a) The gas is highly dispersed in the rock.
   (b) The gas occurs in a concentrated underground location which is, at present levels of technology, hard to accurately pinpoint.
   (c) The momentary pressure rise resulting from a fracture is an important step in the chemical process of creation of gas.
   (d) None of the above

Solution: a.

- **US EPA: Unconventional Natural Gas Production**: Hydraulic fracturing is a technique used in “unconventional” gas production. “Unconventional” reservoirs can cost-effectively produce gas only by using a special stimulation technique, like hydraulic fracturing, or other special recovery process and technology. This is often because the gas is highly dispersed in the rock, rather than occurring in a concentrated underground location.

- **TH**: Unlike conventional hydrocarbons that can be sponged out of permeable rocks easily, shale gas is trapped under low permeable rocks. Therefore, a mixture of ‘pressurised water, chemicals, and sand’ (shale fluid) is required to break low permeable rocks in order to unlock the shale gas reserves.

2. Consider the following statements:
   1. Over a period of time, the usage of water dramatically increases for extracting the same amount of shale gas from a well.
   2. Shale rocks are always found adjacent to aquifers.

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

Solution: a.

- A recent study from Duke University observes that from 2011 through 2016, the water use per well in the U.S. increased up to 770% resulting in some shale wells consuming up to 42 million litres of water per well. The study further conveys that over a period of time, the usage of water dramatically increases for extracting the same amount of shale gas from a well (this is because more water is required to extract the same volume of gas as the reservoir gradually goes empty).

- **TH**: Shale rocks are usually (not always) adjacent to rocks containing useable/drinking water known as ‘aquifers’.

3. The high seas, as defined in maritime law, covers nearly
   (a) Three-fourth of earth’s surface
   (b) Half of earth’s surface
   (c) One-fourth of earth’s surface
   (d) One-tenth of earth’s surface
Solution: b.

The high seas are defined as the oceans that lie beyond exclusive economic zones. These zones (EEZs) are usually within 370km (200 nautical miles) of a country’s coastline. These waters (high seas) cover one and a half times the total land area of the planet and are home to some of the rarest and most charismatic species – but all countries have the right to navigate, fly over, carry our scientific research and fish on the high seas without restriction.

BBC;

4. Consider the following statements:
   1. At more than 70,000 kms in length, the mid-oceanic ridges form the longest mountain-chain on the surface of the earth.
   2. Hydrothermal vents are volcanic systems found along mid-ocean ridges.

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

Solution: c.

- **Fundamentals of Physical Geography Class XI NCERT:** There is a system of mid-ocean ridges more than 70,000 km long that stretches through all the ocean basins. The central portion of this ridge experiences frequent eruptions. These ridges form an interconnected chain of mountain system within the ocean. It is the longest mountain-chain on the surface of the earth though submerged under the oceanic water.

- **BBC:** Hydrothermal vents are volcanic systems found along mid-ocean ridges – places where new sea-floor is created by the upwelling of magma. In some locations, water can get drawn through cracks in the hot rock and become loaded with dissolved metals and other chemicals, before then being ejected back into the ocean. Specialised bacteria are able to exploit these hot fluids (up to 400°C), to provide the energy foundation for a beautiful and bizarre collection of more complex organisms.

5. Consider the following statements:
   1. It is the surface temperatures of the tropical eastern Pacific Ocean that fluctuate during the El Niño/Southern Oscillation.
   2. The last El Niño event to have occurred was in 2016-17.

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

Solution: a.

In the news (**BBC**): There’s a 70% chance of a recurrence of the El Niño weather event before the end of this year, according to the World Meteorological Organisation. Researchers say they are not expecting this new one to be as intense as 2015-16.

- The last El Niño occurred in **2015-16** and impacted weather patterns around the world. It was **one of the strongest ever recorded**, and had an impact on global temperatures, which saw 2016 enter the record books as the warmest
year. As well as heat, the event also led to drought in Africa that saw food production plummet in many countries across the continent. South America saw floods across Brazil, Argentina, Paraguay and Uruguay.

- According to the WMO, climate change is influencing the traditional dynamics of these weather events.
- The El Niño/Southern Oscillation, to give its proper title, is a natural event that involves fluctuating ocean surface temperatures in the Pacific, which influence the weather all over the world.

**NCERT Class 9 Geography:** “El Niño” is a name given to the periodic development of a warm ocean current along the coast of Peru as a temporary replacement of the cold Peruvian current. ‘El Nino’ is a Spanish word meaning ‘the child’, and refers to the baby Christ, as this current starts flowing during Christmas. The presence of the El Nino leads to an increase in sea-surface temperatures and weakening of the trade winds in the region.

---

**THE EL NIÑO PHENOMENON**

---

6. The Golden Globe Race, recently in the news, is associated with the sport of
   (a) Swimming
   (b) Running
   (c) Cycling
   (d) None of the above

**Solution: d.**
PIB: The Golden Globe Race (GGR) commenced from Les Sables d'Olonne harbour in France. In this race, participants are required to sail around the world, single-handed and non-stop. The uniqueness of the race is that boat designs and technology newer than 1968 is not permitted, hence use of Global Positioning System (GPS), satellite communication, navigational aids, etc is forbidden.

Recently in the news: rescue of Commander Abhilash Tomy;