

POLITY

❖ **Standing up for National Anthem: What the Supreme Court has ruled**

❖ **Context:** An executive magistrate in Srinagar has sent 11 men to jail after they were detained for allegedly not rising for the National Anthem at an event on June 25 where J&K Lt Governor Manoj Sinha was present. Srinagar Police said that “12 persons have been generally bound down for good behaviour under sections 107/151 of CrPC”.

➤ **Sections of the law**

- Section 107 of the Code of Criminal Procedure, 1973 allows an Executive Magistrate to ask any person who is “likely to commit a breach of the peace or disturb the public tranquillity or to do any wrongful act that may probably occasion a breach of the peace or disturb the public tranquillity...to show cause why he should not be ordered to execute a bond...for keeping the peace” for up to a year.
- Section 151 CrPC allows a police officer who knows of a design to commit a cognizable offence to “arrest, without orders from a Magistrate and without a warrant, the person so designing”.
- In legal terms, to be “bound down” means to be required to appear before the investigating officer or the court on a given date. The expression is usually used in court orders to indicate that an accused is “bound” by surety or personal guarantee to appear before authorities.

➤ **Bijoe Emmanuel case**

- The law around alleged disrespect to the National Anthem was laid down by the Supreme Court in its 1986 judgment in *Bijoe Emmanuel & Ors vs State Of Kerala & Ors*.
- The court granted protection to three children belonging to the millenarian Christian sect Jehovah’s Witnesses, who did not join in the singing of the National Anthem at their school. The court held that forcing them to sing the Anthem violated their fundamental right to religion under Article 25 of the Constitution.
- The children, siblings named Bijoe Emmanuel, Binu, and Bindu, who were students of Classes 10, 9, and 5 respectively, were expelled from NSS High School, run by the Hindu organisation Nair Service Society, on July 26, 1985.
- Their parents pleaded unsuccessfully before the Kerala High Court that Jehovah’s Witnesses permitted worship of only Jehovah (a form of the Hebrew name for God), and since the Anthem was a prayer, the children could stand up in respect, but could not sing.
- In its August 11, 1986 judgment, the Supreme Court said that “Article 25 (“Freedom of conscience and free profession, practice and propagation of religion”)...[was] incorporated in recognition of the principle that the real test of a true democracy is the ability of even an insignificant minority to find its identity under the country’s Constitution.”
- Standing up respectfully when the National Anthem is sung — as the children had done — but not singing oneself “does not either prevent the singing of the National Anthem or cause disturbance to an assembly engaged in such singing so as to constitute the offence...[under] the Prevention of Insults to National Honour Act, [1971],” the court said.
- Section 3 of the National Honour Act prescribes jail up to three years and/ or a fine for “intentionally prevent[ing] the singing of the National Anthem or caus[ing] disturbance to any assembly engaged in such singing”.
- The court held that the children’s expulsion as a result of their “conscientiously held religious faith...was a violation of their Fundamental Right to freedom of conscience” and to freely profess, practise and propagate their religion.

➤ **The debate revisited**

- The Supreme Court revisited the matter in *Shyam Narayan Chouksey vs Union of India* (2018). While hearing the case, the court had, on November 30, 2016, passed an interim order that “All the cinema halls in India shall play the National Anthem before the feature film starts and all present in the hall are obliged to stand up to show respect to the National Anthem.”
- The court had also ordered that “entry and exit doors shall remain closed” when the Anthem is played, and that “when the National Anthem shall be played...it shall be with the National Flag on the screen”.
- However, in its final judgment in the case passed on January 9, 2018, the court modified its 2016 interim order.
- “The order passed on 30th November, 2016, is modified to the extent that playing of the National Anthem prior to the screening of feature films in cinema halls is not mandatory, but optional or directory,” the court said.
- The court’s decision to modify the 2016 order came after it was informed by the Centre that a 12-member inter-ministerial committee had been formed to frame guidelines for occasions on which the National Anthem will be played or sung in theatres.

GLOBAL AFFAIRS

❖ **High Seas Treaty**

❖ **Context:** the UN adopted the Marine Biodiversity of Areas Beyond National Jurisdiction (BBNJ) or the High Seas Treaty. It became the third agreement to be approved under UNCLOS, after the 1994 and 1995 treaties, which established the International Seabed Authority and the Fish Stocks agreement.

➤ **When did the process start?**

- The idea of protecting the marine environment emerged in 2002. By 2008, the need for implementing an agreement was recognised, which led to the UNGA resolution in 2015 to form a Preparatory Committee to create the treaty.
- The Committee recommended the holding of intergovernmental conferences (IGC) and after five prolonged IGC negotiations, the treaty was adopted in 2023.
- The treaty's objective is to implement international regulations to protect life in oceans beyond national jurisdiction through international cooperation.

➤ **What does the treaty entail?**

- The treaty aims to address critical issues such as the increasing sea surface temperatures, overexploitation of marine biodiversity, overfishing, coastal pollution, and unsustainable practices beyond national jurisdiction.
- The first step is establishing marine protected areas to protect oceans from human activities through a “three-quarterly majority vote,” which prevents the decision from getting blocked by one or two parties.
- On the fair sharing of benefits from marine genetic resources, the treaty mandates sharing of scientific information and monetary benefits through installing a “clear house mechanism.”
- Through the mechanism, information on marine protected areas, marine genetic resources, and “area-based management tools” will be open to access for all parties. This is to bring transparency and boost cooperation.
- The last pillar of the treaty is capacity building and marine technology.
- The Scientific and Technical Body will also play a significant role in environmental impact assessment. The body will be creating standards and guidelines for assessment procedures, and helping countries with less capacity in carrying out assessments. This will facilitate the conference of parties to trace future impacts, identify data gaps, and bring out research priorities.

➤ **Why did it take so long to sign?**

- The marine genetic resources issue was the treaty's most contended element. The parties to the treaty must share and exchange information on marine protected areas and technical, scientific and area-based management tools to ensure open access of knowledge.
- The negotiations on the subject were prolonged due to the absence of a provision to monitor information sharing. In IGC-2, small island states supported the idea of having a licensing scheme for monitoring, but was opposed by the likes of the U.S., and Russia, stating its notification system would hinder “bioprospecting research.”
- Another debate was over definition. The use of the phrases “promote” or “ensure” in different parts of the treaty, especially with respect to the sharing of benefits from marine genetic resources, was heavily debated over.
- And finally, there was the prolonged negotiation over the adjacency issue. This was specifically applicable to coastal states whose national jurisdictions over the seas may vary. This meant it required special provisions where it can exercise sovereign rights over seabed and subsoil in the jurisdiction beyond. It prolonged the decision-making as it affects the interests of landlocked and distant states.

➤ **Who opposed the treaty?**

- Many developed countries opposed the treaty as they stand by private entities which are at the forefront of advanced research and development in marine technology (patents relating to marine genetic resources are held by a small group of private companies).
- Russia and China also are not in favour of the treaty. Russia withdrew from the last stage of reaching a consensus in IGC-5, arguing that the treaty does not balance conservation and sustainability.

➤ **What are the high seas?**

- According to the 1958 Geneva Convention on the High Seas, parts of the sea that are not included in the territorial waters or the internal waters of a country are known as the high seas
- Simply put, it is the area beyond a country's Exclusive Economic Zone which extends up to 200 nautical miles (370 km) from the coastline and till where a nation has jurisdiction over living and non-living resources.
- No country is responsible for the management and protection of resources on the high seas.

➤ **Importance**

- The high seas account for more than 60% of the world's ocean area and cover about half of the Earth's surface, which makes them a hub of marine life.
- They are home to around 2.7 lakh known species, many of which are yet to be discovered.
- The high seas are fundamental to human survival and well-being.
- The high seas regulate the climate by playing a fundamental role in planetary stability by mitigating the effects of climate change through its absorption of carbon and by storing solar radiation and distributing heat around the globe.

PUBLIC HEALTH

❖ **The challenge of Antimicrobial Resistance (AMR), and how to confront it effectively**

❖ **Context:** Antimicrobial Resistance (AMR) is today reckoned among the most ominous threats confronting Global Public Health. AMR implies that a pathogen sensitive to a certain drug ceases to respond to that drug.

➤ While the more commonly known **resistance is Antibacterial (ABR)**, the larger term AMR encompasses resistance to medicines for treatment of other pathogens too, which cause viral, fungal, and parasitic diseases.

- AMR is a global issue, not confined by political boundaries, and is a threat to all humanity. Animals and plants are also afflicted by diseases caused by pathogens, and hence are vulnerable to AMR. Human beings are victims of AMR due to the irrational and improper use of drugs. Additionally, AMR spreads in humans through their food, water, and from their environment.
- **A serious concern around the world:**
 - Over the last ten years, the prevention, control, and response to AMR has been a high priority for most national governments, international organisations (such as the WHO, FAO, OIE), healthcare communities, and civil society, etc. The WHO's global action plan (GAP) was adopted by member nations in 2015. National action plans have been prepared by many countries.
 - India's NAP was approved in 2017. It is understood that NAP 2.0 is now envisaged. The thrust of India's NAP includes coordinated action by the government and non-government sectors; a whole of government approach (Health, Animal Husbandry, Fisheries, Agriculture, Dairy, Pharmaceuticals and Biotechnology sectors); advocacy; awareness-building; involvement of the community; infection prevention and control; National AMR Surveillance Network (NARS Net); research and international collaboration. AMR is an important priority in the G20 health agenda under India's presidency.
 - The COVID-19 pandemic hijacked the priorities of the health sector. The entire focus shifted to the management and containment of COVID. As a consequence, most public health programmes, including AMR endeavours, suffered and timelines got extended. Hence, substantial effort is now needed to get back on track.
- **Need for a concerted, combined effort**
 - Despite the International 'One Health' initiative and India's own vision of inter-ministerial coordination for AMR prevention and control, the war against AMR is largely construed as the burden of the health sector. It is vital that other stakeholders too, especially the sectors overseeing food, drinking water, and environment, shoulder equal ownership, failing which the achievement of India's AMR objectives will be difficult.
 - An area of immense concern is the apparently unregulated access to antibiotics for the animal husbandry, dairying, and poultry sectors.
 - Prompt and effective action in this area is warranted. This should include not only regulated access, but also no over- or under-use of drugs for non-human consumption.
 - Another important aspect that we must recognise and address is the role of the environment in the spread of AMR. Untreated wastewater and effluents, including such releases from antibiotics manufacturing units and healthcare facilities, can contaminate our environment, facilitating the propagation of AMR. Effective sanitation, sewage, and waste treatment infrastructure is required to keep the environment safe and prevent AMR contamination and transmission.
- **How crucial are the state governments and local bodies in India's AMR agenda?**
 - AMR containment measures including hospital infection and control, regulation of pharmacies/pharmacists, treatment of sewage and pharmaceutical effluents, adoption of standard treatment protocols, AMR surveillance etc., are largely implemented by the state governments.
 - Hence, our efforts cannot be successful without the active and enthusiastic involvement of the states. This realisation must quickly resonate across the country.
- **Why urgent action is needed; how to go about it**
 - AMR puts a huge economic burden on both individual families and society as a whole. Long periods of morbidity due to non-responsive medicines, increased mortality due to AMR, massive loss of productive man-days of work, wasteful expenditure on medicines which do not work, maintaining large ill populations, etc. put an enormous burden on national resources. This can be prevented by effectively neutralising the threat of AMR. Hence, investments in the AMR programme is not only a health necessity, it is also good economics.
 - India has achieved huge success in the application of digital technology. Leveraging such applications, especially conceived for the AMR programme, will yield good dividends. This can also add value to India's contribution in the G20 collaboration.
 - Applications can be for monitoring the use of antibiotics, prescription audits, movement of antibiotics from the production source to the ultimate user, for surveillance of incidence and prevalence of AMR including state-wise or interspatial variations, etc.
 - Parallel efforts on a war footing are needed for the discovery and commercialisation of new antibiotics and new antimicrobials.
 - We must leverage the social media platforms to spread the message of AMR. Our objective should be to inculcate community realisation for rational and correct use of antimicrobials. Bereft of community participation, public health programmes may not succeed.

PRELIMS

1. **First overseas IIT campus**

- **In News:** India signed a Memorandum of Understanding (MoU) with Tanzania for setting up the campus of IIT-Madras in Zanzibar.
 - The academic programmes, curricula, student selection aspects and pedagogical details will be set by IIT-Madras, while the capital and operating expenditure will be met by the government of Zanzibar-Tanzania. IIT-Madras degrees will be awarded to students enrolled in the campus.

- It is the first overseas IIT campus. Two more global campuses of IIT Delhi and IIT Kharagpur are set to come up in Abu Dhabi and Kuala Lumpur.
- **Significance**
 - The initiative is to strengthen South-South cooperation as well as forge stronger people-to-people ties with Africa.
 - The move is also in line with the National Education Policy (NEP) 2020, which recommends that “high performing Indian universities will be encouraged to set up campuses in other countries”.
 - The setting up of the IIT campus is a step towards internationalizing Indian education and expanding India's diplomatic relationships.
- 2. **NeSDA portal**
 - In News: Recently, secretary of Department of Administrative Reforms and Public Grievances launched the third edition of the National e-Governance Service Delivery Assessment (NeSDA) portal.
 - **About NeSDA portal:**
 - NeSDA framework, launched in August 2018 was conceptualized with an overall objective to measure the depth and effectiveness of existing e-Governance service delivery mechanisms.
 - The Department has successfully released 2 editions of NeSDA study, viz., NeSDA 2019 and NeSDA 2021.
 - This framework is based on the Online Service Index (OSI) of UN eGovernment Survey.
 - The framework covers six sectors, Finance, Labour & Employment, Education, Local Government & Utilities, Social Welfare (including Agriculture & Health) and Environment (including Fire) sectors.
 - Improvement in the country's e-Governance landscape due to last 2 editions of NESDA study may be summarized in the following key take aways:
 - ✓ Increase in e-Service Delivery
 - ✓ Rise in use of Integrated / Centralized Portals for delivery of e-Services
 - ✓ Improvement across assessment parameter scores
 - NeSDA helps the respective governments improve their delivery of citizen centric services and shares best practices across the country for all States, UTs and Central Ministries to emulate.
- 3. **Ubinas Volcano**
 - In News: Peru recently announced a state of emergency in the Moquegua region due to the ongoing activity of the Ubinas volcano.
 - **About Ubinas Volcano:**
 - Ubinas is a stratovolcano located in the Central Volcanic Zone of the Andes.
 - It is one of the most active volcanoes in Peru, with more than 26 eruptive episodes recorded in the last 500 years.
 - The Ubinas volcano is part of a group of seven volcanoes in southern Peru located within a volcanic zone that extends from southern Peru to northern Chile.
 - The affected area is situated within the "Ring of Fire," a region encompassing the edges of the Pacific Ocean that is renowned for its volcanic activity and seismic events, such as earthquakes.
 - The upper portion of the volcano is made from lava flows from the Pleistocene.
 - The depression (caldera) at the summit contains a cone of volcanic ash sporting a vent shaped like a funnel.
 - **What is a Stratovolcano?**
 - The stratovolcano is a tall, steep, and cone-shaped type of volcano.
 - Unlike flat shield volcanoes like in Hawaii, they have higher peaks. At the peak, stratovolcanoes usually have a small crater.
 - Stratovolcanoes build up on height by layering lava, ash and tephra. By definition, they have alternating layers of pyroclastic and lava.
 - When ash falls or lava flows, it solidifies and makes a narrower cone.
 - Strato Volcanoes comprise the largest percentage (~60%) of the Earth's individual volcanoes.
 - Strato volcanoes are usually about half-half lava and pyroclastic material, and the layering of these products gives them their other common name of composite volcanoes.
- 4. **OpenKylin**
 - In News: China recently released its first open-source desktop operating system, named OpenKylin.
 - About OpenKylin:
 - It is China's first open-source desktop operating system (OS).
 - It is a Linux-based operating system built by a community of about 4,000 developers.
 - OpenKylin users have access to the software's lines of code and can modify them as they wish, unlike Microsoft and Apple, which keep the workings of Windows and MacOS systems secret.
 - **What is an open-source operating system (OS)?**
 - An Open-source OS is the OS in which source code is visible publicly and editable.
 - The generally known Operating Systems like Microsoft's Windows, Apple's iOS and Mac OS, are closed OS.
 - Closed Operating Systems are built with numerous codes and complex programming and that is called source code. This source code is kept secret by the respective companies (owners) and inaccessible to third parties. In the case of an Open-Source Operating system, everyone can access and edit the source code.
- 5. **Peste Des Petits Ruminants (PPR)**
 - In News: An outbreak of a highly contagious animal disease, Peste Des Petits Ruminants, has recently killed 60 sheep and goats and affected around 200 in the highland pastures of the Lahaul and Spiti district of Himachal Pradesh.

- **About Peste Des Petits Ruminants (PPR):**
 - PPR is a highly contagious viral disease of sheep and goats with high mortality.
 - It is caused by a virus of the family paramyxoviridae and genus morbillivirus. It is closely related to other members of the genus, including the rinderpest virus, measles virus, and canine distemper virus.
- Symptoms:
 - ✓ PPRV causes disease with an array of clinical signs. It also causes immunosuppression, which makes affected animals more likely to pick up other infections.
 - ✓ Clinical signs of PPR: Fever, Eye and nasal discharges, Sores in the mouth, Diarrhoea, Listlessness, Respiratory signs (coughing and pneumonia), Abortion and death, with case fatality rates as high as 90% (though more commonly around 20%).
- PPR is mainly spread during close contact when a susceptible animal inhales the virus from infected animals' coughing and sneezing. Transmission can also occur indirectly through contact with infected objects (fomites) such as feed troughs, bedding etc.
- Once introduced, the **virus can infect up to 90 percent of an animal herd**, and the disease **kills anywhere from 30 to 70 percent of infected animals**.
- The PPR virus **does not infect humans**.
- In India, the disease outbreaks have been reported in Himachal Pradesh, Andhra Pradesh, West Bengal, Telangana, Karnataka and Chhattisgarh.
- Currently, a global initiative driven by the Food and Agriculture Organization of the United Nations (FAO) and the World Organisation for Animal Health (OIE) exists to eradicate PPR by 2030.

ANSWER WRITING

Q. "If India wants to continue being the pharmacy of the world, then it needs to make its pharmaceutical industry robust, resilient, and responsive". Elaborate.

Answer;

Although globally, India ranks 3rd in terms of pharmaceutical production by volume and 14th by value and its current market size is around USD 50 billion but when its robustness, resilience and responsiveness were put to test during the Covid-19 pandemic various challenges which this sector is witnessing were brought to light.

State of Indian Pharma Sector:

- India is the largest provider of generic drugs globally:
 - 40% of generic demand in the U.S. and 25% of all medicine in the U.K.
 - Presently, over 80% of the antiretroviral drugs used globally to combat AIDS (Acquired Immune Deficiency Syndrome) are supplied by Indian pharmaceutical firms.
- Largest producer of vaccines: The Indian pharmaceutical industry meets over 50% of the global demand for various vaccines.
- Fixed dose combination (FDC) drugs are an innovation of India's national pharmaceutical industry. FDC is being used in the treatment of diseases like HIV, Parkinson's disease and contraceptive pills.
- Growth Potential: According to the Economic Survey 2021, the domestic market is expected to grow three times in the next decade from USD 42 billion in 2021 to USD 65 billion by 2024.

Challenges to India in retaining the tag of pharmacy of the world:

- Lack of Capabilities in Innovation Space: India is rich in its manpower and talent but still lags in innovation infrastructure as it has been slow to grow in the innovation space (e.g., new molecular entities, complex generics), due to a limited government-supported research ecosystem. As less than 1% of GDP is spent on R&D while China spends 2.1% of its GDP.
- Dependence on other nations for raw materials:- Active Pharmaceutical Ingredients (API), also known as bulk drugs. Indian drug-makers import around 70% of their total bulk drug requirements from China. For example, during the Covid pandemic, India banned API from China to boycott China and became dependent on America but America banned the export of API to India as per their policy of "America First".
- Hostile competition: There is stiff competition from firms in countries like China, Israel and Japan. Hostile and negative lobbying by the big players who frequently accuse Indian firms of violating patent laws.
- Quality compliance inquiry: India has undergone the highest number of Food and Drug Administration (FDA) inspections since 2009; therefore, continuous investment in upgrading quality standards will distract the capital away from other areas of development and growth is reduced.
- Lack of Stable Pricing and Policy Environment:- Frequent changes in GoI's Drug Price Control Order discourage the pharma industries from scaling up their production and from undertaking new investments. This was witnessed during the pandemic as well as the government regulated the pharma prices to ensure the availability of life-saving drugs and vaccines to all.
- Scalability: During the pandemic an adequate number of life-saving drugs like remdesivir, and hydroxychloroquine were not made available on time due to a lack of adequate infrastructure facilities like storage facilities.

Steps that need to be taken:

- Innovation Hubs to Accelerate Collaboration: There is a need for several at-scale innovation hubs co-locating academia, public R&D centres, industry, start-ups and incubators. In this regard, the GOI organized the first Global Innovation Summit of the pharmaceutical sector in November 2021.
- Revival of R&D and public sector API manufacturers is necessary - For example, the Council of Scientific and Industrial Research (CSIR) should be promoted to invest in R&D. To encourage domestic production of APIs and drug intermediaries the government has launched the Production linked incentive (PLI) scheme.

- Harnessing global value-chain: Besides the volume share, India now needs to capture value share as well.
- Implement the Malshekar committee's recommendation on drug regulation regarding setting up a National Drug Authority and strengthening the State Drug Control Organisations.
- Provide better Infrastructure facilities: Government has approved the establishment of three mega 'Bulk Drug Parks' to provide common facilities like solvent recovery, effluent treatment, distillation, etc. So, effective implementation of this scheme and the creation of more such bulk parks is required to enhance the robustness of this sector.

In recent times the world is witnessing a rise in zoonotic diseases and as there is an imminent threat of the rise of new diseases on account of climate change, we need to move towards the idea of "one health" along with strengthening our pharma sector by ensuring effective implementation of these above-given suggestions.

MCQs

1. Recently, the US re-affirmed his support for Sweden's demand for NATO membership.
Which of the following countries share a land border with Sweden?
1. Norway 2. Finland
3. Russia 4. Denmark
Select the correct answer using the code given below:
a) 1 and 2 b) 1,2 and 4
c) 1, 3 and 4 d) 1, 2, 3, and 4
2. Recently, ambergris, also known as floating gold, was found in the carcass of a sperm whale washed up on a shore of the Canary Island. Consider the following statements regarding 'Ambergris':
Statement-I: Ambergris originates from the digestive system of protected sperm whales.
Statement-II: It is a rare substance used to produce perfumes with musk notes.
Which one of the following is correct in respect of the above statements?
a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I
b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
c) Statement-I is incorrect but Statement-II is correct
d) Statement-I is correct but Statement-II is incorrect
3. Consider the following Statements regarding the 'International Court of Justice (ICJ)':
1. ICJ is the principal judicial organ of the United Nations (UN), commonly referred to as the World Court.
2. ICJ Judges are not Eligible for Re-Election.
3. It decides disputes based on the voluntary participation of the States concerned.
Which of the above statements is/are correct?
a) Only one **b) Only two**
c) All three d) None of these
4. Which of the following organization launched 'One Health Global Leaders Group on Antimicrobial Resistance'?
1. World Health Organization (WHO)
2. UN Food and Agriculture Organization (FAO)
3. United Nations Children Fund (UNICEF)
4. International Organization on Animal Health (OIE).
Select the correct answer using the code given below.
a) 1, 2 and 3 only b) 2 and 3 only
c) 1, 2 and 4 only d) 1, 2, 3 and 4
5. The Goods and Services Tax (GST) Council, in its upcoming meeting, is likely to discuss the scope of the budgetary support policy for the eligible manufacturing units operating in hilly areas, such as Uttarakhand, Himachal Pradesh, and Northeast states. Consider the following statements, with respect to Goods and Services Tax (GST) Council
1. It is a constitutional body which is responsible for making recommendations on issues related to the implementation of the Goods and Services Tax (GST) in India
2. Every decision of the GST Council shall be taken by a majority of not less than three-fourths of the weighted votes of the members present and voting
3. Chairperson of, Central Board of Excise and Customs (CBEC), is Ex-officio chairman of GST Council
Which of the statements given above is/are not correct?
a) 3 only b) 2 and 3 only
c) 1 and 2 only d) 1, 2 & 3
6. Recently Indian Oil Corporation (IOC) planning to raise capital through rights issue of equity shares. Consider the following statements regarding rights issue:
1. It is an invitation to existing shareholders to purchase additional new shares in the company.
2. It is issued to raise extra capital to meet its current financial obligations.
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
7. Recently, astronomers have made a stunning discovery of meteor-like streaks falling on the surface of the Sun. With reference to the Solar shooting stars, consider the following statements:
1. It is formed due to clumps of plasma that plummet to the Sun's surface.
2. These play a key role in cooling of the corona.
3. It was discovered by the Solar Orbiter spacecraft of the European Space Agency.
How many of the statements given above is/are correct?
a) Only one **b) Only two**
c) All three d) None of these
8. With reference to the gravity hole, consider the following statements:
1. It is a region of the ocean where the effects of gravity are more than its surrounding.
2. It occurs due to gravitational anomalies at the bottom of the ocean.
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
9. First Overseas IIT Campus will be established which of the following countries?
a) Saudi Arabia b) Nepal
c) Bangladesh **d) Tanzania**
10. With reference to the National e-Governance Service Delivery Assessment, consider the following statements:
1. It measures the depth and effectiveness of existing e-Governance service delivery mechanisms.
2. The assessment study is published biennially.
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