

TEST SERIES 12/20-2017-18...Answer and Explanation

1. **Ans: c**
Taiga Biome is also known as boreal or snow forest, is a biome characterized by coniferous forests consisting mostly of pines, spruces and larches. The taiga is the world's largest biome apart from the oceans. In North America it covers most of inland Canada and Alaska as well as of the extreme northern continental United States. Taiga is the world's largest land biome.
2. **Ans: c**
The Copenhagen Accord established during the 2009 United Nations climate change conference in Copenhagen mentioned the "Copenhagen Green Climate Fund". The fund was formally established during the 2010 United Nations Climate Change Conference in Cancun as a fund with the UNFCCC framework. Its governing instrument was adopted at 2011 United Nations Climate Change Conference in Durban, South Africa. The GCF is a fund established within the framework of the UNFCCC to assist developing countries in adaptation and mitigation practices to counter climate change.
3. **Ans: d**
Tholpavakoothu a form of shadow puppetry that is practiced in Kerala, India. It is performed using leather puppets as a ritual dedicated to Bhadrakali and is performed in Devi temples in specially built theatres called Koothumadams. The puppets used in Tholpavakoothu used to be made out of a deerskin but are now typically made from goatskin.
4. **Ans: a**
The Blackbuck formerly occurred across almost the whole of Indian subcontinent south of the Himalaya. Their range decreased during the 20th century and they are now extinct in Bangladesh and Pakistan. It is also known as Indian Antelope, native of India and Nepal.
5. **Ans: d**
The Supreme Court has refused to stay a plea filed by people for the Ethical Treatment of Animals to ban a legislation in Karnataka that permits the annual buffalo race known as Kambala. The Kambala season begins in November and goes on till March. It is similar to the Jallikattu of Tamilnadu.
6. **Ans: c**
The World Trade Organization is an intergovernmental organization that regulates international trade. The WTO officially commenced on 1 January 1995 under the Marrakesh Agreement, signed by 123 nations on 15 April 1994, replacing the General Agreement on Tariff and Trade (GATT), which commenced in 1948. It is the largest international economic organization in the world. Most of the issues that the WTO focuses on derive from previous trade negotiations, especially from the Uruguay Round.
7. **Ans: d**
Mansabdari implies the generic term for the military –kind of royal functionaries of the Mughal Empire. The Mansabdari system introduced by Akbar was borrowed from the system followed in Mongolia.
8. **Ans: c**
YONO, You Only Need One is the new unified integrated application from the SBI. It is developed using artificial intelligence, predictive analysis and machine learning.
9. **Ans: d**
A unified application to serve e-governance through mobile devices. It is developed by the Ministry of Electronics and Informatics Technical National e- governance Division to offer services of the central, states, local bodies. The UMANG app services including Aadhar, Digilocker and citizens can use the UMANG app to access their income tax filing, LPG booking and provident fund account. These services will cater for by many different departments of the Union and State Governments.
10. **Ans: a**
The Indian Hog deer is a small deer whose habitat ranges from Pakistan through Northern India, to mainland of Southeast Asia, which inhabits much of the Indo Gangetic plains of Pakistan, North India, Nepal, Bangladesh. Hog deer is threatened by hunting and habitat loss and degradation. IUCN ranking Endangered.
11. **Ans: b**
Crypto Currencies or Virtual Currencies are type of unregulated digital money. They are mainly peer-to-peer system, and transacted between users directly, without an intermediary. These transactions are verified by network nodes and recorded in public distributed ledger called block chain. They are neither issued by central bank/public authority, nor is necessarily

TEST SERIES 12/20-2017-18...Answer and Explanation

attached to fiat currency, but is used and accepted among the members of a specific virtual community. They are being transferred, stored or traded electronically. Crypto currencies - Bitcoin, Ethereum, Monero, DASH, Litecoin, Z-cash etc.

12. **Ans: c**

By 2019 or 2020 India will send ISRO Solar Mission Aditya L1 to the vantage point in space to do the imaging and study of the sun. The 1500 kg satellite will be programmed to orbit the L1 point and image the sun's magnetic field from space for the very first time in the world. There is currently no satellite imaging the sun from space. Aditya-L1 will carry seven payloads.

13. **Ans: b**

The government decides the support prices for various agricultural commodities after taking into account the following: Recommendations of **Commission for Agricultural Costs and Prices**, views of state governments, views of ministries, other relevant factors.

14. **Ans: a**

The Konyak are naga people, and are recognized among other Naga by their tattoos which they have all over their face and hands, chews, arms, calves. The Konyak can be found in Myanmar, in the Tirap and Changlang districts of Arunachal Pradesh and in the Mon districts of Nagaland. They are known in Arunachal as Wancho Konyak. The Konyak language belongs to the Noryhyern Naaga sub branch of the Sal subfamily of Sino Tibetan family.

15. **Ans: b**

The world's only particle accelerator dedicated to art was switched on at the Louvre in Paris to help the first time to routinely study and help authenticate paintings and other items made from organic materials. AGLAE generates protons and Alpha particles that are emitted outside the accelerator itself, enabling items of virtually any size or type to be examined. The particles, and their collision products, are detected to analyse the composition of the cultural items in the path of the particle beams. The techniques used at AGLAE include particle-induced X-ray and gamma-ray emission spectrometries. The data is used to determine the atomic constituents of the cultural items, including trace elements.

16. **Ans: d**

'Safe city' plan for women in eight metropolitan cities of the country. It will be implemented in **Delhi, Mumbai, Kolkata, Ahmedabad, Chennai, Lucknow, Bengaluru and Hyderabad**. The Safe city plan will serve as robust emergency response system and provides police-verified public transport will come into place. It discusses issues such as 33% reservation for women in police, installation of CCTV cameras, deployment of women in police stations, infrastructure issues, prevention of cybercrime, mapping of dark spots and crime-prone locations and involvement of educational institutions, among others. It included 'Himmat' app, all women patrol van, 'Shishtachar' programme of the Delhi police; 'Suraksha' app of the Bengaluru police, 'Hawkeye' mobile app and 'Bharosa' programme of the Hyderabad police and Power Angels of Uttar Pradesh police.

17. **Ans: d**

10th South Asia Economic Summit was held at Kathmandu and organized by National Planning Commission and Ministry of Commerce of Nepal and South Asia Watch on Trade, economics and Environment, Nepal. Theme of the summit was deepening economic integration for inclusive and sustainable development in South Asia. SAES started in 2008. It is a regional platform for discussing and analyzing economic development issues and challenges faced by South Asian countries and advancing the cause of regional integration and cooperation.

18. **Ans: b**

SAFAR envisages a research based management system where strategies of air pollution mitigation go hand in hand with nation's economic development to target a win-win scenario. Through know the City Air Quality - Over all city pollution and Location specific Air Quality - A relative contribution of different environments in a city.

19. **Ans: b**

SAMPRITI 2017, the 7th edition of Indo-Bangladesh jointed military training was held in Meghalaya. The main objective of this exercise is to enhance interoperability between army personnel of India and Bangladesh while carrying out jointed counter insurgency or counter terrorism operations.

20. **Ans: d**

The Delhi government signed a twin city agreement with the Seoul Metropolitan Government for strengthening cooperation in the fields of e-governance, transportation, climate change and smart city. The agreement - Establishment of Friendship City

TEST SERIES 12/20-2017-18...Answer and Explanation

Relationship - was signed between Seoul (South Korea) Metropolitan Government led by Mayor Park Won Soon and Delhi Chief Minister Arvind Kejriwal. Other areas of cooperation that the agreement proposes are - environment, culture & tourism, education, waste water, solid waste management, public health and youth exchange among others.

21. **Ans: b**

1. **Kundhei, Orissa**

- Made of light wood.
- Have no legs but wear long flowing skirts.
- Have more joints and are, therefore, more versatile, articulate and easy to manipulate.
- Music of Odissi dance.
- Puppeteers hold a wooden prop, triangular in shape, to which strings are attached.



Kundhei Nata

2. **Kathputli, Rajasthan**

- Carved from a single piece of wood.
- Large dolls that are colorfully dressed.
- Costumes and headgears are designed in the medieval Rajasthani style.
- Uses highly dramatized version of the regional music.
- Oval faces, large eyes, arched eyebrows and large lips.
- Wear long trailing skirts and do not have legs.
- Manipulated with strings attached to puppeteer's fingers.



3. **Gombeyatta, Karnataka**

- Styled and designed like the characters of Yakshagana, have joints at the legs, shoulders, elbows, hips and knees.
- Music is dramatic; blends folk and classical elements.

TEST SERIES 12/20-2017-18...Answer and Explanation

- Manipulated by five to seven strings tied to a prop.



4. Bommalattam, Tamil Nadu

- Techniques of both rod and string puppets.
- Made of wood
- Strings are tied to an iron ring which the puppeteer wears like a crown on his head.
- Are the largest, heaviest and the most articulate of all. (A puppet may be as big as 4.5 feet).
- Manipulation Jointed arms sometimes manipulated by rods (because heavy).



22. Ans: b

The Qutb complex is a collection of monuments and buildings from the Delhi Sultanate at Mehrauli in Delhi in India, which were built on the ruins of Lal Kot, which consisted of 27 Hindu and Jain temples (built by Anangpal, the Tomar ruler, in 739 CE) and Qila-Rai-Pithora (Prithviraj Chauhan's city, whom Muhammad Ghori's Afghan armies had earlier defeated and killed in the Second Battle of Tarain). The Qutub Minar in the complex, named after Qutbuddin Bakhtiar Kaki, was built by Qutb-ud-din Aibak, who later became the first Sultan of Delhi of the Mamluk dynasty. The Minar was added upon by his successor Iltutmish (a.k.a. Altamash), and much later by Firoz Shah Tughlaq, a Sultan of Delhi from the Tughlaq dynasty in 1368 AD. The Qubbat-ul-Islam Mosque (Dome of Islam), later corrupted into Quwwat-ul Islam, stands next to the Qutb Minar.

Monuments in Qutub Complex

Alai Darwaza, Qutub Minar, Quwwat-ul-Islam Mosque, Iron pillar, Tomb of Iltutmish, Ala-ud-din Khalji's tomb and madrasa, Alai Minar...

23. Ans: a

Madhubani painting - Also known as Mithila painting.

- Originated in Madhubani village in Bihar.

TEST SERIES 12/20-2017-18...Answer and Explanation

- According to mythology, this tradition commenced when Janakraj, father of Sita asked his painters to paint the moments of marriage ceremony of Sita with Lord Rama.
- Traditionally done by Madhubani's women on mud walls, later started on cloth, canvas and handmade papers.
- Also depict other Hindu devotional stories.
- Natural objects like moon, sun, tulsi etc is also found as theme.
- No empty space is left, gaps are filled by different geometrical motifs, floral, animals, and bird pictures.
- Are of three kinds: Brahmin style, Tatoo style and Kshatriya style.
- Done with twigs, brushes, fingers, matchsticks, and nib pens using natural dyes and colors.
- Eye-catching geometrical patterns.



24. **Ans: d**

The Vedas are probably the earliest documents of the human mind and said to have divine revelation. It is divided as:

Rig Veda:

It is a collection of 1028 hymns. Books II and VII are oldest while I, VIII and X were added later. Consists of hymns in praises of different gods. It contains the famous Purushasukta that explains that the four varnas (Castes) (Brahmana, Kshatriya, Vaishya and Shudra) were born from the mouth, arms, belly and the legs of the Creator. The universally famous Gayatri mantra (Savitri) is also in Rig-Veda.

Sama Veda:

It is a collection of melodies. It contains stanzas taken from rig veda and set to the tune for the purpose of singing. The Jha Samaveda is important in tracing the history of Indian music.

Yajur Veda:

The Yajurveda prescribes the procedures to be adopted at the time of performing different sacrifices. There are two main texts of the Yajurveda: Sukla Yajurveda or Vajasaneyi (Madhyandin and Kanva) and Krishna-Yajurveda (Taittiriya, Kathaka, Maitrayani and Kapisthal). It is a collection of short magic spells used by a certain class of priests at the time of sacrifices.

Atharva Veda:

It describes the popular beliefs and superstitions of the humble folk. It contains charms and spells in verses to ward off diseases and evils.

25. **Ans: c**

1. Right Belief,
2. Right Thought,
3. Right Speech,
4. Right Action,
5. Right Means of Livelihood,
6. Right Endeavor,
7. Right Recollection,
8. Right Mediation.

The Buddha called it the Middle Path as it avoided both the extremes of gross luxury and grim austerity.

26. **Ans: c**

The holy city Sri Anandpur Sahib was founded in 1665 by the Sri Guru Tegh Bahadur, ninth Guru of Sikhs. Later in 1699, Khalsa Panth was created here by the Tenth Guru Sri Guru Gobind Singh.

TEST SERIES 12/20-2017-18...Answer and Explanation

Anandpur Sahib is situated in a city in Rupnagar district (Ropar) of Punjab and located on the lower spurs of the Himalayas surrounded with the river Sutlej forming a border on the south west. It is commonly known as the holy City of Bliss which is one of the most important sacred places for Sikhs. It is closely linked with their religious traditions and history of Sikhism.

27. **Ans: b**

The Gandhara School of art had also developed in first century AD along with Mathura School during reign of Kushana emperor Kanishka. Both Shakas and Kushanas were patrons of Gandhara School, which is known for the first sculptural representations of the Buddha in human form. The art of the Gandhara school was primarily Mahayana and shows Greco-Roman influence. Gandhara School was based on Greco-Roman norms encapsulating foreign techniques and an alien spirit. It is also known as Graeco-Buddhist School of art. The foreign influence is evident from the sculptures of Buddha in which they bear resemblance to the Greek sculptures. Grey sandstone (Blue-grey Mica schist to be precise) is used in Gandhara School of Art. The Bamyian Buddha of Afghanistan were the example of the Gandhara School. The other materials used were Mud, Lime, Stucco. However, Marble was NOT used in Gandhara art. Terracotta was used rarely. Bimaran Casket has yielded the earliest specimen of the Gandhara Art.

28. **Ans: a**

Jaipur's signature building, the Hawa Mahal, a multi layered palace, was built by Sawai Pratap Singh (grandson of Sawai Jai Singh and son of Sawai Madhoo Singh) in 1799 A.D. and Mr. Lal Chand Usta was the architect. Famous for its beehive like structure, the Hawa Mahal is an interplay of red and pink sand stone, carefully and painstakingly outlined with white borders and motifs. This five storey building, which looks out over the main street of the old city, is a stunning example of Rajput artistry, with its pink semi-octagonal and delicately honeycombed sandstone windows. It was originally built to enable ladies of the royal household, to watch the everyday life and processions of the city.

29. **Ans: b**

Sattriya

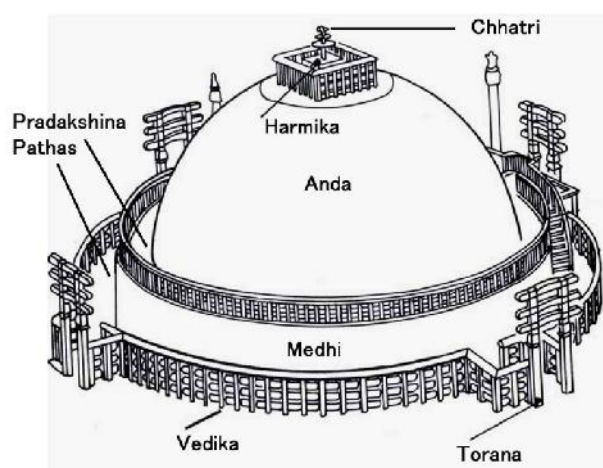
It originated in Assam state. Performances are based on mythological stories and is performed by both men and women. It is recognized as one of the classical dance forms of India in 2000. Devotional songs called Borgeets are used. Instruments used are Khols (drums), Taals (cymbals) and flute. Costumes are made of pat (type of silk). Ornaments are based on traditional Assamese designs

30. **Ans: a**

Self-explanatory

31. **Ans: d**

Plan of a Stupa with two pradakshinapathas



32. **Ans: a**

The Thousand Pillar Temple or Rudreshwara Swamy Temple is a historic Hindu temple located in the town of Hanamakonda, Telangana State, India. It is dedicated to Shiva, Vishnu and Surya. Thousand Pillar Temple, along with "warangal Fort" and

TEST SERIES 12/20-2017-18...Answer and Explanation

"Ramappa Temple" are added to the tentative list of World Heritage sites recognised by UNESCO. The Thousand Pillar Temple was believed to be constructed during the period between 1175–1324 CE by order of the king, Rudra Deva. It stands out to be a masterpiece and achieved major heights in terms of architectural skills by the ancient Kakatiya vishwakarma sthaphathis. It was desecrated by the Tughlaq dynasty during their invasion of the Deccan.

33. **Ans: d**

The pillar weighs over 6,000 kg, and is thought to have originally been erected in what is now Udayagiri by one of the Gupta monarchs in approximately 402 CE, though the precise date and location are a matter of dispute. It was transported to its current location in 1233 CE. It is now in Qutab complex in Delhi. It is also known as Mehrauli Iron Pillar.

Barhut Stupa was renovated by Pushyamitra Sunga. Vikramashila was established by King Dharmapala (783 to 820) in response to a supposed decline in the quality of scholarship at Nalanda. Rudradaman renovated Sudarsana Lake for the first time and mentioned in Junagarh inscription in 150 AD.

34. **Ans: c**

The 6 classical schools (Shatdarshan) are **Sankhya, Yoga, Nyaya, Vaisheshik, Purva Mimansa** and **Uttar Mimansa (Vedanta)**. Almost all Indian schools of thought accepted the theory of karma and rebirth, and the ideal of moksha is conceived as liberation from the cycle of births and deaths. Moksha/liberation is considered as the highest goal of human struggle.

35. **Ans: a**

The Qutub Minar is a minaret that forms a part of the Qutab complex, a UNESCO World Heritage Site in the Mehrauli area of Delhi, India. Qutub Minar is a 73-metre (239.5 feet) tall tapering tower of five storeys, with a 14.3 metres (47 feet) base diameter, reducing to 2.7 metres (9 feet) at the peak. It contains a spiral staircase of 379 steps.[4] Its design is thought to have been based on the Minaret of Jam, in western Afghanistan. Qutab Ud-Din-Aibak, founder of the Delhi Sultanate, started construction of the Qutub Minar's first storey around 1192. In 1220, Aibak's successor and son-in-law Iltutmish completed a further three storeys. In 1369, a lightning strike destroyed the top storey. Firoz Shah Tughlaq replaced the damaged storey, and added one more. Sher Shah Suri also added an entrance to this tower while he was ruling and Humayun was at an exile. It derived its name from the Sufi saint Qutbuddin Bakhtiar Kaki whom Qutab Ud-Din-Aibak revered. The Minar is surrounded by several historically significant monuments of the Qutab complex, including Quwwat-ul-Islam Mosque, which was built at the same time as the Minar, and the much older Iron Pillar of Delhi. The nearby pillared Cupola known as "Smith's Folly" is a remnant of the tower's 19th century restoration, which included an ill-advised attempt to add a sixth storey.

36. **Ans: a**

India's is neither a signatory to **Nuclear Non-proliferation treaty (NPT)** nor to the **CTBT** because of its discriminatory nature in its present format as is advantageous to the nuclear weapon holder.

NPT

The Treaty on the Non-Proliferation of Nuclear Weapons, commonly known as the **Non-Proliferation Treaty** or **NPT**, is an international treaty whose objective is to prevent the spread of nuclear weapons and weapons technology, to promote cooperation in the peaceful uses of nuclear energy, and to further the goal of achieving nuclear disarmament and general and complete disarmament.

Four UN member states have never accepted the NPT, three of which are thought to possess nuclear weapons: **India, Israel, and Pakistan**. In addition, **South Sudan**, founded in 2011, has not joined.

CTBT

The Comprehensive Nuclear-Test-Ban Treaty (CTBT) is a multilateral treaty that bans all nuclear explosions, **for both civilian and military purposes**, in all environments. It was adopted by the **United Nations General Assembly** on 10 September 1996, but has **not entered into force**, as eight specific states have not ratified the treaty, namely **China, Egypt, India, Iran, Israel, N. Korea, Pakistan** and **US**

37. **Ans: a**

The European Communities (EC), sometimes referred to as the European Community, were three international organizations that were governed by the same set of institutions. These were the European Coal and Steel Community (ECSC), the European Atomic Energy Community (EAEC or Euratom), and the European Economic Community (EEC); the last of which was renamed the European Community (EC) in 1993 by the Maastricht Treaty.

TEST SERIES 12/20-2017-18...Answer and Explanation

The Single European Act (SEA) was the first major revision of the 1957 Treaty of Rome. The Act set the European Community an objective of establishing a single market by 31 December 1992, and codified European Political Cooperation, the forerunner of the European Union's Common Foreign and Security Policy.

The Maastricht Treaty (formally, the Treaty on European Union or TEU) undertaken to integrate Europe was signed on 7 February 1992 by the members of the European Community in Maastricht, Netherlands. On 9–10 December 1991, the same city hosted the European Council which drafted the treaty.

Prior amendment treaty: Single European Act (1986)

Subsequent amendment treaty: Amsterdam Treaty (1997)

EU policies aim to ensure the free movement of people, goods, services, and capital within the internal market, enact legislation in justice and home affairs, and maintain common policies on trade, agriculture, fisheries, and regional development. Within the Schengen Area, passport controls have been abolished. A monetary union was established in 1999 and came into full force in 2002, and is composed of 19 EU member states which use the euro currency.

The EU traces its origins from the European Coal and Steel Community (ECSC) and the European Economic Community (EEC), established, respectively, by the 1951 Treaty of Paris and 1957 Treaty of Rome. The original members of what came to be known as the European Communities, were the Inner Six; Belgium, France, Italy, Luxembourg, the Netherlands and West Germany.

38. **Ans: b**

Bretton woods conference

- It's a place in New Hampshire State of USA,
- Officially it is known as United Nations Monetary and Financial Conference, commonly known as Bretton Woods because of the place where it was held.

Result of Bretton Woods

1. IMF

- They give short-term loans to help nations settle the balance of payment crisis.
- They've a system called "SDR" :Special Drawing rights.

2. World Bank

- Officially known as IBRD : International bank for reconstruction and Development, that time
- They give long term soft loans to rebuild the third world.
- Soft loans= interest rate is very low. Sometimes you don't have to pay back the principle.

3. GATT (General Agreement on Trade and Tariff) – later becomes WTO

- To facilitate the international trade.
- This will later become WTO.

4. Fixed Exchange Rate system.

- Discarded this system in 1970s.

The World Bank

The World Bank is an international financial institution that provides loans to countries of the world for capital programs.

It comprises two institutions: the International Bank for Reconstruction and Development (IBRD), and the International Development Association (IDA). The World Bank is a component of the World Bank Group.

The World Bank's stated goal is the reduction of poverty.

The World Bank Group (WBG)

Its five organizations are the International Bank for Reconstruction and Development (IBRD), the International Development Association (IDA), the International Finance Corporation (IFC), the Multilateral Investment Guarantee Agency (MIGA) and the International Centre for Settlement of Investment Disputes (ICSID). The first two are sometimes collectively (and confusingly) referred to as the World Bank.

The International Development Association (IDA) is an international financial institution which offers concessional loans and grants to the world's poorest developing countries. The IDA is a member of the World Bank Group and is headquartered in Washington, D.C., United States. It was established in 1960 to complement the existing International Bank for Reconstruction

TEST SERIES 12/20-2017-18...Answer and Explanation

and Development by lending to developing countries which suffer from the lowest gross national income, from troubled creditworthiness, or from the lowest per capita income. Together, the International Development Association and International Bank for Reconstruction and Development are collectively generally known as the World Bank, as they follow the same executive leadership and operate with the same staff

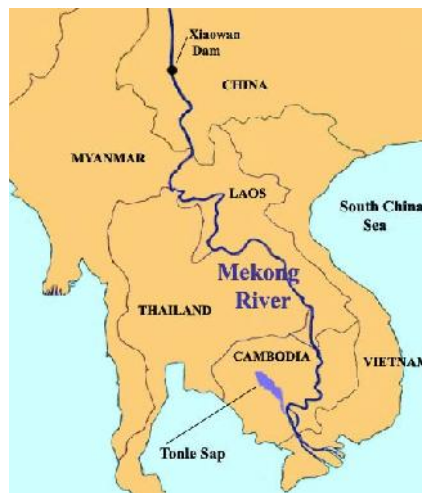
39. **Ans: c**

Mercosur is a sub-regional political and economic bloc of South American countries. It calls itself the common market of the South America. At present it is a full customs union and a trading bloc. Its full members are Argentina, Brazil, Paraguay and Uruguay. Its purpose is to promote free trade and the fluid movement of goods, people, and currency. It was established in 1991 and its headquarters are located at Montevideo (Uruguay).

40. **Ans: b**

The Mekong-Ganga Cooperation (MGC), established in the year 2000, focusses on expanding cooperation between India and five ASEAN countries of the Mekong region, viz. Cambodia, Laos, Myanmar, Vietnam and Thailand. The key areas of cooperation under MGC are tourism, culture, education, and transport & communications, which aim to strengthen the ties between the peoples of the two regions.

It is named after Ganga and the Mekong which both are civilisational rivers.



41. **Ans: c**

In the performance of his official duties, the Attorney General has the right of audience in all courts in the territory of India. Further, he has the right to speak and to take part in the proceedings of both the Houses of Parliament or their joint sitting and any committee of the Parliament of which he may be named a member, but without a right to vote. He enjoys all the privileges and immunities that are available to a Member of Parliament.

42. **Ans: b**

He can also be removed by the president on same grounds and in the same manner as a judge of the Supreme Court.

Also - The chief election commissioner (same manner as a judge of the Supreme Court.)

43. **Ans: d**

Delhi and Puduchery has representation in Rajya Sabha. Delhi has 3 and Puduchery has 1 representatives.

Election commission act as a court for settling disputes related to granting of recognition to political parties and allotment of election symbols to them.

SC decides the disputes regarding the election of the president and the vice president. In this regard, it has the original, exclusive and final authority.

HC decides disputes relating to the election of members of Parliament and state legislatures.

44. **Ans: b**

The Finance Commission is required to make recommendations to the president of India on the following matters:

1. The distribution of the net proceeds of taxes to be shared between the Centre and the states, and the allocation between the states of the respective shares of such proceeds.

TEST SERIES 12/20-2017-18...Answer and Explanation

2. The principles that should govern the grants-in-aid to the states by the Centre (i.e., out of the consolidated fund of India).
3. The measures needed to augment the consolidated fund of a state to supplement the resources of the panchayats and the municipalities in the state on the basis of the recommendations made by the state finance commission
4. Any other matter referred to it by the president in the interests of sound finance.

45. **Ans: c**

The Election Commission is a permanent and an independent body established by the Constitution of India directly to ensure free and fair elections in the country. Article 324 of the Constitution deals with election commission.

All other bodies are statutory bodies.

46. **Ans: b**

The Constitution makes a provision for the establishment of a Joint State Public Service Commission (JSPSC) for two or more states. While the UPSC and the SPSC are created directly by the Constitution, a JSPSC can be created by an act of Parliament on the request of the state legislatures concerned. Thus, a JSPSC is a statutory and not a constitutional body.

The chairman and members of a JSPSC are appointed by the president.

47. **Ans: b**

The Constitution, **without specifying the strength of the Commission** has left the matter to the **discretion of the president**, who determines its composition. Usually, the Commission consists of nine to eleven members including the chairman. Further, no qualifications are prescribed for the Commission's membership except that one-half of the members of the Commission should be such persons who have held office for at least ten years either under the Government of India or under the government of a state.

The chairman and members of the Commission hold office for a term of **six years or until they attain the age of 65 years**, whichever is earlier.

The entire expenses including the salaries, allowances and pensions of the chairman and members of the UPSC are charged on the Consolidated Fund of India. Thus, they are not subject to vote of Parliament.

48. **Ans: c**

Informatory.

49. **Ans: b**

The National Commission for Scheduled Castes (SCs) is a constitutional body in the sense that it is directly established by Article 338 of the Constitution. To inquire into specific complaints with respect to the deprivation of rights and safeguards of the SCs. The commission presents an annual report to the president. It can also submit a report as and when it thinks necessary. The President places all such reports before the Parliament, along with a memorandum explaining the action taken on the recommendations made by the Commission. The memorandum should also contain the reasons for the non-acceptance of any of such recommendations.

50. **Ans: a**

It is constituted by the President of India. The constitution prescribes detailed qualifications for each member of the commission.

51. **Ans: d**

52. **Ans: d**

The Energy and Resources Institute (TERI), a non-profit organisation has developed GRIHA (Green Rating for Integrated Habitat Assessment), which was adopted as the national rating system for green buildings by the Government of India in 2007. **Rio+20** is the short name for the United Nations **Conference on Sustainable Development** which took place in Rio de Janeiro, Brazil in June 2012 twenty years after the landmark 1992 Earth Summit in Rio.

The International Tropical Timber Organization (ITTO) an intergovernmental organization, **under UN (1986)** promoting the conservation and sustainable management, use and trade of tropical forest resources.

53. **Ans: a**

The Bt brinjal has been developed to give resistance against lepidopteron insects, in particular the Brinjal Fruit and Shoot Borer.

TEST SERIES 12/20-2017-18...Answer and Explanation

Mahyco, an Indian seed company based in Jalna, Maharashtra, has developed the Bt brinjal.

54. **Ans: a**

Leadership in Energy and Environmental Design (LEED) is a rating system devised by the United States Green Building Council (USGBC) to evaluate the environmental performance of a building and encourage market transformation towards sustainable design.

55. **Ans: c**

The oceans absorb more than a quarter of carbon dioxide in the atmosphere, which dissolves in the water to form carbonic acid. This way, the oceans act as a carbon dioxide sink. However, as the amount of greenhouse gas increases in the atmosphere, so does the amount of carbonic acid in the waters, leading to ocean acidification (OA).

Corals spend their entire life in one place and cannot efficiently compensate for higher acidity as they lack the necessary physiological mechanisms. These organisms also secrete calcium carbonate to create the most productive ecosystems known: coral reefs. Higher OA and warmer climates could interfere with the formation of reefs, with the scientists believing they could face extinction by the end of the century.

56. **Ans: d**

The Cartagena Protocol on Biosafety is an international agreement on biosafety, as a supplement to the **Convention on Biological Diversity (CBD)**.

The Biosafety Protocol makes clear that products from new technologies must be based on the precautionary principle and allow developing nations to balance public health against economic benefits. It will let countries ban imports of a **genetically modified organisms (GMOs)** if they feel there is not enough scientific evidence that the product is safe and requires exporters to label shipments containing genetically altered commodities such as corn or cotton.

The Biosafety Clearing-House is an international mechanism that exchanges information about the movement of genetically modified organisms, established under the Cartagena Protocol on Biosafety.

57. **Ans: d**

Aerosols are fine particles suspended in the atmosphere. Others are volcano ash, water vapour and dust.

58. **Ans: d**

Rio de Janeiro Earth Summit, 1992 In June 1992, more than 100 heads of states met in Rio de Janeiro in Brazil, for the **first International Earth Summit** or **United Nations Conference on Environment and Development (UNCED)**.

The Rio Convention endorsed the global Forest Principles and adopted **Agenda 21** for achieving **Sustainable Development in the 21st century**.

Agenda 21 is the declaration signed by world leaders in 1992 at the United Nations Conference on Environment and Development (UNCED), which took place at Rio de Janeiro, Brazil. It is an agenda to combat environmental damage, poverty, disease through global co-operation on common interests, mutual needs and shared responsibilities.

One major objective of the Agenda 21 is **that every local government should draw its own local Agenda 21**.

59. **Ans: a**

Ecotype is a group of organisms within a species that is adapted to particular environmental conditions and therefore exhibits behavioral, structural, or physiological differences from other members of the species.

60. **Ans: b**

The Godavari is the largest Peninsular River. It rises from the slopes of the Western Ghats in the Nasik district of Maharashtra. Its length is about 1500 km. It drains into the Bay of Bengal. Its drainage basin is also the largest among the peninsular rivers. The basin covers parts of Maharashtra (about 50 per cent of the basin area lies in Maharashtra), Madhya Pradesh, Orissa and Andhra Pradesh.

The Godavari is joined by a number of tributaries such as the **Purna**, the **Wardha**, the **Pranhita**, the **Manjra**, the **Wainganga** and the **Penganga**.

61. **Ans: c**

Both correct (Ramesh Singh)

62. **Ans: b**

TEST SERIES 12/20-2017-18...Answer and Explanation

The Global Competitiveness Report (GCR) is a **yearly report** published by the **World Economic Forum**. Since 2004, the Global Competitiveness Report ranks countries based on the Global Competitiveness Index; India=40th (2017)

63. **Ans: d**

Both are correct

64. **Ans: a**

65. **Ans: c**

66. **Ans: a**

25 crore. Provided that such entity is not formed by splitting up, or reconstruction, of a business already in existence. Provided also that an entity shall cease to be a Startup if its turnover for the previous financial years has exceeded INR 25 crore or it has completed 7 years and for biotechnology startups 10 years from the date of incorporation/ registration. Provided further that a Startup shall be eligible for tax benefits only after it has obtained certification from the Inter-Ministerial Board, setup for such purpose.

67. **Ans: d**

Government is to create Rs. 10,000 crore corpus fund for development and growth of innovation driven enterprises.

Mobile apps, portal for register start-ups in a day from 1st April 2016.

Establishing Credit guarantee fund and special scheme for women entrepreneurs.

68. **Ans: c**

Highlights from the review

- Scope of Merchandise Exports from India Scheme (MEIS) and Service Exports from India Scheme (SEIS) enhanced.
- MEIS incentive raised for ready-made garments and made-ups by 2% (additional annual outgo Rs 2,743 crore).
- Across-the-board increase of 2 per cent in existing MEIS for exports by MSMEs/labour incentive industries (Rs 4,567 crore).
- Annual incentive increased by 34 per cent to Rs 8,450 crore.
- SEIS incentives raised by 2 per cent with a view to boosting services sector exports (Rs 1,140 crore).
- Validity of Duty Credit Scrips increased from 18 months to 24 months to enhance their utility in GST framework.
- To focus on improving ease of trading across borders for exporters and importers.
- Professional team to handhold, assist and support exporters in accessing markets, meeting regulatory norms.
- New Logistics Division to promote integrated development of the logistics sector.
- State-of-the-art trade analytics division in DGFT for data-based policy actions.
- New agricultural exports policy to focus on increasing exports of value-added agri products.
- New Services Division in DGFT to examine Exim policies and procedures to push services exports.
- Supplies of goods and services to SEZs to be treated as zero rated under GST.
- Import of second hand goods for repair/refurbishing/re-conditioning/re-engineering made free.
- Increase focus on exploring new markets and products, raising share in traditional markets and products.
- Promotion of exports by MSMEs and labour intensive sectors to increase employment opportunities for youth.
- To enhance participation of Indian industry in global value chains.

69. **Ans: d**

70. **Ans: b**

WTO 11th Ministerial conference was held in 2017 **Buenos Aires**, Argentina

71. **Ans: c**

72. **Ans: a**

Transport of goods of more than Rs. 50,000 in value in a vehicle cannot be made by a registered person without an e-way bill.

73. **Ans: a**

TEST SERIES 12/20-2017-18...Answer and Explanation

| BASIS FOR COMPARISON | FDI | FII |
|------------------------|--|--|
| Meaning | When a company situated in one country makes an investment in a company situated abroad, it is known as FDI. | FII is when foreign companies make investments in the stock market of a country. |
| Entry and Exit | Difficult | Easy |
| What it brings? | Long term capital | Long/Short term capital |
| Transfer of | Funds, resources, technology, strategies, know-how etc. | Funds only. |
| Economic Growth | Yes | No |
| Consequences | Increase in country's Gross Domestic Product (GDP). | Increase in capital of the country. |
| Target | Specific Company | No such target, investment flows into the financial market. |
| Control over a company | Yes | No |

74. **Ans: a**

Technical support is provided by The Ministry of Electronics and Information Technology;

75. **Ans: c**

The scheme would focus on managing and converting cattle dung and solid waste in farms to compost, biogas and bio-CNG. The Galvanizing Organic Bio-Agro Resources Dhan (GOBAR-DHAN) scheme was first announced by Finance Minister Arun Jaitley during his budget speech on February 1. According to Jaitley, the scheme would focus on managing and converting cattle dung and solid waste in farms to compost, biogas and bio-CNG. "The Gobar-Dhan Yojana will help in keeping the village clean while increasing the income of farmers and cattle herders," PM Modi had said after the budget.

76. **Ans: c**

Capital markets are markets for buying and selling equity and debt instruments.

Capital markets channel savings and investment between suppliers of capital such as retail investors and institutional investors, and users of capital like businesses, government and individuals.

Capital markets are vital to the functioning of an economy, since capital is a critical component for generating economic output.

Capital markets include primary markets, where new stock and bond issues are sold to investors, and secondary markets, which trade existing securities.

77. **Ans: b**

78. **Ans: a**

79. **Ans: d**

a. Protective Functions:

As the name suggests, the main focus of this function of SEBI is to protect the interest of investor and security of their investment;

1. SEBI checks Price Rigging
2. SEBI prohibits Insider trading
3. SEBI prohibits fraudulent and Unfair Trade Practices

b. Developmental Functions:

TEST SERIES 12/20-2017-18...Answer and Explanation

Under developmental categories following functions are performed by SEBI

1. SEBI promotes training of intermediaries of the securities market
2. SEBI tries to promote activities of stock exchange by adopting a flexible and adaptable approach in following way
 - a. SEBI has permitted internet trading through registered stock brokers
 - b. SEBI has made underwriting optional to reduce the cost of issue
 - c. An Even initial public offer of primary market is permitted through the stock exchange.

c. Regulatory Functions:

To regulate the activities of stock exchange following functions are performed

1. SEBI has framed rules and regulations and a code of conduct to regulate the intermediaries such as merchant bankers, brokers, underwriters, etc
2. These intermediaries have been brought under the regulatory purview and private placement has been made more restrictive.
3. SEBI registers and regulates the working of stock brokers, sub-brokers, share transfer agents, trustees, merchant bankers and all those who are associated with stock exchange in any manner.
4. SEBI registers and regulates the working of mutual funds etc.
5. SEBI regulates takeover of the companies
6. SEBI conducts inquiries and audit of stock exchanges.

80. **Ans: b**

Customers of any bank can use such white-label ATMs, but they will **have to pay a fee** for using the service. All transactions through these ATMs will be charged.

81. **Ans: c**

Ramanujan Fellowship Program:

- For Indian scientists and engineers from all over the world, especially those who wish to return to India, to take up scientific research positions at **any of the scientific institutions and universities in India.**
- All areas of science are covered under this Fellowship and the Fellowship is given for 5 years duration with financial support.

82. **Ans: b**

It is a scheme under Department of Science & Technology. INSPIRE Faculty Scheme opens up an 'Assured Opportunity for Research Career (AORC)' for young researchers in the age group of 27-32 years. It is expected to augment high quality scientific manpower in scientific and educational institutions. It provides attractive opportunities to young achievers for developing independent scientific profiles and intends helping them emerge as S&T leaders in the long term. It provides career opportunities, but it is not a guarantee for tenure positions after 5 years.

The scheme offers contractual research positions to **Indian citizens and people of Indian origin including NRI/PIO status** with PhD (in science, engineering, pharmacy, medicine, and agriculture related subjects) from any recognized university in the world.

83. **Ans: c**

It is an optical communication technology in which data is transmitted by propagation of light in free space allowing optical connectivity. Working of FSO is similar to OFC (optical fiber cable) networks but the only difference is that the optical beams are sent through free air or vacuum instead of glass fiber. It is a Line of Sight (LOS) technology. It consists of an optical transceiver at both ends to provide full duplex (bidirectional) capability. It is capable of sending up to 1.25 Gbps of data, voice, and video communications simultaneously through the air.

Advantages

- It has low initial investment and is a flexible network that delivers better speed than broadband.
- High data rate can be obtained which is comparable to the optical fiber cable's data rate but error rate is very low.
- The extremely narrow laser beam enables having unlimited number of FSO links which can be installed in a specific area.

TEST SERIES 12/20-2017-18...Answer and Explanation

- It is a secure system because of line of sight operation. Therefore, no security upgradation is needed.
- There is no need for spectrum license or frequency coordination between users as it is required in radio and microwave systems previously.
- Electromagnetic and radio-magnetic interference cannot affect the transmission in FSO link.

Challenges

- The transmitted optical signal is affected by various limitations before arriving at the receiver such as misalignment errors, geometric losses, background noise, weather attenuation losses and atmospheric turbulence.

84. **Ans: a**

Self-explanatory.

India stands at a rate of 15.5 per 100 patients.

85. **Ans: b**

It is the self-sustaining cascading collision of space debris in Low Earth Orbit (LEO). The debris travel at a speed of 30,000 km/hr which can in effect damage satellites, space shuttles, space stations etc.

86. **Ans: d**

Self-Explanatory and informative

87. **Ans: a**

Organisms that respond to light with motions

- **Positively Phototactic:** Move towards light (Moths)
- **Negatively Phototactic:** Move away from light (Cockroaches)

88. **Ans: d**

Self-Explanatory and informative

89. **Ans: b**

IRNSS (Indian Regional Navigation Satellite System (IRNSS) is an independent regional system developed by India on par with the US-based Global Positioning System (GPS), Glonass of Russia, and Galileo developed by Europe. The system, which offers services like terrestrial and marine navigation, disaster management, vehicle tracking and fleet management, navigation aide for hikers and travellers, visual and voice navigation for drivers. This system is called NavIC (Navigation with Indian Constellation).

It has a network of seven satellites, of which four are in Geo Synchronous Orbit at an angle of 29° to the equatorial plane while remaining three are in Geo Stationary orbit.

90. **Ans: d**

Informative and self-explanatory

Cryonics is the science of using ultra-cold temperature to preserve human life with the intent of restoring good health when technology becomes available to do so.

91. **Ans: c**

Cobalt-60 is an artificially created isotope of cobalt.

92. **Ans: a**

Coal-bed methane is a natural gas which is associated with coal beds, also called "Sweet Gas".

93. **Ans: d**

Self-Explanatory

94. **Ans: d**

Union Home Ministry has decided to launch a web portal 'MySecurity.in' that will be a platform for innovation in the field of security related web applications. Any individual, company, student, NGO etc can develop and deploy on this portal such security applications which may be useful to the people. It will enable the general public to get access to a large number of security related applications.

The main objective of launching the web portal 'MySecurity.in' is to promote innovation in developing security related applications as well as offer to the people safe and trusted applications for their security needs. People will have options to choose the applications best suited for their requirements. Application developers, meeting the basic screening criteria, will be

TEST SERIES 12/20-2017-18...Answer and Explanation

allowed hardware and middleware resources in a cloud based environment to deploy their applications. An expert group constituted by MHA will also evaluate the application on parameters like usefulness, innovation, public acceptance, technology used, maintenance, updation, feedback mechanism etc.

95. **Ans: c**

NASA-ISRO Synthetic Aperture Radar (NISAR) mission will be launched in **2020**. Its purpose is to measure the changes on earth's land surface, ice surface, glaciers, earthquakes and volcanoes. The data will be used to understand climate change and predict natural disasters. NISAR will be the first satellite mission to use two different radar frequencies (L-band and S-band). Hence it can capture resolution even less than a centimeter of earth's surface.

96. **Ans: a**

Lukosin is a herbal drug developed by Defence Research Development Organisation (DRDO) for treatment of Lucoderma.

97. **Ans: c**

Informative

In nuclear engineering, fertile material (nuclide) is material that can be converted to fissile material by neutron transmutation and subsequent nuclear decay. The process of the transmutation of fertile materials to fissile materials is referred to as **fuel breeding**. Fertile materials are not capable of undergoing fission reaction after absorbing thermal (slow or low energy) neutrons and these materials are not capable of sustaining a nuclear fission chain reaction. There are two basic fertile materials: U-238 and Th-232.

A fertile isotope is one which absorbs neutron to yield a fissile element. When a slow moving neutron interacts with an atom, it either gets absorbed or scattered. In case it gets absorbed, it may or may not cause the resulting element to fission out. U-235 becomes very unstable on absorbing a neutron and promptly breaks into lighter nuclei. Hence it is fissile element. U-238, on the other hand, absorbs a neutron to form Pu-239 which is fissile material. Hence U-238 is fertile.

98. **Ans: a**

Goldilocks Zone refers to the zone range of orbits around a star, where it neither too hot, nor too cold to support liquid water.

This is the zone where life can possibly exist. Earth is a planet which has life, in the Goldilocks Zone.

99. **Ans: c**

The GRAPES-3 experiment located at Ooty (Nilgiri, Tamil Nadu) in India started as a collaboration of the Tata Institute of Fundamental Research, Mumbai, India and the Osaka City University, Osaka, Japan. It is designed to study cosmic rays with an array of air shower detectors and a large area muon detector.

It has been upgraded to GRAPES-3 to monitor the propagation of solar storms, which are the eruption of mass and energy from solar surface mainly in the form of magnetic plasma and hot gases of electrically charged particles, and in addition, more dangerous gamma, UV and X-Rays, out into space.

100. **Ans: d**

A scheme by Dept of Biotechnology under Ministry of Science and Technology, Ramalingaswami Re-entry Fellowship is for Indian Nationals who are working overseas in various fields of biotechnology and life sciences and are interested in taking up scientific research positions in India. It allows fellows to work in any of the scientific institutions/ universities in the country and would also be eligible for regular research grant through extramural and other research schemes of various S&T agencies of the Government of India.