PRELIMS - 2017

INSIGHTS REVISION TEST – 3
(DAYS 11-15)

Question and Solution Booklet

For Insights Current Affairs;
PRELIMS 2017 REVISION MODULES etc.

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1. With reference to Deccan painting, consider the following statements

1. It is a form of miniature painting
2. The style developed under the patronage of Mughals

Which of the above statements is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Solution: a)

Insights Prelims Tests 2017, Test 19, Q 3

Deccani painting is a Deccan form of miniature painting, evolved in south-western India—(also known as Deccan), during the inception of Bahmani Sultanate in 1347 AD. The style developed under the patronage of Deccan sultanates—(namely, Bijapur, Golkonda, Ahmadnagar, Bidar, and Berar) and lasted until the extinction of the Qutb Shahi dynasty in 1687 AD.

It lost its features under Mughals.


2. The first Law Commission was established, under the Chairmanship of Lord Macaulay which recommended codification of the Penal Code and the Criminal Procedure Code, by the

(a) The Saint Helena Act 1833
(b) The Charter Act of 1813
(c) The Charter Act of 1853
(d) None of the above

Solution: a)

Insights Prelims Tests 2017, Test 19, Q 5

The charter act of 1833 is also known as Saint Helena Act 1833. (you will know answer if you had studied carefully the test question)

It is one of the very important Charter Acts.

The Saint Helena Act 1833 or The Government of India Act 1833 (3 & 4 Will 4 c 85) is an Act of the Parliament of the United Kingdom.

As this Act was also intended to provide for an extension of the royal charter granted to the East India Company, it is also called the Charter Act of 1833. This Act extended the charter by 20 years. It contained the following provisions:

- It redesignated the Governor-General of Bengal as the Governor-General of India. Under this provision Lord William Bentinck became the first Governor-General of India.
- It deprived the Governors of Bombay and Madras of their legislative powers. For the first time, the Governor-General’s Government was known as the ‘Government of India’ and his council as the ‘India Council’. The Governor-General and his executive council were given exclusive legislative powers for the whole of British India.
- It ended the activities of the British East India Company as a commercial body and it became a purely administrative body. In particular, the Company lost its monopoly on trade with China and other parts of the Far East.
- It attempted to introduce a system of open competitions for the selection of civil servants. However this provision was negated after opposition from the Court of Directors who continued to hold the privilege of appointing Company officials.
- The Island of Saint Helena was vested in His Majesty.
- With the exception of section 112, vesting Saint Helena in the monarchy, the act was repealed by the Government of India Act 1915

3. Which of the following food items can be considered as fortified food?

1. Iodised salt
2. Vegetable oil enriched with Vitamin D
3. Golden Rice which produces beta carotene

Select the correct answer using codes below:
(a) 1 and 2 only
(b) 2 only
(c) 1, 2 and 3
(d) None of the above
4. Rivers Musi, Koyna and Malaprabha are the tributaries of
   (a) River Godavari
   (b) River Krishna
   (c) River Kaveri
   (d) River Tungabhadra

Solution: b)

5. With reference to the Bengal School of Art, consider the following statements
   1. It was against British colonialism and associated itself with Indian nationalism and patriotism
   2. One of its proponents, Abanindranath Tagore, was influenced by Mughal painting

Which of the above statements is/are correct?
   (a) 1 only
   (b) 2 only
   (c) Both 1 and 2
   (d) Neither 1 nor 2

Solution: c)

6. With reference to Mahabalipuram monuments, consider the following statements:
   1. They are located on the Coromandel Coast of the Bay of Bengal
   2. They belong to Chola Dynasty
   3. Most of these monuments depict figures from Ramayana

Which of the above statements is/are correct?
   (a) 1 and 2 Only
   (b) 1 Only
   (c) 1,2 and 3
   (d) None of the above

Solution: b)

Tributaries of Krishna

Left: Bhima, Dindi, Peddavagu, Haliya,Musi, Paleru, Munneru
Right: Venna, Koyna, Panchganga,Dudhaganga, Ghataprabha,Malaprabha, Tungabhadra

7. Which of the following banks is/are now part of the SBI?
   1. State Bank of Bikaner and Jaipur (SBBJ)
   2. Bharatiya Mahila Bank (BMB)
   3. State Bank of Travancore (SBT)
   4. Union Bank of India

Select the correct answer using codes below:
   (a) 1 and 3 Only
   (b) 1,2 and 3 Only
   (c) 1,3 and 4 Only
   (d) 1,2,3 and 4

Solution: b)

Five associates and the Bharatiya Mahila Bank became part of the State Bank of India (SBI) on Saturday, catapulting the country’s largest lender to among the top 50 banks in the world.
State Bank of Bikaner and Jaipur (SBBJ), State Bank of Hyderabad (SBH), State Bank of Mysore (SBM), State Bank of Patiala (SBP) and State Bank of Travancore (SBT), besides Bharatiya Mahila Bank (BMB), merged with SBI with effect from 1 April 2017.

8. Article 243ZE of the Indian Constitution talks about Committee for Metropolitan Planning (CMP). With reference to CMP, consider the following statements:

1. It shall be constituted in every Metropolitan area a Metropolitan Planning Committee to prepare a draft development plan for the Metropolitan area as a whole
2. The Chairperson of every Metropolitan Planning Committee shall forward the development plan, as recommended by such Committee, to the District Planning Committee (DPC)

Which of the above statements is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Solution: a)
Insights Prelims Tests 2017, Test 19, Q 26

DPC and CMP are different. CMP should send its development plan to the state government, not to DPC (which sends its own plan to state government)

Please read few basics about all the bodies mentioned in solution (Q 26).
http://www.sanchitha.ikm.in/node/2307
http://www.sanchitha.ikm.in/node/2306

9. With reference to Aihole, consider the following statements:
1. It is known for Chalukyan architecture
2. It lies along the Malaprabha River
3. It is a UNESCO World heritage site

What is the correct answer?
(a) 1 and 2 only
(b) 2 and 3 Only
(c) 2 Only
(d) 1, 2 and 3

Solution: a)
Insights Prelims Tests 2017, Test 19, Q 35
https://en.wikipedia.org/wiki/Aihole

It is not yet a UNESCO World heritage site.

10. With reference to the Kailasa Temple of Ellora, consider the following statements:
1. It is one of the largest rock-cut ancient Buddhist temples
2. All the deities carved in this temple complex belong to Shaivaite (followers of Lord Shiva) tradition

Which of the above statements is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Solution: d)
Insights Prelims Tests 2017, Test 19, Q 42

It’s Hindu temple complex.
It has both Shaivaite and Vaishnavaite deities.

11. With reference to Rajgir, consider the following statements:
1. The city of Rajgir was the first capital of the Magadha empire
2. The city was the venue for the first Buddhist Council
3. Lord Mahavira, 24th Tirthankara spent many years of his life at Rajgir

Which of the above statements is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Solution: c)
Insights Prelims Tests 2017, Test 19, Q 44

It has both Shaivaite and Vaishnavaite deities.
Which of the above statements is/are correct?

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

Solution: d)

Insights Current Affairs, November 2016, Page 7

Rajgir (originally known as Girivraj) is a city and a notified area in Nalanda district in the Indian state of Bihar. The city of Rajgir was the first capital of the kingdom of Magadha, a state that would eventually evolve into the Mauryan Empire. Its date of origin is unknown, although ceramics dating to about 1000 BC have been found in the city. This area is also notable in Jainism and Buddhism as one of the favorite places for Lord Mahavira and Gautama Buddha and the well-known “Atanatiya” conference was held at Vulture’s Peak mountain.

Lord Mahavira, 24th Tirthankara spent fourteen years of his life at Rajgir and Nalanda, spending Chaturmas (i.e. 4 months of the rainy season) at a single place in Rajgir (Rajgruhi) and the rest in the places in the vicinity. It was the capital of one of his Shravaks (follower) King Shrenik. Thus Rajgir is a very important religious place for Jains. The twentieth Jain tirthankara, Munisuvrata is supposed to have been born here. An ancient temple (about 1200 years old) dedicated to Munisuvrat bhagwan is also present here along with many other jain temples. This temple is also a place for four Kalyanakas of Bhagwan Munisuvratnath.

12. Recently, the Ministry of Culture commemorated “500th Anniversary of Shri Krishna Chaitanya Mahaprabhu’s Coming to Vrindavan”. With reference to Vrindavan, consider the following statements:

1. It is located on the banks of Yamuna River in Bihar
2. The place is considered sacred by followers of Vaishnavism

Which of the above statements is/are correct?

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

Solution: b)

Insights Current Affairs, November 2016, Page 7 – 8

It is in Mathura district of UP.

https://en.wikipedia.org/wiki/Vrindavan

13. With reference to the Kohinoor diamond, consider the following statements:

1. It was forcibly taken away by the British from the last ruler of Mughal Empire
2. The government of India, since Independence has officially sought to bring back Kohinoor diamond back to India

Which of the above statements is/are correct?

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

Solution: b)

Insights Current Affairs, November 2016, Page 8-9

It was taken away from Maharaja Ranjit Singh (either forcibly or as a gift).

The return of Kohinoor diamond to India has been a long-standing demand, with many claiming that the diamond was taken forcibly. The fight to get back the diamond has been ongoing since India’s independence. The Indian government, believing the gem was rightfully theirs, made the first demand for the return of the Kohinoor diamond soon after independence. A second request followed in 1953, the year of the coronation of Queen Elizabeth II. Each time, the British government refuted the claims, saying that ownership was non-negotiable.
14. With reference to recent major cyclones and the regions affected by them, consider the following:

<table>
<thead>
<tr>
<th>Cyclone</th>
<th>Major Affected Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclone Mathew</td>
<td>Fiji</td>
</tr>
<tr>
<td>Typhoon Lionrock</td>
<td>South Korea</td>
</tr>
<tr>
<td>Cyclone Winston</td>
<td>Haiti</td>
</tr>
</tbody>
</table>

Which of the above is/are correctly matched?

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

Solution: c)
Insights Current Affairs, November 2016, Page 10

In total, there have been 78 tropical cyclones globally in 2016 as of October 31, close to the long-term average. The most significant, in terms of casualties, was Hurricane Matthew affecting Haiti and parts of the U.S. Typhoon Lionrock caused destructive flooding and heavy casualties in the Democratic People’s Republic of Korea, and Cyclone Winston was the most severe tropical storm on record to affect Fiji.

15. In the recent US election, Donald Trump defeated Democratic opponent Hillary Clinton by garnering about 300 votes in the electoral college. Which of the following states has highest number of electoral votes?

(a) California
(b) Texas
(c) Mississippi
(d) Washington

Solution: a)
Insights Current Affairs, November 2016, Page 12

California state with highest population has largest electoral votes.

16. With reference to ‘Pradhan Mantri Surakshit Matri Abhiyan’ (PMSMA), consider the following statements:

1. The scheme aims to provide healthy life to the pregnant women.
2. It aims at Lowering the maternity mortality rate

Which of the above is/are correct?

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

Solution: c)
Insights Current Affairs, November 2016, Page 32-33

The scheme is aimed at ensuring that every pregnant woman undergoes essential checkup during pregnancy to avoid unnecessary complication. This is expected to significantly bring down maternal deaths, mainly in rural areas. Scheme is applicable to women through their third to sixth month of pregnancy. A key feature of the scheme includes services by gynaecology specialists and physicians with support from private sector doctors to supplement the efforts of the government sector. Under the scheme, pregnant women will be provided special antenatal check-up in their second or third trimester at government health care facilities. These services include ultrasound, blood and urine tests, in addition to routine antenatal check-up. It also invites the private sector to provide free ante-natal services (ANC) on the 9th of every month on a voluntary basis to pregnant women, especially those living in underserved, semi-urban, poor and rural areas.

17. World Pneumonia Day 2016 was observed on November 12, 2016. Pneumonia is caused by

(a) Virus
(b) Bacteria
(c) Protozoa
(d) Both a and b

Solution: d)
Insights Current Affairs, November 2016, Page 34

California state with highest population has largest electoral votes.
Pneumonia is usually caused by infection with viruses or bacteria and less commonly by other microorganisms, certain medications and conditions such as autoimmune diseases.

18. International Research Conference on Brucellosis was recently inaugurated in New Delhi. Brucellosis is

(a) A disease caused by ingestion of unpasteurized milk or undercooked meat from infected animals, or close contact with their secretions

(b) It is caused by a virus

(c) It affects only children below age of 5 years

(d) All the above are correct

Solution: a)

Brucellosis is a highly contagious zoonosis caused by ingestion of unpasteurized milk or undercooked meat from infected animals, or close contact with their secretions. Brucella species are small, gram-negative, nonmotile, nonspore-forming, rod-shaped (coccobacilli) bacteria. They function as facultative intracellular parasites, causing chronic disease, which usually persists for life. Four species infect humans: B. abortus, B. canis, B. melitensis, and B. suis. B. abortus is less virulent than B. melitensis and is primarily a disease of cattle. B. canis affects dogs. B. melitensis is the most virulent and invasive species; it usually infects goats and occasionally sheep. B. suis is of intermediate virulence and chiefly infects pigs. Symptoms include profuse sweating and joint and muscle pain. Brucellosis has been recognized in animals and humans since the 20th century.

19. Russia has invited India to join in developing nuclear reactors and participate in its fast reactor research project. With reference to fast reactor, consider the following statements:

1. It is said that this fast reactor can solve the major ecological problem of reprocessing and deactivation of the accumulated radioactive waste

2. This reactor needs no neutron moderator

Which of the above statements is/are correct?

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

Solution: c)

A fast neutron reactor or simply a fast reactor is a category of nuclear reactor in which the fission chain reaction is sustained by fast neutrons. Such a reactor needs no neutron moderator, but must use fuel that is relatively rich in fissile material when compared to that required for a thermal reactor.


20. The UN body – UNISDR, is concerned with

(a) Sustainable development

(b) Disaster Reduction

(c) Refugee Rehabilitation

(d) None of the above

Solution: b)

The United Nations Office for Disaster Risk Reduction (UNISDR) was created in December 1999. The successor to the secretariat of the International Decade for Natural Disaster Reduction, it was established to ensure the implementation of the International Strategy for Disaster Reduction (General Assembly (GA) resolution 54/219). UNISDR is part of the United Nations Secretariat and its functions span the social, economic, environmental as well as humanitarian fields. UNISDR supports the implementation, follow-up and review of the Sendai Framework for Disaster Risk Reduction adopted by the Third UN World Conference on Disaster Risk Reduction on 18 March 2015 in Sendai, Japan. The Sendai Framework is a 15-year voluntary, non-binding agreement that maps out a broad, people-centred approach to disaster risk reduction, succeeding the 2005-2015 Hyogo Framework for Action.
21. Recently, the Union HRD Minister inaugurated “Smart India Hackathon 2017”. With reference to this initiative, consider the following statements:

1. It is to find digital solutions to problems that India faces in sectors such as water, power, health, education etc
2. It was a digital programming competition conducted among software professionals across India

Which of the above statements is/are correct?
(a) 1 only
(b) 2 Only
(c) Both 1 and 2
(d) Neither 1 nor 2

Solution: a) Insights current affairs Nov 2016, Page 39

Through Smart India Hackathon 2017, HRD ministry is keen on reaching out to all technology institutions in India and challenge students to offer innovative solutions to some of the daunting problems faced by our nation. The Hackathon will have nearly 500 problem statements in all which will be published on innovate.mygov.in. In this regard, the ministry has unveiled the first set of 250 problem statements received from various ministries that the students will be required to solve during the Hackathon.

22. AirSewa portal was recently launched by the Ministry of Civil Aviation. What’s the main purpose of this portal?
(a) Help passengers to book flight tickets at affordable rates
(b) Grievance redressal for air passengers
(c) Provide information on ongoing works under the Ministry of Aviation
(d) None of the above

Solution: b) Insights current affairs Nov 2016, Page 43

With the launch of AirSewa, passengers will be able to register their grievances through the mobile app or a web portal. The users will have the facility to upload voice or video along with an elaborate description of their issues. They will be given a unique reference number for each of their reported grievances which would also be communicated through an email as well as an SMS. The Users can track the status and response to these grievances through the mobile application as well as the web application based on the reference number provided. Once the grievance is closed the user has an option to provide his feedback and rate the overall experience and satisfaction.

This government site is beautifully designed. Check here – http://airsewa.gov.in/

23. Recently, the Union Agriculture & Farmers Welfare Minister launched ‘e-pashuhaat’ portal. With reference to this portal, consider the following statements:

1. Through this portal breeders/farmers can sell and purchase breeding stock
2. According to the Agriculture Ministry, this portal will lead to propagation of high genetic merit germplasm

Which of the above statements is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Solution: c) Insights current affairs Nov 2016, Page 44

The scheme National Mission on Bovine Productivity ‘e-pashuhaat’ portal has been developed for connecting breeders and farmers regarding availability of bovine germplasm. Through the portal breeders/farmers can sell and purchase breeding stock, information on all forms of germplasm including semen, embryos and live animals with all the agencies and stakeholders in the country has been uploaded on the portal. Through this portal, farmers will be aware about the availability of quality disease free bovine germplasm with different agencies in the country. The portal will lead to propagation of high genetic merit germplasm.
24. The “Colombo Declaration” signed in November 2016, seeks to
(a) Fight flow of drugs in the Indian Ocean
(b) Increase trade between Sri Lanka and other Indian Ocean countries
(c) Improve capacity building of Indian Ocean countries to fight terrorism in the region
(d) None of the above

Solution: a)

Insights current affairs Nov 2016, Page 54

At the high-level meeting, Ministers and Government Representatives adopted the “Colombo Declaration,” which gives way to the forthcoming Southern Route Partnership as the main coordination mechanism for counter narcotics initiatives in this region.

Maritime routes account for a significant part of Afghan opiates trafficked to Africa and South Asia. The Southern Route from the Makran coast to transit points along the East African coast and South Asian islands has become a major supply route for the distribution of Afghan opiates. The jurisdictional limitations on the high seas make the maritime route a convenient option for the distribution of narcotics across the Indian Ocean.

The increase in volumes of heroin detected on the coastlines of Eastern Africa and Southern Asia indicate the growing importance of the Southern Route. The Combined Maritime Forces (CMF), which patrols the Western Indian Ocean region, seized over 9300 kg of high purity heroin on dhows over the last three years, strengthening the evidence that large volumes of heroin cross the Indian Ocean.

In response to the increase in criminality on the maritime domain, UNODC’s Global Maritime Crime Programme (GMCP), spearheaded the establishment of the Indian Ocean Forum on Maritime Crime (IOFMC) in late 2014. The IOFMC brings together littoral states of the Indian Ocean region intending to strengthen regional cooperation and counter criminal activity in the maritime domain.

25. With reference to the Ratle Hydroelectric Plant, which was in news recently, consider the following statements:

1. It is a run-of-the-river hydroelectric power station currently under construction on the Jhelum River
2. It is being constructed in Himachal Pradesh

Which of the above statements is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Solution: d)

Insights current affairs Nov 2016, Page 54


The Ratle Hydroelectric Plant is a run-of-the-river hydroelectric power station currently under construction on the Chenab River, downstream of the village of Ratle in Doda district of the Indian state of Jammu and Kashmir. The project includes a 133 m (436 ft) tall gravity dam and two power stations adjacent to one another. Water from the dam will be diverted through four intake tunnels about 400 m (0.25 mi) southwest to the power stations. The main power station will contain four 205 MW Francis turbines and the auxiliary power station will contain one 30 MW Francis turbine. The installed capacity of both power stations will be 850 MW. On 25 June 2013, Prime Minister Manmohan Singh laid the foundation stone for the dam. The project is expected to be complete in February 2018. Pakistan has frequently alleged that it violates the Indus Water Treaty but the World Bank has not found fault with it.
26. India has signed a historic civilian nuclear deal with Japan during the annual bilateral summit held recently in Tokyo. With reference to this Deal, consider the following statements:

1. India is the first non-member of the non-proliferation treaty (NPT) to have signed such a deal with Japan
2. Under this Deal, if India conducts a nuclear test, Japan shall stop its cooperation immediately without any notice to India

Which of the above statements is/are correct?

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

Solution: a)

Insights current affairs Nov 2016, Page 56

India is the first non-member of the non-proliferation treaty (NPT) to have signed such a deal with Japan. The deal will help India access Japan’s nuclear market. The deal includes the option that Japan can give a year’s notice before terminating it in case India breaks the nuclear testing moratorium that it had extended to the Nuclear Suppliers Group in 2008. The deal is significant as it will help guarantee Japan’s continued support to India’s civil nuclear programme. The deal will bring Japan into the Indian nuclear market where France and Russia have already have a strong presence.

http://www.thehindu.com/news/international/Japan-has-option-to-scrub-N-deal/article16443048.ece

27. Indian government has indicated that it is not inclined to automatically grant the coveted ‘Market Economy Status’ (MES) to China this December under World Trade Organisation (WTO) norm. What does ‘Market Economy Status’ mean?

(a) A country whose exports is growing at rapid rate
(b) A country’s domestic prices are largely set by open competition
(c) A country which strictly adheres to WTO norms

28. India hosted the golden jubilee celebrations of UNCITRAL, a UN body. UNCITRAL aims to

(a) Promote the progressive harmonisation and unification of international trade law
(b) Promote arbitration in trade disputes
(c) Promote free trade among member countries
(d) None of the above

Solution: a)

Insights current affairs Nov 2016, Page 65

The core legal body of the United Nations system in the field of international trade law. A legal body with universal membership specializing in commercial law reform worldwide for over 40 years, UNCITRAL’s business is the modernization and harmonization of rules on international business.

29. With reference to the Asian Infrastructure Investment Bank (AIIB), consider the following statements:

1. Its main aim is to provide financial support for infrastructure development and regional connectivity in Asia
2. India has the second-largest voting share and percentage of shares (next only to China) in the multilateral
The AIIB was established as a new multilateral financial institution aimed at providing “financial support for infrastructure development and regional connectivity in Asia.” It was founded in October, 2014, and will have its headquarters in Beijing. Its goals are also to boost economic development in the region, create wealth, prove infrastructure, and promote regional cooperation and partnership. The value of AIIB’s authorized capital amounts to $100 billion, with almost $30 billion invested by China. The bank expects to lend $10 billion to $15 billion a year for the first five years of its operations, beginning in the second quarter of 2016. India is an influential member of the AIIB as it has the second-largest voting share and percentage of shares (next only to China) in the multilateral institution that has 57 member countries.

30. The Securities and Exchange Board of India (SEBI) has liberalised norms for angel funds. What is angel fund?
(a) It is a money pool created by high networth individuals or companies for investing in business startups
(b) It is money pool created by governments to encourage startups
(c) Funds that manage the money of investors who seek private equity stakes in startup and small- to medium-sized enterprises with strong growth potential
(d) None of the above

Solution: a)
Insights current affairs Nov 2016, Page 70
Third definition is of Venture Funds.

31. The Reserve Bank of India (RBI) has proposed the opening of “Islamic window” in conventional banks. What is ‘Islamic Banking’?
(a) Banking where only Muslims are preferred over other customers
(b) Banking where loans are given at very cheap rate to poor Muslim families
(c) Banking where interest is not charged on the principal amount
(d) None of the above

Solution: c)
Insights current affairs Nov 2016, Page 75
The Reserve Bank of India (RBI) has proposed the opening of “Islamic window” in conventional banks for “gradual” introduction of Sharia-compliant or interest-free banking in the country. In this regard, both the Centre and the RBI have been exploring the possibility of introduction of Islamic banking for a while now to ensure financial inclusion of those sections of society that remain excluded due to religious reasons.

What is Islamic banking?

Islamic or Sharia banking is a finance system based on the principles of not charging interest. The charging of interest is prohibited under Islam.
32. With reference to debt-to-GDP ratio, consider the following statements:

1. It is the ratio of a country’s public debt to its gross domestic product (GDP)
2. The higher the debt-to-GDP ratio, the less likely the country will pay back its debt and the higher its risk of default

Which of the above statements is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Solution: c)

Insights Prelims Tests 2017, Test 20, Q 3

What is the ‘Debt-To-GDP Ratio’

The debt-to-GDP ratio is the ratio of a country’s public debt to its gross domestic product (GDP). By comparing what a country owes to what it produces, the debt-to-GDP ratio indicates the country’s ability to pay back its debt. Often expressed as a percentage, the ratio can be interpreted as the number of years needed to pay back debt if GDP is dedicated entirely to debt repayment.

BREAKING DOWN ‘Debt-To-GDP Ratio’

Economists have not identified a specific debt-to-GDP ratio as being ideal, and instead focus on the sustainability of certain debt levels. If a country can continue to pay interest on its debt without refinancing or harming economic growth, it is generally considered to be stable. A high debt-to-GDP ratio may make it more difficult for a country to pay external debts, and may lead creditors to seek higher interest rates when lending.

If a country is unable to pay its debt, it defaults, which could cause a panic in the domestic and international markets. The higher the debt-to-GDP ratio, the less likely the country will pay back its debt and the higher its risk of default. While governments may strive to have low debt-to-GDP ratios, government borrowing may increase in times of war or recession; this is a macroeconomic strategy attributed to Keynesian economics.

Read more: Debt-To-GDP Ratio

http://www.investopedia.com/terms/d/debtgdpratio.asp#ixzz4h9yqdvrs

33. Who issues an appropriate notification for the due constitution of the House after General Election?

(a) The President
(b) The Election Commission of India
(c) The Speaker of Lok Sabha
(d) None of the above

Solution: b)

Insights Prelims Tests 2017, Test 20, Q 6

The ECI issues an appropriate notification for the due constitution of the House. • With this, the process of elections is complete and the President, in case of the Lok Sabha, can then convene the house to hold its sessions. • The Governors of the concerned states, in case of State Assemblies, convene the sessions.

34. GRIHA rating system is an evaluation tool for

(a) Progress made under housing schemes
(b) Rating transparency in real estate transactions
(c) Calculating asset bubble in the real estate sector
(d) None of the above

Solution: d)

Insights Prelims Tests 2017, Test 20, Q 9

GRIHA is an acronym for Green Rating for Integrated Habitat Assessment.

Throughout their life cycles, from construction to operation and then demolition, buildings consume resources and emit wastes either directly in the form of municipal wastes or indirectly as emissions from electricity generation.

• GRIHA attempts to minimize a building’s resource consumption, waste generation, and overall ecological impact to within certain nationally acceptable limits / benchmarks.
• GRIHA attempts to quantify aspects such as energy consumption, waste generation, renewable energy adoption, etc. so as to manage, control and reduce the same to the best possible extent.
• It evaluates the environmental performance of a building holistically over its entire life cycle, thereby providing a definitive standard for what constitutes a ‘green building’.

35. *Mricchakatika* (The Little Clay Cart) a ten-act Sanskrit drama attributed to Śūdraka, deals with

(a) Status of farmers in ancient India
(b) Relationship between higher caste people with the royalty
(c) Relationship between women and the King
(d) None of the above

Solution: d)

Insights Prelims Tests 2017, Test 20, Q 27

Unlike other classical plays in Sanskrit, the play does not borrow from epics or mythology. The characters of Śūdraka are drawn from the mundane world. It is peopled with gamblers, courtesans, thieves and so on. The protagonist of the play Chārudatta does not belong to the noble class or royal lineage. Though Vasantasenā is a courtesan, her exemplary attitude and dignified behavior impress the audience. The nobility of the characters does not stem from their social conditioning but from the inner virtues and behavior.

36. The term “Cooperatives” or “Cooperative Societies” can be found in which part of the Constitution?

(a) Part IX – The Panchayats
(b) Part IV – Directive Principles of State Policy
(c) Part IVA – Fundamental Duties
(d) Both (a) and (b)

Solution: b)

Insights Prelims Tests 2017, Test 20, Q 35

It is found in Part III (Fundamental Rights) and Part IV (DPSP)

37. Which of the following countries is not a member of the East Asia Summit (EAS)?

(a) India
(b) Japan
(c) Australia
(d) Mongolia

Solution: d)

Insights Prelims Tests 2017, Test 20, Q 38

The *East Asia Summit (EAS)* is a forum held annually by leaders of, initially, 16 countries in the East Asian, Southeast Asian and South Asian regions. Membership expanded to 18 countries including the United States and Russia at the Sixth EAS in 2011. EAS meetings are held after annual ASEAN leaders’ meetings. The first summit was held in Kuala Lumpur, Malaysia on 14 December 2005.

https://en.wikipedia.org/wiki/East_Asia_Summit

38. Which of these nations lie between Tropic of Capricorn and Equator?

(a) Ethiopia
(b) South Sudan
(c) Venezuela
(d) Peru

Solution: d)

Insights Prelims Tests 2017, Test 20, Q 44

Important countries which lie between Equator and Tropic of Capricorn include: Peru, Brazil, Bolivia, Indonesia, Australia (parts of it) etc

39. Which of the following is one of the objectives under National Population Stabilization Fund (NPSF)?

(a) Conduct sterilization operations in Public Private Partnership mode to control population growth
(b) Push up the age of marriage of girls
(c) To provide monetary reward to couples who delay childbirth
(d) All the above

Solution: d)

Insights Prelims Tests 2017, Test 20, Q 56

The Government of India had set up a National Population Stabilization Fund (NPSF) in the year 2004-05 with a one-time grant of Rs.100 crore in the form of a corpus fund. This is now known as Jansankhya Srirat Kosh (JSK). To empower the NPSF, Government of India has set up Jansankhya Srirat Kosh (JSK). This is an autonomous body registered under the Societies Registration Act, 1860. JSK can take all the policy related decisions. It can raise contributions from organisations and individuals that support population stabilisation. JSK implements two schemes, namely, Santushti and Prerna.

The details of schemes, funds allocated, released etc. are as follows:

SANTUSHTI STRATEGY

Santushti is a strategy of Jansankhya Srirat Kosh (JSK) for the highly populated states of India viz Bihar, Uttar Pradesh, Madhya Pradesh, Rajasthan, Jharkhand, Chhattisgarh & Odisha. Under this strategy, Jansankhya Srirat Kosh (JSK) invites private sector gynaecologists and vasectomy surgeons to conduct sterilization operations in Public Private Partnership mode. According to this Scheme, an accredited private Nursing Home/Hospital can sign a tripartite MOU between the State Health Society as 1st party, accredited private health facility as 2nd party and JSK as the third party. Upon signing the MOU the private hospitals/nursing homes shall be entitled to incentive by JSK whenever it conducts 10 or more Tubectomy/Vasectomy cases in a month. The accreditation is done by the district and approved by the State Health Society.

PRERNA STRATEGY

In order to help push up the age of marriage of girls and space the birth of children in the interest of health of young mothers and infants, Jansankhya Srirat Kosh (National Population Stabilization Fund) has launched PRERNA, a Responsible Parenthood Strategy in seven focus states namely Bihar, Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Jharkhand, Odisha, and Rajasthan.

The strategy recognizes and awards couples who have broken the stereotype of early marriage, early childbirth and repeated child birth and have helped change the mindsets of the community.

In order to become eligible for award under the scheme, the girl should have been married after 19 years of age and given birth to the first child after at least 2 years of marriage. The couple will get an award of Rs.10,000/- if it is a Boy child or Rs.12,000/- if it is a Girl child. If birth of the second child takes place after at least 3 years of the birth of first child and either parent voluntarily accept permanent method of family planning within one year of the birth of the second child, the couple will get an additional award of Rs.5,000/- (Boy child) / Rs.7,000/- (Girl child). The amount of award is given in the form of National Saving Certificate (NSC). The scheme is meant only for BPL families.

40. Which of the following states is not a producer of coal in India?

(a) Assam
(b) Karnataka
(c) Andhra Pradesh
(d) Tamil Nadu

Solution: b)

Jharkhand is the largest coal producing state in the country followed by Orissa, Chhattisgarh, West Bengal, Madhya Pradesh, Telangana (previous part of Andhra Pradesh) and Maharashtra.

Jharkhand: 38% of the total reserves of India are found in this state. Darla is the most important and most productive coal field in India. The field accounts for 100% of the country’s prime coking coal production. Other significant coal producing regions of this state are
Bokaro, North Karanpura, South Karanpura, Giridih, Ramgarh, Daltonganj and Rajmahal.

Orissa (Odisha): Orissa account for around 13.4% of the country’s total production. Talcher and Ranapur Himgir are the two important coal fields. Talcher accounts for nearly 3/4th of the total coal reserve of the state.

Chhattisgarh and Madhya Pradesh: Major coal fields are Korba, Umaria, Singrauli, Chirmiri and Sohagpur. Other coal fields include Pench Kanhan, Mohpani, Sonhat, Jhilimili, Bisrampur, Raigarh and Tatapani – Ramkola.

Andhra Pradesh & Telangana: The major coal producing districts are Adilabad, Karimnagar, Warangal, Khammam, East Godavari and West Godavari. Major coal fields are Tandur, Singareni, Kothagudem and Ramagundam.

Maharashtra: The major coal fields are found in Nagpur-Wardha region. The important mining areas are – Wardha, Ballarpur, Chanda and Kampati.

West Bengal: Raniganj is the largest coal field of West Bengal and the second biggest in India in terms of total reserve. The coal fields of Asansol are also famous. Recently a large coal field has been discovered in Mejia in the Bankura district.

Tertiary coalfields:

Assam accounts for 63% of the total tertiary coal reserves. Major coal fields in Assam are the Makum, Nazira, Mikir Hills and Dilli-Jeypore. Of these, the Makum is the most developed field. Among the other fields West Darrangiri, Langrin and Bapung in Meghalaya, Namchik in Arunachal Pradesh and Borjan in Nagaland are important.

Lignite coalfields:

Lignite coal is mainly produced in two states – Tamil Nadu and Gujarat. Small lignite coal fields are also found in Rajasthan and Jammu and Kashmir. Neyveli is the lignite field in Tamil Nadu which is located in South Arcot district. Neyveli is the largest lignite coal mine of India. This field supplies fuel for thermal power generation in Tamil Nadu.

https://en.wikipedia.org/wiki/Coal_mining_in_India#Distribution_of_coal_reserves_by_states

**41.** With reference to the Photic Zone in an ocean, consider the following statements

1. In this region photosynthesis by phytoplankton and plants takes place
2. About 90% of all marine life lives in the photic zone

Which of the above statements is/are correct?

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

Solution: c)

Insights Prelims Tests 2017, Test 21, Q 1

The **photic zone**, euphotic zone or sunlight or (Sunlit) zone is the depth of the water in a lake or ocean that is exposed to such intensity of sunlight which designates **compensation point**, i.e. the intensity of light at which the rate of carbon dioxide uptake, or equivalently, the rate of oxygen production, is equal to the rate of carbon dioxide production, equivalently to the rate of oxygen consumption, reducing thus the net carbon dioxide assimilation to zero.

It extends from the surface down to a depth where light intensity falls to one percent of that at the surface, called the euphotic depth. Accordingly, its thickness depends on the extent of light **attenuation** in the water column. Typical euphotic depths vary from only a few centimetres in highly turbid eutrophic lakes, to around 200 meters in the open ocean. It also varies with seasonal changes in turbidity.

Since the **photic zone is where almost all of the photosynthesis occurs**, the depth of the photic zone is generally proportional to the level of primary production that occurs in that area of the ocean. **About 90% of all marine life lives in the photic zone**. A small amount of primary production is generated deep in the **abyssal zone** around the **hydrothermal vents**, which exist along some **mid-oceanic ridges**.

The zone which extends from the base of the euphotic zone to about 200 metres is sometimes called the **disphotic zone**. While there is some light, it is insufficient for photosynthesis, or at least insufficient for photosynthesis at a rate greater than respiration. The euphotic zone together with the disphotic zone
coincides with the epipelagic zone. The bottommost zone, below the euphotic zone, is called the aphotic zone. Most deep ocean waters belong to this zone.

The transparency of the water, which determines the depth of the photic zone, is measured simply with a Secchi disk. It may also be measured with a photometer lowered into the water.

42. With reference to syngas, consider the following statements:

1. It is available naturally as a primary product
2. It is usually a product of gasification
3. It is used in the production of hydrogen, ammonia, methanol, and synthetic hydrocarbon fuels

Which of the above statements is/are correct?
(a) 1 only
(b) 2 only
(c) 2 and 3 only
(d) 1 and 3 only

Solution: c)

Insights Prelims Tests 2017, Test 21, Q 2

Syngas is not available naturally as a primary product. It is a byproduct.

Gasification is a process that converts organic or fossil fuel based carbonaceous materials into carbon monoxide, hydrogen and carbon dioxide. This is achieved by reacting the material at high temperatures (>700 °C), without combustion, with a controlled amount of oxygen and/or steam. The resulting gas mixture is called syngas (from synthesis gas) or producer gas and is itself a fuel. The power derived from gasification and combustion of the resultant gas is considered to be a source of renewable energy if the gasified compounds were obtained from biomass.

Syngas, or synthesis gas, is a fuel gas mixture consisting primarily of hydrogen, carbon monoxide, and very often some carbon dioxide. The name comes from its use as intermediates in creating synthetic natural gas (SNG) and for producing ammonia or methanol. Syngas is usually a product of gasification and the main application is electricity generation. Syngas is combustible and often used as a fuel of internal combustion engines.

It has less than half the energy density of natural gas. Syngas can be produced from many sources, including natural gas, coal, biomass, or virtually any hydrocarbon feedstock, by reaction with steam (steam reforming), carbon dioxide (dry reforming) or oxygen (partial oxidation). Syngas is a crucial intermediate resource for production of hydrogen, ammonia, methanol, and synthetic hydrocarbon fuels. Syngas is also used as an intermediate in producing synthetic petroleum for use as a fuel or lubricant via the Fischer–Tropsch process and previously the Mobil methanol to gasoline process.

43. Consider the following statements:

1. Ecotope is a genetically distinct geographic variety, population or race within a species, which is adapted to specific environmental conditions
2. Ecotype is a transition area between two biomes where two communities meet and integrate

Which of the above statements is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Solution: d)

Insights Prelims Tests 2017, Test 21, Q 7

In evolutionary ecology, an ecotype, sometimes called ecospecies, describes a genetically distinct geographic variety, population or race within a species, which is adapted to specific environmental conditions. Typically, though ecotypes exhibit phenotypic differences (such as in morphology or physiology) stemming from environmental heterogeneity, they are capable of interbreeding with other geographically adjacent ecotypes without loss of fertility or vigor.

An ecotone is a transition area between two biomes. It is where two communities meet and integrate. It may be narrow or wide, and it may be local (the zone between a field and forest) or regional (the transition between forest and grassland ecosystems).
may appear on the ground as a gradual blending of the two communities across a broad area, or it may manifest itself as a sharp boundary line. The word ecotone was coined from a combination of eco(logy) plus -tone, from the Greek tonos or tension – in other words, a place where ecologies are in tension.

Ecotopes are the smallest ecologically distinct landscape features in a landscape mapping and classification system. As such, they represent relatively homogeneous, spatially explicit landscape functional units that are useful for stratifying landscapes into ecologically distinct features for the measurement and mapping of landscape structure, function and change.

44. Anthracene and formaldehyde are extensively used in leather tanning industries. What is common to them?
   (a) Both are byproducts of coal tar
   (b) Both are not found naturally anywhere
   (c) Both are organic compounds
   (d) None of the above

Solution: c)
Insights Prelims Tests 2017, Test 21, Q 21
Both are organic compounds.

Coal tar, which contains around 1.5% anthracene, remains a major source of this material. Common impurities are phenanthrene and carbazole. A classic laboratory method for the preparation of anthracene is by cyclodehydration of o-methyl- or o-methylene-substituted diarylketones in the so-called Elbs reaction. It may also occur in the interstellar medium. More than 20% of the carbon in the universe may be associated with PAHs, including anthracene.

Processes in the upper atmosphere contribute up to 90% of the total formaldehyde in the environment. Formaldehyde is an intermediate in the oxidation (or combustion) of methane, as well as of other carbon compounds, e.g. in forest fires, automobile exhaust, and tobacco smoke.

45. Because of rich nutrition, Inter-tidal zones support large mangrove population. What is an intertidal zone?
   (a) Area that experiences high frequency of high tides
   (b) Area that is above water at low tide and under water at high tide
   (c) Area that experiences high frequency of low tides
   (d) Area where vegetation if grown onshore

Solution: b)
Insights Prelims Tests 2017, Test 21, Q 28
The intertidal zone, also known as the foreshore and seashore and sometimes referred to as the littoral zone, is the area that is above water at low tide and under water at high tide (in other words, the area between tide marks). This area can include many different types of habitats, with many types of animals, such as starfish, sea urchins, and numerous species of coral. The well-known area also includes steep rocky cliffs, sandy beaches, or wetlands (e.g., vast mudflats). The area can be a narrow strip, as in Pacific islands that have only a narrow tidal range, or can include many meters of shoreline where shallow beach slopes interact with high tidal excursion. Peritidal zone is similar but a somewhat wider zone, extending from above the highest tide level to below that of the lowest tide level.

46. Which of the following is not a principle enunciated under the Gujral Doctrine?
   (a) With neighbours like Bangladesh, Bhutan, Maldives, Nepal and Sri Lanka, India does not ask for reciprocity, but gives and accommodates what it can in good faith and trust
   (b) No South Asian country should allow its territory to be used against the interest of another country of the region
   (c) All the disputes in the region must be resolved with the aid and support of major international players
   (d) All South Asian countries must respect each other’s territorial integrity and sovereignty
The Gujral Doctrine is a set of five principles to guide the conduct of foreign relations with India’s immediate neighbours as spelt out by I.K. Gujral, first as India’s foreign minister and later as the prime minister. Among other factors, these five principles arise from the belief that India’s stature and strength cannot be divorced from the quality of its relations with its neighbours. It, thus, recognises the supreme importance of friendly, cordial relations with neighbours. These principles are:

first, with neighbours like Bangladesh, Bhutan, Maldives, Nepal and Sri Lanka, India does not ask for reciprocity, but gives and accommodates what it can in good faith and trust;

second, no South Asian country should allow its territory to be used against the interest of another country of the region;

third, no country should interfere in the internal affairs of another;

fourth, all South Asian countries must respect each other’s territorial integrity and sovereignty; and,

finally, they should settle all their disputes through peaceful bilateral negotiations. According to Gujral, these five principles, scrupulously adhered to, would achieve a fundamental recasting of South Asia’s regional relationships, including the difficult relationship between India and Pakistan. Further, the implementation of these principles would generate a climate of close and mutually benign cooperation in the region, where the weight and size of India is regarded positively and as an asset by these countries.

47. The Prototype Fast Breeder Reactor (PFBR) is a 500 MWe fast breeder nuclear reactor presently being constructed at the Madras Atomic Power Station in Kalpakkam, India. It uses which of the following fuels?

(a) Thorium
(b) Uranium - 238
(c) Uranium - 235
(d) Uranium - 233

Solution: b)

48. With reference to Lok Sabha Speaker, which of the following statements is not correct?

(a) She is eligible for re-election
(b) She is elected from among Lok Sabha members by a simple majority of members present and voting in the House
(c) The Speaker can be removed from office only on a resolution of the House passed by a majority of all the then members of the House
(d) On the dissolution of the Lok Sabha, unlike other members, the Speaker continues to be a member of the House till the next Speaker is elected

Solution: d)
resolution. It is also mandatory to give a minimum of 14 days' notice of the intention to move the resolution.

49. What was known as the “Instrument of Instructions” contained in the Government of India Act 1935 was incorporated in the Constitution of India as
   (a) Fundamental Rights
   (b) Rules of business of the Parliament
   (c) Fundamental Duties
   (d) None of the above

Solution: d)

Insights Prelims Tests 2017, Test 21, Q 70

It was incorporated as Directive Principles of State Policy.

The Directive Principles resemble the ‘Instrument of Instructions’ enumerated in the Government of India Act of 1935. In the words of Dr B R Ambedkar, ‘the Directive Principles are like the instrument of instructions, which were issued to the Governor-General and to the Governors of the colonies of India by the British Government under the Government of India Act of 1935. What is called Directive Principles is merely another name for the instrument of instructions. The only difference is that they are instructions to the legislature and the executive’

50. With reference to anti retroviral therapy (ART), consider the following statements:

1. ART kills the HIV virus and stop the progression of HIV disease
2. WHO recommends ART for all people with HIV as soon as possible after diagnosis without any restrictions of CD4 counts

Which of the above statements is/are correct?
   (a) 1 only
   (b) 2 only
   (c) Both 1 and 2
   (d) Neither 1 nor 2

Solution: b)

Insights Prelims Tests 2017, Test 21, Q 75

ART neither kill or cure the AIDS virus. It suppresses it.

Standard antiretroviral therapy (ART) consists of the combination of antiretroviral (ARV) drugs to maximally suppress the HIV virus and stop the progression of HIV disease. ART also prevents onward transmission of HIV. Huge reductions have been seen in rates of death and infections when use is made of a potent ARV regimen, particularly in early stages of the disease. WHO recommends ART for all people with HIV as soon as possible after diagnosis without any restrictions of CD4 counts. It also recommends offer of pre-exposure prophylaxis to people at substantial risk of HIV infection as an additional prevention choice as part of comprehensive prevention.

51. Thiruvalluvar is a celebrated Tamil poet and philosopher whose contribution to Tamil literature, the Thirukkural, is celebrated even today. Thirukkural mainly deals with
   (a) Music and dance
   (b) Ethics and virtues
   (c) Caste system
   (d) Glory of Tamil Kings and Queens

Solution: b)

Insights Current Affairs, Dec 2016, Page 8

The Tirukkural or Thirukkural, or shortly the Kural, is a classic Tamil sangam literature consisting of 1330 couplets or kurals, dealing with the everyday virtues of an individual. Considered one of the greatest works ever written on ethics and morality, chiefly secular ethics, it is known for its universality and non-denominational nature. It was authored by Valluvar, also known as Thiruvalluvar.

52. Recently, the Union government released special stamp on “Shri Gaya Prasad Katiyar”. He was a
   (a) Celebrated Hindi poet
   (b) Sanskrit scholar
   (c) Freedom fighter
   (d) Religious scholar

Solution: c)
Gaya Prasad Katiyar was one of the most dedicated soldiers of India’s freedom struggle. Gaya Prasad Katiyar was born at Jagadishpur (UP). He joined Hindustan Socialist Republican Association in 1925 and got connected with Chandra Shekhar Azad and Bhagat Singh. Later he participated on Lahore Conspiracy Case and was arrested from Saharanpur in 1929. He joined the hunger strike at Lahore Jail with his co prisoners. Later he was transported to Cellular jail in Andaman and again he participated on hunger strike there. He was repatriated in 1937 but again arrested and transported to cellular jail from where he was released in 1946.

53. Global Wage Report 2016-17 was recently released by
(a) World Bank
(b) IMF
(c) UNDP
(d) None of the above

Solution: d)

54. With reference to the Vishaka Guidelines, consider the following statements:
1. These guidelines are mainly related to domestic violence against women
2. These guidelines were stipulated by the Supreme Court of India

Which of the above statements is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Solution: b)

55. Which of the following is/are correctly matched:

<table>
<thead>
<tr>
<th>Judicial powers of President</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Reprieve</td>
<td>Temporary suspension of sentence</td>
</tr>
<tr>
<td>2. Respite</td>
<td>Awarding less sentence</td>
</tr>
<tr>
<td>3. Remission</td>
<td>Changing one punishment to another</td>
</tr>
<tr>
<td>4. Commutation</td>
<td>Reducing amount of sentence</td>
</tr>
</tbody>
</table>

Select the correct answer using codes below:
(a) 1 and 2 Only
(b) 1, 2 and 3 Only
(c) 1 and 3 Only
(d) 1, 2, 3 and 4

Solution: a)
remissions of punishment or to suspend, remit or commute the sentence of any person convicted of any offence. The meaning of these terms is as follows:

- Pardon: Complete pardon
- Reprieve: Temporary suspension of sentence
- Respite: awarding less sentence
- Remission: Reducing amount of sentence
- Commutation: Changing one punishment to another.

http://www.gktoday.in/presidential-pardon-judicial-review/

56. SSL Certificate is a global standard security technology. Consider the following about it. How is it useful to ensure cyber security?

1. An organization needs to install the SSL Certificate onto its web server to initiate secure sessions with browsers
2. It encrypts the data that’s being transmitted between the web browser and server

Which of the above is/are correct?

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

Solution: c)

57. Lighting a Billion Lives (LABL) campaign is related to

(a) Providing free access to health care facilities to all families
(b) Providing electricity to all villages
(c) Promotion of the use of solar lanterns
(d) Promoting child welfare

Solution: c)

Insights Tests 2017, Test 22, Q 22

It is a campaign by TERI that promotes the use of solar lanterns specially designed and manufactured on a decentralized basis. It has been able to engage with government interventions under Sarva Shiksha Abhiyan, Madhya Pradesh Rural Livelihood Project, Rastriya Gramin Vikas Nidhi, and has facilitated the spread of mobile telephony. The campaign has demonstrated how Public-Private-People partnerships can support rural development schemes, particularly in the areas of health, education, environment and women’s empowerment since it has involved private manufacturing support.

58. Consider the following statements:

1. It is the only system in India that has been practicing rice cultivation below sea level since the past 2 centuries
2. It is a delta region of about 900 sq. km situated in the west coast of Kerala State

To which place above statements refer?

(a) Chettinad
(b) Wayanad
(c) Kuttanad
(d) Thekkady

Solution: c)

Insights Tests 2017, Test 22, Q 23

Kuttanad is a delta region of about 900 sq. km situated in the west coast of Kerala State, India. The area is a larger mosaic of fragmented landscape patches and varied ecosystems such as coastal backwaters, rivers, vast stretches of paddy fields, marshes, ponds, garden lands, edges, corridors and remarkably networked water ways.

The Kuttanad Below Sea-level Farming System (KBSFS) is unique, as it is the only system in India that practices rice cultivation below sea level. The major land use structure of KBSFS is flat stretches of rice fields in about 50,000 ha of mostly reclaimed delta swamps. The rice fields, which are popularly known as “Puncha Vayals” exist in three landscape elements: Karapadam (upland
59. S&P BSE-GREENEX measures
   (a) Total market value of carbon-intensive products in the economy
   (b) Performance of the companies in terms of Carbon Emissions
   (c) Performance of green bonds
   (d) Performance of funds invested in green ventures

Solution: b) Insights Tests 2017, Test 22, Q 36

Climate change is considered to be one of the greatest and widest ranging market failures as modern day efficient markets have largely failed to price in the large number of negative externalities associated with it. Businesses the world over have begun to acknowledge the phenomenon and the response to climate change and the systemic and sector specific risks associated with it need to be urgently countered through the realization of viable market based mechanisms. This imperative is especially strong in the developing country context. Owing to the high levels of risks posed to countries like India, the immediate need to shift to a low carbon growth path is clear. In turn, low carbon strategies can only be implemented if the emissions landscape across businesses and its effects on sustainable growth are clearly defined and understood. The S&P BSE-GREENEX Index is a veritable first step in creating a credible market based response mechanism in India, whereby both businesses and investors can rely upon purely quantitative and objective performance based signals, to assess carbon performance.

60. Which among the following Indian States has the maximum total forest cover as a percentage of total area of the state?
   (a) Arunachal Pradesh
   (b) Chhattisgarh
   (c) Madhya Pradesh
   (d) Kerala

Solution: a) Insights Tests 2017, Test 22, Q 59

You can find an arranged list here: https://en.wikipedia.org/wiki/Forest_cover_by_state_in_India

Punjab has the least forest cover, whereas Mizoram has the highest. Other states/UTs with high forest cover are Arunachal Pradesh, Lakshadweep, A&N Islands, Nagaland and Meghalaya. Arunachal Pradesh has the highest area of dense forests, whereas Madhya Pradesh has the highest area of open forests.

61. INS Tillanchang, a Water Jet Fast Attack Craft (WJFAC) was recently commissioned into the Indian Navy. The name Tillanchang is related to
   (a) An island in Andaman and Nicobar Islands
   (b) Naga Warrior who fought the British
   (c) A lesser known tribe in the Northeast India
   (d) None of the above

Solution: a) Insights Module on S&T, Page 7

INS Tillanchang, a Water Jet Fast Attack Craft (WJFAC) was recently commissioned into the Indian Navy. INS Tillanchang is the third ship of four follow-on WJFAC. The first two ships of the class, INS Tarmugli and Tihayu (named after an island in the Andaman, “Tihayu”). Indian Navy has launched INS Tarasa, the fourth and last ship in the series of the Water Jet Fast Attack Craft (WJFAC). INS Tillanchang has been indigenously designed and built and is an upgrade from the Chetlat class of Fast Attack Craft. It is an ideal platform for a number of missions like Coastal and Off-shore Surveillance, EEZ Control, Law Enforcement as well as non-military missions such as Search and Rescue, Humanitarian Assistance and Disaster Relief.

Tillanchang is an uninhabited island and has been declared a sanctuary by the Government of India. There is thick vegetation on the island. On the coast, coconut palms have been planted by the islanders from Chowra.
62. Which of the following is India’s first indigenously-built ballistic missile?
(a) Agni V  
(b) Prithvi  
(c) Akash  
(d) Trishul
Solution: b)
Insights Module on S&T, Page 9
Prithvi-II is a short-range surface-to-surface missile. Inducted into India’s armed forces in 2003, Prithvi II is the first missile to be developed by DRDO under India’s IGMDP (Integrated Guided Missile Development Program). The missile, capable of reaching targets 350 km away, can carry a 500-kg nuclear warhead. Also, Prithvi is India’s first indigenously-built ballistic missile. Prithvi-II has been designed to operate with both liquid and solid fuels and is capable of carrying both conventional and nuclear payloads.

63. Some of the Agni class missiles have a specialised navigation system called Ring Laser Gyroscope. Why is Ring Laser Gyroscope used?
(a) It ensures ultra accuracy in hitting the target  
(b) It provides momentum required for a missile  
(c) It masks radar signals  
(d) None of the above
Solution: a)
Insights Module on S&T, Page 9
The path length around the cavity is carefully monitored and adjusted so that it is an integral multiple of the peak power laser wavelength. When the laser gyro is at rest, the frequencies of the two opposite travelling laser beams are equal. When the laser gyro is rotated about an axis perpendicular to the lasing plane, a frequency difference between the two laser beams results. The frequency difference is created because the speed of light is constant. One laser beam will thus have a greater apparent distance to travel than the other laser beam in completing one pass around the cavity. A small amount of light from the two laser beams passes through one of the mirrors (less than 0.2%).

The beams are combined by optical frequencies to produce a beat frequency. This takes the form of a fringe (interference) pattern. This beat frequency of light is analogous to two different audio frequencies which combine to produce a third difference frequency. When the laser beam frequencies differ, a fringe pattern of alternate dark and light stripes is created. Photodiodes sense the fringe pattern rate and direction of movement.

The frequency and relative phase of the two diode outputs indicate magnitude and the direction of the gyro’s rotation. At low rotation rates, the small frequency difference between the laser beams leads to beam coupling. This locks the frequencies together at a single false value. To compensate for this effect a piezoelectric dither motor is used to vibrate the laser block through the lock-in region. Dither vibration has a net zero average. It produces no net inertial rotation. The dither motor vibration can be felt on the IRU case and produces an audible hum.

64. Consider the following statements:
1. It is said to be the world’s fastest anti-ship cruise missile in operation  
2. Recently, the missile’s range has been increased beyond 300km  
3. Its launch platforms include Ship, submarine, aircraft (under testing), and land-based mobile launchers
To which of the following missiles does above statements refer?
(a) Barak  
(b) Trishul  
(c) BrahMos  
(d) None of the above
Solution: c)

India has successfully test-fired the Brahmos supersonic cruise missile, which is capable of carrying a warhead of 300 kg. Brahmos has been developed as part of a joint venture between India and Russia. Its earlier strike range was 290 km. But after India’s induction into the Missile Technology Control Regime (MTCR) in June 2016, missile’s range has been increased beyond 300km in the same configuration. The two-stage missile, one being solid and the second one ramjet liquid propellant, has already been inducted into the Army and Navy, while the Air Force version is in final stage of trial. It is the world’s fastest anti-ship cruise missile in operation. The missile travels at speeds of Mach 2.8 to 3.0. The land-launched and ship-launched versions are already in service, with the air and submarine-launched versions currently in the testing phase.

65. NASA’s New Horizons mission was launched on 19 January 2006, and has been travelling through space for the past nine years. What was its core mission?

(a) To study rings of Saturn
(b) To find earth like planets outside our solar system
(c) To study the atmosphere of Neptune
(d) To map the surface of Pluto

Solution: d)

66. Recently, the Indian Space Research Organisation has commissioned Doppler weather radar at the Vikram Sarabhai Space Centre (VSSC), Thiruvananthapuram. With reference to Doppler Weather Radars, consider the following statements:

1. It is the most advanced radar used in all modern weather radars
2. These Radars help in better forecast of rainfall and flash floods

Which of the above statements is/are correct?

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

Solution: b)
improve the Flood Early Warning System (FLEWS), being developed by NESAC for NE states. It will also enable IMD and NESAC to take up operational activities on thunderstorm now-casting and hail now-casting for NE states.

67. The James Webb Space Telescope (JWST) is the largest space telescope ever built. With reference to James Webb after whom this telescope is named, consider the following statements:

1. He was NASA’s foremost space scientist who was pioneer in building first generation space telescopes
2. He was instrumental in designing Hubble telescope

Which of the above statements is/are correct?

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

Solution: d)

68. With reference to Sunspots, consider the following statements:

1. They are the hotter parts of Sun
2. They are seen on the photosphere of the Sun
3. They are permanent features on Sun

Which of the above statements is/are correct?

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

Solution: a)

69. In which of the following situations one would see a Supermoon?

(a) Perigee-syzygy of the Earth–Moon–Sun system
(b) Apogee-syzygy of the Earth–Moon–Sun system
(c) Optical illusion created at Earth’s magnetosphere
(d) None of the above

Solution: a)
A supermoon is the coincidence of a full moon or a new moon with the closest approach the Moon makes to the Earth on its elliptical orbit, resulting in the largest apparent size of the lunar disk as seen from Earth. The technical name is the perigee-syzygy of the Earth–Moon–Sun system. The term supermoon is not astronomical, but originated in modern astrology. The association of the Moon with both oceanic and crustal tides has led to claims that the supermoon phenomenon may be associated with increased risk of events such as earthquakes and volcanic eruptions, but there is no evidence of such a link. The opposite phenomenon, an apogee-syzygy, has been called a micromoon, though this term is not as widespread as supermoon.

70. With reference to Gravitational Waves, consider the following statements:
   1. They travel at the speed of light
   2. Their existence was predicted by Albert Einstein on the basis of his theory of general relativity
   3. They always originate from dying stars

Which of the above statements is/are correct?
(a) 1 and 2 Only
(b) 1 and 3 Only
(c) 2 and 3 Only
(d) 1, 2 and 3

Solution: a)

Gravitational waves are ‘ripples’ in the fabric of space-time caused by some of the most violent and energetic processes in the Universe. Albert Einstein predicted the existence of gravitational waves in 1916 in his general theory of relativity. Einstein’s mathematics showed that massive accelerating objects (such as neutron stars or black holes orbiting each other) would disrupt space-time in such a way that ‘waves’ of distorted space would radiate from the source (like the movement of waves away from a stone thrown into a pond). Furthermore, these ripples would travel at the speed of light through the Universe, carrying with them information about their cataclysmic origins, as well as invaluable clues to the nature of gravity itself.

The strongest gravitational waves are produced by catastrophic events such as colliding black holes, the collapse of stellar cores (supernovae), coalescing neutron stars or white dwarf stars, the slightly wobbly rotation of neutron stars that are not perfect spheres, and the remnants of gravitational radiation created by the birth of the Universe itself.

71. Consider the following statements:
   1. He was awarded the Nobel Memorial Prize in Economic Sciences for his analysis of consumption, poverty, and welfare
   2. In 1978 he became the first recipient of the Frisch Medal, an award given by the Econometric Society every two years

To whom does above statements refer?
(a) Angus Deaton
(b) Robert J. Shiller
(c) Paul Krugman
(d) Joseph E. Stiglitz

Solution: a)

Sir Angus Stewart Deaton, FBA (born 19 October 1945) is a British and Scottish-American economist. In 2015, he was awarded the Nobel Memorial Prize in Economic Sciences for his analysis of consumption, poverty, and welfare.


72. With reference to Jet Streams, consider the following statements:
   1. They form where large temperature differences exist in the atmosphere.
   2. Jet streams travel in the tropopause.
   3. They are faster in winter
Which of the above statements is/are correct?

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

Solution: d)
Insights Prelims Tests 2017, Test 23, Q 13
Jet streams are currents of air high above the Earth. They move eastward at altitudes of about 8 to 15 kilometers (5 to 9 miles). They form where large temperature differences exist in the atmosphere.

An air current is a flowing movement of air within a larger body of air. Air currents flow in the atmosphere, the layers of air surrounding the Earth. They form because the sun heats the Earth unevenly. As the sun beams down on the Earth, it warms some areas, particularly the tropics, more than others, such as the poles. As the Earth is heated, it warms the air just above it. The warmed air expands and becomes lighter than the surrounding air. It rises, creating a warm air current. Cooler, heavier air then pushes in to replace the warm air, forming a cool air current. Jet streams are air currents in the highest part of the atmosphere.

Jet streams are some of the strongest winds in the atmosphere. Their speeds usually range from 129 to 225 kilometers per hour (80 to 140 miles per hour), but they can reach more than 443 kilometers per hour (275 miles per hour). They are faster in winter when the temperature differences between tropical, temperate, and polar air currents are greater.

At most times in the Northern and Southern Hemispheres, there are two jet streams: a subtropical jet stream centered at about 30 degrees latitude and a polar-front jet stream whose position varies with the boundary between polar and temperate air. A reverse jet stream blows toward the west in tropical high altitudes during the Northern Hemisphere’s summer. It is associated with the heating of the Asian continent and may help bring summer monsoons to the Indian Ocean.

73. In 2014, the Central government initiated the Vanbandhu Kalyan Yojana for

(a) The mission mode afforestation of forests under threat
(b) Sensitizing tribals to save wildlife and share information about poaching
(c) Holistic development and Welfare of the tribals
(d) None of the above

Solution: c)
Insights current affairs, Dec 2016, Page – 50
The Government of India, Ministry of Tribal Affairs has launched Vanbandhu Kalyan Yojana (VKY) for welfare of Tribals. VKY aims at creating enabling environment for need based and outcome oriented holistic development of the tribal people. This process envisages to ensure that all the intended benefits of goods and services under various programmes/schemes of Central as well as State Governments actually reach the target groups by convergence of resources through appropriate institutional mechanism.
74. The government has launched GARV- II app to
(a) Track Rural Household Electrification
(b) Track dowry harassment and other abusive practices against women
(c) Track institutional deliveries
(d) Track women literacy rate in rural regions

Solution: a)
Insights current affairs, Dec 2016, Page – 55

The government has launched GARV- II app to track Rural Household Electrification. This is the next step in Government of India’s aim to provide access to electricity to all households in the country.

Key facts:
Under this module, village-wise and habitation-wise base line data on household electrification for all States, as provided by them, has been incorporated. The data in respect of about 6 lakh villages, with more than 15 lakh habitations having 17 crore people, has been mapped for tracking progress on household electrification in each of the habitations of these villages, which is a remarkable progress over the previous GARV App. In the earlier version of the ‘GARV’ App, launched in October 2015 for the effective and efficient monitoring of village electrification programme, the data of only 18,452 un-electrified villages had been mapped and a 12-stage milestone-based monitoring mechanism was put in place.

75. Recently, the President approved the Payment of Wages (Amendment) Ordinance, 2016. With reference to this Ordinance, consider the following statements:

1. The ordinance empowers the Centre or State governments to specify industries or establishments where wage payment can be made mandatory through the banking system
2. The ordinance makes payment of wages mandatory through the banking system

Which of the above statements is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Solution: a)
Insights current affairs, Dec 2016, Page – 57

The ordinance empowers the Centre or State governments to specify industries or establishments where wage payment can be made mandatory through the banking system.

The ordinance doesn’t make payment of wages mandatory through the banking system and employers can still pay salaries through cash. The Payment of Wages Act of 1936 required employers to take permission from employees before paying salaries through cheque or bank credit.

76. It is claimed that many potent diseases can be treated with the process called hyper-oxygenation which kills microorganisms by oxidizing them. What is hyper-oxygenation?

(a) The administration of a higher than usual concentration of oxygen to patients
(b) The administration of oxygen below normal levels in a controlled situation
(c) The administration of oxygen to patients suffering near-death situations
(d) None of the above

Solution: a)
Insights Prelims Tests 2017, Test 23, Q 22

Hyperoxygenation. Noun. (plural hyperoxygenations) (medicine) The administration of a higher than usual concentration of oxygen, usually in combination with another procedure.
77. Consider the following statements:

1. India is the world’s largest producer and the largest consumer of pulses
2. India is the leading exporter of skimmed milk powder

Which of the above statements is/are correct?

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

Solution: c)

India is the world’s largest producer and the largest consumer of pulses. Pakistan, Canada, Myanmar, Australia and the United States, in that order, are significant exporters and are India’s most significant suppliers. The global pulse market is estimated at 60 million tonnes.

India is the world’s largest producer of milk, and is the leading exporter of skimmed milk powder, yet it exports few other milk products. The ever increasing rise in domestic demand for dairy products and a large demand-supply gap could lead to India being a net importer of dairy products in the future. The United States, India, China and Brazil are the world’s largest exporters of milk and milk products.

78. The Buddhist school that had given great importance to “selfeffort” in achieving nibbana, as opposed to the idea of a saviour, is

(a) Vajrayana School
(b) Mahayana School
(c) Shingon School
(d) None of the above

Solution: d)

Early Buddhist teachings had given great importance to self effort in achieving nibbana. Besides, the Buddha was regarded as a human being who attained enlightenment through his own efforts. Those who adopted these beliefs were described as Hinayana or Theravada or the “lesser vehicle”.

79. Five major global non-governmental organizations (NGOs) have been associated with the Ramsar Wetlands Convention since its beginnings and were confirmed in the formal status of International Organization Partners (IOPs) of the Convention. Which of the following is not one of them?

(a) WWF (World Wide Fund for Nature)
(b) IWMI - The International Water Management Institute
(c) IUCN
(d) Greenpeace

Solution: d)

The Ramsar Convention works closely with six other organisations known as International Organization Partners (IOPs). These are:

- Birdlife International
- International Union for Conservation of Nature (IUCN)
- International Water Management Institute (IWMI)
- Wetlands International
- WWF International
- Wildfowl & Wetlands Trust (WWT)

80. Lezim is a folk dance form of Indian state of

(a) Nagaland
(b) Mizoram
(c) Sikkim
(d) None of the Above

Solution: d)

Lezim is a folk dance form of Indian state of Maharashtra and is done along with jingling cymbals. This dance is quite strenuous.

https://en.wikipedia.org/wiki/Lezim
81. With reference to barcode and RFID, consider the following statements:

1. Unlike a barcode, the RFID tag need not be within the line of sight of the reader
2. Multiple RFID tags can be read simultaneously whereas it’s possible to read only one barcode at a time
3. Data in RFID can be encrypted and password protected

Which of the above statements is/are correct?
(a) 1 and 2 Only
(b) 2 and 3 Only
(c) 1 and 3 Only
(d) 1, 2 and 3

Solution: d)

Insights Module on S&T, Page 30

RFID vs Barcodes: RFID is not necessarily better than barcodes. The two are different technologies and have different applications, which sometimes overlap. In many circumstances, RFID offers advantages over traditional barcodes. The big difference between the two is that barcodes are line-of-sight technology. That is, a scanner has to “see” the barcode to read it, which means people usually have to orient the barcode toward a scanner for it to be read.

One advantage of RFID is that the technology doesn’t require line of sight. RFID tags can be read as long as they are within range of a reader. Barcodes have other shortcomings as well. If a label is ripped or soiled or has fallen off, there is no way to scan the item, and standard barcodes identify only the manufacturer and product, not the unique item. For example, the barcode on one milk carton is the same as every other, making it impossible to identify which one might pass its expiration date first.

See the table below for a direct comparison of the two technologies.

<table>
<thead>
<tr>
<th>Comparison of RFID &amp; Barcode</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RFID</strong></td>
</tr>
<tr>
<td><strong>Read Rate</strong></td>
</tr>
<tr>
<td><strong>Line of Sight</strong></td>
</tr>
<tr>
<td><strong>Human Capital</strong></td>
</tr>
<tr>
<td><strong>Read/Write Capability</strong></td>
</tr>
<tr>
<td><strong>Durability</strong></td>
</tr>
<tr>
<td><strong>Security</strong></td>
</tr>
</tbody>
</table>
82. Additive manufacturing, which is frequently in news, refers to

(a) Manufacturing of chemicals
(b) Indigenous manufacturing of industrial products
(c) Manufacturing of products that can not be imported
(d) Industrial version of 3-D printing

Solution: d)

Additive Manufacturing (AM) is an appropriate name to describe the technologies that build 3D objects by adding layer-upon-layer of material, whether the material is plastic, metal, concrete or one day...human tissue. Common to AM technologies is the use of a computer, 3D modeling software (Computer Aided Design or CAD), machine equipment and layering material. Once a CAD sketch is produced, the AM equipment reads in data from the CAD file and lays downs or adds successive layers of liquid, powder, sheet material or other, in a layer-upon-layer fashion to fabricate a 3D object. The term AM encompasses many technologies including subsets like 3D Printing, Rapid Prototyping (RP), Direct Digital Manufacturing (DDM), layered manufacturing and additive fabrication. AM application is limitless. Early use of AM in the form of Rapid Prototyping focused on preproduction visualization models. More recently, AM is being used to fabricate end-use products in aircraft, dental restorations, medical implants, automobiles, and even fashion products.

https://www.technologyreview.com/s/513716/additive-manufacturing/

83. Researchers from Imperial College London in the UK discovered that the melting point of hafnium carbide is the highest ever recorded for a material. What is the name given to such materials?

(a) Refractory ceramics
(b) Resistant metals
(c) Reinforced composite
(d) None of the above

Solution: a)

Even option (d) is correct, but with reference to question, option (a) more correct.

Scientists have identified materials that can withstand temperatures of nearly 4,000 degrees Celsius. Researchers from Imperial College London in the UK discovered that the melting point of hafnium carbide is the highest ever recorded for a material. Tantalum carbide (TaC) and hafnium carbide (HfC) are refractory ceramics, meaning they are extraordinarily resistant to heat. Their ability to withstand extremely harsh environments means that refractory ceramics could be used in thermal protection systems on highspeed vehicles and as fuel cladding in the super-heated environments of nuclear reactors.

84. With reference to Project Loon by Google, which of the following statements is not correct?

(a) It can predict weather systems
(b) It provides internet services to the remote parts of the world
(c) Balloons are placed in the troposphere
(d) It is powered by solar panels

Solution: c)

Project Loon is a research and development project being developed by X (formerly Google X) with the mission of providing Internet access to rural and remote areas. The project uses high-altitude balloons placed in the stratosphere at an altitude of about 18 km (11 mi) to create an aerial wireless network with up to 4G-LTE speeds. It was named Project Loon, since even Google
itself found the idea of providing Internet access to the remaining 5 billion population unprecedented and crazy/loony.

85. Which of the following chemicals/substances commonly used in cloud seeding?
   1. Liquid propane
   2. Silver iodide
   3. Potassium iodide
   4. Dry Ice

   Select the correct answer using codes below:
   (a) 1,2 and 3 Only
   (b) 2,3 and 4 Only
   (c) 2 and 3 Only
   (d) 1,2,3 and 4

   Solution: d)

86. With reference to Food irradiation, consider the following statements:
   1. Food irradiation reduces the nutritional value of food products and changes their organoleptic properties
   2. Food and Agriculture Organization (FAO) recommends the irradiation doses for Food irradiation.

   Which of the above statements is/are correct?
   (a) 1 only
   (b) 2 only
   (c) Both 1 and 2
   (d) Neither 1 nor 2

   Solution: d)

87. Consider the following statements:
   1. Inactivated poliovirus vaccine (IPV) contains live weakened virus
   2. Oral poliovirus vaccine (OPV) contains live killed virus

   Which of the above statements is/are correct?
   (a) 1 only
   (b) 2 only
   (c) Both 1 and 2
   (d) Neither 1 nor 2

   Solution: d)

Food irradiation is a technology in which food products are subjected to a low dosage of radiation to treat them for germs and insects, increasing their longevity and shelf life. The radiation can be emitted by a radioactive substance or generated electrically. The irradiated food does not become radioactive. International Atomic Energy Agency (IAEA) recommends the irradiation doses for Food irradiation. It does not reduce the nutritional value of food products and does not change their organoleptic properties and appearance. The irradiation treatment delay/eliminate ripening or sprouting and reduce the risk of food borne illness.
88. Guillain-Barre syndrome (GBS: a condition in which the body’s immune system attacks part of the nervous system) is associated with which of the following diseases?
   (a) Swine Flu
   (b) Zika Virus
   (c) Alzheimer’s syndrome
   (d) Parkinson’s disease

Solution: b)

Insights Module on S&T, Page 39

Zika virus is vector borne disease transmitted primarily by Aedes aegypti mosquitoes. Its name comes from the Zika Forest of Uganda, where the virus was first isolated in 1947. The virus is capable of causing foetal deformation known as Microcephaly in which infants are born with abnormally smaller heads. It is associated with Guillain-Barre syndrome (GBS: a condition in which the body’s immune system attacks part of the nervous system). Zika virus is related to the dengue, yellow fever, Japanese encephalitis, and West Nile viruses. It can be transmitted sexually also. In mid-2015 more than 1.5 million people were infected, mostly in Brazil and other countries in South America. The World Health Organization (WHO) had declared a global health emergency in February 2016, and declared it over in November 2016. As of 2016, the illness cannot be prevented by medications or vaccines. Brazilian scientists have identified Culex quinquefasciatus mosquito infected by the Zika virus as another type of Zika-transmitting mosquito.

89. CRISPR–Cas9 technique was named “2015 Breakthrough of the Year” by the U.S. journal Science. This techniques is related to
   (a) Tuberculosis vaccine
   (b) DNA editing
   (c) Zika vaccine
   (d) None of the above

Solution: b)

Insights Module on S&T, Page 43

A Chinese group has become the first to inject a person with cells that contain genes edited using the revolutionary CRISPR–Cas9 technique. Researchers used a novel version of the CRISPR system called CRISPR/Cas9n to successfully insert a tuberculosis resistance gene into the cow genome.

- CRISPR, short for clustered regularly interspaced short palindromic repeats, was named “2015 Breakthrough of the Year” by the U.S. journal Science.
- It allows scientists to selectively edit genome parts and replace them with new DNA stretches.
- It’s already been done with pigs, fish, mice, and mosquitoes, as well as human embryos.
- Cas9 is an enzyme that can edit DNA, allowing the alteration of genetic patterns by genome modification.

90. The nuclear reactors used in Kudankulam Nuclear Power Plant (KKNPP) are
   (a) Advanced Heavy Water Reactors
   (b) Fast Breeder Reactors
   (c) Pressurised water reactors
   (d) None of the above

Solution: c)

The reactors are pressurised water reactor of Russian design, model VVER-1000/V-412 referred also as AES-92. Thermal capacity is 3,000 MW, gross electrical capacity is 1,000 MW with a net capacity of 917 MW. Construction is by NPCIL and Atomstroyexport. When completed the plant will become the largest nuclear power generation complex in India producing a cumulative 2 GW of electric power. Both units are water-cooled, water-moderated power reactors.

91. With reference to melamine, consider the following statements:
   1. It is added to milk or milk powder to reduce fat content
   2. Its addition to food products is approved by FAO and WHO

Which of the above statements is/are correct?
   (a) 1 only
   (b) 2 only
Both 1 and 2
Neither 1 nor 2

Solution: d)
Insights Module on S&T, Page 53

Melamine is an organic base chemical most commonly found in the form of white crystals rich in nitrogen. Melamine is widely used in plastics, adhesives, countertops, dishware, whiteboards. The addition of melamine increases the nitrogen content of the milk and therefore its apparent protein content. However, addition of melamine into food is not approved by the FAO/WHO Codex Alimentarius (food standard commission), or by any national authorities.

Please read this FAQ on melamine:
http://www.who.int/csr/media/faq/QAmelamine/en/

Why unsaturated vegetable oils are considered as toxic? Consider the following statements:
1. They contain trans fats
2. They are susceptible to attack by free radicals

Which of the above statements is/are correct?
(a) 1 Only
(b) 2 Only
(c) Both 1 and 2
(d) Neither 1 nor 2

Solution: c)
Insights Prelims Tests 2017, Test 25 Q 4

- Rancidity of oils occurs when they are exposed to oxygen, in the body just as in the bottle. Harmful free radicals are formed, and oxygen is used up.

The committee that selects the CBI Director includes
1. Prime Minister of India
2. Leader of the single largest opposition party
3. Home Minister
4. Defence Minister
5. Chief justice of India or his nominee

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

Solution: b)
Insights Prelims Tests 2017, Test 25 Q 13

The amended Delhi Special Police Establishment Act empowers a committee to appoint the director of CBI. The committee consists of:
- Prime Minister – chairperson
- Leader of Opposition – member
- Chief Justice of India or a Supreme Court Judge recommended by the Chief Justice – member

When making recommendations, the committee considers the views of the outgoing director.

Above Selection committee was constituted under The Lokpal and Lokayuktas Act, 2013

Which of the following tribes is/are present in Andaman and Nicobar Islands?
1. Shom Pens
2. Kora
3. Sentinelese
4. Onges
5. Balawa
Select the correct answer using codes below:

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

Solution: d)

Insights Prelims Tests 2017, Test 25 Q 18

The tribe-wise population of Scheduled Tribes in Andaman and Nicobar Islands as per Census 2011 is given below:

<table>
<thead>
<tr>
<th>Tribes</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andamanese, Chariar, Chari</td>
<td>44</td>
</tr>
<tr>
<td>Kora, Tabo, Bo, Yere, Kede, Bea, Balawa, Bojigiyab, Juwai, Kol</td>
<td></td>
</tr>
<tr>
<td>Jarawas</td>
<td>380</td>
</tr>
<tr>
<td>Nicobarese</td>
<td>27168</td>
</tr>
<tr>
<td>Onges</td>
<td>101</td>
</tr>
<tr>
<td>Sentineleese</td>
<td>15</td>
</tr>
<tr>
<td>Shom Pens</td>
<td>229</td>
</tr>
</tbody>
</table>

95. Surendranath Banerjee was called the Indian Burke. Here Burke refers to

(a) American economist
(b) Irish parliamentarian and philosopher
(c) American political philosopher
(d) None of the above

Solution: b

Insights Prelims Tests 2017, Test 25 Q 24

Gahirmatha Beach and Marine Sanctuary lies to the east of this National Park, and separates swamp region cover with canopy of mangroves from the Bay of Bengal.

2. The park is home to Saltwater Crocodile (Crocodylus porosus), White Crocodile, Indian python

To which National Park does above statements refer?

(a) Simlipal National Park
(b) Kanger Ghati national Park
(c) Bhitarkanika National Park
(d) None of the above

Solution: c)

Insights Prelims Tests 2017, Test 25 Q 29

Bhitarkanika National Park is a national park located in Kendrapara district of Odisha in eastern India. Core area of 145 square kilometre of the Bhitarkanika Wildlife Sanctuary, spread over 672 km2, has been designated as a National Park since 16th Sep 1998. Also a Ramsar Convention 19th Aug 2002. The national park is surrounded by the Bhitarkanika Wildlife Sanctuary.

Gahirmatha Beach and Marine Sanctuary lies to the east, and separates swamp region cover with canopy of mangroves from the Bay of Bengal. Thus it become a vicinity of rich biodiversity The park is home to Saltwater Crocodile (Crocodylus porosus), White Crocodile, Indian python, King Cobra, black ibis, darters and many other species of flora and fauna. The national park was created in September 1998 from the core area of the Bhitarkanika Wildlife Sanctuary, which was created in 1975. The sanctuary is the second largest mangrove ecosystem in India.

96. Consider the following statements:

1. Gahirmatha Beach and Marine Sanctuary lies to the east of this National Park, and separates swamp region cover with canopy of mangroves from the Bay of Bengal

2. The park is home to Saltwater Crocodile (Crocodylus porosus), White Crocodile, Indian python

To which National Park does above statements refer?

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(d) None of the above

Solution: c)

Insights Prelims Tests 2017, Test 25 Q 29

Bhitarkanika National Park is a national park located in Kendrapara district of Odisha in eastern India. Core area of 145 square kilometre of the Bhitarkanika Wildlife Sanctuary, spread over 672 km2, has been designated as a National Park since 16th Sep 1998. Also a Ramsar Convention 19th Aug 2002. The national park is surrounded by the Bhitarkanika Wildlife Sanctuary.

Gahirmatha Beach and Marine Sanctuary lies to the east, and separates swamp region cover with canopy of mangroves from the Bay of Bengal. Thus it become a vicinity of rich biodiversity The park is home to Saltwater Crocodile (Crocodylus porosus), White Crocodile, Indian python, King Cobra, black ibis, darters and many other species of flora and fauna. The national park was created in September 1998 from the core area of the Bhitarkanika Wildlife Sanctuary, which was created in 1975. The sanctuary is the second largest mangrove ecosystem in India.

97. Which of the following techniques for soil conservation is best used in coastal and flat dry areas for soil conservation?

(a) Terrace farming
(b) Contour barriers
(c) Contour ploughing
(d) None of the above

Solution: d)
Shelter belts are rows of trees, usually along fence lines. They are planted mainly to protect animals or crops from cold winds, but also to give shade in hot weather. In regions such as Canterbury where there is a lot of cultivated land, shelter belts also reduce wind erosion.

98. Which of these was/were pillars of the Nehru – Mahalanobis strategy?
1. Heavy industry bias
2. Emphasis on public sector
3. Socialistic pattern of society
4. Import substitution

Select the correct answer using codes below:
(a) 1,2 and 3 Only
(b) 2,3 and 4 Only
(c) 1,3 and 4 Only
(d) 1,2,3 and 4

Solution: d)

99. With reference to the 123rd Constitutional Amendment Bill, 2017, consider the following statements:
1. It seeks to grant the National Commission on Backward Classes (NCBC) constitutional status
2. This Bill was introduced by Minister of Social Justice and Empowerment

Which of the above statements is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Solution: c)

The crucial parts of Nehru – Mahalanobis strategy were
(a) high savings rate
(b) heavy industry bias
(c) protectionist policies and public sector
(d) import substitution
(e) socialistic pattern of society.

Mahalanobis stressed on investing in commanding heights of the economy, to sacrifice present consumer goods for capital goods.

- It believed that India should no longer need to rely on imports of foreign capital goods which are the critical imports.
- If a high savings rate is to be achieved and sustained profitable investment opportunities have to be provided on a sustained basis, it would be possible only with investment in heavy industries and capital goods that generate returns.

The Constitution (123rd Amendment) Bill, 2017 was introduced in Lok Sabha by the Minister of Social Justice and Empowerment, Mr. Thaawarchand Gehlot on April 5, 2017. It seeks to grant the National Commission on Backward Classes (NCBC) constitutional status, at par with the National Commission for Scheduled Castes (NCSC) and the National Commission for Scheduled Tribes.

- Role of NCSC: Currently, under the Constitution the NCSC has the power to look into complaints and welfare measures with regard to Scheduled Castes, backward classes and Anglo-Indians. The Bill seeks to remove the power of the NCSC to examine matters related to backward classes.

- Constitutional status to National Commission for Backward Classes: The NCBC is a body set up under the National Commission for Backward Classes Act, 1993. It has the power to examine complaints regarding inclusion or exclusion of groups within the list of backward classes, and advise the central government in this regard. The Bill seeks to establish the NCBC under the Constitution, and provide it the authority to examine complaints and welfare measures regarding socially and educationally backward classes.

- Note that this Bill was introduced alongside the National Commission for Backward Classes (Repeal) Bill, 2017 that seeks to repeal the National Commission for Backward Classes Act, 1993.
100. Transcription and translation are two steps involved in

(a) RNA and DNA synthesis respectively
(b) RNA and Protein Synthesis respectively
(c) Protein and Vitamin Synthesis respectively
(d) None of the Above

Solution: b)

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Transcription is the process by which DNA is copied (transcribed) to mRNA, which carries the information needed for protein synthesis. Transcription takes place in two broad steps. First, pre-messenger RNA is formed, with the involvement of RNA polymerase enzymes. The process relies on Watson-Crick base pairing, and the resultant single strand of RNA is the reverse complement of the original DNA sequence. The pre-messenger RNA is then “edited” to produce the desired mRNA molecule in a process called RNA splicing.

The mRNA formed in transcription is transported out of the nucleus, into the cytoplasm, to the ribosome (the cell’s protein synthesis factory). Here, it directs protein synthesis. Messenger RNA is not directly involved in protein synthesis – transfer RNA (tRNA) is required for this. The process by which mRNA directs protein synthesis with the assistance of tRNA is called translation.