



ForumIAS

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## Prelims Marathon

March,  
2020

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*HISTORY*

*ECONOMICS*

*POLITY*

*SCIENCE AND TECHNOLOGY*

*GEOGRAPHY AND ENVIRONMENT*

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## *History*

**Q.1)** Consider the following statements with respect to Architecture development during **Akbar Reign**:

1. Red Sandstone used in constructions
2. He introduced the use of Tudor Arch

Which of the following above statements is/are correct?

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

**Q.2)** Which of the following buildings located inside the **Fatehpur Sikri**?

1. Buland Darwaza
2. Salim Chisti's tomb
3. Moti Masjid

Choose the correct code from below given options:

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

**Q.3)** "**The East India Association**" was organised by which of the following freedom fighter?

- a) Dadabhai Naoroji
- b) Ishwar Chandra Vidya Sagar
- c) Sisir Kumar Ghosh
- d) Surendranath Banerjea

**Q.4)** Consider the following statements with respect to **Indian Freedom struggle**:

1. The first session of the Indian National Congress was attended by 72 delegates
2. Kadambini Ganguly, the first woman graduate of Calcutta University, addressed the Congress session in 1890

Which of the following codes below given is/are **NOT** correct?

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

**Q.5)** **Ripon's Resolution** on which of the following below given sector?

- a) Educational reforms
- b) Health reforms
- c) Financial reforms
- d) Local Body reforms

**Q.6)** Consider the following statements with respect to **Indian National Association**:

1. It is founded by Dadabhai Naoroji
2. The association demanded holding of civil service examination in India only

Which of the following above statements is/are correct?

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

**Q.7) "Safety Value Theory"** has significance in Indian national movement related to which of the following?

- a) Indian National Congress
- b) Indianisation of civil services
- c) Responsible Government
- d) Social reforms

**Q.8) "Indian National Liberal Federation"** founded by which of the following?

- a) M K Gandhiji
- b) Anand Mohan Bose
- c) Surendranath Banerjea
- d) None of the above

**Q.9)** Which of the following **Cave temples** located in Tamil Nadu?

- 1. Varaha Cave Temple
- 2. Lord Balaji Cave Temple
- 3. Panchapandava Temple

Choose the correct code from the below given options?

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

**Q.10)** Consider the following statements with respect to **"Gupta Empire Administration"**:

- 1. The King was the highest authority and possessed wide powers to enable the smooth functioning of the empire.
- 2. Salaries in the Gupta period were paid in form of land grants
- 3. Decentralization is totally absent

Which of the following codes below given is/are correct?

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

**Q.11)** Which of the following **Governor General of India** established Fort William College to recruit civil servants?

- a) Cornwallis
- b) Wellesley
- c) Ripon
- d) William Bentinck

**Q.12)** Which of the following statements is/are correct with respect to **Indian Factory Act 1891**?

- 1. Reduced maximum working hours for children to 7 hours a day
- 2. Provided weekly holiday for woman and children only

Which of the following codes below given is/are **NOT** correct?

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

**Q.13) “The Economic History of India”** book written by which of the following?

Dadabhai Naoroji  
Romesh Chandra Dutt  
Gopal Krishna Gokhale  
M G Ranade

**Q.14) “Applique or Pipli”** embroidery work famous in which of the following state?

- a) Telangana
- b) Kerala
- c) Karnataka
- d) Odisha

**Q.15) “Mohiniattam or Mohiniyattam”** is an Indian classical dance form that evolved in which of the following state?

- a) Karnataka
- b) Tamil Nadu
- c) Andhra Pradesh
- d) Kerala

**Q.16)** Consider the following statements with respect to **Dutch Settlements** in Pre-Independent India:

1. The Dutch founded their first factory in Masulipatnam in 1605.
2. No Dutch settlements on Coromandel Coast.

Which of the following above statements is/are correct?

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

**Q.17) “Treaty of Ryswick”** was concluded between which of the following nations in 17<sup>th</sup> Century?

- a) French & English
- b) French & Portuguese
- c) French & Dutch
- d) Dutch & Portuguese

**Q.18)** Which of the following is/are **consequences of 1857 revolt**?

1. No religious interference from British officials.
  2. Number of Indian soldiers was increased.
- Choose the correct code from below given options:
- a) 1 only
  - b) 2 only
  - c) Both 1 and 2
  - d) Neither 1 nor 2

**Q.19) “Angkor Vat”-** the world’s largest Hindu temple located in which of the following country?

- a) Thailand
- b) Singapore
- c) Myanmar
- d) Cambodia

**Q.20)** Consider the following statements with respect **British India freedom movement**:

1. Ramosi Peasant Force established by Savarkar brothers.
2. Mitra mela organized Chapekar brothers.

Which of the following codes below given is/are **NOT** correct?

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

**ANSWER KEY**

Que.	Ans.	Que.	Ans.
1	C	11	B
2	B	12	B
3	A	13	B
4	D	14	D
5	D	15	D
6	D	16	A
7	A	17	C
8	C	18	A
9	C	19	D
10	A	20	C

**EXPLANATION**

**1. Explanation:** Akbar took a keen interest in the development of art and architecture during his reign. The principal feature of the constructions during Akbar’s reign was the use of red sandstone. He also introduced the use of ‘Tudor arch’ (four centred arch).

**2. Explanation:** One of the highlights of Indo-Islamic architecture was the creation of a new capital city by Akbar at Fatehpur Sikri. It has been described as a “frozen moment in history” as the buildings here represent a unique blend of Hindu and Persian styles.

Some of the important buildings inside the city are:

- Buland Darwaza the imposing 40 metre red sandstone structure was built in 1576 AD, to commemorate Akbar’s victory over Gujarat. It is the largest gateway of the world.
- Salim Chisti’s tomb was built in 1581 AD. It has beautiful Jaali work in white marble. It has arabesque patterns with inscriptions of Quranic verses on the walls. It is in the imperial complex which also has Buland Darwaza and Jama Masjid. It was further decorated by Jahangir in 1606 AD.
- Panch Mahal is a five-storied structure made of columns and is inspired by the concept of Persian badgir (wind-catcher)
- Jodha Bai’s palace or Mariam-uz-Zamani’s palace (Mary of the Age) has beautiful interiors with Hindu motifs of bell and flowers.

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- Ibadat Khana Akbar used to meet the leaders of different religions here to have discussion.
- Pachisi Court in the courtyard where Akbar is said to have played chess.
- Hiran Minar was built in memory of Akbar's favourite elephant, named Hiran. It also served as lighthouse for travellers. It is uniquely designed and its exterior wall contains tusk like spikes.
- Akbar also built a temple of Govind Dev in Vrindavan.

**3. Explanation:** The East India Association was organised by Dadabhai Naoroji in 1866 in London to discuss the Indian question and influence public men in England to promote Indian welfare. Later, branches of the association were started in prominent Indian cities.

**4. Explanation:** The first session of the Indian National Congress was attended by 72 delegates and presided over by Womesh Chandra Bonnerjee. Hereafter, the Congress met every year in December, in a different part of the country each time. Some of the great presidents of the Congress during this early phase were Dadabhai Naoroji (thrice president), Badruddin Tyabji, Pherozshah Mehta, P. Anandacharlu, Surendranath Banerjea, Romesh Chandra Dutt, Ananda Mohan Bose and Gopal Krishna Gokhale. Other prominent leaders included Mahadeo Govind Ranade, Bal Gangadhar Tilak, Sisir Kumar Ghosh, Motilal Ghosh, Madan Mohan Malaviya, G. Subramaniya Aiyar, C. Vijayaraghavachariar, Dinshaw E. Wacha. In 1890, Kadambini Ganguly, the first woman graduate of Calcutta University, addressed the Congress session, which symbolised the commitment of the freedom struggle to give the women of India their due status in national life.

**5. Explanation:** The Government of Ripon desired the provincial governments to apply in case of local bodies the same principle of financial decentralization which Lord Mayo's Government had begun towards them. For his contributions, Lord Ripon is called father of local self-government in India.

**6. Explanation:** The Indian Association of Calcutta (also known as the Indian National Association) superseded the Indian League and was founded in 1876 by younger nationalists of Bengal led by Surendranath Banerjea and Ananda Mohan Bose, who were getting discontented with the conservative and pro-landlord policies of the British Indian Association. The Indian Association was the most important of pre- Congress associations and aimed to "promote by every legitimate means the political, intellectual and material advancement of the people." It set out to—

- (i) create a strong public opinion on political questions, and
- (ii) unify Indian people in a common political programme.

It protested against the reduction of age limit in 1877 for candidates of the Indian Civil Service examination. The association demanded simultaneous holding of civil service examination in England and India and Indianisation of higher administrative posts. It led a campaign against the repressive arms act and the vernacular press act.

**7. Explanation:** There is a theory that Hume formed the Congress with the idea that it would prove to be a 'safety valve' for releasing the growing discontent of the Indians. To this end, he convinced Lord Dufferin not to obstruct the formation of the Congress. The extremist leaders like Lala Lajpat Rai believed in the 'safety valve' theory. Even the Marxist historian's 'conspiracy theory' was an offspring of the 'safety valve' notion. For example, R.P. Dutt opined that the Indian National Congress was born out of a conspiracy to abort a popular uprising in India and the bourgeois leaders were a party to it.



**8. Explanation:** The adoption by the Congress of the non-cooperation movement initiated earlier by the Khilafat Committee gave it a new energy, and the years 1921 and 1922 saw an unprecedented popular upsurge. At this stage, some leaders like Mohammad Ali Jinnah, Annie Besant, G.S. Kharpade and B.C. Pal left the Congress as they believed in a constitutional and lawful struggle while some others like Surendranath Banerjee founded the Indian National Liberal Federation and played a minor role in national politics henceforward.

**9. Explanation:** The ancient port city of Mamallapuram under Pallava dynasty in Tamil Nadu, flourished with a number of marvelous architecture. These seventh century Pallava sites have been declared as UNESCO World Heritage Site in 1984 by the name "Group of Monuments at Mahabalipuram. They include:

- Ratha temples or Pancha Ratha: Also known as Pandava Rathas, they are the earliest rock cut temples in India, comprising of Dharmaraja Ratha, Bhima Ratha, Arjuna Ratha, Nakula and Sahadeva Ratha, and Draupadi Ratha, dated around 7th century AD. Dharmaraja Ratha is the largest structure among the five.
- Rock-cut caves: which include Varaha Cave Temple, Krishna Cave Temple, Panchapandava Cave Temple, and the Mahishasuramardini Mandapa (Bas-relief of Goddess Durga killing Mahishasura).

**10. Explanation:** The administrative system during the Gupta dynasty reign was similar to that of the Mauryan Empire. The King was that highest authority and possessed wide powers to enable the smooth functioning of the empire. At the time of the Gupta rule, there was political harmony in ancient India. During the Gupta period, the empire was classified into separate administrative divisions like Rajya, Rashtra, Desha, Mandala, etc. Thus importance was given to decentralization of power. The administrative division helped the rulers to systematically control their territories. Salaries in the Gupta period were paid in form of land grants in lieu of cash. By virtue of such land grants, it gave the beneficiary hereditary rights over the land. However, the King had the power to take away the land. The government levied land taxes and excise duties were collected from the subjects. The lands given to the Brahmins had no chargeable tax on them.

**11. Explanation:** In 1800, Wellesley (governor-general, 1798-1805) set up the Fort William College for training of new recruits. In 1806 Wellesley's college was disapproved by the Court of Directors and instead the East India College was set up at Haileybury in England to impart two years' training to the recruits.

**12. Explanation:** The Indian Factory Act, 1891

- increased the minimum age (from 7 to 9 years) and the maximum (from 12 to 14 years) for children,
- reduced maximum working hours for children to 7 hours a day,
- fixed maximum working hours for women at 11 hours per day with an one-and-a-half hour interval (working hours for men were left unregulated),
- Provided weekly holiday for all.

**13. Explanation:** Dadabhai Naoroji, the 'Grand Old Man of India', who after a brilliant analysis of the colonial economy put forward the theory of economic drain in Poverty and Un-British Rule in India. Other economic analysts included Justice Mahadeo Govind Ranade, Romesh Chandra Dutt (The Economic History of India), Gopal Krishna Gokhale, G. Subramaniya Iyer and Prithwishchandra Ray. The essence of nineteenth century colonialism, they said, lay in the transformation of India into a supplier of foodstuffs and

raw-materials to the metropolis, a market for metropolitan manufacturers and a field for investment of British capital. These early nationalist analysts organised intellectual agitations and advocated a complete severance of India's economic subservience to Britain and the development of an independent economy based on modern industries.

**14. Explanation:** Amongst the crafts used on textiles, the art of working raised designs using threads or wooden blocks is unique. This art is called embroidery and can be performed by using threads of gold, silver, silk or cotton on cloth using needles. Embroidery arts like Applique or Pipli work is practiced in Pipli village in Odisha. It is a type of patchwork made of embroidered colourful fabric that is sewed together to make a single piece. They use this technique to make beautiful lamps.

**15. Explanation:** Mohiniattam or Mohiniyattam is an Indian classical dance form that evolved in the state of Kerala, India, and is counted among the two popular dance arts of the state, the other being Kathakali. Although its roots date back to the age-old Sanskrit Hindu text on performing arts called 'Natya Shastra', similar to other Indian classical dance forms, Mohiniattam adheres to the Lasya type that showcases a more graceful, gentle and feminine form of dancing. Mohiniattam derives its name from the word 'Mohini', a female avatar of Lord Vishnu. Conventionally a solo dance performed by female artists, it emotes a play through dancing and singing where the song is customarily in Manipravala which is a mix of Sanskrit and Malayalam language and the recitation may be either performed by the dancer herself or by a vocalist with the music style being Carnatic.

**16. Explanation:** After their arrival in India, the Dutch founded their first factory in Masulipatnam (in Andhra) in 1605. They went on to establish trading centres at different parts of India and thus became a threat to the Portuguese. They captured Nagapatnam near Madras (Chennai) from the Portuguese and made it their main stronghold in South India. The Dutch established factories on the Coromandel Coast, in Gujarat, Uttar Pradesh, Bengal and Bihar. In 1609, they opened a factory in Pulicat, north of Madras.

**17. Explanation:** The French position in India was badly affected with the outbreak of war between the Dutch and the French. Bolstered by their alliance with the English since the Revolution of 1688, the Dutch captured Pondicherry in 1693. Although the Treaty of Ryswick concluded in September 1697 restored Pondicherry to the French, the Dutch garrison held on to it for two more years.

**18. Explanation:** As per the Queen's proclamation, the era of annexations and expansion had ended and the British promised to respect the dignity and rights of the native princes. The Indian states were henceforth to recognise the paramountcy of the British Crown and were to be treated as parts of a single charge. The people of India were promised freedom of religion without interference from British officials. The proclamation also promised equal and impartial protection under law to all Indians, besides equal opportunities in government services irrespective of race or creed. It was also promised that old Indian rights, customs and practices would be given due regard while framing and administering the law. The Army, which was at the forefront of the outbreak, was thoroughly re-organised and British military policy came to be dominated by the idea of "division and counterpoise". The British could no longer depend on Indian loyalty, so the number of Indian soldiers was drastically reduced even as the number of European soldiers was increased.

**19. Explanation:** Deep in the jungles of Cambodia, the world's largest Hindu temple – the Angkor Wat is situated. However, it is just one of the many Hindu temples in South East



Asia. The sea-faring activities of the Chola Empire, Kaling Empire etc. brought the religion in these parts and gave rise to many Hindu dynasties – the Champa civilisation in Vietnam, the Khmer empire in Indochina and the Majapahit Empire in Java.

**20. Explanation:** The first of the revolutionary activities in Maharashtra was the organisation of the Ramosi Peasant Force by Vasudev Balwant Phadke in 1879, which aimed to rid the country of the British by instigating an armed revolt by disrupting communication lines. It hoped to raise funds for its activities through dacoities. It was suppressed prematurely. During the 1890s, Tilak propagated a spirit of militant nationalism, including use of violence, through Ganapati and Shivaji festivals and his journals Kesari and Maharatta. Two of his disciples—the Chapekar brothers, Damodar and Balkrishna—murdered the Plague Commissioner of Poona, Rand, and one Lt. Ayerst in 1897. Savarkar and his brother organised Mitra Mela, a secret society, in 1899 which merged with Abhinav Bharat (after Mazzinni's 'Young Italy') in 1904. Soon Nasik, Poona and Bombay emerged as centres of bomb manufacture. In 1909, A.M.T. Jackson, the Collector of Nasik, who was also a well-known indologist, was killed by Anant Lakshman Kanhere, a member of Abhinav Bharat.

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## *Economy*

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**Q.1) “Lorenz Curve”** related to which of the following?

- a) Inflation
- b) Tax revenue
- c) Income inequality
- d) Public debt

**Q.2)** Which of the following are **International Credit Rating Agencies**?

- 1. S & P
- 2. Moody's
- 3. Fitch
- 4. DBRS

Choose the correct code from below given options:

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

**Q.3)** Consider the following statements with respect to **Twin Balance Sheet** problem:

- 1. High Non Performing Assets (NPA's) of Public sector banks
- 2. Low stressed balance sheet of the private corporate sector

Which of the following codes below given is/are **NOT** correct?

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

**Q.4)** Consider the following statements with respect to UNO projections on **Demographic Dividend**:

- 1. According to UNO, China and Russia will see downfall in working age population in next three decades
- 2. India's working age population will increase 1/3<sup>rd</sup> in the same period

Which of the following above statements is/are correct?

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

**Q.5)** Consider the following statements with respect to **Credit Default Swap (CDS)**:

- 1. CDS is a risk management product which helps entities guard against possibility of defaults in repayment of corporate bonds
- 2. CDS introduced in 2011
- 3. The eligible participants are commercial banks, primary dealers, NBFCs, insurance companies and mutual funds

Which of the following codes below given is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only

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

**Q.6) “FERA and FEMA”** are constantly in news related to which of the following?

- a) Foreign funding
- b) Bilateral trade relations
- c) Foreign exchange
- d) Agriculture sector reforms

**Q.7) Which of the following is/are objectives of National Initiative on Climate Resilient Agriculture (NICRA)?**

1. To enhance the resilience of Indian agriculture covering crops, livestock and fisheries to climatic variability and climate change
2. To demonstrate site specific technology packages on farmers’ fields for adapting to current climate risks
3. To provide low interest credit to farmers

Choose the correct code from below given options:

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

**Q.8) Consider the following statements with respect to Accelerated Irrigation Benefit Programme (AIBP):**

1. AIBP was launched in 1996-97 to support major and medium irrigation projects
2. After launch of PMKSY in 2015-16, AIBP became a part of PMKSY

Which of the following codes below given is/are **NOT** correct?

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

**Q.9) “BASEL NORMS”** is frequently in news related to which of the following?

- a) Educational Reforms
- b) Banking provisions
- c) Waste Management
- d) Nuclear Weapons control

**Q.10) “Special Safeguard Mechanism”** of WTO related to which of the following?

- a) Agriculture sector
- b) Automobiles sector
- c) Services sector
- d) Financial sector

**Q.11) Consider the following statements with respect to Minimum Alternate Tax (MAT):**

1. It is a direct tax.
2. It is imposed on Individuals and companies.
3. It was first imposed in 1997–98.

Which of the following codes below given is/are **NOT** correct?

- a) 1 only
- b) 1 and 2 only

- c) 2 only
- d) 2 and 3 only

**Q.12) “Most Favored Nation”** provision related to which of the following?

- a) WTO
- b) IMF
- c) AIIB
- d) World Bank

**Q.13)** Consider the following statements with respect to **Bilateral Investment Promotion & Protection Agreement (BIPA)**:

1. The objective of the BIPA is to promote and protect the interests of investors of either country in the territory of other country.
  2. It is an initiative of International Centre for Settlement of Investment Disputes (ICSID).
- Which of the following below given codes is/are correct?

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

**Q.14)** Consider the following statements with respect to **International Development Agency (IDA)**:

1. It provides short term lending for the development of economic services.
2. India is the biggest beneficiary of the IDA support.

Which of the following below given codes is/are correct?

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

**Q.15)** Consider the following statements with respect to **Repo and Reverse Repo rate**:

1. RBI introduced both Repo and Reverse Repo rate at the same time.
2. Repo and Reverse Repo rate instruments used to raise long term funds.

Which of the following codes below given is/are **NOT** correct?

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

**Q.16)** Consider the following statements with respect to traits of **“recession”**:

1. General fall in demand.
2. Inflation remains higher & no signs of going down.
3. Unemployment rate grows.

Which of the following codes below given is/are correct?

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

**Q.17)** Arrange the following events in chronological order:

1. Great depression

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2. Asian financial crisis
3. International debt crisis
4. Sub-prime crisis (Global economic recession)

Select the correct answer using the codes given below:

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

**Q.18)** Consider the following statements with respect to **Farm Subsidies**:

1. The farm subsidies of developed countries are higher than developing countries like India.
2. WTO has put some ceilings on the amount of subsidies being provided by the various developing and developed nations.

Which of the following codes below given is/are **NOT** correct?

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

**Q.19)** Which of the following Latin American country implementing **“Bolsa Familia”** direct subsidy programme?

- a) Argentina
- b) Brazil
- c) Uruguay
- d) Peru

**Q.20)** Consider the following statements with respect to **‘Rural Infrastructure Promotion Fund’ (RIPF)**:

1. It has been created by Ministry of Rural Development.
2. RIPF has been set up with a corpus of Rs. 25 crore.

Which of the following above statements is/are correct?

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

**ANSWER KEY**

Que.	Ans.	Que.	Ans.
1	C	11	C
2	D	12	A
3	B	13	A
4	C	14	B
5	C	15	C
6	C	16	C
7	D	17	C
8	B	18	D
9	B	19	B
10	A	20	B



**EXPLANATION**

**1. Explanation:** A graph showing the degree of inequality in income and wealth in a given population or an economy. It is a rigorous way to measure income inequality. In this method (for example), personal incomes in an economy are arranged in increasing order; the cumulative share of total income is then plotted against the cumulative share of the population. The curve's slope is thus proportional to per capita income at each point of the population distribution. In the case of complete equality of income, the Lorenz curve will be a straight line and with greater curvature the inequality rises proportionally—the Gini Coefficient measures this inequality.

**2. Explanation:** Presently, India is rated by six international credit rating agencies, namely Standard and Poor's (S&P), Moody's Investor Services, Fitch, Dominion Bond Rating Service (DBRS), the Japanese Credit Rating Agency (JCRA), and the Rating and Investment Information Inc., Tokyo (R&I).

**3. Explanation:** Though, India has today one of the fastest growth rates in the world, for the past few years, certain financial issues have been worsening. In the aftermath of the global financial crisis (GFC) of 2007, India has been trying to come to grips with the 'twin balance sheet' (TBS) problem—

(i) High NPAs of the PSBs; and

(ii) Highly stressed balance sheet of the private corporate sector.

India has taken several steps by now to recover and control the bad loans of the banks. But they have not been very effective and banks are even today under high stress. On the other hand, India has been waiting for a recovery in the corporate sector for their balance sheet to come in good health but to no avail.

**4. Explanation:** Global demographics saw a turning point in 2016—for the first time since 1950, the combined WA population (age group 15–59 years) of the advanced countries declined. As per the projections of the UNO, for the next three decades China and Russia will see their WA declining by over 20 per cent. However, India seems to be in a demographic sweet spot with its WA population—projected to grow by a third over the same period. Economic research of the last two decades has suggested that the higher growth rates in East Asia were driven by demographic changes.

**5. Explanation:** CDS is in operation in India since October 2011—launched in only corporate bonds. The eligible participants are commercial banks, primary dealers, NBFCs, insurance companies and mutual funds. CDS is a credit derivative transaction in which two parties enter into an agreement, whereby one party (called as the 'protection buyer') pays the other party (called as the 'protection seller') periodic payments for the specified life of the agreement. The protection seller makes no payment unless a credit event relating to a pre-determined reference asset occurs. If such an event occurs, it triggers the Protection Seller's settlement obligation, which can be either cash or physical (India follows physical settlement). It means, CDS is a credit derivative that can be used to transfer credit risk from the investor exposed to the risk (called protection buyer) to an investor willing to take risk (called protection seller). It operates like an insurance policy. In an insurance policy, the insurance firm pays the loss amount to the insured party.

**6. Explanation:** FERA was mainly formulated to deal with deep crunch of foreign exchange post world war II and hence was a rigid piece of legislation which have left all the businesspeople and Indian citizens at the mercy of Enforcement Directorate as violence of FERA was considered a criminal act and there were major penalties associated with it. FEMA or Foreign Exchange Management Act was introduced in the year 1999 to

replace FERA (Foreign Exchange Regulations Act). FEMA came into act on 1st of June 2000. The Scope and Objective of FEMA was mainly to amend the laws related to foreign exchange to facilitate external trade and payments and to develop the foreign exchange market in India. FEMA was a liberal from of its prior version (FERA). It extends to whole of the country. It introduced resident ship in place of citizenship. FEMA is more human and natural in nature and removed all kinds of restrictions on withdrawal of foreign exchange. FEMA also introduced RFC (Resident foreign currency account). It specifically deals with possession and retention of foreign currency and includes all kinds of foreign securities and immovable property.

**7. Explanation:** National Innovations on Climate Resilient Agriculture (NICRA) is a network project of the Indian Council of Agricultural Research (ICAR) launched in February, 2011. The project aims to enhance resilience of Indian agriculture to climate change and climate vulnerability through strategic research and technology demonstration. The research on adaptation and mitigation covers crops, livestock, fisheries and natural resource management. The project consists of four components viz. Strategic Research, Technology Demonstration, Capacity Building and Sponsored/Competitive Grants.

Objectives:

With this background, the ICAR has launched a major Project entitled, National Initiative on Climate Resilient Agriculture (NICRA) during 2010-11 with an outlay of Rs.350 crores for the XI Plan with the following objectives.

- To enhance the resilience of Indian agriculture covering crops, livestock and fisheries to climatic variability and climate change through development and application of improved production and risk management technologies
- To demonstrate site specific technology packages on farmers' fields for adapting to current climate risks
- To enhance the capacity building of scientists and other stakeholders in climate resilient agricultural research and its application.

**8. Explanation:** Central Government launched the Accelerated Irrigation Benefits Programme (AIBP) in the year 1996-97 to provide Central Assistance to major/medium irrigation projects in the country, with the objective to accelerate implementation of such projects which were beyond resource capability of the States or were in advanced stage of completion. Priority was given to those projects which were started in Pre-Fifth and Fifth Plan period and also to those which were benefiting Tribal and Drought Prone Areas. After launch of PMKSY in 2015-16, AIBP became a part of PMKSY. Since its inception, 297 Irrigation / Multi-Purpose Projects have been included for funding under AIBP. Out of this 143 projects have been completed and 5 projects were foreclosed.

**9. Explanation:** The Basel Accords/Norms (i.e., Basel I, II and now III) are a set of agreements set by the Basel Committee on Bank Supervision (BCBS), which provides recommendations on banking regulations in regards to capital risk, market risk and operational risk. The purpose of the accords is to ensure that financial institutions have enough capital on account to meet obligations and absorb unexpected losses. They are of paramount importance to the banking world and are presently implemented by over 100 countries across the world.

**10. Explanation:** In recent times, India has become more conscious towards protecting its agricultural trade interests at the international platforms. At the 10th Ministerial Conference of the WTO (Nairobi, December 2015), the Government of India adopted the following approach towards agri-trade policy:

- A Special Safeguard Mechanism (SSM) for developing countries.
- Public stockholding food for security purposes,
- A commitment to abolish export subsidies for farm exports, and
- Measures related to cotton.

**11. Explanation:** The Minimum Alternate Tax (MAT) is a direct tax imposed on the 'zero tax' companies at the rate of 18.5 per cent on their book profit. This was first imposed in 1997–98. Basically, income tax is paid as per the provisions of the Income Tax Act (IT Act), but companies calculate their profit (through profit and loss account) as per the provisions of the Companies Act. The IT Act allows several kinds of exemptions and other incentives from total income together with deductions on the gross income. Again, the rates of 'depreciation' under the Companies Act are higher than the IT Act. As a result of these exemptions, deductions and other incentives under IT Act together with higher depreciation under the Companies Act, companies show their taxable income either 'nil' or 'negative', and this way; the 'zero tax' companies emerge.

**12. Explanation:** The WTO provides a rule based, transparent and predictable multilateral trading system. The WTO rules envisage non-discrimination in the form of National Treatment and Most Favoured Nation (MFN) treatment to India's exports in the markets of other WTO Members. National Treatment ensures that India's products once imported into the territory of other WTO Members would not be discriminated vis-à-vis the domestic products in those countries. MFN treatment principle ensures that members do not discriminate among various WTO members.

**13. Explanation:** As part of the Economic Reforms Programme initiated in 1991, the foreign investment policy of the Government of India was liberalised and negotiations undertaken with a number of countries to enter into Bilateral Investment Promotion & Protection Agreement (BIPA) in order to promote and protect on reciprocal basis investment of the investors. Government of India have, so far, (as by July 2012) signed BIPAs with 82 countries out of which 72 BIPAs have already come into force and the remaining agreements are in the process of being enforced. In addition, agreements have also been finalised and/or being negotiated with a number of other countries. The objective of the BIPA is to promote and protect the interests of investors of either country in the territory of other country. Such agreements increase the comfort level of the investors by assuring a minimum standard of treatment in all matters and provides for justifiability of disputes with the host country (it should be noted here that India is not a member of the World Bank group's body, the ICSID, serving the same purpose. BIPA is India's version. While the former is a multilateral body, the latter is a bilateral one).

**14. Explanation:** The International Development Agency (IDA) which is also known as the soft window of the WB was set up in 1960 with the basic aim of developing infrastructural support among the member nations, long-term lending for the development of economic services. Its loans, known as credits are extended mainly to economies with less than \$895 per capita income. The credits are for a period of 35–40 years, interest-free, except for a small charge to cover administrative costs. Repayment begins after a 10-year grace period. There was no human angle to its lending. But now there remain no hard and fast differences between the purposes for the IBRD and IDA lending. Every year developing nations make enough diplomatic attempts to carve out maximum loan disbursement for themselves. India had been the biggest beneficiary of the IDA support. The total support (IBRD + IDA) for India had been \$ 91.81 billion till date.



**15. Explanation:** Repos and Reverse Repos: In the era of economic reforms there developed two new instruments of money market-repo and reverse repo. Considered the most dynamic instruments of the Indian money market they have emerged the most favored route to raise short-term funds in India. 'Repo' is basically an acronym of the rate of repurchase. The RBI in a span of four years, introduced these instruments-repo in December 1992 and reverse repo in November 1996. Repo allows the banks and other financial institutions to borrow money from the RBI for short-term (by selling government securities to the RBI). In reverse repo, the banks and financial institutions purchase government securities from the RBI (basically here the RBI is borrowing from the banks and the financial institutions). All government securities are dated and the interest for the repo or reverse repo transactions is announced by the RBI from time to time. The provision of repo and the reverse repo have been able to serve the liquidity evenness in the economy as the banks are able to get the required amount of funds out of it, and they can park surplus idle funds through it. These instruments have emerged as important tools in the management of the monetary and credit policy in recent years.

**16. Explanation:** Recession is somewhat similar to the phase of 'depression' — we may call it a mild form of depression — fatal for economies as this may lead to depression if not handled with care and in time. The financial crises which followed the US 'sub-prime crisis' in almost the whole Euro-American economies has basically brought in 'severe recessionary' trends there. Major traits of recession, to a great extent, are similar to that of 'depression' [except the point (iv) of the Depression, discussed earlier]—may be summed up as follows:

- (i) There is a general fall in demand as economic activities take a downturn;
- (ii) Inflation remains lower or/and shows further signs of falling down;
- (iii) employment rate falls/unemployment rate grows;
- (iv) Industries resort to 'price cuts' to sustain their business.

**17. Explanation:** 7 major financial crises that the world witnessed in the last 100 years. The 7 crises that will be presented are the Great Depression 1932; the Suez Crisis 1956; the International Debt Crisis 1982; the East Asian Economic Crisis 1997-2001; the Russian Economic Crisis 1992-97, the Latin American Debt Crisis in Mexico, Brazil and Argentina 1994-2002, and the Global Economic Recession 2007-09.

**18. Explanation:** Farm subsidies form an integral part of the government's budget. In the case of developed countries, the agricultural or farm subsidies compose nearly 40 per cent of the total budgetary outlay, while in India's case it is much lower (around 7.8 per cent of GDP) and of different nature. The World Trade Organization (WTO) has put some ceilings on the amount of direct and indirect subsidies being provided by the various developing and developed nations due to the fact that these subsidies distort the free market forces which have their own implications.

**19. Explanation:** The biggest and most cited of such programmes is Brazil's Bolsa Familia. It started in 2001, with a programme aimed at education. It expanded in 2003 to include a range of services like food and fuel, and now covers 2.6 million families in that country. The government transfers cash straight to a family, subject to conditions such as school attendance, nutritional monitoring, prenatal and post-natal tests. By many measures, the programme is a success. Brazil's poverty levels dropped by 15 percentage points between 2003 and 2009, at least a sixth, thanks to Bolsa Familia (economic growth played a big part, too.) Millenium Development Goals initiative, which in 2000 sought to halve poverty

by 2015, doesn't even mention cash transfers. But, Brazil achieved the goals 10 years ahead of the deadline. And the cost of these transfers has been 0.4 per cent of GDP.

**20. Explanation:** NABARD has created a separate fund titled 'Rural Infrastructure Promotion Fund' (RIPF) to support programs and activities that promote rural infrastructure, with the ultimate objective of facilitating agriculture and rural development. RIPF has been set up with a corpus of Rs. 25 crore. The amount is contributed out of margin received by NABARD from a special window created under RIDF for funding the rural roads component of Bharat Nirman through National Rural Roads Development Agency (NRRDA).



## *Polity*

**Q.1)** Consider the following statements with respect to **Tribal Advisory Council (TAC)**:

1. Each state having scheduled areas has to establish a tribal advisory council
2. It is to consist of 20 members, three-fourths of whom are to be the women representatives of the scheduled tribes in the state assembly

Which of the following above statements is/are **NOT** correct?

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

**Q.2)** Consider the following statements with respect to **Union Public Service Commission (UPSC)**:

1. Articles 315 to 323 of the Indian Constitution related to UPSC
2. The UPSC consists of a chairman and other members appointed by the President of India
3. Parliament determine the conditions of service of the chairman and other members of the Commission

Which of the following codes below given is/are correct?

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

**Q.3)** Consider the following statements with respect to **Commonwealth Nations Group (CHOGM)**:

1. It contains most of the earlier colonies of British Empire
2. India withdrew its membership after Independence from British Empire

Which of the following codes given below is/are correct?

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

**Q.4)** The framers of the constitution made **Directive Principles of State Policy** are Non-Justifiable. Consider the following reasons:

1. The country did not possess sufficient financial resources to implement them.
2. The presence of vast diversity and backwardness in the country

Which of the following codes below given is/are **NOT** correct?

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

**Q.5)** **"MERCOSUR"** is a regional trade block, related to which of the following Continent?

- a) South America
- b) Europe
- c) Africa

d) Asia

**Q.6)** Which of the following ways vacancy occur in the **President's office**?

1. Expiry of tenure
2. Resignation
3. Death

Choose the correct code from below given options?

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

**Q.7)** Consider the following statements with respect to **military powers of President**:

1. He is supreme commander of defense forces
2. He can declare a war or conclude peace

Which of the following codes below given is/are **NOT** correct?

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

**Q.8)** Consider the following statements with respect to **Central Administrative Tribunal (CAT)**:

1. CAT exercises original jurisdiction in relation to recruitment and all service matters of public servants
2. CAT is not bound by the procedure laid down in the Civil Procedure Code of 1908

Which of the following codes below given is/are correct?

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

**Q.9)** Consider the following statements with respect to **presidential system of government**:

1. The American President is both the head of the State and the head of government
2. He cannot be removed by the Congress except by impeachment for a grave unconstitutional act.

Which of the following codes below given is/are correct?

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

**Q.10)** Consider the following statements with respect to Regional Comprehensive Economic Partnership (RCEP):

1. USA is a member country of RCEP
2. India signed the agreement

Which of the following codes below given is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2

d) Neither 1 nor 2

**Q.11)** Consider the following statements with respect to **Inter-State council**:

1. Article 262 contemplates the establishment of an Inter-State Council to effect coordination between the states and between Centre and states
2. Parliament can establish such a council to serve the public interest

Which of the following codes below given is/are **NOT** correct?

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

**Q.12)** Consider the following statements with respect to **National Emergency (Article 352)**:

1. President proclaim a national emergency only after receiving a written recommendation from the cabinet
2. President can declare a national emergency only on the actual occurrence of war or external aggression

Which of the following above statements is/are correct?

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

**Q.13)** Consider the following statements with respect to **Joint State Public Service Commission (JSPSC)**:

1. The Constitution makes a provision for the establishment of a Joint State Public Service Commission (JSPSC) for two or more states
2. JSPSC is a constitutional body

Which of the following codes below given is/are correct?

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

**Q.14)** Consider the following statements with respect to **North American Free Trade Agreement (NAFTA)**:

1. The North American Free Trade Agreement (NAFTA) is a treaty entered into by the United States, Canada, Mexico and Caribbean Nations
2. NAFTA was created to eliminate tariff barriers to agricultural, manufacturing, and services

Which of the following statements above is/are correct?

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

**Q.15)** Consider the following statements with respect to “**connect Central Asia Policy of India**”:

1. India launched the “Connect Central Asia” Policy in 2012

2. This policy is aimed at strengthening and expanding of India's relations with the Central Asian countries

Which of the following codes below given is/are **NOT** correct?

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

**Q.16)** Consider the following statements with respect to "**Rajya Sabha**":

- 1. It is a permanent body and not subject to dissolution.
- 2. The Constitution has not fixed the term of office of members of the Rajya Sabha.

Which of the following codes below given is/are **NOT** correct?

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

**Q.17)** In which of the following cases a member has to vacate his seat in the Parliament?

- 1. If his election is declared void by the court.
- 2. If he is expelled by the House.
- 3. If he is appointed to the office of governor of a state.

Choose the correct option from codes below given:

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

**Q.18)** Consider the following statements with respect to **adjournment motion**:

- 1. It is introduced in the Parliament for a definite matter of urgent public importance.
- 2. It needs the support of 50 members to be admitted.
- 3. Rajya Sabha is also permitted to make use of the adjournment motion

Which of the following codes below given is/are correct?

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

**Q.19)** Consider the following statements with respect to "**Chief Minister**":

- 1. The Constitution does not contain specific procedure for the selection and appointment of the Chief Minister.
- 2. Article 164 only says that the Chief Minister shall be appointed by the governor.

Which of the following below given codes are correct?

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

**Q.20)** Consider the following statements with respect to **New Development Bank**:

- 1. At the fourth BRICS Summit in New Delhi (2012), the leaders signed the Agreement for establishing the New Development Bank (NDB).

2. NDB was established to mobilize resources for infrastructure and sustainable development projects in BRICS nations only.

Which of the following codes below given is/are correct?

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

**Q.21)** Consider the following statements with respect to the **Constituent Assembly**:

- 1. The Constituent Assembly was constituted under the scheme formulated by the Cripps Mission.
- 2. The members of the Constituent Assembly were elected directly.

Which of the following codes below given is/are **NOT** correct?

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

**Q.22)** Which of the following is/are features of the **Indian Independence Act, 1947**?

- 1. It ended the British rule in India and declared India as an independent and sovereign state.
- 2. It abolished the office of viceroy.
- 3. It curtailed the right to secede from the Commonwealth.

Choose the correct code from below given options:

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

**Q.23)** Which of the following is/are **NOT** features of the parliamentary government in India?

- 1. Majority party rule.
- 2. Collective responsibility of the executive to legislature.
- 3. Presence of nominal and real executives.

Choose the correct code from below given options:

- a) 1 only
- b) 1 and 2 only
- c) 1, 2 and 3
- d) None

**Q.24)** Which of the following Article of Indian Constitution related to implementing the **International law and treaty obligations**?

- a) Article 48
- b) Article 49
- c) Article 50
- d) Article 51

**Q.25)** Consider the following statements with respect to **Shanghai Cooperation Organisation (SCO)**:

- 1. India is a founder member of the SCO.
- 2. Japan and South Korea members of the SCO.
- 3. SCO established on 2001.



## PRELIMS MARATHON COMPILATION FOR THE MONTH OF MARCH, 2020

Which of the following codes below given is/are correct?

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

### ANSWER KEY

Que.	Ans.	Que.	Ans.	Que.	Ans.
1	B	11	C	21	C
2	A	12	A	22	B
3	A	13	A	23	D
4	D	14	B	24	D
5	A	15	D	25	C
6	D	16	D		
7	D	17	D		
8	C	18	B		
9	A	19	C		
10	D	20	D		

### EXPLANATION

**1. Explanation:** Tribes Advisory Council: Each state having scheduled areas has to establish a tribal advisory council to advice on welfare and advancement of the scheduled tribes. It is to consist of 20 members, three-fourths of whom are to be the representatives of the scheduled tribes in the state legislative assembly. A similar council can also be established in a state having scheduled tribes but not scheduled areas therein, if the president so directs.

**2. Explanation:** Union Public Service Commission (UPSC) is the central recruiting agency in India. It is an independent constitutional body in the sense that it has been directly created by the Constitution. Articles 315 to 323 in Part XIV of the Constitution contain elaborate provisions regarding the composition, appointment and removal of members along with the independence, powers and functions of the UPSC. The UPSC consists of a chairman and other members appointed by the president of India. 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 Constitution also authorizes the president to determine the conditions of service of the chairman and other members of the Commission.

**3. Explanation:** In 1949 itself, India declared the continuation of her full membership of the Commonwealth of the Nations and the acceptance of the British Crown as the head of the Commonwealth. But, this extra-constitutional declaration does not affect India's sovereignty in any manner as the Commonwealth is a voluntary association of independent nations. It also does not affect India's republican character as India neither pays final allegiance to the British Crown nor the latter has any functions to discharge in relation to India. India remained a member of the Commonwealth because of pragmatic reasons. It thought that the membership in the Commonwealth would be beneficial to her in the economic, political, cultural and other spheres. It has been playing an important role at the

CHOGM (Commonwealth Heads of Governments Meet). India hosted the 24th Commonwealth Summit at New Delhi in 1983.

**4. Explanation:** The framers of the Constitution made the Directive Principles non-justifiable and legally non-enforceable because:

- The country did not possess sufficient financial resources to implement them.
- The presence of vast diversity and backwardness in the country would stand in the way of their implementation.
- The newly born independent Indian State with its many preoccupations might be crushed under the burden unless it was free to decide the order, the time, the place and the mode of fulfilling them.
- The Constitution makers, therefore, taking a pragmatic view, refrained from giving teeth to these principles. They believed more in an awakened public opinion rather than in court procedures as the ultimate sanction for the fulfillment of these principles.

**5. Explanation:** Mercosur was created in 1991 when Argentina, Brazil, Paraguay, and Uruguay signed the Treaty of Asuncion, an accord calling for the “free movement of goods, services, and factors of production between countries.” The four countries agreed to eliminate customs duties, implement a common external tariff of 35 percent on certain imports from outside the bloc, and adopt a common trade policy toward outside countries and blocs. The charter members hoped to form a common market similar to that of the European Union, and even considered introducing a common currency.

**6. Explanation:** A vacancy in the President’s office can occur in any of the following ways:

1. on the expiry of his tenure of five years.
2. by his resignation.
3. on his removal by the process of impeachment.
4. by his death.
5. Otherwise, for example, when he becomes disqualified to hold office or when his election is declared void.

When the vacancy is going to be caused by the expiration of the term of the sitting President, an election to fill the vacancy must be held before the expiration of the term. In case of any delay in conducting the election of new President by any reason, the outgoing President continues to hold office (beyond his term of five years) until his successor assumes charge. This is provided by the Constitution in order to prevent an ‘interregnum’. In this situation, the Vice-President does not get the opportunity to act as President or to discharge the functions of the President.

**7. Explanation:** He is the supreme commander of the defence forces of India. In that capacity, he appoints the chiefs of the Army, the Navy and the Air Force. He can declare war or conclude peace, subject to the approval of the Parliament.

**8. Explanation:** The Central Administrative Tribunal (CAT) was set up in 1985 with the principal bench at Delhi and additional benches in different states. At present, it has 17 regular benches, 15 of which operate at the principal seats of high courts and the remaining two at Jaipur and Lucknow<sup>1</sup>. These benches also hold circuit sittings at other seats of high courts. The CAT exercises original jurisdiction in relation to recruitment and all service matters of public servants covered by it. Its jurisdiction extends to the all-India services, the Central civil services, civil posts under the Centre and civilian employees of defence services. However, the members of the defence forces, officers and servants of the

Supreme Court and the secretarial staff of the Parliament are not covered by it. The CAT is not bound by the procedure laid down in the Civil Procedure Code of 1908. It is guided by the principles of natural justice. These principles keep the CAT flexible in approach. Only a nominal fee of 50 is to be paid by the applicant. The applicant may appear either in person or through a lawyer.

**9. Explanation:** The features of the American presidential system of government are as follows:

The American President is both the head of the State and the head of government. As the head of State, he occupies a ceremonial position. As the head of government, he leads the executive organ of government. The President is elected by an electoral college for a fixed tenure of four years. He cannot be removed by the Congress except by impeachment for a grave unconstitutional act. The President governs with the help of a cabinet or a smaller body called 'Kitchen Cabinet'. It is only an advisory body and consists of non-elected departmental secretaries. They are selected and appointed by him, are responsible only to him, and can be removed by him any time. The President and his secretaries are not responsible to the Congress for their acts. They neither possess membership in the Congress nor attend its sessions. The President cannot dissolve the House of Representatives-the lower house of the Congress. The doctrine of separation of powers is the basis of the American presidential system. The legislative, executive and judicial powers of the government are separated and vested in the three independent organs of the government.

**10. Explanation:** The Regional Comprehensive Economic Partnership was introduced during the 19th Asean meet held in November 2011. The RCEP negotiations were kick-started during the 21st Asean Summit in Cambodia in November 2012. Now, all participating countries aim to finalise and sign a deal by November 2019. Member states of Asean and their FTA partners are Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, Vietnam, China, Japan, India, South Korea, Australia and New Zealand. On November 4, 2019 India decided against joining the 16-nation Regional Comprehensive Economic Partnership (RCEP) trade deal, saying it was not shying away from opening up to global competition across sectors, but it had made a strong case for an outcome which would be favourable to all countries and all sectors.

**11. Explanation:** Article 263 contemplates the establishment of an Inter-State Council to effect coordination between the states and between Centre and states. Thus, the President can establish such a council if at any time it appears to him that the public interest would be served by its establishment. He can define the nature of duties to be performed by such a council and its organisation and procedure.

**12. Explanation:** Under Article 352, the President can declare a national emergency when the security of India or a part of it is threatened by war or external aggression or armed rebellion. It may be noted that the president can declare a national emergency even before the actual occurrence of war or external aggression or armed rebellion, if he is satisfied that there is an imminent danger. The President, however, can proclaim a national emergency only after receiving a written recommendation from the cabinet<sup>3</sup>. This means that the emergency can be declared only on the concurrence of the cabinet and not merely on the advice of the prime minister. In 1975, the then Prime Minister, Indira Gandhi advised the president to proclaim emergency without consulting her cabinet. The cabinet was informed of the proclamation after it was made, as a fait accompli. The 44th Amendment Act of 1978

introduced this safeguard to eliminate any possibility of the prime minister alone taking a decision in this regard.

**13. Explanation:** 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 two states of Punjab and Haryana had a JSPSC for a short period, after the creation of Haryana out of Punjab in 1966.

**14. Explanation:** The North American Free Trade Agreement (NAFTA) is a treaty entered into by the United States, Canada, and Mexico; it went into effect on January 1, 1994. (Free trade had existed between the U.S. and Canada since 1989; NAFTA broadened that arrangement.) On that day, the three countries became the largest free market in the world—the combined economies of the three nations at that time measured \$6 trillion and directly affected more than 365 million people. NAFTA was created to eliminate tariff barriers to agricultural, manufacturing, and services; to remove investment restrictions; and to protect intellectual property rights. This was to be done while also addressing environmental and labor concerns (although many observers charge that the three governments have been lax in ensuring environmental and labor safeguards since the agreement went into effect). Small businesses were among those that were expected to benefit the most from the lowering of trade barriers since it would make doing business in Mexico and Canada less expensive and would reduce the red tape needed to import or export goods.

**15. Explanation:** India launched the “Connect Central Asia” Policy in 2012. This policy is aimed at strengthening and expanding of India’s relations with the Central Asian countries. These countries include Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan.

**16. Explanation:** The Rajya Sabha (first constituted in 1952) is a continuing chamber, that is, it is a permanent body and not subject to dissolution. However, one-third of its members retire every second year. Their seats are filled up by fresh elections and presidential nominations at the beginning of every third year. The retiring members are eligible for re-election and renomination any number of times. The Constitution has not fixed the term of office of members of the Rajya Sabha and left it to the Parliament. Accordingly, the Parliament in the Representation of the People Act (1951) provided that the term of office of a member of the Rajya Sabha shall be six years.

**17. Explanation:** A member has to vacate his seat in the Parliament:

- (a) if his election is declared void by the court;
- (b) if he is expelled by the House;
- (c) if he is elected to the office of President or Vice-President; and
- (d) if he is appointed to the office of governor of a state.

If a disqualified person is elected to the Parliament, the Constitution lays down no procedure to declare the election void. This matter is dealt by the Representation of the People Act (1951), which enables the high court to declare an election void if a disqualified candidate is elected. The aggrieved party can appeal to the Supreme Court against the order of the high court in this regard.

**18. Explanation:** Adjournment Motion: It is introduced in the Parliament to draw attention of the House to a definite matter of urgent public importance, and needs the support of 50



members to be admitted. As it interrupts the normal business of the House, it is regarded as an extraordinary device. It involves an element of censure against the government and hence Rajya Sabha is not permitted to make use of this device. The discussion on an adjournment motion should last for not less than two hours and thirty minutes.

**19. Explanation:** The Constitution does not contain any specific procedure for the selection and appointment of the Chief Minister. Article 164 only says that the Chief Minister shall be appointed by the governor. However, this does not imply that the governor is free to appoint any one as the Chief Minister. In accordance with the conceptions of the parliamentary system of government, the governor has to appoint the leader of the majority party in the state legislative assembly as the Chief Minister.

**20. Explanation:** At the fourth BRICS Summit in New Delhi (2012), the leaders of Brazil, Russia, India, China and South Africa considered the possibility of setting up a new Development Bank to mobilize resources for infrastructure and sustainable development projects in BRICS and other emerging economies, as well as in developing countries. They directed Finance Ministers to examine the feasibility and viability of this initiative, to set up a joint working group for further study, and to report back by the next Summit in 2013. Following the report from the Finance Ministers at the fifth BRICS summit in Durban (2013), the leaders agreed on the feasibility of establishing the New Development Bank and made the decision to do so. It was also agreed that the initial contribution to the Bank should be substantial and sufficient for it to be effective in financing infrastructure. During the sixth BRICS Summit in Fortaleza (2014), the leaders signed the Agreement establishing the New Development Bank (NDB). In the Fortaleza Declaration, the leaders stressed that the NDB will strengthen cooperation among BRICS and will supplement the efforts of multilateral and regional financial institutions for global development, thus contributing to collective commitments for achieving the goal of strong, sustainable and balanced growth.

**21. Explanation:** The Constituent Assembly was constituted in November 1946 under the scheme formulated by the Cabinet Mission Plan. The features of the scheme were:

1. The total strength of the Constituent Assembly was to be 389. Of these, 296 seats were to be allotted to British India and 93 seats to the Princely States. Out of 296 seats allotted to the British India, 292 members were to be drawn from the eleven governors' provinces and four from the four chief commissioners' provinces, one from each.
2. Each province and princely state (or groups of states in case of small states) were to be allotted seats in proportion to their respective population. Roughly, one seat was to be allotted for every million population.
3. Seats allocated to each British province were to be divided among the three principal communities—Muslims, Sikhs and general (all except Muslims and Sikhs), in proportion to their population.
4. The representatives of each community were to be elected by members of that community in the provincial legislative assembly and voting was to be by the method of proportional representation by means of single transferable vote.
5. The representatives of princely states were to be nominated by the heads of the princely states.

It is thus clear that the Constituent Assembly was to be a partly elected and partly nominated body. Moreover, the members were to be indirectly elected by the members of the provincial assemblies, who themselves were elected on a limited franchise.

**22. Explanation:** On June 3, 1947, the British Government made it clear that any Constitution framed by the Constituent Assembly of India (formed in 1946) cannot apply to



those parts of the country which were unwilling to accept it. On the same day (June 3, 1947), Lord Mountbatten, the viceroy of India, put forth the partition plan, known as the Mountbatten Plan. The plan was accepted by the Congress and the Muslim League. Immediate effect was given to the plan by enacting the Indian Independence Act 1947.

**Features of the Act:**

1. It ended the British rule in India and declared India as an independent and sovereign state from August 15, 1947.
2. It provided for the partition of India and creation of two independent dominions of India and Pakistan with the right to secede from the British Commonwealth.
3. It abolished the office of viceroy and provided, for each dominion, a governor-general, who was to be appointed by the British King on the advice of the dominion cabinet. His Majesty's Government in Britain was to have no responsibility with respect to the Government of India or Pakistan.
4. It empowered the Constituent Assemblies of the two dominions to frame and adopt any constitution for their respective nations and to repeal any act of the British Parliament, including the Independence act itself.
5. It empowered the Constituent Assemblies of both the dominions to legislate for their respective territories till the new constitutions were drafted and enforced. No Act of the British Parliament passed after August 15, 1947 was to extend to either of the new dominions unless it was extended thereto by a law of the legislature of the dominion.

**23. Explanation:** The parliamentary system is also known as the 'Westminster' model of government, responsible government and cabinet government. The Constitution establishes the parliamentary system not only at the Centre but also in the states. The features of parliamentary government in India are:

- (a) Presence of nominal and real executives;
- (b) Majority party rule,
- (c) Collective responsibility of the executive to the legislature,
- (d) Membership of the ministers in the legislature,
- (e) Leadership of the prime minister or the chief minister,
- (f) Dissolution of the lower House (Lok Sabha or Assembly).

Even though the Indian Parliamentary System is largely based on the British pattern, there are some fundamental differences between the two. For example, the Indian Parliament is not a sovereign body like the British Parliament. Further, the Indian State has an elected head (republic) while the British State has hereditary head (monarchy).

**24. Explanation:** To promote international peace and security and maintain just and honorable relations between nations; to foster respect for international law and treaty obligations, and to encourage settlement of international disputes by arbitration (Article 51).

**25. Explanation:** The Shanghai Cooperation Organization (SCO) is an eight-member multilateral organization, established on 15 June 2001 in Shanghai, China by the leaders of China, Kazakhstan, Kyrgyzstan, Russia, Tajikistan and Uzbekistan. These countries, except for Uzbekistan, had been members of the Shanghai Five group, formed on 26 April 1996 with the signing of the Treaty on Deepening Military Trust in Border Regions. In 2001, during the annual summit in Shanghai, the five member nations first admitted Uzbekistan in the Shanghai Five mechanism (thus transforming it into the Shanghai Six). Thereafter, on 15 June 2001 the Declaration of Shanghai Cooperation Organization, was signed and in June 2002 the heads of the SCO Member States signed the SCO Charter which expounded

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on the organization's purposes, principles, structures and forms of operation, and established it in international law. At the July 2005 Astana Summit, India, Iran and Pakistan were granted Observer status. In July 2015 in Ufa, Russia, the SCO decided to admit India and Pakistan as full members. India and Pakistan signed the memorandum of obligations in June 2016 in Tashkent, Uzbekistan, thereby starting the formal process of joining the SCO as full members. On 9 June 2017, at the historic summit in Astana, India and Pakistan officially joined SCO as full-fledged members.

ForumIAS

## Science

**Q.1)** Consider the following statements with respect to **INS Arihant**:

1. Arihant is India's first indigenously built nuclear submarine
2. Arihant is a ship submersible ballistic, nuclear (SSBN) submarine
3. French designers assisted in building the Arihant

Which of the following codes below given is/are **NOT** correct?

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

**Q.2)** "**Pegasus**" is recently in news related to which of the following?

- a) Spyware
- b) Drones
- c) Surface to air Missile
- d) Stealth Aircraft

**Q.3)** "**MQ-4C Triton**" is recently in news related to which of the following?

- a) Unmanned Aerial Vehicle
- b) Frigates
- c) Submarine Missile
- d) Torpedo

**Q.4)** Which of the following convention Controls of **Trans-boundary Movements of Hazardous Wastes** and their Disposal?

- a) Rotterdam Convention
- b) Basel Convention
- c) Stockholm Convention
- d) Vienna Convention

**Q.5)** Consider the following statements with respect to **Indian Institute of Remote Sensing (IIRS)**:

1. IIRS is located at Dehradun
2. IIRS is a premier institute with the objective of capacity building in Remote Sensing and Geo-informatics

Which of the following codes below given is/are correct?

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

**Q.6)** Consider the following statements with respect to **VIKAS engine**:

1. It is a liquid-fuelled rocket engines conceptualized and designed by the Liquid Propulsion Systems Centre
2. It is used only in PSLV launch vehicle

Which of the following codes below given is/are correct?

- a) 1 only

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

**Q.7)** Consider the following statements with respect to **Scramjet engine**:

1. ISRO successfully test fired scramjet engine and realized the critical technology of Air Breathing Propulsion System in 2016
2. The Scramjet engine designed by ISRO uses Oxygen as fuel and the Hydrogen from the atmospheric air as the oxidizer

Which of the following codes below given is/are **NOT** correct?

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

**Q.8)** “**Epsilon Launch Vehicle**” is developed and used by which of the following Space agency?

- a) JAXA (Japan Space Agency)
- b) Roscosmos
- c) NASA
- d) European Space Agency

**Q.9)** Consider the following statements with respect to The **Innovative Young Biotechnologist Award (IYBA)**:

1. The awards are conferred to budding scientists below 35 years of age
2. The award carries a fellowship amount of Rs.1.00 Lakh/annum

Which of the following codes given below is/are **NOT** correct?

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

**Q.10)** Consider the following statements with respect to **L2 Pro India**:

1. It is a website developed by NITI Aayog
2. It will aid and enable youth, innovators, entrepreneurs in understanding IPRs for their ownership and protection, integrate IP into business models and obtain value for their R&D efforts

Which of the following codes below given is/are correct?

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

**Q.11)** Consider the following statements with respect to **National Supercomputing Mission**:

1. Mission launched in 12<sup>th</sup> Plan period
2. The mission would be implemented jointly by Department of Science and Technology (DST) and Department of Electronics and Information Technology (DeitY)

Which of the following codes below given is/are **NOT** correct?

- a) 1 only
- b) 2 only

- c) Both 1 and 2
- d) Neither 1 nor 2

**Q.12)** Consider the following statements with respect to National Intellectual Properties Rights Policy 2016:

1. It aims to promote a holistic and conducive ecosystem to catalyze the full potential of intellectual property for India's economic growth and development
2. Department of industrial policy and promotion (DIPP) is the nodal agency for all IPR issues and the policy

Which of the following below given codes are correct?

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

**Q.13) "UNNATI Programme"** launched by which of the following Institution?

- a) ISRO
- b) CSIR
- c) NITI Aayog
- d) All of the above

**Q.14) "APSARA, CIRUS and ZERLINA"** related to which of the following?

- a) Space expedition programmes
- b) Nuclear reactors
- c) Surface to Air missiles
- d) None of the above

**Q.15)** With reference to 'India's Ballistic Missile Defence Shield (BMD)', consider the following statements:

1. The primary aim was to bolster India's defence against possible nuclear attack from Pakistan.
2. India began the development of anti ballistic missile system post 2008 Mumbai Attack.
3. The BMD is being developed by the DRDO.

Which of the above given statement is/are correct?

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

**Q.16) "INS Teg"** is recently in news related to which of the following?

- a) Stealth Frigate
- b) Aircraft Carrier
- c) Submarine
- d) None

**Q.17)** Consider the following statements with respect to **BRAHMOS Supersonic cruise missile**:

1. It is developed by India and Russia Jointly.
2. It has flight range up to 500km.
3. It operates on "Fire and Forget Principle".

Which of the following below given codes is/are **NOT** correct?



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

**Q.18)** Consider the following statements with respect to “**Transiting Exoplanet Survey Satellite (TESS)**”:

1. TESS is launched by European Space Agency.
2. TESS is an Astrophysics Explorer-class mission that is performing a near all-sky survey to search for planets transiting nearby stars.

Which of the following codes below given is/are correct?

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

**Q.19)** “**Spitzer Space Telescope**” is launched by which of the following space agency?

- a) ISRO
- b) JAXA
- c) ROSCOSMOS
- d) NONE

**Q.20)** Consider the following statements with respect to **Industrial Design (IPR)**:

1. “Industrial design” title granted by any official authority protects only the non-functional features of an industrial product
2. The period of protection granted to Industrial Design is from 10 to 25 years

Which of the following codes below given is/are **NOT** correct?

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

### **ANSWER KEY**

Que.	Ans.	Que.	Ans.
1	D	11	D
2	A	12	C
3	A	13	A
4	B	14	B
5	C	15	C
6	A	16	A
7	B	17	C
8	A	18	B
9	D	19	D
10	B	20	D

### **EXPLANATION**

**1. Explanation:** INS Arihant is India’s first nuclear-powered submarine. The ship submersible ballistic, nuclear (SSBN) submarine was launched at the Indian Navy’s dockyard in Visakhapatnam, which is the headquarters of India’s Eastern Naval Command. Indian Prime Minister Manmohan Singh, who has inaugurated the vessel into the Indian Navy, asserted that the indigenously built submarine would be used for self defence. The

name Arihant derives from two words – Ari meaning enemy and Hanth meaning destroy. Arihant, India's first indigenously built nuclear submarine, cost \$2.9bn. It was jointly developed by the Indian Navy, Bhabha Atomic Research Centre (BARC) and Defence Research and Development Organisation (DRDO) at the naval dockyard in Visakhapatnam. Russian designers assisted in building the vessel.

**2. Explanation:** WhatsApp has released a shocking statement admitting that a cyberattack exploited their software's vulnerabilities and infected about 1,400 devices across 20 countries spanning four continents. The attack targeted activists, lawyers and journalists of which 20 were Indians. The attack was allegedly carried out using the Israel-based NSO Group's spyware, Pegasus, which allowed the surveillance to be conducted on individuals via their smart phones.

**3. Explanation:** Northrop Grumman's MQ-4C Triton unmanned aircraft system (UAS) provides real-time intelligence, surveillance and reconnaissance (ISR) over vast ocean and coastal regions. Based on the proven Global Hawk UAS, Triton's autonomous operations are supported by land-based command and control mission planners and sensor operators. Triton will be equipped with a unique and robust mission sensor suite that provides 360-degree coverage on all sensors, providing unprecedented maritime domain awareness for the U.S. Navy. Triton also incorporates a reinforced airframe, for increased internal payload, and wing for hail, bird strike, and gust load protection, along with de-icing and lightning protection systems. These features allow the aircraft to descend and ascend through harsh maritime weather environments to gain a closer view of ships and other targets at sea when needed. Built for the U.S. Navy, Triton will support a wide range of missions including maritime ISR patrol, signals intelligence, search and rescue and communications relay. The aircraft can fly over 24 hours at a time, at altitudes higher than 10 miles, with an operational range of 8,200 nautical miles.

**4. Explanation:** The Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal was adopted on 22 March 1989 by the Conference of Plenipotentiaries in Basel, Switzerland, in response to a public outcry following the discovery, in the 1980s, in Africa and other parts of the developing world of deposits of toxic wastes imported from abroad. Awakening environmental awareness and corresponding tightening of environmental regulations in the industrialized world in the 1970s and 1980s had led to increasing public resistance to the disposal of hazardous wastes – in accordance with what became known as the NIMBY (Not In My Back Yard) syndrome – and to an escalation of disposal costs. This in turn led some operators to seek cheap disposal options for hazardous wastes in Eastern Europe and the developing world, where environmental awareness was much less developed and regulations and enforcement mechanisms were lacking. It was against this background that the Basel Convention was negotiated in the late 1980s, and its thrust at the time of its adoption was to combat the “toxic trade”, as it was termed. The Convention entered into force in 1992.

**5. Explanation:** Indian Institute of Remote Sensing (IIRS) at Dehradun is a premier institute with the objective of capacity building in Remote Sensing and Geo-informatics and their applications through education and training programmes at postgraduate level. The Institute also hosts and provides support to the Centre for Space Science and Technology Education in Asia and the Pacific (CSSTE-AP), affiliated to the United Nations.

**6. Explanation:** VIKAS (an acronym for Vikram Ambalal Sarabhai) is a family of liquid-fuelled rocket engines conceptualized and designed by the Liquid Propulsion Systems

Centre since the 1970s. The early production VIKAS engines used imported French components which were later replaced by domestically produced equivalents. It is used in the Polar Satellite Launch Vehicle (PSLV) and the Geosynchronous Satellite Launch Vehicle (GSLV) series of expendable launch vehicles for space launch use. VIKAS engines are used to power the second stage PSLV, boosters and second stage of GSLV Mark I and II and now the first stage of GSLV Mark III (LVM3).

**7. Explanation:** The first experimental mission of ISRO's Scramjet Engine towards the realisation of an Air Breathing Propulsion System was successfully conducted on August 28, 2016 from Satish Dhawan Space Centre SHAR, Sriharikota. After a flight of about 300 seconds, the vehicle touched down in the Bay of Bengal, approximately 320 km from Sriharikota. The vehicle was successfully tracked during its flight from the ground stations at Sriharikota. With this flight, critical technologies such as ignition of air breathing engines at supersonic speed, holding the flame at supersonic speed, air intake mechanism and fuel injection systems have been successfully demonstrated. The Scramjet engine designed by ISRO uses Hydrogen as fuel and the Oxygen from the atmospheric air as the oxidiser. This test was the maiden short duration experimental test of ISRO's Scramjet engine with a hypersonic flight at Mach 6. ISRO's Advanced Technology Vehicle (ATV), which is an advanced sounding rocket, was the solid rocket booster used for the test of Scramjet engines at supersonic conditions. ATV carrying Scramjet engines weighed 3277 kg at lift-off.

**8. Explanation:** The Epsilon LV is a next-generation solid propellant rocket, which is developed in a Japanese national program led by JAXA. After the completion of the development, it has been positioned as a Japanese flagship LV. It plays a key role in securing Japan's autonomous capability to launch small satellites for observation and scientific missions. It can also offer effective launch opportunities to small satellites for commercial missions. Epsilon is a highly-reliable vehicle for space transportation fully reflecting Japanese rocket technology long accumulated through many vehicle programs such as a former M-V and currently operated H-IIA/B LV. Epsilon offers user-friendly launch services with newly incorporated technologies, such as next-generation ground support / check-out systems, highly accurate orbit injection system, advanced built-in PL vibration-suppression system, and multi-satellite mounting structure.

**9. Explanation:** The Innovative Young Biotechnologist Award (IYBA), initiated in 2005, is a career-oriented award to identify and nurture outstanding young scientists with innovative ideas and desirous of pursuing research in frontier areas of biotechnology. The awards are conferred to budding scientists below 35 years of age. However, there is a relaxation in age limit upto 5 years in case of women, OBC, SC/ST and for differently-abled candidates. The scheme includes scientists without regular employment also. The award carries a fellowship amount of Rs.1.00 Lakh/annum for candidates who are in permanent faculty position and Rs.75000/- per month for those candidates who are not in regular employment along with a substantial project grant to pursue their innovative ideas at the beginning of their career.

**10. Explanation:** Secretary Department for Promotion of Industry and Internal Trade (DPIIT), launched the website and mobile application [Learn to Protect, Secure and Maximize Your Innovation] on Intellectual Property Rights (IPRs) today in New Delhi. The website and app has been developed by Cell for IPR Promotion and Management (CIPAM)-DPIIT in collaboration with Qualcomm and National Law University (NLU), Delhi. The modules of this e-learning platform [L2Pro India IP e-learning Platform and the L2Pro India Mobile App] will aid and enable youth, innovators, entrepreneurs and small and medium

industries (SMEs) in understanding IPRs for their ownership and protection, integrate IP into business models and obtain value for their R&D efforts. The L2Pro has been successfully implemented in Germany, United Kingdom, Italy and France, benefiting immensely from close collaboration with respective IP organizations and public research institutions. The learning app has been customized for India in order to ensure that innovation which is fundamental to startups are protected, managed and commercialised.

**11. Explanation:** The Mission, launched in 2015, envisages empowering our national academic and R&D institutions spread over the country by installing a vast supercomputing grid comprising of more than 70 high performance computing facilities. The mission would be implemented jointly by Department of Science and Technology (DST) and Department of Electronics and Information Technology (DeitY) through two organizations the Centre for Development of Advanced Computing (C-DAC) and the Indian Institute of Science (IISc), Bangalore. The Mission envisages empowering our national academic and R&D institutions spread over the country by installing a vast supercomputing grid comprising of more than 70 high-performance computing facilities.

**12. Explanation:** National IPR Policy 2016

- It aims to promote a holistic and conducive ecosystem to catalyse the full potential of intellectual property for India's economic growth and socio-cultural development, while protecting public interest.
- The rationale for the National IPR Policy lies in the need to create awareness about the importance of IPRs as a marketable financial asset and economic tool.
- Department of industrial policy and promotion (DIPP) is the nodal agency for all IPR issues and the policy will be renewed every five years in consultation with all the stakeholders.
- The policy will also suggest incentives such as tax benefits and fee waivers to encourage R&D and IP creation to strengthen the Make In India/Start-up/Digital India initiatives.
- To protect 'small inventions' developed especially in the informal / unorganised sectors, policy will promote 'utility patents' (with lower compliance burden and shorter period of protection, when compared to the normal patents) only for mechanical innovations.

**13. Explanation:** UNNATI, a capacity building programme on Nanosatellite development, is an initiative by ISRO to commemorate the 50th anniversary of the first United Nations conference on the exploration and peaceful uses of outer space (UNISPACE-50). The programme provides opportunities to the participating developing countries to strengthen in assembling, integrating and testing of Nanosatellite. UNNATI programme is planned to be conducted for 3 years by U.R. Rao Satellite Centre of ISRO in 3 batches and will target to benefit officials of 45 countries. The first batch started today in which 30 delegates from 17 countries are participating.

**14. Explanation:** "APSARA" – the celestial water nymph, by Pandit Nehru himself. The basic design for this reactor was frozen in July 1955 and Indian scientists and engineers completed the construction in just over a year. With APSARA, India became the first Asian country outside the erstwhile Soviet Union, to have designed and built its own nuclear reactor. The next crucial step involved the planning of larger reactors having much higher neutron flux and power than what was available at APSARA. This plan materialized in 1960 with the building of CIRUS, a high power (40 MWt) research reactor. This reactor, then known as the Canada India Reactor or CIR for short, was built in collaboration with



Canada. In early 1961, a zero energy critical facility named ZERLINA (Zero Energy Reactor for Lattice Investigations and New Assemblies) was built, for studying various geometrical aspects (lattice parameters) of a reactor fuelled with natural uranium and moderated with heavy water.

**15. Explanation:** The Indian ballistic missile defence program aims to develop multi layered ballistic missile defence system for protecting the Indian territory from ballistic missile attacks. The advancements in Technology has allowed various countries to develop anti ballistic missiles for destroying the incoming ballistic missiles before they hit the ground. India has faced the threat of ballistic missile attacks since the early 90s from China and Pakistan. The increase in tensions with Pakistan after the deployment of M-11 missiles by Pakistan forced India to think about development anti ballistic missile defence system. After the nuclear test of India conducted in May 1998, Pakistan also tested nuclear weapons due to which the threat of nuclear weapons and missile delivery systems intensified. The Kargil War of 1999 between India and Pakistan further increased this tension.

India began the development of anti ballistic missile system in late 1999 in light of Pakistan eschewing of a nuclear no first use policy. The development of ballistic missile defence system accelerated after USA vetoed India's attempt to acquire Israeli Arrow-2 interceptor missile in 2002. The ballistic missile defence system consist of two land and sea based interceptor missiles, viz. The Prithvi Air Defence for high altitude interception and the Advanced Air Defence for lower altitude interception.

**16. Explanation:** INS Teg is a state-of-the-art guided missile frigate of the Indian Navy and is based at Mumbai. With a displacement of 4000 tons and speed of 30 knots, she is armed with the latest weapons and is capable of accomplishing a wide variety of missions.

**17. Explanation:** BrahMos is a supersonic cruise missile being developed by BrahMos Aerospace, a joint venture between Defence Research and Development Organisation (DRDO) of India and NPO Mashinostroyeniya (NPOM) of Russia. The missile can be launched against ships and land-based targets. The missile is named after two rivers, the Brahmaputra in India and the Moskva in Russia. BrahMos has a flight range of up to 290km and can reach a maximum speed of Mach 3. The air launched version of the missile is under development as of 2013. Advanced satellite navigation systems from Russia's Kh-555 and Kh-101 strategic long-range cruise missiles, and GPS-GLONASS technology were added to the existing doppler-inertial platforms of BrahMos missiles in 2013. The missile can be installed on ships, submarines, aircraft and ground vehicles. BrahMos missiles are inducted in to the armed forces of India and Russia and can also be exported to friendly nations. The 'Fire and Forget' type missile weights 3t and intercepts surface targets at an altitude of 10m up to 14,000m.

**18. Explanation:** The Transiting Exoplanet Survey Satellite (TESS) is a NASA-sponsored Astrophysics Explorer-class mission that is performing a near all-sky survey to search for planets transiting nearby stars. The primary goal of TESS is to discover planets smaller than Neptune that transit stars bright enough to enable follow-up spectroscopic observations that can provide planet masses and atmospheric compositions.

**19. Explanation:** The Spitzer Space Telescope is a space-borne, cryogenically-cooled infrared observatory capable of studying objects ranging from our Solar System to the distant reaches of the Universe. Spitzer is the final element in NASA's Great Observatories Program, and an important scientific and technical cornerstone of the Astronomical Search



for Origins Program. Designed to observe objects in the infrared spectrum, Spitzer has proven to be a revolutionary tool in the characterization of exoplanets. The mission is the first instrument to directly detect light from an exoplanet, and its data has revealed the composition, temperature, and even likely wind patterns on faraway exoplanets.

**20. Explanation:** An industrial design renders an object attractive or appealing, thus increasing its marketability and adding to its commercial value. The design may be three-dimensional based on the shape or surface of the object, or two-dimensional based on the object's patterns, lines or colours. Novelty, originality and visual appeal are essential if an industrial design is to be patented, although these criteria can differ from one country to another. Its aesthetic features should not be imposed by the technical functions of the product. Legally, "industrial design" is the title granted by an official authority, generally the Patent Office, to protect the aesthetic or ornamental aspect of an object. This protects solely the non-functional features of an industrial product and does not protect any technical features of the object to which it is applied. Industrial design rights are granted to the creator of designs to reward them for their effort and investment in manufacturing the product. These rights enable the owner to make articles to which the design is applied or in which the design is embodied. The holder of this legal title has the exclusive right to make, import or sell any objects to which the design is applied. They can authorise others to exploit the design and bring a legal action against anyone using the design without authorisation. In general the period of protection granted is from 10 to 25 years. This is often divided into terms and an extension of the term requires renewal of the registration.

## *Geography*

**Q.1) “Bailadila Iron ore mine”** is located in which of the following state?

- a) Jharkhand
- b) Karnataka
- c) Chhattisgarh
- d) Odisha

**Q.2)** Consider the following statements with respect to **Copper mineral** in India:

- 1. India is critically deficient in the reserve and production of copper
- 2. The Balaghat mines in Maharashtra produce more than 50% per cent of India's copper
- 3. The Khetri mines in Rajasthan are also famous for copper ores

Which of the following codes below given is/are **NOT** correct?

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

**Q.3)** Consider the following statements with respect to **mica**:

- 1. Properties of mica is excellent di-electric strength and low power loss factor
- 2. Koderma Gaya-Hazaribagh belt of Jharkhand is the leading producer of mica

Which of the following above statements is/are correct?

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

**Q.4)** Consider the following statements **Agro-based industries** in India:

- 1. The first successful textile mill was established in Mumbai in 1854
- 2. The first jute mill was set up near Kolkata in 1859

Which of the following codes below given is/are correct?

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

**Q.5)** Which of the following are planetary winds?

- 1. Westerlies
- 2. Polar Easterlies
- 3. Trade Winds
- 4. Chinook

Choose the correct code from below given options:

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

**Q.6)** Which of the following theories/hypothesis explain the **origin of the earth**?

1. Nebular Hypothesis
2. Binary theories
3. Big-bang theory

Choose the correct code from below given options:

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

**Q.7)** Consider the following **elements of the earth's crust**:

1. Oxygen
2. Silicon
3. Aluminum
4. Iron

Which of the following code is correct **ascending order** of elements of the earth's crust?

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

**Q.8)** "**Lithification**" process is commonly found in which of the following rocks?

- a) Igneous Rocks
- b) Sedimentary Rocks
- c) Metamorphic Rocks
- d) None of the above

**Q.9)** Which of the following process comes under **Diastrophism**?

1. Orogenic movement
2. Epeirogenic movement
3. Earthquake
4. Plate tectonics

Choose the correct code from below given options:

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

**Q.10)** Consider the following statements about **latitudes**:

1. The tropic of Capricorn is a line located in southern hemisphere at  $23\frac{1}{2}^{\circ}\text{S}$ , while tropic of cancer is a line located in Northern hemisphere at  $23\frac{1}{2}^{\circ}\text{N}$ .
2. Equator is also called as Great Circle.

Which of the following codes below given is/are correct?

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

**Q.11)** Consider the following statements with respect to **Cyclones**:

1. Cyclones on account of coriolis force blow in an anti-clockwise direction in Southern hemisphere and clockwise direction in Northern hemisphere.

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2. Tropical cyclone travel from west to east while temperate cyclone travel from east to west.  
Which of the following above statements is/are **NOT** correct?

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

**Q.12)** Consider the following statements with respect to **South-West Monsoon**:

- 1. The monsoon has two branches- the Arabian Sea Branch and the Bay of Bengal Branch.
- 2. The monsoon enters West Bengal and Bangladesh in South-Westerly direction.
- 3. The Arabian Sea Branch reaches Punjab plains.

Which of the following codes below given is/are correct?

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

**Q.13)** Consider the following statements with respect to **Tropical Thorn Forest**:

- 1. These occur in areas with rainfall less than 50 cm
- 2. Important species found here are oak, teak and sal
- 3. The forests are given an expression of scrub vegetation

Which of the following codes below given is/are correct?

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

**Q.14)** Arrange the **Alluvium deposits** from north to south:

- 1. Tarai
- 2. Khadar
- 3. Bhangar

Which of the following codes below given is/are correct?

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

**Q.15)** With respect to Indian climate, what is the reason of '**October Heat**'?

- a) Low temperature and dry conditions.
- b) High temperature and dry conditions.
- c) Low temperature and humidity.
- d) High temperature and humidity.

**Q.16)** Which of the following is/are factors of **soil formation**?

- 1. Parent rock
- 2. Time
- 3. Relief
- 4. Flora, Fauna and Micro-organism

Choose the correct code from below given options:

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

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

**Q.17)** Consider the following statements with respect to “**Van Mahotsav**”:

1. It is an annual pan-India tree planting festival celebrated in the month of June.
2. It was initiated by Pundit Jawaharlal Nehru.

Which of the following codes below given is/are **NOT** correct?

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

**Q.18)** “**Kalgoorlie and Coolgardie**” areas are famous for which of the following?

- a) Coal reserves
- b) Gold reserves
- c) Iron ore reserves
- d) Bauxite reserves

**Q.19)** Which of the following fossil fuel is called as “**Buried Sunshine**”?

- A. Crude oil
- B. Natural gas
- C. Coal
- D. None

**Q.20)** Which of the following institution implements The **Mitigation of Climate Change in Agriculture (MICCA)** programme?

- a) UNEP
- b) FAO
- c) World Bank
- d) WEF

### **ANSWER KEY**

Que.	Ans.	Que.	Ans.
1	C	11	C
2	C	12	A
3	C	13	B
4	C	14	B
5	A	15	D
6	D	16	D
7	C	17	C
8	B	18	B
9	D	19	C
10	C	20	B

### **EXPLANATION**

**1. Explanation:** Durg-Bastar-Chandrapur belt lies in Chhattisgarh and Maharashtra. Very high grade hematites are found in the famous Bailadila range of hills in the Bastar district of Chhattisgarh. The range of hills comprises of 14 deposits of super high grade hematite iron ore. It has the best physical properties needed for steel making. Iron ore from these mines is exported to Japan and South Korea via Vishakhapatnam port.



**2. Explanation:** India is critically deficient in the reserve and production of copper. Being malleable, ductile and a good conductor, copper is mainly used in electrical cables, electronics and chemical industries. The Balaghat mines in Madhya Pradesh produce 52 per cent of India's copper. The Singbhum district of Jharkhand is also a leading producer of copper. The Khetri mines in Rajasthan are also famous.

**3. Explanation:** Mica is a mineral made up of a series of plates or leaves. It splits easily into thin sheets. These sheets can be so thin that a thousand can be layered into a mica sheet of a few centimeters high. Mica can be clear, black, green, red yellow or brown. Due to its excellent di-electric strength, low power loss factor, insulating properties and resistance to high voltage, mica is one of the most indispensable minerals used in electric and electronic industries. Mica deposits are found in the northern edge of the Chota Nagpur plateau. Koderma Gaya – Hazaribagh belt of Jharkhand is the leading producer. In Rajasthan, the major mica producing area is around Ajmer. Nellore mica belt of Andhra Pradesh is also an important producer in the country.

**4. Explanation:** In ancient India, cotton textiles were produced with hand spinning and handloom weaving techniques. After the 18th century, power-looms came into use. Our traditional industries suffered a setback during the colonial period because they could not compete with the mill-made cloth from England. The first successful textile mill was established in Mumbai in 1854. The two world wars were fought in Europe, India was a British colony. There was a demand for cloth in U.K. hence; they gave a boost to the development of the cotton textile industry. The first jute mill was set up near Kolkata in 1859 at Rishra. After Partition in 1947, the jute mills remained in India but three-fourth of the jute producing area went to Bangladesh (erstwhile East Pakistan).

**5. Explanation:** Planetary Winds: The winds blowing throughout the year from high pressure belts to low pressure belts in the same direction are called "planetary or prevailing winds". Due to the effect of the rotation of the earth, the direction of the winds tends to deflect, instead of blowing directly from one pressure belt to another. These winds blow throughout the year and are controlled by the latitudinal pressure belts. They blow over vast area of continents and oceans. The main planetary winds are:

- Trade Winds
- Westerlies
- Polar Easterlies

**6. Explanation:** A large number of hypotheses were put forth by different philosophers and scientists regarding the origin of the earth. One of the earlier and popular arguments was by German philosopher Immanuel Kant. Mathematician Laplace revised it in 1796. It is known as Nebular Hypothesis. The hypothesis considered that the planets were formed out of a cloud of material associated with a youthful sun, which was slowly rotating. Later in 1900, Chamberlain and Moulton considered that a wandering star approached the sun. As a result, a cigar-shaped extension of material was separated from the solar surface. As the passing star moved away, the material separated from the solar surface continued to revolve around the sun and it slowly condensed into planets. Sir James Jeans and later Sir Harold Jeffrey supported this argument. At a later date, the arguments considered of a companion to the sun to have been coexisting. These arguments are called binary theories. The most popular argument regarding the origin of the universe is the Big Bang Theory. It is also called expanding universe hypothesis. Edwin Hubble, in 1920, provided evidence that the universe is expanding.

**7. Explanation:** The earth is composed of various kinds of elements. These elements are in solid form in the outer layer of the earth and in hot and molten form in the interior. About 98 per cent of the total crust of the earth is composed of eight elements like oxygen, silicon, aluminium, iron, calcium, sodium, potassium and magnesium and the rest is constituted by titanium, hydrogen, phosphorous, manganese, sulphur, carbon, nickel and other elements.

The Major Elements of the Earth's Crust Elements By Weight (%):

1. Oxygen- 46.60
2. Silicon- 27.72
3. Aluminum- 8.13
4. Iron- 5.00
5. Calcium- 3.63
6. Sodium- 2.83
7. Potassium- 2.59
8. Magnesium- 2.09
9. Others- 1.41

**8. Explanation:** The word 'sedimentary' is derived from the Latin word sedimentum, which means settling. Rocks (igneous, sedimentary and metamorphic) of the earth's surface are exposed to denudation agents, and are broken up into various sizes of fragments. Such fragments are transported by different exogenous agencies and deposited. These deposits through compaction turn into rocks. This process is called lithification. In many sedimentary rocks, the layers of deposits retain their characteristics even after lithification. Hence, we see a number of layers of varying thickness in sedimentary rocks like sandstone, shale etc.

**9. Explanation:** All processes that move, elevate or build up portions of the earth's crust come under diastrophism. They include: (i) orogenic processes involving mountain building through severe folding and affecting long and narrow belts of the earth's crust; (ii) epeirogenic processes involving uplift or warping of large parts of the earth's crust; (iii) earthquakes involving local relatively minor movements; (iv) plate tectonics involving horizontal movements of crustal plates.

**10. Explanation:** The five major lines of latitude, more commonly referred to as the five major circles of latitude, mark specific points on a globe or map of Earth. Four of the lines run parallel to the equator and sit north or south above or below the equator.

- The Arctic Circle is located at approximately 66.5 degrees north latitude, or 66.5 degrees north of the equator. This circle of latitude stretches through eight countries, including the United States, Canada, Greenland, Iceland, Norway, Sweden, Finland and Russia.
- The Antarctic Circle is located at approximately 66.5 degrees south Latitude, or 66.5 degrees south of the equator. This line, or circle, of latitude marks the start of the southern area known as the Antarctic. The circle consists of only one continent, Antarctica.
- The Equator or great circle is possibly the most well-known circle of latitude is the line sitting at zero degrees latitude, the equator. The equator circles the globe with a circumference of nearly 25,000 miles, dividing the northern and the southern hemispheres. This line of latitude is the starting point when referring to other points of the globe in terms of degrees north and degrees south.
- The Tropic of Cancer is located at approximately 23.5 degrees north latitude, or 23.5 degrees north of the Equator. This line of latitude is the northern boundary of the

area referred to as the tropics. During the summer solstice the sun is located immediately above the Tropic of Cancer. This line is the point farthest to the north at which the sun is hanging directly upward at noon.

- The Tropic of Capricorn is located at approximately 23.5 degrees south Latitude, or 23.5 degrees south of the equator. This line of latitude is the southern boundary of the area referred to as the tropics. This line marks the point farthest to the south at which the sun is hanging directly upward at noon. During the summer solstice of the Southern Hemisphere, the sun is located immediately above the Tropic of Capricorn.

**11. Explanation:** Cyclone, any large system of winds that circulates about a centre of low atmospheric pressure in a counterclockwise direction north of the Equator and in a clockwise direction to the south. Cyclonic winds move across nearly all regions of the Earth except the equatorial belt and are generally associated with rain or snow. Also occurring in much the same areas are anticyclones, wind systems that rotate about a high-pressure centre. Anticyclones are so called because they have a flow opposite to that of cyclones—i.e., an outward-spiraling motion, with the winds rotating clockwise in the Northern Hemisphere and counterclockwise in the Southern. These winds are usually not as strong as the cyclonic variety and commonly produce no precipitation.

**12. Explanation:** The peninsular shape of India divides these Southwest monsoons into two branches - Arabian Sea branch and Bay of Bengal branch.

(a) Arabian Sea branch of Southwest monsoons strikes the western coast of India and causes heavy rains on the western slopes of the Western Ghats. After crossing the Western Ghats, these winds cause less rainfall on the eastern slopes as they gain temperature while descending. This area is, therefore, known as rain shadow zone. This explains why interior parts of Maharashtra, Karnataka and Telangana get meager rains from these winds. Southwest monsoons striking along the coast of Saurashtra and Kutch and pass over Rajasthan and beyond to meet the Bay of Bengal branch. These winds cause widespread rain in these states and western Himalayan region.

(b) The Bay of Bengal branch is divided into two sub branches after striking eastern Himalayas. One branch moves towards the east northeast direction and causes heavy rains in Brahmaputra valley and northeast hills of India. The other branch moves towards northwest along the Ganga valley and the Himalayan ranges causing heavy and widespread rains over vast areas. In this region, the amount of rainfall decreases from east to west owing to the progressive decrease in humidity of these winds.

**13. Explanation:** Tropical thorn forests occur in the areas which receive rainfall less than 50 cm. These consist of a variety of grasses and shrubs. It includes semi-arid areas of south west Punjab, Haryana, Rajasthan, Gujarat, Madhya Pradesh and Uttar Pradesh. In these forests, plants remain leafless for most part of the year and give an expression of scrub vegetation. Important species found are babool, ber, and wild date palm, khair, neem, khejri, palas, etc. Tussocky grass grows upto a height of 2 m as the under growth.

**14. Explanation:** The northern plains are formed by the alluvial deposits brought by the rivers – the Indus, the Ganga and the Brahmaputra. These plains extend approximately 3,200 km from the east to the west. The average width of these plains varies between 150-300 km. The maximum depth of alluvium deposits varies between 1,000-2,000 m. From the north to the south, these can be divided into three major zones: the Bhabar, the Tarai and the alluvial plains. The alluvial plains can be further divided into the Khadar and the Bhangar. Bhabar is a narrow belt ranging between 8-10 km parallel to the Shiwalik foothills



at the break-up of the slope. As a result of this, the streams and rivers coming from the mountains deposit heavy materials of rocks and boulders, and at times, disappear in this zone. South of the Bhabar is the Tarai belt, with an approximate width of 10-20 km where most of the streams and rivers re-emerge without having any properly demarcated channel, thereby, creating marshy and swampy conditions known as the Tarai. This has a luxurious growth of natural vegetation and houses a varied wildlife. The south of Tarai is a belt consisting of old and new alluvial deposits known as the Bhangar and Khadar respectively. These plains have characteristic features of mature stage of fluvial erosional and depositional landforms such as sand bars, meanders, oxbow lakes and braided channels. The Brahmaputra plains are known for their riverine islands and sand bars. Most of these areas are subjected to periodic floods and shifting river courses forming braided streams.

**15. Explanation:** Season of Retreating Monsoon: The months of October and November are known for retreating monsoons. By the end of September, the southwest monsoon becomes weak as the low pressure trough of the Ganga plain starts moving southward in response to the southward march of the sun. The monsoon retreats from the western Rajasthan by the first week of September. It withdraws from Rajasthan, Gujarat, Western Ganga plain and the Central Highlands by the end of the month. By the beginning of October, the low pressure covers northern parts of the Bay of Bengal and by early November, it moves over Karnataka and Tamil Nadu. By the middle of December, the centre of low pressure is completely removed from the Peninsula. The retreating southwest monsoon season is marked by clear skies and rise in temperature. The land is still moist. Owing to the conditions of high temperature and humidity, the weather becomes rather oppressive. This is commonly known as the 'October heat'. In the second half of October, the mercury begins to fall rapidly, particularly in northern India. The weather in the retreating monsoon is dry in north India but it is associated with rain in the eastern part of the Peninsula. Here, October and November are the rainiest months of the year. The widespread rain in this season is associated with the passage of cyclonic depressions which originate over the Andaman Sea and manage to cross the eastern coast of the southern Peninsula. These tropical cyclones are very destructive. The thickly populated deltas of the Godavari, Krishna and Kaveri are their preferred targets. Every year cyclones bring disaster here. A few cyclonic storms also strike the coast of West Bengal, Bangladesh and Myanmar. A bulk of the rainfall of the Coromandal coast is derived from these depressions and cyclones. Such cyclonic storms are less frequent in the Arabian Sea.

**16. Explanation:** The major factors of soil formation are the nature of the parent rock and climatic factors. Other factors are the topography, role of organic material and time taken for the composition of soil formation. All these differ from place to place.

**17. Explanation:** Van Mahotsava is an annual tree planting festival in the month of July. During this festival thousand of trees are planted all over India. In 1950, it was started by K. M. Munshi, the Union Minister for Agriculture and Food at that time. It was started to create awareness in the mind of the people for the conservation of forests and planting of new trees. Van Mahotsava is celebrated as a festival of life. In India it was started as a crusade to save mother earth. The name Van Mahotsava means 'the festival of trees'. It began in July 1947 after a flourishing tree planting drive was undertaken in Delhi, in which national leaders like Dr Rajendra Prasad and Jawaharlal Nehru participated. The festival was simultaneously celebrated in a number of states in India. Since then, thousands of saplings of diverse species are planted with energetic participation of the locals and various agencies like the forest department.

**18. Explanation:** Australia is the largest producer of bauxite in the world. It is a leading producer of gold, diamond, iron ore, tin and nickel. It is also rich in copper, lead, zinc and manganese. Kalgoorlie and Coolgardie areas of Western Australia have the largest deposits of gold.

**19. Explanation:** Coal is the most abundantly found fossil fuel. It is used as a domestic fuel, in industries such as iron and steel, steam engines and to generate electricity. Electricity from coal is called thermal power. The coal which we are using today was formed millions of years ago when giant ferns and swamps got buried under the layers of earth. Coal is therefore referred to as Buried Sunshine.

**20. Explanation:** The Mitigation of Climate Change in Agriculture (MICCA) programme strengthens FAO's longstanding work to address climate change in the agriculture, forestry and fisheries sectors and supports countries participating in the climate change negotiation processes within the United Nations Framework Convention on Climate Change.



## *Environment*

**Q.1) “Kanha national park and Tiger reserve”** is recently in news located in which of the following state?

- a) Tamil Nadu
- b) Kerala
- c) Maharashtra
- d) Madhya Pradesh

**Q.2)** Consider the following statements with respect to **Forest Rights Act**:

- 1. The Act came into effect in 2008
  - 2. It seeks to recognize forest rights of Scheduled Tribes only
- Which of the following codes below given is/are **NOT** correct?

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

**Q.3) “Sukhna Lake”** is recently in news located in which of the following city?

- a) Bangalore
- b) Chennai
- c) Lucknow
- d) Chandigarh

**Q.4) “Global Environment Outlook”** published by which of the following Institution?

- a) WEF
- b) UNEP
- c) Global Environment Facility
- d) UNDP

**Q.5)** Consider the following statements with respect to **Global Tiger Forum (GTF)**:

- 1. GTF is the only inter- governmental international body to protect the Tiger
- 2. The GTF has a General Assembly meeting of every 3 years

Which of the following codes below given is/are **NOT** correct?

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

**Q.6)** Which of the following is/are **NOT abiotic components** of biosphere?

- 1. Rocks
- 2. Oxygen & Carbon dioxide
- 3. Water
- 4. Plants and Micro-organism

Choose the correct code from below given options:

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

d) 2 and 3 only

**Q.7) “Montreal Protocol” and “London Conference” related to which of the following?**

- a) Solid Waste Management
- b) Persistent Organic Pollutants
- c) CFCs
- d) Methane control

**Q.8) Which of the following is/are principle agents of Acid rain?**

- 1. Sulfuric Acid
- 2. Methane
- 3. Nitric Acid

Choose the correct code from below given options:

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

**Q.9) Consider the following statements with respect to National Environmental Engineering Research Institute (NEERI):**

- 1. It was established in Nagpur
- 2. Its research focuses only water and sewage supply
- 3. NEERI falls under Ministry of Science and Technology

Which of the following codes below given is/are **NOT** correct?

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

**Q.10) The “Our Common Future” report released by which of the following commission?**

- a) Vienna commission
- b) Bruntland Commission
- c) Washington Commission
- d) None of the above

**Q.11) Consider the following statements with respect to Coal bed methane (CBM) in India:**

- 1. It is a conventional form of natural gas found in coal deposits or coal seams
- 2. It is considered as an alternative source for augmenting India’s energy resource

Which of the following codes below given is/are **NOT** correct?

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

**Q.12) “Dachigam national park” is located in which of the following State/Union Territory?**

- a) Pondicherry
- b) Himachal Pradesh
- c) Jammu & Kashmir
- d) Arunachal Pradesh

**Q.13)** Consider the following statements with respect to **Chlorofluorocarbons (CFCs)**:

1. Chlorofluorocarbons (CFCs) are toxic and flammable chemicals containing atoms of carbon, chlorine, and fluorine
2. CFCs are used in the manufacture of aerosol sprays, blowing agents for foams and packing materials

Which of the following codes below given is/are correct?

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

**Q.14)** Which of the following convention related to Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters?

- a) Rotterdam convention
- b) Aarhus Convention
- c) Berne Convention
- d) Basel Convention

**Q.15)** Consider the following statements with respect to **World Energy Council (WEC)**:

1. WEC is an Inter-Governmental organization
2. The World Energy Council has developed an interactive tool-The World Energy Issues Monitor

Which of the following codes below given is/are **NOT** correct?

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

**Q.16)** Consider the following statements with respect to **National Parks**:

1. It is a protected area constituted for the protection and conservation of wildlife.
2. Human activity is permitted.
3. National parks are constituted under Environmental Protection Act, 1980.

Which of the following codes below given is/are **NOT** correct?

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

**Q.17)** Consider the following statements with respect to **Nameri National Park**:

1. It is located in Arunachal Pradesh
2. It is famous for Rhinoceros

Which of the following codes below given is/are correct?

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

**Q.18)** Consider the following statements with respect to **"Sambar deer"**:

1. It is found in India and other parts of Asia only.
2. Sambar deer inhabit tropical rainforests, evergreen and mixed forests.

Which of the following codes below given is/are correct?

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

**Q.19)** Which of the following is/are **endemic** to Western Ghats?

- 1. Nilgiri langur
- 2. Lion tailed macaque
- 3. Asiatic Lion

Choose the correct code from below given options:

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

**Q.20)** Which of the following institution publishes the **Climate Change Performance Index**?

- a) UNESCO
- b) World Bank
- c) Germanwatch
- d) UNDP

**ANSWER KEY**

Que.	Ans.	Que.	Ans.
1	D	11	A
2	C	12	C
3	D	13	B
4	B	14	B
5	D	15	A
6	C	16	C
7	C	17	D
8	C	18	B
9	B	19	B
10	B	20	C

**EXPLANATION**

**1. Explanation:** Hard ground swamp deer (Barasingha or Rucervus duvaucelii), the state animal of Madhya Pradesh, is seeing a revival in the Kanha National Park and Tiger Reserve (KNPTR) after having been perilously close to extinction for a long time. The species now numbers 800, after five decades of persistent conservation work. KNPTR is on the Maikal range of the Satpura hills, and is spread over an area of 940 square kilometres between Mandla and Balaghat districts of Madhya Pradesh. The swamp deer is endemic to KNPTR. In 1967, the numbers of swamp deer decreased to 66 due to rampant hunting, habitat loss and diseases. The number was estimated at around 551 in 1953. The deer was brought back from the verge of extinction with the help of a successful breeding programme and conservation practices at the KNPTR.

**2. Explanation:** Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act came into effect in 2006. It seeks to recognize forest rights of Scheduled Tribes and other traditional forest dwellers who have been occupying and are dependent on

the forest land for generations. It envisions the forest rights committee of a village as the central unit in managing forest resources.

**3. Explanation:** The Punjab and Haryana High Court has declared Sukhna Lake legal entity and has ordered demolition of legal/unauthorized constructions in its catchment area. Sukhna Lake in Chandigarh is a reservoir at the foothills (Shivalik hills) of the Himalayas. This lake was created in 1958 by Le Corbusier and the Chief Engineer P L Verma by damming the Sukhna Choe, a seasonal stream coming down from the Shivalik Hills. The lake is a sanctuary for many exotic migratory birds like the Siberian duck, storks and cranes during the winter months.

**4. Explanation:** The Global Environment Outlook (GEO) is often referred to as UN Environment's flagship environmental assessment. The first publication was in 1997 and was originally requested by Member States. It is a flagship report because it fulfills the core functions of the organization, which date back to the UN General Assembly resolution that established the UN Environment Programme in 1972. The Global Environment Outlook (GEO) is a consultative and participatory process to prepare an independent assessment of the state of the environment, the effectiveness of the policy response to address these environmental challenges and the possible pathways to be achieve various internationally agreed environmental goals.

**5. Explanation:** The Global Tiger Forum (GTF) is the only inter- governmental international body established with members from willing countries to embark on a global campaign to protect the Tiger. The GTF was formed in 1993 on recommendations from an international symposium on Tiger Conservation at New Delhi, India. The first meeting of the Tiger Range countries to setup the forum was held in 1994, in which India was elected to the Chair and was asked to form an interim secretariat. In 1997, the GTF became an independent organization. The GTF has a General Assembly meeting every 3 years and Standing committee meetings at least once a year. A Chairperson, usually a Minister from one of the Tiger Range countries heads GTF for a fixed tenure of 3 Years. The Secretariat of GTF is headed by a Secretary General and is located in New Delhi, India.

**6. Explanation:** Biosphere has three basic components. These are (A) abiotic (physical and inorganic) components; (B) biotic (organic) components and (C) energy components. Let us discuss about these three components in detail. (A) Abiotic Components: These components broadly consist of all non-living elements which are essential for the survival of all living organisms. These are (i) lithosphere (solid part of the earth crust), (ii) atmosphere and (iii) hydrosphere. Mineral nutrients, certain gases and water are the three basic requirements of organic life. Soils and sediments constitute the chief reservoir of mineral nutrients. Atmosphere constitutes the chief reservoir of gases essential for organic life. Ocean constitutes the chief reservoir of liquid water. Where all these three reservoirs intermingle and that area becomes the most fertile area for organic life. The upper layer of the soil and shallow parts of the ocean constitute the most important areas, box sustaining organic life. The upper layer of soil, permits easy penetration of gases and percolation of moisture, while shallow parts of oceans, allow penetration of sunlight, intermingling of dissolved gases and nutrients from land surface and ocean bottoms.

**7. Explanation:** Ozne constitutes only less than 0.002 percent of the volume of the atmosphere. However, it's role is very critical as far as lives on the earth is concerned. It strongly absorbs ultraviolet radiation from the sun. Ultraviolet radiation is biologically destructive in many ways. It causes skin cancer and cataracts, suppresses the human



immune system, diminishes the yield of many crops, disrupts the aquatic food chain by killing micro-organisms on the ocean surface and many other negative effects which is still undiscovered. This is happening due to certain recent human activities which have injected certain chemicals in the stratosphere which consume ozone and reduce its concentration. Depletion is mainly caused by chlorofluorocarbons (CFCs), halons, methyl chloroform and carbon tetrachlorides. These chemical substances are mainly either chlorine or bromine which can reach the stratosphere and catalytically break down ozone into oxygen. CFCs are odourless, non-flammable, non-corrosive and nontoxic. For this reason, scientists originally believed CFCs could not possibly have any effect on the environment. That is why it is widely used in refrigeration and air conditioning, in foam and plastic manufacturing and in aerosol sprays. It needs certain actions both at individual as well as governmental level. Since the last two decades, certain actions have been initiated at global level. Among these **Montreal Protocol of 1987** and **London Conference of 1992** are important. In both these conferences it was decided that the developed countries would totally ban CFC production by 2000 and the developing countries by 2010AD.

**8. Explanation:** The term 'acid rain' refers to the deposition of wet or dry acidic materials from the atmosphere on the earth's surface. Although most conspicuously associated with rainfall, the pollutants may fall on the earth's surface either in the form of snow, sleet, hail or fog or in the dry form of gases or particulate matter. **Sulphuric acid** and **nitric acid** is considered as the principal agents responsible for acid rain. But the major culprits are human beings. Smokes emitted from the industries are the major source of sulphur dioxide whereas smokes emitted from the motor vehicle is the major source of nitrogen oxide. These emissions mixed with atmospheric moisture form the sulphuric acid and nitric acids which, sooner or later precipitate on earth in various form.

**9. Explanation:** The CSIR-National Environmental Engineering Research Institute (CSIR-NEERI) is a research institute created and funded by Government of India. It was established in Nagpur in 1958 with focus on water supply, sewage disposal, and communicable diseases and to some extent on industrial pollution and occupational diseases found common in post-independent India. NEERI is a pioneer laboratory in the field of environmental science and engineering and part of Council of Scientific and Industrial Research (CSIR). NEERI has five zonal laboratories at Chennai, Delhi, Hyderabad, Kolkata and Mumbai. NEERI falls under the Ministry of Science and Technology (India) of central government. The NEERI is an important partner organization in India's POPs national implementation plan (NIP).

**10. Explanation:** In the 1980s the UN set up the Commission on Environment and Development, also known as the Brundtland Commission, named after its Chair Gro Harlem Brundtland. The outcome of the Brundtland Commission was a comprehensive document entitled "Our Common Future", otherwise known as the Brundtland Report. This report framed much of what would become the 40 chapters of Agenda 21 and the 27 principles of the Rio Declaration on Environment and Development.

**11. Explanation:** CBM, like shale gas, is extracted from what are known as **unconventional** gas reservoirs — where gas is extracted directly from the rock that is the source of the gas (shale in case of shale gas and coal in case of CBM). The methane is held underground within the coal and is extracted by drilling into the coal seam and removing the groundwater. The resulting drop in pressure causes the methane to be released from the coal. It is considered as an alternative source for augmenting India's energy resource.

**12. Explanation:** Dachigam National Park is located 22 km from Srinagar in Jammu and Kashmir. The name literally stands for 'ten villages', which could be in memory of the ten villages that were relocated in order to create the park. The Park is only 141 sq. kms. and roughly rectangular in shape, approximately 23.5km by 6km. It is best considered as two sections - Upper and Lower Dachigam. Lower Dachigam, in the west, comprises approximately a third of the total area and is the area most accessible to a visitor. Upper Dachigam in the east extends over the higher reaches and is a good day's trek from the nearest road head. Dachigam was initially established to ensure the supply of clean drinking water to Srinagar city. A protected area since 1910, it was declared as a national park in 1981. The park is best known as the home of the hangul, or Kashmir stag.

**13. Explanation:** Chlorofluorocarbons (CFCs) are nontoxic, nonflammable chemicals containing atoms of carbon, chlorine, and fluorine. They are used in the manufacture of aerosol sprays, blowing agents for foams and packing materials, as solvents, and as refrigerants. CFCs are classified as halocarbons, a class of compounds that contain atoms of carbon and halogen atoms. Individual CFC molecules are labeled with a unique numbering system. For example, the CFC number of 11 indicates the number of atoms of carbon, hydrogen, fluorine, and chlorine (e.g. CCl<sub>3</sub>F as CFC-11). The best way to remember the system is the "rule of 90" or add 90 to the CFC number where the first digit is the number of carbon atoms (C), the second digit is the number of hydrogen atoms (H), and the third digit is number of the fluorine atoms (F).

**14. Explanation:** The UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters was adopted on 25th June 1998 in the Danish city of Aarhus at the Fourth Ministerial Conference in the 'Environment for Europe' process. Together with its Protocol on Pollutant Release and Transfer Registers, it protects every person's right to live in an environment adequate to his or her health and well-being. They are the only global legally binding global instruments on environmental democracy that put Principle 10 of the Rio Declaration on Environment and Development in practice.

**15. Explanation:** The World Energy Council was created in 1923, when visionary Daniel Dunlop brought together 40 countries to discuss the problems facing the global energy industry. Ever since, the World Energy Council has been non-governmental and non-commercial. The Council has withstood many changes, from geopolitical and economic upheavals to a complete shift in the way people understand and use energy. It has had to adapt to a changing world. Throughout history, it has never strayed from the initial concept of an organization that is impartial, objective and realistic. As a result, its analyses and agendas for action have always promoted sustainable energy for all. Today, The World Energy Council has almost 100 national member committees. Its member list includes governments, businesses and expert organizations. The World Energy Congress, held over 20 times since the organization's founding, is the world's premier energy gathering. The World Energy Council continues to build on its long, stable history as a key player on the global energy scene. The World Energy Council has developed an interactive tool - The World Energy Issues Monitor. The Monitor is an annual reality check of 2,000+ leaders worldwide focusing on the challenges of energy transition.

**16. Explanation:** An area, whether within a sanctuary or not, can be notified by the state government to be constituted as a National Park, by reason of its ecological, faunal, floral, geomorphologic, or zoological association or importance, needed to for the purpose of protecting & propagating or developing wildlife therein or its environment. No human

activity is permitted inside the national park except for the ones permitted by the Chief Wildlife Warden of the state under the conditions given in CHAPTER IV, Wildlife Protection Act 1972. There are 104 existing national parks in India covering an area of 40501.13 km<sup>2</sup>, which is 1.23% of the geographical area of the country (National Wildlife Database, May, 2019).

**17. Explanation:** Nameri National Park covers an area of 200 Sq. Kms. With river Jia Bhoroli bi-furcating the park, it is the most scenic of all the national parks of Assam. It's in the eastern border of Assam in the valley and mountainous Arunachal Pradesh. It was set up as a sanctuary in 1985 with an area of 137 sq. km. In 1998 it was officially established as a National Park. Nameri is home to some of the endangered species like white winged wood duck, Sloth Bear, Tiger Leopard, Clouded Leopard, Sambar, Gaur, Indian Wild Dog, four varieties of Hornbill and many other winged species. The other reason Nameri is famous for, is the herds of elephants. The park have a high density of elephant population and due to lessening of forest cover, they sometimes invade human inhabited villages, which have attracted the attention of wildlife conservationists worldwide.

**18. Explanation:** Sambar deer is one of the largest members of deer family. There are 7 subspecies of sambar deer that originate from southern and southeastern parts of Asia (Sri Lanka, Nepal, China, Cambodia and Thailand). They can be found all over Australia, New Zealand and North America today. Sambar deer inhabit tropical rainforests, evergreen and mixed forests. They live in habitats that provide enough water. Sambar deer are often on a target of hunters because of their beautiful antlers and meat. Also, different parts of their body are used in traditional Asian medicine. Habitat loss (as a result of deforestation) additionally decreases number of sambar deer in the wild. These animals are listed as vulnerable (may become endangered in the near future).

**19. Explanation:** The Western Ghats cover only 5% of India's land surface but are home to more than about 4,000 of the country's plant species of which 1800 are endemic. The monsoon forests occur both on the western margins of the ghats and on the eastern side where there is less rainfall. This zone displays diversity of forests from evergreen to dry deciduous. The Nilgiri langur, lion tailed macaque, Nilgiri tahr, Malabar grey hornbill and most amphibian species are endemic to the Western Ghats.

**20. Explanation:** The Climate Change Performance Index published by Germanwatch, CAN International and the NewClimate Institute evaluates and compares the climate protection performance of 56 countries and the EU. The Climate Change Performance Index is an independent monitoring tool of countries' climate protection performance. It aims to enhance transparency in international climate politics and enables the comparability of climate protection efforts and progress made by individual countries. On the basis of standardised criteria, the index evaluates and compares the climate protection performance of 56 countries and the EU that are, together, responsible for nearly 90 percent of global greenhouse gas emissions.