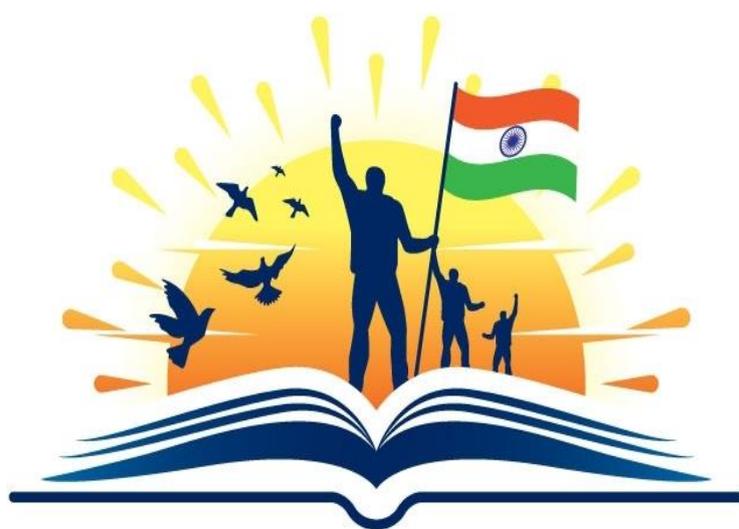


PRELIMS TEST SERIES 2019

TEST 5 Answers : Post

**Independence, International relations, Current
Affairs**



PD GURUKUL

Learn India....Lead India

Detail Answers

1. A. 1 only

Answer Justification :

Justification: Statement 1: A thermal battery is an exceptionally reliable source of specific energy. It is a non-rechargeable, single use battery that is completely inert before being activated. It can be stored without requiring maintenance for 15 years and then brought into use at any time, requiring only several tenths of a second before it is ready for use.

Activation is effected internally either by mechanical or electrical ignition. Certain batteries can also be activated automatically, for example through an accelerating effect or a sudden increase in temperature.

It can function under severe climatic and mechanical environments. Its intrinsic qualities mean that it is impervious to high stresses, sudden shocks and sharp pressure drops. Thermal batteries can supply the highest level of specific powers available on the market. It is also possible to provide several output voltages from a single battery.

Statement 2: A thermal battery provides its power not by converting thermal energy to electrical energy, but from a reactive electrochemical couple. Discharge is either terminated by exhaustion of the cell materials or by solidification of the electrolyte upon cooling.

Statement 3: Thermal batteries are classified as non-explosive and non-pyrotechnic equipment items for the purposes of transport and storage as for UN regulation. They can be handled without risk and destroyed by conventional means.

India has become home to the world's first-ever thermal battery plant. The thermal battery facility, inaugurated in Andhra Pradesh, will be owned by Bharat Energy Storage Technology Private Limited (BEST).

Learning: How it Works: This is an extension of explanation for Statement 2:

The thermal battery is composed of a series of cells each one having an anode, electrolyte, cathode and a heating pellet. The electrolyte, which functions as a separator between the anode and the cathode, remains solid and non-conductive until activation.

The battery remains completely inert while being stored. In each battery, the necessary number of cells is connected in series or parallel, or a combination of both, in order to produce the required voltage level(s).

At the moment of activation the pyrotechnic material (heat source) is ignited and releases energy into the cells. The temperature increases, the electrolyte melts and ion exchange takes place: the power in the cell is thus liberated.

The electrical current is transmitted through the terminals to external cabling to provide the energy required to the load.

Pyrotechnics is the science of using materials capable of undergoing self-contained and self-sustained exothermic chemical reactions for the production of heat, light, gas, smoke and/or sound.

Pyrotechnics include not only the manufacture of fireworks but items such as safety matches, oxygen candles, explosive bolts and fasteners, components of the automotive airbag and gas pressure blasting in mining, quarrying and demolition.

2. B. 1, 2 and 3

Answer Justification :

Justification: 3D face recognition is a modality of facial recognition methods in which the three-dimensional geometry of the human face is used.

It has been shown that 3D face recognition methods can achieve significantly higher accuracy than their 2D counterparts, rivaling fingerprint recognition.

Statement 2: 3D research is enhanced by the development of sophisticated sensors that do a better job of capturing 3D face imagery. The sensors work by projecting structured light onto the face. Up to a dozen or more of these image sensors can be placed on the same CMOS chip—each sensor captures a different part of the spectrum.

Statement 3: 3D face recognition has the potential to achieve better accuracy than its 2D counterpart by measuring geometry of rigid features on the face.

This avoids such pitfalls of 2D face recognition algorithms as change in lighting, different facial expressions, make-up and head orientation.

Another approach is to use the 3D model to improve accuracy of traditional image based recognition by transforming the head into a known view.

Additionally, most 3D scanners acquire both a 3D mesh and the corresponding texture. This allows combining the output of pure 3D matchers with the more traditional 2D face recognition algorithms, thus yielding better performance.

The main technological limitation of 3D face recognition methods is the acquisition of 3D image, which usually requires a range camera.

3. A. 1 only

Answer Justification :

Justification: Bhoomi Rashi, the portal developed by MoRTH and NIC, comprises the entire revenue data of the country, right down to 6.4 lakh villages.

The entire process flow, from submission of draft notification by the State Government to its approval by the Hon. Minister of State for RT&H and publication in e-Gazette, is online.

The portal, created for expediting the process of publication of notifications for LA, is now being fully utilised for issuing the notifications.

Bhoomi Rashi portal has been instrumental in reducing the time taken for approval and publication of notifications pertaining to land acquisition.

The Public Financial Management System (PFMS) is an end-to-end solution for processing payments, tracking, monitoring, accounting, reconciliation and reporting.

4. D. Opposing the intrusion of East Asian countries in the mainstream economic development of Myanmar

Answer Justification :

Learning: It was a series of nationwide protests, marches and civil unrest in Burma (Myanmar) that peaked in August 1988. Key events occurred on 8 August 1988 and therefore it is known as the 8888 Uprising.

August 8 marks the 30th anniversary of this uprising.

‘8888’ was a people’s movement that challenged the then ruling Burma Socialist Programme Party’s grip on political, economic and social affairs which led the country into extreme poverty.

The objective of ‘8888’ was two-fold: to push for the transfer of power from the military to a civilian leadership and a change in the political system from an authoritarian regime to a multi-party democracy.

The protests and the bloody crackdown gave rise to the National League for Democracy (NLD), a political party which paved the way for the current Myanmar State Counsellor, Aung San Suu Kyi's entry into politics and for the pro-democracy movement to continue. The democratic transition in Myanmar thus far has been meticulously designed by the military. The primary objective, which is laid out in the country's 2008 Constitution, is to give the military a dominant role in politics.

In a parallel to the 'Burmese way to socialism' introduced by former military leader Ne Win in the 1960s, Myanmar now practices what can be called the 'Burmese way to democracy' as introduced by former Prime Minister Khin Nyunt in 2003 when he announced the military's seven-step road map to a flourishing democracy.

5. A. Production of Kashmiri willow Cricket Bats

Answer Justification :

Justification: Option A: These are some of the districts where Kashmir willow bats are made. The willow used in making these bats was brought in by the British. These willows are lighter and more powerful than ordinary wood, making them more effective as a hitting bat.

Option B: The cave paintings of Sonbhadra and Chitrakoot depict scenes of hunting, war, festivals, dances, romantic life and animals and belong to UP.

Option C: One of the important crafts of Uttar Pradesh is Chikankari, which entails delicate and traditional hand embroidery. This form of handicrafts is mainly practiced in Lucknow. It is done on fabrics like chiffon, muslin, organza, organdie and silk.

Option D: Gorakhpur has villages where clay figures of animals are done and It is famous for its ornately decorated terracotta horse. The potter creates the basic form by throwing separate pieces on the wheel and then joining them.

Moradabad in U P is famous for art metalwork and known for its coloured enamelling and intricate engravings.

6. C. Both 1 and 2

Answer Justification :

Justification: Some salient points from the Xiamen Declaration:

1. Besides naming terror groups responsible for violence and causing concern, Brics called for a comprehensive approach to combat terrorism, including countering radicalisation, recruitment, movement of terrorists, supply of weapons and money laundering.

It also referred to violence caused by the Taliban, Al-Qaida and its affiliates, including the Eastern Turkestan Islamic Movement Haqqani network, Lashkar-e-Taiba, Jaish-e- Mohammad, Tehrik-i-Taliban Pakistan etc.

The Chinese government, as is evident from the inclusion of the Uighur-focused Eastern Turkestan Islamic Movement in the above list, is concerned about growing Islamist activity in its western provinces.

2. Working together to promote most effective use of fossil fuels and wider use of gas, hydro and nuclear power, which will contribute to the move towards a low emission economy, better energy access and sustainable development.

3. Commitment to promote green development and low-carbon economy in the context of sustainable development and poverty alleviation.

4. Enhancing Brics anti-corruption cooperation and supporting the strengthening of international cooperation against corruption.

7. C. Both 1 and 2

Answer Justification :

Background: A proposed move by the Centre to abolish the ROFR clause for transportation of Indian cargo by Indian-flagged vessels, the only benefit available to Indian shipping companies is threatening the existence of the domestic shipping industry.

If the clause is scrapped, it could hurt the Indian shipping industry. Indian shipping companies have a combined fleet of 1,372 ships with a total capacity of 12.35 million Gross Tonnage (GT). The move may also prompt Indian Shipping firms to de-register their vessels from India and flag them in tax havens of Panama and Bahama to survive and compete with foreign lines.

Currently, 92% of India's export import trade is carried by foreign flag ships. And the 8% that is assured to Indian ships is likely to go if the ROFR is scrapped.

Justification: The question statements explain ROFR.

An ROFR can cover almost any sort of asset, including real estate, personal property, a patent license, a screenplay, or an interest in a business.

Example: Abe owns a house and Bo offers to buy that house for \$1 million. However, Carl holds a right of first refusal to purchase the house. Therefore, before Abe can sell the house to Bo, he must first offer it to Carl for the \$1 million that Bo is willing to buy it for. If Carl accepts, he buys the house instead of Bo. If Carl declines, Bo may now buy the house at the proposed \$1 million price.

Why maintain ROFR clause?

The right of first refusal is the only incentive to the Indian flag, which suffers from many disadvantages versus foreign flags.

De-registering of vessels from the Indian flag will be a strategic blow to Indian security as merchant naval fleet always acts as a second line of defence for coastal security.

8. A. Silicosis

Answer Justification :

Justification:

Option A:

Silicosis is a progressive interstitial lung disease, characterized by shortness of breath, cough, fever and bluish skin; it can present in three different forms: acute, accelerated and chronic.

It is caused by the lung tissue reaction to the inhalation of silica and occurs most commonly as an occupational disease of people working in the quarrying, manufacturing and building construction industries. Exposure to large amounts of free silica can go unnoticed because silica is odourless, non-irritant and does not cause any immediate health effects.

As silicosis is incurable, clinical management includes removing the worker from the industry and giving symptomatic treatment. Public health goals are to detect early cases through monitoring of currently and formerly exposed workers, to establish surveillance programmes, to slow progression and to reduce disability.

Option C: Meningitis is a rare infection that affects the delicate membranes -- called meninges -- that cover the brain and spinal cord. Meningitis is usually caused by a viral infection but can also be bacterial or fungal. Vaccines can prevent some forms of meningitis.

9. B. 1 and 2 only

Answer Justification :

Justification: The new dialogue format was agreed to between the two sides during the visit of Prime Minister Narendra Modi to Washington D.C. in June, 2017. The dialogue mechanism includes defence and foreign ministers of the two countries. It replaced India-U.S. Strategic and Commercial Dialogue for trade and commercial issues. Significance of “2 by 2” Dialogue:

The objective of this dialogue mechanism is to raise defence and security issues to the forefront and centre of the relationship between India and the U.S. It is aimed at enhancing peace and stability across the Indo-Pacific region by elevating strategic consultations in the dialogue.

The shared priorities include job creation, improving the business and investment climate and sustaining a rules-based global order. The U.S. has strategic consultations in this format with key partners and allies including Australia, Japan and the Philippines. The inaugural U.S.-India 2+2 Dialogue will take place in the month of July.

10. C. 1 and 3 only

Answer Justification :

Justification: Statement 1: It also intends to improve on-farm water use efficiency to reduce wastage of water and enhance the adoption of precision-irrigation and other water saving technologies (More crop per drop).

The scheme will be implemented by Ministries of Agriculture, Water Resources and Rural Development.

PMKSY has been conceived amalgamating ongoing schemes viz. Accelerated Irrigation Benefit Programme (AIBP) of the Ministry of Water Resources, River Development & Ganga Rejuvenation

(MoWR,RD&GR), Integrated Watershed Management Programme (IWMP) of Department of Land Resources (DoLR) and the On Farm Water Management (OFWM) of Department of Agriculture and

Cooperation (DAC).

Statement 2: To cater to the large fund requirement and ensure completion of the projects, the Union Finance Minister, during his Budget speech 2016-17, announced creation of dedicated Long Term Irrigation Fund (LTIF) in NABARD with an initial corpus of Rs. 20,000 crore for funding of Central and State share for the identified ongoing projects under PMKSY (AIBP and CAD).

Corpus would be raised by way of budgetary resources and market borrowings to fund fast tracking of implementation of incomplete major & medium irrigation projects.

Statement 3: The National Water Development Agency (NWDA), was set up in July 1982 as Autonomous Society under the societies registration act 1860, to carry out the water balance and other studies on a scientific and realistic basis for optimum utilization of water resources of the Peninsular river system for preparation of feasibility reports and thus to give concrete shape to Peninsular river development component of National perspective plan prepared by Central Water Commission and the then Ministry of Irrigation (now MoWR, RD & GR).

11. A. Adding Net factor income from abroad to the Net Domestic Product (NDP)

Answer Justification :

Learning: $GNP \equiv GDP + \text{Factor income earned by the domestic factors of production employed in the rest of the world} - \text{Factor income earned by the factors of production of the rest of the world employed in the domestic economy}$

Hence, $GNP \equiv GDP + \text{Net factor income from abroad}$ If we discount (reduce) depreciation from GNP the measure of aggregate income that we obtain is called Net National Product (NNP).

12. D. All of the above jointly

Answer Justification :

Learning: GII ranks 126 economies based on 80 indicators.

The GII 2018 marks the 11th edition of the GII, and the beginning of its second decade providing data and insights gathered from tracking innovation across the globe. This year's edition, is dedicated to the theme of Energizing the World with Innovation. It analyses the energy innovation landscape of the next decade and identifies possible breakthroughs in fields such as energy production, storage, distribution, and consumption. It also looks at how breakthrough innovation occurs at the grassroots level and describes how small-scale renewable systems are on the rise.

Performance of India:

This year, India has moved up 3 places as compared to 60th rank in GII 2017 and emerged as top-ranked economy in Central and South Asia. It has consistently moving up on global ranking from 81st in 2015 to 57th this year. India is a top performer in the lower middle income group, where it is ranked at fifth position. It is the most innovative country in its region of central and southern Asia. In the indicators that capture the quality of innovation inputs and outputs, India is ranked second after China in the lower and upper middle income group combined. However, India has fared badly on indicators such as ease of starting business, political stability and safety, overall education and environmental performance.

Performance of other countries:

Switzerland is at the top. Since 2011, Switzerland has been ranked at the top every year.

13. A. World Economic Forum (WEF)

Answer Justification :

Learning: The report finds that air quality is the leading environmental threat to public health. Now in its twentieth year, the biennial report is produced by researchers at Yale and Columbia Universities in collaboration with the World Economic Forum.

The tenth EPI report ranks 180 countries on 24 performance indicators across 10 issue categories covering environmental health and ecosystem vitality. Switzerland leads the world in sustainability, followed by France, Denmark, Malta, and Sweden.

Switzerland's top ranking reflects strong performance across most issues, especially air quality and climate protection. In general, high scorers exhibit long-standing commitments to protecting public health, preserving natural resources, and decoupling greenhouse gas (GHG) emissions from economic activity.

India and Bangladesh come in near the bottom of the rankings, with Burundi, Democratic Republic of the Congo, and Nepal rounding out the bottom five. Low scores on the EPI are indicative of the need for national sustainability efforts on a number of fronts, especially cleaning up air quality, protecting biodiversity, and reducing GHG emissions, said the researchers.

Some of the lowest-ranking nations face broader challenges, such as civil unrest, but the low scores for others can be attributed to weak governance, they note.

14. B. 2 only

Answer Justification :

Justification: Statement 1: Maitree 2018 was an annual joint military training exercise between India and Thailand. The 2018 edition of this exercise is being held in Thailand. The aim of this exercise is to build and promote closer relations while exchanging skills and experiences between the two armies. Last exercise was held in Himachal Pradesh's Bakloh in 2017.

Statement 2: Xingkong-2 is China's hypersonic "waverider" flight vehicle. It is also called Starry Sky-2. It is capable of flying independently and of carrying nuclear warheads.

It glides at high speeds using shockwaves generated by its own hypersonic flight with the air.

Statement 3: An all-women expedition team has begun its journey to Mt. Manirang from Himachal Pradesh. The expedition commemorates the silver jubilee of 1993 Women Everest expedition. Manirang is one of the highest mountains in the Indian state of Himachal Pradesh. It lies on the border between Kinnaur and Lahaul and Spiti district.

The Indo-Nepalese women's Everest expedition in 1993 was the first all women expedition, launched by Indian Mountaineering foundation. The 21-member team was led by Ms. Bachendri Pal. The historic expedition set up several world records at the time which included the largest number of persons (18) of a single expedition to climb Mount Everest, largest number of women (six) from a single country to climb Mount Everest.

15. A. Central government

Answer Justification :

Justification & Learning: The Constitution divided the powers between the Centre and the states in terms of the Union List, State List and Concurrent List in the Seventh Schedule. The Union List consists of 100 subjects, the State List 61 subjects and the Concurrent List 52 subjects. Both the Centre and the states can make laws on the subjects of the concurrent list, but in case of a conflict,

the Central law prevails. The residuary subjects (i.e., which are not mentioned in any of the three lists) are given to the Centre.

16. C. Shipping in international waters

Answer Justification :

Learning: It is a specialised agency of the United Nations responsible for regulating shipping. The IMO's primary purpose is to develop and maintain a comprehensive regulatory framework for shipping and its remit today includes safety, environmental concerns, legal matters, technical cooperation, maritime security and the efficiency of shipping.

IMO is governed by an assembly of members and is financially administered by a council of members elected from the assembly.

17. B. 2 only

Answer Justification :

Justification: Statement 1: It is now a constitutional democracy.

Statement 2: Bhutan is a constitutional monarchy with a parliamentary form of government. The political system grants universal suffrage. It consists of the National Council and the National Assembly. Executive power is exercised by the Council of Ministers led by the prime minister. Legislative power is vested in both the government and the National Assembly. Judicial power is vested in the courts of Bhutan.

Statement 3: It recently transformed from a military rule to a democracy.

Statement 4: Democratic elections have been held in Myanmar with India's assistance. However, the polity has been disturbed lately due to internal feuds, coups and authoritarianism.

18. C. 1 and 3 only

Answer Justification :

Justification: Communal division between Brahmins and non-Brahmins began in the presidency during the late-19th and early-20th century, mainly due to caste prejudices and disproportionate Brahminical representation in government jobs.

The Justice Party's foundation marked the culmination of several efforts to establish an organisation to represent the non-Brahmins in Madras Presidency and is seen as the start of the Dravidian Movement. In 1920, it won the first direct elections in the presidency and formed the government.

Statement 1: It came under the leadership of Periyar E. V. Ramaswamy and his Self-Respect Movement. In 1944, Periyar transformed the Justice Party into the social organisation Dravidar Kazhagam and withdrew it from electoral politics. So, 2 is correct.

Statement 2 and 3: It opposed Annie Besant and her Home rule movement, because it believed home rule would benefit the Brahmins. The party also campaigned against the non-cooperation movement in the presidency. It was at odds with M. K. Gandhi, primarily due to his praise for Brahminism.

Learning: The Justice Party is credited with passing in 1921 a bill which allowed Women to vote in Madras Presidency for the first time in India. Its mistrust of the Brahmin-dominated Congress led it to adopt a hostile stance toward the Indian independence movement. For the next seventeen years, it formed four out of the five ministries and was in power for thirteen years. It was the main political alternative to the nationalist Indian National Congress in Madras.

19. A. 1 and 2 only

Answer Justification :

Justification: Statement 1: A trading bloc, particularly when it is coupled with a political goal, is likely to lead to at least partial loss of sovereignty for its participants. For example, the European Union, started as a trading bloc in 1957 by the Treaty of Rome, has transformed itself into a farreaching political organization that deals not only with trade matters, but also with human rights, consumer protection, greenhouse gas emissions and other issues which are only marginally related.

Statement 2: Because trading blocs increase trade among participating countries, those countries become increasingly dependent on each other. A disruption of trade within a trading bloc as a result of a natural disaster, conflict or revolution may have severe consequences for the economies of all participating countries.

Statement 3: This is actually an advantage.

The larger markets created by trade blocs permit companies to take advantage of economies of scale. Since the average cost of each good produced tends to fall as production increases, this results in lower prices for consumers. Increased competition and the removal of tariffs, which may act as a price floor, drive down prices and allow for increased consumption. This reduces deadweight loss and hence improves market efficiency.

Learning: Some other disadvantages of economics blocs are:

No country wants to let foreign firms gain domestic market share at the expense of local companies without getting something in return. Any country that wants to join a trading bloc must be prepared to make concessions. For example, allowing MNCs to enter their home markets, hurting the business of some local firms.

Also, Trading blocs inherently favor their participating countries. Regional economies establish tariffs and quotas that protect intra-regional trade from outside forces. Rather than pursuing a global trading regime within the World Trade Organization, which includes the majority of the world's countries, regional trade bloc countries contribute to regionalism rather than global integration.

20. B. 2 only

Answer Justification :

Justification: Statement 1: It is an inter-governmental organization created on 18 June 2002 to promote Asian cooperation at a continental level and to help integrate separate regional organizations such as ASEAN, SAARC, the Gulf Cooperation Council, and the Eurasian Economic Union.

The ACD's main members states are Pakistan, Kuwait, Qatar, Sri Lanka, Turkey, Indonesia, Thailand, Uzbekistan, China and Japan, the so-called Major Ten ACD Nations.

Statement 2: The ASEAN Regional Forum (ARF) is an important forum for security dialogue in Asia. It draws together 27 members which have a bearing on the security of the Asia Pacific region.

ARF was established in 1994. It comprises 27 members: the 10 ASEAN member states (Brunei, Cambodia, Indonesia, Laos, Malaysia, Burma, Philippines, Singapore, Thailand and Vietnam), the 10 ASEAN dialogue partners (Australia, Canada, China, the European Union, India, Japan, New Zealand, the Republic of Korea, Russia and the United States), one ASEAN observer (Papua New Guinea), as well as the Democratic People's Republic of Korea, Mongolia, Pakistan, Timor-Leste, Bangladesh and Sri Lanka.

The ARF is characterised by consensus decision making and frank dialogue.

21. A. Saraswati River

Answer Justification :

Learning: The Reserve Bank of India (RBI) will soon be releasing a new lavender Rs 100 currency note. The banknote highlights the rich and diverse cultural heritage of India as it prominently displays a photograph of 'Rani-ki-vav' (The Queen's Stepwell), an 11th century architectural wonder.

It was built by the Solanki dynasty's queen Udayamati in the 11th century as a memorial to her deceased husband Bhimdev I.

Architectural significance: Rani-ki-Vav was built in the complex Maru-Gurjara architectural style. It highlights the sanctity of water as it is designed as an inverted temple under the earth's surface. The central theme is the Dasavataras, or ten incarnations of Vishnu, including Buddha. The avatars are accompanied by sadhus, brahmins, and apsaras (celestial dancers).

22. B. Hindu Code Bill

Answer Justification :

Learning: There are several reasons behind Dr. Ambedkar's resignation from the cabinet as are evident from his resignation speech. Hindu code bill disagreement was the trigger.

During the debates in the Constituent Assembly, Ambedkar demonstrated his will to reform Indian society by recommending the adoption of a Uniform Civil Code. Ambedkar resigned from the cabinet in 1951, when parliament stalled his draft of the Hindu Code Bill, which sought to enshrine gender equality in the laws of inheritance and marriage.

Some of the other reasons can be:

He was never a congressman and was always treated like an outcast in the Congress Party and was never included in any substantial Cabinet Committee except the Cabinet Committee on Economic Affairs and that too on Dr. Ambedkar's own protest. Also, there was little freedom in the Law Ministry where he was working.

Most of the tenure of Dr. Ambedkar passed by while making and drafting the constitution till 26 January 1950. When the constitution was enacted he wanted to leave the cabinet but he stayed for several reasons. One of the major reason was the upliftment of the Scheduled Classes, Backward Classes and Women.

23. C. 3 and 4 only

Answer Justification :

Justification: More details on these phenomena will be covered later. A broad sketch will suffice for now. The energy emanating from within the earth is the main force behind endogenic geomorphic processes. This energy is mostly generated by radioactivity, rotational and tidal friction and primordial heat from the origin of the earth.

The endogenic and exogenic forces causing physical stresses and chemical actions on earth materials and bringing about changes in the configuration of the surface of the earth are known as

geomorphic processes. Diastrophism and volcanism are endogenic geomorphic processes. Weathering, mass wasting, erosion and deposition are exogenic geomorphic processes.

24. B. Carbon

Answer Justification :

Learning: The major 8 elements are 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.

Option B: Carbon is NOT a major element, even though organic life constitutes carbon; please note that.

25. C. Arabian Plate

Answer Justification :

Justification: The major plates are as follows:

- (i) Antarctica and the surrounding oceanic plate
- (ii) North American (with western Atlantic floor separated from the South American plate along the Caribbean islands) plate
- (iii) South American (with western Atlantic floor separated from the North American plate along the Caribbean islands) plate
- (iv) Pacific plate
- (v) India-Australia-New Zealand plate
- (vi) Africa with the eastern Atlantic floor plate
- (vii) Eurasia and the adjacent oceanic plate.

Some important minor plates are listed below:

- (i) Cocos plate : Between Central America and Pacific plate
- (ii) Nazca plate : Between South America and Pacific plate
- (iii) Arabian plate : Mostly the Saudi Arabian landmass

(iv) Philippine plate : Between the Asiatic and Pacific plate

26. C. Both 1 and 2

Answer Justification :

Justification: The Earth experiences two high tides per day because of the difference in the Moon's gravitational field at the Earth's surface and at its center. You could say that there is a high tide on the side nearest the Moon because the Moon pulls the water away from the Earth, and a high tide on the opposite side because the Moon pulls the Earth away from the water on the far side. The tidal effects are greatly exaggerated in the sketches.

The tidal influence on a close object is greater because the inverse square law drop in gravitational force gives a greater ratio of the force on the near side of the object to that on the far side. As shown below, the tidal ratio of the force per unit mass on the near side compared to that on the far side is much larger for the closer object.

Statement 1: If you introduce a new celestial body, it would lead to a change in the gravitational field as experienced by the oceans causing a change in the tidal force. It is a different matter that the new celestial body would also attract the earth and try to influence its orbit, but we ignore the extraneous considerations here.

27. D. 1, 2 and 3

Answer Justification :

Justification: Statement 1: The shorelines of Africa and South America facing each other have a remarkable and unmistakable match. It may be noted that a map produced using a computer programme to find the best fit of the Atlantic margin was presented by Bullard in 1964. It proved to be quite perfect. The match was tried at 1,000- fathom line instead of the present shoreline.

Statement 2: The radiometric dating methods developed in the recent period have facilitated correlating the rock formation from different continents across the vast ocean. The belt of ancient rocks of 2,000 million years from Brazil coast matches with those from western Africa. The earliest marine deposits along the coastline of South America and Africa are of the Jurassic age. This suggests that the ocean did not exist prior to that time.

Statement 3: The occurrence of rich placer deposits of gold in the Ghana coast and the absolute absence of source rock in the region is an amazing fact. The gold bearing veins are in Brazil and it is obvious that the gold deposits of the Ghana are derived from the Brazil plateau when the two continents lay side by side.

28. B. 2 only

Answer Justification :

Justification: Oyashio is a cold subarctic ocean current that flows south and circulates counterclockwise in the western North Pacific Ocean.

The nutrient-rich Oyashio is named for its metaphorical role as the parent that provides for and nurtures marine organisms. The current has an important impact on the climate of the Russian Far East, mainly in Kamchatka and Chukotka, where the northern limit of tree growth is moved south up to ten degrees compared with the latitude it can reach in inland Siberia.

The waters of the Oyashio Current form probably the richest fishery in the world owing to the extremely high-nutrient content of the cold water and the very high tides (up to ten metres) in some areas – which further enhances the availability of nutrients.

Because the Oyashio Current brings water of subarctic origin southward, the Subarctic Current is accompanied by a distinct temperature-salinity front between cold, fresher water to the north and warm, saltier water of subtropical origin to the south.

Learning: The waters of the Oyashio Current originate in the Arctic Ocean and flow southward via the Bering Sea, passing through the Bering Strait and transporting cold water from the Arctic Sea into the Pacific Ocean and the Sea of Okhotsk. It collides with the Kuroshio Current off the eastern shore of Japan to form the North Pacific Current (or Drift).

The Oyashio Current colliding with the Kuroshio Current near Hokkaido. When two currents collide, they create eddies. Phytoplankton growing in the surface waters become concentrated along the boundaries of these eddies, tracing out the motions of the water.

29. C. Both 1 and 2

Answer Justification :

Justification: Statement 1: Along the high rocky coasts, the rivers appear to have been drowned with highly irregular coastline.

The coastline appears highly indented with extension of water into the land where glacial valleys (fjords) are present. The hill sides drop off sharply into the water. Erosion features dominate. When barrier bars and spits form at the mouth of a bay and block it, a lagoon forms. The lagoons would gradually get filled up by sediments from the land giving rise to a coastal plain.

Statement 2: Along low sedimentary coasts the rivers appear to extend their length by building coastal plains and deltas. The coastline appears smooth with occasional incursions of water in the form of lagoons and tidal creeks.

The land slopes gently into the water. Marshes and swamps may abound along the coasts. Depositional features dominate. When waves break over a gently sloping sedimentary coast, the bottom sediments get churned and move readily building bars, barrier bars, spits and lagoons.

Lagoons would eventually turn into a swamp which would subsequently turn into a coastal plain. The maintenance of these depositional features depends upon the steady supply of materials.

30. B. Human ecological footprint as compared to earth's bio-capacity has reduced considerably.

Answer Justification :

Learning: It is date when humanity annual demand on nature exceeds what Earth can regenerate over the entire year. It is calculated by Global Footprint Network and World Wide Fund for Nature (WWF). If the earth overshoot day occurs later, it simply means that we have become more efficient in the usage of our natural resources, or that we have bought more time for the earth.

Currently, humankind is using 170% of the world's natural output. That means we are using up the equivalent of 1.7 Earths. And, according to the Global Footprint Network , we're on track to be using two Earths by the end of the 21st Century.

In 1963, we used 78% of the Earth's biocapacity. However by the early 1970s we began to consume more energy than the planet could produce. By 10 years ago, we were using 144% of the Earth's biocapacity.

The two greatest contributing factors to humanity's Ecological Footprint are carbon emissions, which accounts for 60%, and food, 26%.

31. C. 1, 2, 3 and 4

Answer Justification :

Justification: The father of ZBNF and Padma Shri Awardee, Sh. Subash Palekar has provided four important non-negotiable guidelines: Bijamrita (Seed Treatment using local cowdung and cow urine), Jiwamrita (applying inoculation made of local cowdung and cow urine without any fertilizers and pesticides), Mulching (activities to ensure favorable microclimate in the soil), and Waaphasa (soil aeration).

Zero Budget Natural Farming, as the name implies, is a method of farming where the cost of growing and harvesting plants is zero.

This means that farmers need not purchase fertilizers and pesticides in order to ensure the healthy growth of crops. It is, basically, a natural farming technique that uses biological pesticides instead of chemical-based fertilizers. Farmers use earthworms, cow dung, urine, plants, human excreta and such biological fertilizers for crop protection. It reduces farmers' investment. It also protects the soil from degradation.

Learning: Government initiatives to support ZBNF:

Government of India has been promoting organic farming in the country through the dedicated schemes of Paramparagat Krishi Vikas Yojana (PKVY) since 2015-16 and also through Rashtriya Krishi Vikas Yojana (RKVY).

In the revised guidelines of PKVY scheme during the year 2018, various organic farming models like Natural Farming, Rishi Farming, Vedic Farming, Cow Farming, Homa Farming, Zero Budget Natural Farming (ZBNF) etc. have been included wherein flexibility is given to states to adopt any model of Organic Farming including ZBNF depending on farmer's choice.

Under the RKVY scheme, organic farming/ natural farming project components are considered by the respective State Level Sanctioning Committee (SLSC) according to their priority/ choice. Indian Council of Agricultural Research (ICAR) under Network Project on Organic Farming (NPOF) and All India Coordinated Research Projects (AICRP) on Integrated Farming Systems, has initiated an experiment on "Evaluation of zero budget farming practices in basmati rice-wheat system" at Modipuram (Uttar Pradesh), Ludhiana (Punjab), Pantnagar (Uttarakhand) and Kurukshetra (Haryana) from rabi 2017 to study the zero budget farming practices on productivity, economics and soil health including soil organic carbon and soil fertility.

32. A. 1 only

Answer Justification :

Justification: Statement 1: Daily wages in urban areas (₹384) also remain more than twice as high as those in rural areas (₹175). Regional disparities in average wages have actually increased over time, with wages rising more rapidly in high-wage States than in low-wage ones.

Statement 2: The minimum wages are set by state governments for employees in 'selected, scheduled' employment and this has led to 1709 different rates across the country. As the coverage is not complete these rates are applicable for an estimated of 66 % of wage workers.

A national minimum wage floor was introduced in the 1990s which has progressively increased to Rs 176 per day in 2017 but this wage floor is not legally binding, in spite of a recurrent discussion since the 1970s.

Real average daily wages in India almost doubled in the first two decades after economic reforms, but low pay and wage inequality remains a serious challenge to inclusive growth.

Overall, in 2009-10, a third of all of wage workers were paid less than the national minimum wage, which is merely indicative and not legally binding. That includes 41% of all casual workers and 15% of salaried workers.

Statement 3: The gender wage gap decreased from 48% in 1993-94 to 34% in 2011-12, but still remains high by international standards. And of all worker groups, the average wages of casual rural female workers was the lowest, at just ₹104 a day.

33. A. 1 and 3 only

Answer Justification :

Justification: These are a new type of gold in the form of very small crystals developed by researchers from Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bengaluru.

The microcrystallites were synthesised by decomposing an organic complex containing gold and other ions under controlled conditions. The newly formed microcrystallites, about 3 micrometre in length were found to be of a different crystal structure.

Normal gold has a (face-centered) cubic structure, while the new ones exhibit deformed cubic structure — tetragonal and orthorhombic cells. The microcrystal gold has been found to be nobler than gold — it do not dissolve in mercury and Aqua regia (a mixture of nitric acid and hydrochloric acid), and showed the least interaction with copper.

Microcrystallites are also more stable than the normal gold.

34. B. 2 only

Answer Justification :

Justification: Statement 1: The option of NOTA for Lok Sabha and assembly elections was prescribed by the SC in 2013. The option of NOTA in RS polls was introduced by the EC in 2014. Thus, India became the 14th country to institute negative voting.

Statement 2: NOTA in indirect elections, such as in the Rajya Sabha, would lead to horse-trading, corruption and use of extra constitutional methods to defeat a party candidate. NOTA also makes the system of proportional representation by means of single transferable vote nugatory and otiose.

The use of NOTA cannot be sanctioned by way of the impugned circulars which has the effect of overriding the provisions of Article 80(4), the provisions of Representation of People Act 1951 and the Conduct of Election Rules 1961.

35. A. 1 and 3 only

Answer Justification :

Justification: The quadrilateral formation includes Japan, India, United States and Australia. All four nations find a common ground of being the democratic nations and common interests of unhindered maritime trade and security.

The idea was first mooted by Japanese Prime Minister Shinzo Abe in 2007. However, the idea couldn't move ahead with Australia pulling out of it.

China's concerns:

The coming together of India, the US, Japan and Australia is being seen as building a strategic partnership to deal with China's rise and its implications. A report on the policy recommendations on Indian Ocean security by four think tanks from the Quad countries has been unveiled.

Important recommendations:

Maintain the momentum of high-level consultations among the Quad countries with the aim of "free and open Indo-Pacific region" and progressively move it to a political level. Australia, Japan, India and the US should work with countries in the IOR to help maintain independent security and economic policies by supporting high-quality alternatives to unilateral Chinese investments and political alignment with Chinese regional objectives.

The four countries should work to oppose the establishment of permanent Chinese military bases in the IOR. This should include demonstrating to China that its security needs can be met through cooperation and consultation with other nations and without the recourse to a "disruptive unilateral military presence."

Naval fleets should evolve increasingly long range operations. This may require consideration in Japan of new options such as nuclear propulsion for its submarines

36. A. 1 only

Answer Justification :

Justification: The Bill seeks to amend Representation of People Act (RPA), 1950 and Representation of People Act (RPA), 1951 to allow for proxy voting and make certain provisions of these Acts gender-neutral.

The Bill proposes to allow non-resident Indians (NRIs) to emerge as a decisive force in the country's electoral politics on their own terms.

The amendment paves the way to remove an “unreasonable restriction” posed by Section 20A of the Representation of the People Act, which requires overseas electors to be physically present in their electoral constituencies to cast their votes.

What necessitated this move?

Section 20A of the Act provides for registration and inclusion of overseas electors in the electoral rolls. The Registration of Electors Rules, 1960 provide for overseas electors to register themselves in the electoral rolls of their respective constituencies on the basis of self-attested copies of their passport and valid visa, and exercise their franchise in person on production of the original passport at the time of voting at the specified polling booth.

Thus, the rules demand for the physical presence of overseas electors in their respective polling stations in India on the day of polling. This causes hardship to the overseas electors. This amendment proposes facilitating an external mode of voting, that is, voting by proxy, whereby such electors can exercise their franchise from their places of residence abroad.

37. B. Environmental and Wildlife clearances

Answer Justification :

Learning: PARIVESH: Pro-Active and Responsive facilitation by Interactive, Virtuous and Environmental Single-window Hub.

“PARIVESH” is a workflow based application, based on the concept of web architecture. It has been rolled out for online submission, monitoring and management of proposals submitted by Project Proponents to the Ministry of Environment, Forest and Climate Change (MOEFCC), as well as to the State Level Environmental Impact Assessment Authorities (SEIAA).

It provides single registration and single sign-in for all types of clearances (i.e. Environment, Forest, Wildlife and CRZ), unique-ID for all types of clearances required for a particular project and a single Window interface for the proponent to submit applications for getting all types of clearances (i.e. Environment, Forests, Wildlife and CRZ clearances).

The system has been designed, developed and hosted by the Ministry of Environment, Forest and Climate Change, with technical support from National Informatics Centre, (NIC). Development through e- Governance. With automatic highlighting of non-compliance by the system, PARIVESH helps in improving the overall performance and efficiency of the whole appraisal process.

It also enables project proponents, citizens to view, track and interact with scrutiny officers, generates online clearance letters, online mailers and alerts to state functionaries in case of delays beyond stipulated time for processing of applications.

38. C. Both 1 and 2

Answer Justification :

Justification: Statement 1: The power of the Election Commission to conduct an election and register/de-register political parties under Article 324 of the Constitution and Section 29A of the Representation of the People Act of 1951, respectively.

Section 8 of the Representation of the People (RP) Act, 1951 disqualifies a person convicted with a sentence of two years or more from contesting elections. But those under trial continued to be eligible to contest elections. The Lily Thomas case (2013), however, ended this unfair advantage. The SC has repeatedly expressed concern about the purity of legislatures.

In 2002, it made it obligatory for all candidates to file an affidavit before the returning officer, disclosing criminal cases pending against them.

The famous order to introduce NOTA was intended to make political parties think before giving tickets to the tainted.

In its landmark judgment of March 2014, the SC accepted the urgent need for cleansing politics of criminalisation and directed all subordinate courts to decide on cases involving legislators within a year, or give reasons for not doing so to the chief justice of the high court.

Statement 2: The court said the EC could de-register a party or withdraw its symbol if it refused to comply.

The suggestion was made by the court in a bid to prevent criminals from entering politics or later contesting elections to become parliamentarians, legislators and Ministers. However, the centre has opposed this move suggesting the following reasons:

A political party has a right to field its candidate. Mere charges of having committed a crime cannot be used to prevent a person from contesting elections. The suggestion made by the court amounts to prematurely disqualifying a candidate. Besides, the court is taking on itself a matter of the legislature.

39. C. Both 1 and 2

Answer Justification :

Justification: Statement 1: NASA is preparing to launch its first mission to return a sample of an asteroid to Earth. The mission will help scientists investigate how planets formed and how life began, as well as improve our understanding of asteroids that could impact Earth.

Statement 2: The Origins, Spectral Interpretation, Resource Identification, Security-Regolith Explorer (OSIRIS-REx) spacecraft will travel to the near-Earth asteroid Bennu and bring a sample back to Earth for intensive study.

40. A. 1 and 2 only

Answer Justification :

Justification: Statement 1 and 2: NABARD found that 52.5% of the agricultural households had an outstanding loan on the date of the survey, and thus were considered indebted. For non-agricultural households in rural India, that figure was 10 percentage points lower, at only 42.8%. Agricultural households reporting any outstanding debt also had a higher debt liability compared with non-agricultural ones.

The average debt of an indebted agricultural household stood at ₹1,04,602 in comparison to ₹76,731 for indebted non-agricultural households. Statement 3: No, these come from small farmers. Small and marginal farmer category owns less than 2 hectares of land.

While all classes of farmers had debt, the highest incidence of indebtedness came from those owning more than two hectares of land. In that category, 60% of households are in debt.

The biggest reason for taking loans among agricultural households was capital expenditure for agricultural purposes, with a quarter of all loans taken for this purpose. While 19% of loans were taken for meeting running expenses for agricultural purposes, another 19% were taken for sundry domestic needs. Loans for housing and medical expenses stood at 11% and 12%, respectively

41. D. 1, 2 and 3

Answer Justification :

Justification: Kanyashree is a conditional cash transfer scheme aiming at improving the status and well being of the girl child by incentivising schooling of teenage girls and delaying their marriages until the age of 18. It received the United Nations Public Service Award last year.

Performance of the scheme: Through the initiative, cash was deposited into the bank account of girls for every year they remained in school and were unmarried. This initiative led to a “drastic reduction in child marriage, increase in female education and female empowerment.” West Bengal government has announced that there would not be any ceiling for a family’s annual earnings to be a beneficiary under the UN award winning Kanyashree scheme. Currently, girls who belong to families with annual family income not more than Rs 1.20 lakh is entitled to get the benefits.

42. C. Both 1 and 2

Answer Justification :

Learning: In a step that would further the cause of conservation of endangered and protected animals, India has got its first scientific and most modern national wildlife genetic resource bank. It is located in Hyderabad at the Laboratory for the Conservation of Endangered Species (LaCONES), a research wing of the Centre for Cellular and Molecular Biology (CCMB).

The state-of-the-art bank is equipped with sophisticated equipment to preserve the genetic resources that could be utilised to virtually resurrect an animal species in case it goes extinct. The bank that contains genetic resources of about 250 wildlife species. The Genetic Resource Bank will store genetic material of Indian species. It will also help in protecting India's biodiversity and environment.

43. D. 1 and 2 only

Answer Justification :

Justification: It will amend the Arbitration and Conciliation Act, 1996. The Act contains provisions to deal with domestic and international arbitration, and defines the law for conducting conciliation proceedings.

Key features of the Bill are:

Arbitration Council of India: The Bill seeks to establish an independent body called the Arbitration Council of India (ACI) for the promotion of arbitration, mediation, conciliation and other alternative dispute redressal mechanisms.

Its functions include: (i) framing policies for grading arbitral institutions and accrediting arbitrators, (ii) making policies for the establishment, operation and maintenance of uniform professional standards for all alternate dispute redressal matters, and (iii) maintaining a depository of arbitral awards (judgments) made in India and abroad.

Composition of the ACI: The ACI will consist of a Chairperson who is either: (i) a Judge of the Supreme Court; or (ii) a Judge of a High Court; or (iii) Chief Justice of a High Court; or (iv) an eminent person with expert knowledge in conduct of arbitration. Other members will include an eminent arbitration practitioner, an academician with experience in arbitration, and government appointees.

Appointment of arbitrators: Under the 1996 Act, parties were free to appoint arbitrators. In case of disagreement on an appointment, the parties could request the Supreme Court, or the concerned High Court, or any person or institution designated by such Court, to appoint an arbitrator.

Role of courts: Under the Bill, the Supreme Court and High Courts may now designate arbitral institutions, which parties can approach for the appointment of arbitrators. For international commercial arbitration, appointments will be made by the institution designated by the Supreme Court. For domestic arbitration, appointments will be made by the institution designated by the concerned High Court. In case there are no arbitral institutions available, the Chief Justice of the concerned High Court may maintain a panel of arbitrators to perform the functions of the arbitral institutions. An application for appointment of an arbitrator is required to be disposed of within 30 days.

Relaxation of time limits: Under the 1996 Act, arbitral tribunals are required to make their award within a period of 12 months for all arbitration proceedings. The Bill proposed to remove this time restriction for international commercial arbitrations.

Learning: Arbitration is a settlement of dispute between two parties to a contract by a neutral third party i.e. the arbitrator without resorting to court action. The process can be tailored to suit parties' particular needs.

Arbitrators can be chosen for their expertise. It is confidential and can be speedier and cheaper than court. There are limited grounds of appeal. Arbitral awards are binding and enforceable through courts.

44. A. China's Xinjiang province

Answer Justification :

Learning: They make up around 45% of the population there. Xinjiang is officially designated as an autonomous region within China, like Tibet to its south.

A UN human rights committee has heard there are credible reports that China is holding a million Uighurs in "counter-extremism centres". Human rights groups including Amnesty International and Human Rights Watch have submitted reports to the UN committee documenting claims of mass imprisonment, in camps where inmates are forced to swear loyalty to China's President Xi Jinping.

The World Uyghur Congress said in its report that detainees are held indefinitely without charge, and forced to shout Communist Party slogans.

45. A. 1 only

Answer Justification :

Justification: Statement 1: The Giant Metrewave Radio Telescope (GMRT), located near Pune in India, is an array of thirty fully steerable parabolic radio telescopes of 45 metre diameter, observing at metre wavelengths.

It is operated by the National Centre for Radio Astrophysics, a part of the Tata Institute of Fundamental Research, Mumbai. At the time it was built, it was the world's largest interferometric array offering a baseline of up to 25 kilometres (16 mi).

One of the aims for the telescope during its development was to search for the highly redshifted 21-cm line radiation from primordial neutral hydrogen clouds in order to determine the epoch of galaxy formation in the universe.

Statement 2: Radio galaxies are very rare objects in the universe. They are colossal galaxies with a supermassive black hole in their centre that actively accretes gas and dust from its surroundings. This activity initiates the launch of high-energy jet streams, which are capable of accelerating charged particles around the supermassive black hole to almost the speed of light.

The discovery of such galaxies at extremely large distances is important for our understanding of the formation and evolution of galaxies.

46. A. 1 only

Answer Justification :

Justification: *Parens patriae* in Latin means 'parent of the country' and is a doctrine that grants the court inherent power and authority to act as guardian for those who are unable to take care for themselves.

Statement 2: The SC has mentioned this doctrine several times in their judgments. The article (aforementioned) gives a brief background of the doctrine. It is a good read. The Uttarakhand high court would henceforth act as the legal guardian of cows in the state. It has also issued some directions to the state government in this regard.

This is the first time in India that a court has had invoked the '*parens patriae*' doctrine for "cow protection". It has been invoked at other times for other reasons.

Implications of the judgment:

The court can now act as the legal guardian of the cows in the state and keep a tab on all issues related to cows especially its directions with regard to their protection. If there are any violations in laws and rules regarding cows, the court can take suo moto cognisance and issue directions to the state.

47. B. Corona of the Sun

Answer Justification :

Justification: A nanoflare is a very small episodic heating event which happens in the corona, the external atmosphere of the Sun. According to Parker a nanoflare arises from an event of magnetic reconnection which converts the energy stored in the solar magnetic field into the motion of the plasma. Telescopic observations suggest that the solar magnetic field, which theoretically is "frozen" into the gas of the plasma in the photosphere, expands into roughly semicircular structures in the corona.

48. B. China

Answer Justification :

Justification: The Fragile Five include Turkey, Brazil, India, South Africa, and Indonesia. The Fragile Five came into focus in 2013 and 2014 as emerging market economies that relied on foreign investments to cover current account deficits and finance growth began to see capital outflows as a result of improvements in developed economies.

As capital flows out of emerging markets to developed markets, many of their currencies experienced significant weakness and made it difficult to finance current account deficits. The lack of new investment also made it impossible to finance many growth projects, which contributed to a slowdown in their respective economies. This created a potential issue for certain vulnerable economies.

49. B. 1, 2 and 4 only

Answer Justification :

Justification: Malware is defined as a software designed to perform an unwanted illegal act via the computer network. It could be also defined as software with malicious intent. Malware can be classified based on how they get executed, how they spread, and/or what they do. Some of them are discussed below.

a) Virus: A virus is a program that can infect other programs by modifying them to include a possible evolved copy of itself. A virus can spread throughout a computer or network using the authorization of every user using it to infect their program. Every program so infected may also act as a virus and thus the infection grows. Viruses normally affect program files, but in some cases they also affect data files disrupting the use of data and destroying them completely.

b) Worms: Worms are also disseminated through computer networks, unlike viruses, computer worms are malicious programs that copy themselves from system to system, rather than infiltrating legitimate files. For example, a mass mailing e-mail worm is a worm that sends copies of itself via email. A network worm, on the other hand makes copies of itself throughout a network, thus disrupting an entire network.

c) Trojans: Trojan is another form of Malware, trojans do things other than what is expected by the user. Trojan or trojan horse is a program that generally impairs the security of a system. Trojans are used to create back-doors (a program that allows outside access into a secure network) on computers belonging to a secure network so that a hacker can have access to the secure network.

Unlike viruses, Trojan horses do not replicate themselves but they can be just as destructive. One of the most insidious types of Trojan horse is a program that claims to rid your computer of viruses but instead introduces viruses onto your computer.

d) Hoax: Hoax is an e-mail that warns the user of a certain system that is harming the computer. The message thereafter instructs the user to run a procedure (most often in the form of a download) to correct the harming system. When this program is run, it invades the system and deletes an important file.

e) Spyware: Spyware invades a computer and, as its name implies, monitors a user's activities without consent. Spywares are usually forwarded through unsuspecting e-mails with bonafide email i.ds. Spyware continues to infect millions of computers globally.

50. C. The Economist Group

Answer Justification :

Justification: Statement 1: Founded in 1946 its parent organization is Economist Group, The Economist Newspaper Group, Inc. The liveability index quantifies the challenges that might be presented to an individual's lifestyle in 140 cities worldwide, and assesses which locations provide the best living conditions.

The list ranks 140 cities on a range of factors, including:

Political and social stability.

Crime

Education

Access to healthcare.

The survey rates cities worldwide based on 30 qualitative and quantitative criteria, which fall into five general categories:

Stability

Health care

Culture and environment.

Education

Infrastructure

51. A. A is correct, and R is an appropriate explanation of A.

Answer Justification :

Justification and learning: Nitrogen is one of the five major chemical elements that are necessary for life. While nitrogen is the most abundant of these, more than 99% of it occurs as molecular nitrogen, or N_2 , which cannot be used by most organisms. This is because breaking the triple bond holding the two nitrogen atoms together requires a large amount of energy, which can be mustered only through high-temperature processes or by a small number of nitrogen-fixing microbes.

Most living organisms can only make use of reactive nitrogen, which includes inorganic forms of nitrogen like ammonia, ammonium, nitrogen oxide, nitric acid, nitrous oxide, and nitrate, and organic compounds like urea, amines, proteins, and nucleic acids. It includes any nitrogen compound that is radiatively, chemically or biological active.

In the prehuman world, a small amount of usable reactive nitrogen was created from N_2 by lightening and biological nitrogen fixation, but the spread of reactive nitrogen was held in check by denitrification, a process that converts reactive N back to N_2 .

52. B. 2 and 3 only

Answer Justification :

Justification: PSU banks are expected to come out of the Prompt Corrective Action (PCA) framework by the end of this year. Currently, 11 out of a total of 21 state-owned banks are under the RBI's Prompt Corrective Action (PCA) framework. It is applicable both to public and private sector banks.

The PCA is invoked when certain risk thresholds are breached. There are three risk thresholds which are based on certain levels of asset quality, profitability, capital and the like. The third such threshold, which is maximum tolerance limit, sets net NPA at over 12% and negative return on assets for four consecutive years.

PCA norms allow the regulator to place certain restrictions such as halting branch expansion and stopping dividend payment. It can even cap a bank's lending limit to one entity or sector. Other corrective action that can be imposed on banks include special audit, restructuring operations and activation of recovery plan. Banks' promoters can be asked to bring in new management, too. The RBI can also supersede the bank's board, under PCA.

What are the types of sanctions?

There are two type of restrictions, mandatory and discretionary. Restrictions on dividend, branch expansion, directors compensation, are mandatory while discretionary restrictions could include curbs on lending and deposit. In the cases of two banks where PCA was invoked after the revised guidelines were issued — IDBI Bank and UCO Bank — only mandatory restrictions were imposed. Both the banks breached risk threshold 2.

What will a bank do if PCA is triggered?

Banks are not allowed to re new or access costly deposits or take steps to increase their fee-based income. Banks will also have to launch a special drive to reduce the stock of NPAs and contain generation of fresh NPAs. They will also not be allowed to enter into new lines of business. RBI will also impose restrictions on the bank on borrowings from interbank market.

53. C. Both 1 and 2

Answer Justification :

Justification: Funding of individual project will vary from state to state and will be finalised on the basis of detailed project reports prepared by PMC (Programme Management Consultant).

A National Steering Committee (NSC) will be constituted with Minister in charge of M/O Tourism as Chairman, to steer the mission objectives and vision of the scheme.

A Mission Directorate headed by the Member Secretary, NSC as a nodal officer will help in identification of projects in consultation with the States/ UTs governments and other stake holders. PMC will be a national level consultant to be appointed by the Mission Directorate.

54. B. 2 and 3 only

Answer Justification :

Justification and Learning: The corona gives rise to the solar wind, a continuous flow of charged particles that permeates the solar system. Unpredictable solar winds cause disturbances in our planet's magnetic field and can play havoc with communications technology on Earth. Nasa hopes the findings will enable scientists to forecast changes in Earth's space environment.

Why do we study the sun and the solar wind?

The sun is the only star we can study up close. By studying this star we live with, we learn more about stars throughout the universe. The sun is a source of light and heat for life on Earth. The more we know about it, the more we can understand how life on Earth developed.

The sun also affects Earth in less familiar ways. It is the source of the solar wind; a flow of ionized gases from the sun that streams past Earth at speeds of more than 500 km per second (a million miles per hour).

Disturbances in the solar wind shake Earth's magnetic field and pump energy into the radiation belts, part of a set of changes in near-Earth space known as space weather. Space weather can change the orbits of satellites, shorten their lifetimes, or interfere with onboard electronics. The more we learn about what causes space weather – and how to predict it – the more we can protect the satellites we depend on.

The solar wind also fills up much of the solar system, dominating the space environment far past Earth. As we send spacecraft and astronauts further and further from home, we must understand this space environment just as early seafarers needed to understand the ocean.

55. D. 1, 2, 3 and 4

Answer Justification :

Justification: The Telangana Archives and Research Institute holds a whopping 1.55 lakh documents — all on handmade paper — including 5,000 from the period of Shah Jahan (1628-1658) and another 1.5 lakh of Aurangzeb (1658-1707). Written in Persian in Shikasta script, cursive style, the documents are linked and arranged in chronological order — date, month and regional yearwise.

Farman- order of the emperor.

Nishan- order of a member of the royal family.

Yaddasht-i-ahkam-i-muqaddas- Memorandum containing imperial orders.

Parwana- orders issued by higher authorities.

Siyaha huzur- proceedings of the provincial court.

Roznamcha-i-waqai- daily news report.

Qabzul wasil- bill payments.

Andarz-o-chihra- documents on personnel and horses.

Daftar-i-Diwani- the administrative wing of Hyderabad State.

Theyaddasht-i-ahkam-i-muqaddas- Reports on recommendations of pay hikes for staff sent to the emperor.

56. A. Goa, Karnataka and Maharashtra

Answer Justification :

Learning: The Mahadayi river basin drains an area of 2032 square kilometres of which 375 square km lies in Karnataka, 77 sq km in Maharashtra and the remaining in Goa. The dispute arose since Goa was opposed to Karnataka's plans to divert waters from the tributaries of the river, which Karnataka justified was for drinking water purposes. The tribunal was constituted in November 2010.

The tribunal has given the final verdict. The tribunal has allowed Karnataka access to 13.4 tmc of water for its consumptive use (5.4 tmc) and power generation (8.02 tmc).

The share of Goa was pegged at 24 tmc with the Tribunal allowing it for the state's municipal water needs, irrigation water requirements and industrial water demands. Maharashtra got the lowest share of 1.33 tmc for meeting its in-basin needs with respect to five projects.

The tribunal also directed the Centre to set up the Mahadayi Water Management Authority to implement its report and final decision.

57. D. 1 and 2 only

Answer Justification :

Context: The Defence Acquisition Council (DAC), in a landmark decision, has approved procurement of 111 Utility Helicopters for the Indian Navy at a cost of over Rs. 21,000 crores. This is the first project under the With reference to the Ministry of Defence's (MoD) prestigious Strategic Partnership (SP) Model that aims at providing significant fillip to the Government's 'Make in India' programme.

Concept: The strategic partner model is intended to enhance competition, increase efficiencies, facilitate faster and more significant absorption of technology, create a tiered industrial ecosystem, ensure development of a wider skill base, trigger innovation and enable participation in global value chains as well as promote exports.

Under the model, the government intends to boost private sector participation and create domestic expertise in four key areas, namely, fighter aircraft, helicopters, submarines, and armoured vehicles and main battle tanks.

One company would be selected for each area based on its competence, which would then tie up with the foreign Original Equipment Manufacturer selected through the procurement process, to build the platform in India with significant technology transfer.

The model, whose concept was first suggested by the Dhirendra Singh Committee in its July 2015 report, populates Chapter VII of the Defence Procurement Procedure 2016 (DPP 2016). The ultimate aim of the model is to enhance India's self-reliance index in defence procurement which continues to remain at an abysmally low level despite a huge defence industrial complex much of which is managed by state-owned Defence Public Sector Undertakings (DPSUs) and the Ordnance Factory Board (OFB).

Justification: Statement 1: The strategic partnership model seeks to identify a few Indian private companies as Strategic Partners who would initially tie up with a few shortlisted foreign Original Equipment Manufacturers (OEMs) to manufacture big-ticket military platforms. In the initial phase, the selection of SPs would be confined to four segments: Fighter Aircraft, Helicopters, Submarines, and Armoured Fighting Vehicles (AFV)/Main Battle Tanks (MBT). In each segment, "only one SP would generally be selected".

Statement 2: According to the guidelines stipulated in the new Chapter VII of DPP 2016, any applicant company interested in participating in the selection process for strategic partners must be owned and controlled by resident Indians. This means that the majority in a company's board of directors, including the Chief Executive Officer (CEO), must be resident Indians, and that a minimum 51 per cent of its equity must be owned by resident Indians. The cap of a maximum of 49 per cent Foreign Direct Investment (FDI) in SPs, which is also the condition in the newly revised 'Make' procedure, is intended to keep the crucial decision-making and intellectual property rights (IPR) in the hands of resident Indians.

Statement 3: It is to be noted, however, that existing Strategic Partners would not be the automatic choice for future contracts, although they would be given some weightage in the tendering process for the core expertise developed during the execution of the initial contract under the Strategic Partnership model.

58. A. 1 only

Answer Justification :

Background and Justification: In the world of particle physics, subatomic particles are difficult to observe because of their size. They are smaller than an atom and the wavelength of visible light, so the only way we can detect and observe their behavior is by smashing the atomic nucleus of particles together at intense speeds (close to the speed of light), which generates vast amounts of exotic particles that are only created at high energies. These collisions resemble the conditions physicists believe existed during the time of the big bang.

Thanks to particle accelerators like the Large Hadron Collider, the Relativistic Heavy Ion Collider and the (now defunct) Tevatron circular particle accelerator, physicists have made a lot of progress

in designing a “theory of everything.” This theory postulates how all the subatomic particles in the universe operates and how they interact to comprise the Universe as we know it. One of the most complete models that comes anywhere near producing a “theory of everything,” is the Standard Model of Fundamental Particles and Interactions, which describes how particles and forces interact. The standard model also includes an explanation for 3 of the 4 fundamental forces of nature on a subatomic scale.

59. D. 1, 2, 3 and 4 only

Answer Justification :

Justification: The Pradhan Mantri Awas Yojana (Urban) Programme launched by the Ministry of Housing and Urban Poverty Alleviation (MoHUPA), in Mission mode envisions provision of Housing for All by 2022, when the Nation completes 75 years of its Independence.

The beneficiaries are poor and people living under EWS and LIG categories in the country. The scheme is divided into three phases. In the first phase, a total of 100 cities will be covered from April 2015 to March 2017. In phase two, 200 cities will be covered from April 2017 to March 2019.

In the third phase, the leftover cities will be covered from April 2019 to March 2022. The government is providing an interest subsidy of 6.5% on housing loans which can be availed by beneficiaries for 15 years from start of loan date.

The government will grant Rs 1 lakh to all the beneficiaries of the scheme. In addition, Rs 1.5 lakh will be given to all eligible urban poor who want to construct their houses in urban areas or plan to go for renovation in their existing houses. One can also avail loans under this scheme to build toilets in existing houses.

60. B. 2 and 3 only

Answer Justification :

Justification: Bombay Natural History Society, founded in 1883, is one of the largest nongovernmental organisations in India engaged in conservation and biodiversity research.

BNHS is the partner of BirdLife International in India. It has been designated as a ‘Scientific and Industrial Research Organisation’ by the Department of Science and Technology. The BNHS logo is the great hornbill.

Internet of Birds: IT consultancy firm Accenture and the Bombay Natural History Society have developed Internet of Birds platform that identifies bird species found in India using Artificial

Intelligence technology, including machine learning and computer vision, from digital photos that are uploaded by the public.

61. C. Both 1 and 2

Answer Justification :

Justification: Statement 1: There are two types of fundamental particles: matter particles, some of which combine to produce the world about us, and force particles – one of which, the photon, is responsible for electromagnetic radiation. These are classified in the standard model of particle physics, which theorises how the basic building blocks of matter interact, governed by fundamental forces. Matter particles are fermions while force particles are bosons.

Statement 2: The charged electron is responsible for electric currents. Its uncharged partner, known as the electron-neutrino, is produced copiously in the sun and these interact so weakly with their surroundings that they pass unhindered through the Earth. A million of them pass through every square centimetre of your body every second, day and night.

Electron-neutrinos are produced in unimaginable numbers during supernova explosions and it is these particles that disperse elements produced by nuclear burning into the universe. These elements include the carbon from which we are made, the oxygen we breathe, and almost everything else on earth. Therefore, in spite of the reluctance of neutrinos to interact with other fundamental particles, they are vital for our existence.

62. C. 4 only

Answer Justification :

Justification: Statement 1, 2 and 3: A writ of certiorari or a writ in the nature of certiorari can only be issued by the Supreme court under Art. 32 and a High court under Art. 226 to direct , inferior courts , tribunals or authorities to transmit to the court the record of proceedings disposed of or pending therein for scrutiny , and , if necessary , for quashing the same . But a writ of certiorari can never be issued to call for the record or papers and proceedings of an Act or Ordinance and for quashing such an Act or Ordinance.

Statement 4: There is a fundamental distinction between writs of prohibition and certiorari. They are issued at different stages of proceedings. When an inferior court takes up a hearing for a matter over which it has no jurisdiction, the person against whom hearing is taken can move the superior court for writ of prohibition on which order would be issued forbidding the inferior court from continuing the proceedings.

On the other hand if the court hears the matter and gives the decision , the party would need to move to superior court to quash the decision / order on the ground of want of jurisdiction.

63. A. 1 only

Answer Justification :

Justification: Some other cases are: the citizen has obtained the citizenship by fraud; the citizen has shown disloyalty to the Constitution of India (but not to the laws, because most law breakers are only imprisoned or punished):

the citizen has unlawfully traded or communicated with the enemy during a war; the citizen has, within five years after registration or naturalisation, been imprisoned in any country for two years; and the citizen has been ordinarily resident out of India for seven years continuously.

64. C. 2 only

Answer Justification :

Justification: These rights are not available to the foreigners (friendly aliens): Right against discrimination on grounds of religion, race, caste, sex or place of birth (Article 15).

Right to equality of opportunity in the matter of public employment (Article 16). Right to freedom of speech and expression, assembly, association, movement, residence and profession (Article 19). Cultural and educational rights (Articles 29 and 30). Right to vote in elections to the Lok Sabha and state legislative assembly. Right to contest for the membership of the Parliament and the state legislature.

Eligibility to hold certain public offices, that is, President of India, Vice-President of India, judges of the Supreme Court and the high courts, governor of states, attorney general of India and advocate general of states.

65. D. National Integrity

Answer Justification :

Learning: In India, everyone is free to choose a religion and practice that religion. Freedom of religion also includes the freedom of conscience. This means that a person may choose any religion or may choose not to follow any religion.

Freedom of religion includes the freedom to profess, follow and propagate any religion. Freedom of religion is subject to certain limitations. The government can impose restrictions on the practice of freedom of religion in order to protect public order, morality and health. This means that the freedom of religion is not an unlimited right.

The government can interfere in religious matters for rooting out certain social evils. For example in the past, the government has taken steps banning practices like sati, bigamy or human sacrifice. Such restrictions cannot be opposed in the name of interference in right to freedom of religion.

66. B. Kargil

Answer Justification :

Justification: The Karakoram pass falls on the boundary of Indian state of Jammu and Kashmir and China (Xinjiang Autonomous Region). Siachen Glacier area immediately to the west of the pass. This situation arose from the Simla Agreement, signed in 1972 between India and Pakistan, when the treaty failed to specify the last 100 km (60 mi) or so of the cease-fire line from the end of the Line of Control to the border with China.

A potential China-India-Pakistan tripoint at Karakoram Pass is referenced in a 1963 boundary treaty between China and Pakistan concerning the Trans-Karakoram Tract, but India was not party to that treaty nor any tripoint agreement.

The current de facto tripoint is about 100 km west of the pass near Indira Col in the Siachen Muztagh, where the Actual Ground Position Line between Indian and Pakistani forces meets the border with China.

67. B. 2 only

Answer Justification :

Justification: Statement 2: The Tashkent Declaration was a peace agreement between India and Pakistan signed on 10 January 1966 that resolved the Indo-Pakistani War of 1965. The declaration stated that Indian and Pakistani forces would pull back to their pre-conflict positions, pre-August lines, no later than 25 February 1966, the nations would not interfere in each other's internal affairs, economic and diplomatic relations would be restored, there would be an orderly transfer of prisoners of war, and the two leaders would work towards improving bilateral relations.

Statement 1: The agreement was criticized in India because it did not contain a no-war pact or any renunciation of guerrilla warfare in Kashmir. After signing the agreement, Indian Prime Minister Lal Bahadur Shastri died mysteriously in Tashkent.

68. B. 2 only

Answer Justification :

Justification: Statement 1: Throughout the 1940s and 1950s, Nehru had been an ardent advocate of Asian unity. Under his leadership, India convened the Asian Relations Conference in March 1947, five months ahead of attaining its independence. India made earnest efforts for the early realisation of freedom of Indonesia from the Dutch colonial regime by convening an international conference in 1949 to support its freedom struggle.

Statement 2: India was a staunch supporter of the decolonisation process and firmly opposed racism, especially apartheid in South Africa. The Afro-Asian conference held in the Indonesian city of Bandung in 1955, commonly known as the Bandung Conference, marked the zenith of India's engagement with the newly independent Asian and African nations.

The Bandung Conference later led to the establishment of the NAM. The First Summit of the NAM was held in Belgrade in September 1961.

69. A. one-third

Answer Justification :

Justification: British India was divided into what were called the British Indian Provinces and the Princely States. The British Indian Provinces were directly under the control of the British government. On the other hand, several large and small states ruled by princes, called the Princely States, enjoyed some form of control over their internal affairs as long as they accepted British supremacy.

This was called paramountcy or suzerainty of the British crown. Princely States covered one-third of the land area of the British Indian Empire and one out of four Indians lived under princely rule. Just before Independence it was announced by the British that with the end of their rule over India, paramountcy of the British crown over Princely States would also lapse. This meant that all these states, as many as 565 in all, would become legally independent.

The British government took the view that all these states were free to join either India or Pakistan or remain independent if they so wished. This decision was left not to the people but to the princely rulers of these states. This was a very serious problem and could threaten the very existence of a united India.

70. C. 1 and 3 only

Answer Justification :

Justification: Statement 1: During colonial rule, the state boundaries were drawn either on administrative convenience or simply coincided with the territories annexed by the British government or the territories ruled by the princely powers.

Our national movement had rejected these divisions as artificial and had promised the linguistic principle as the basis of formation of states. In fact after the Nagpur session of Congress in 1920 the principle was recognised as the basis of the reorganisation of the Indian National Congress party itself.

Many Provincial Congress Committees were created by linguistic zones, which did not follow the administrative divisions of British India.

Statement 2: A few days before Independence, the Maharaja of Manipur, Bodhachandra Singh, signed the Instrument of Accession with the Indian government on the assurance that the internal autonomy of Manipur would be maintained. Under the pressure of public opinion, the Maharaja held elections in Manipur in June 1948 and the state became a constitutional monarchy. Thus Manipur was the first part of India to hold an election based on universal adult franchise. In the Legislative Assembly of Manipur there were sharp differences over the question of merger of Manipur with India.

Statement 3: The Nizam wanted an independent status for Hyderabad. He entered into what was called the Standstill Agreement with India in November 1947 for a year while negotiations with the Indian government were going on. In the meantime, a movement of the people of Hyderabad State against the Nizam's rule gathered force.

The peasantry in the Telangana region in particular, was the victim of Nizam's oppressive rule and rose against him. Hyderabad was ultimately integrated in India.

71. D. 1 and 3 only

Answer Justification :

Justification: Article 51 of the Indian Constitution lays down some Directive Principles of State Policy on 'Promotion of international peace and security'. "The State shall endeavour to –

- (a) Promote international peace and security
- (b) Maintain just and honourable relations between nations
- (c) Foster respect for international law and treaty obligations in the dealings of organised people with one another; and

(d) Encourage settlement of international disputes by arbitration.”

72. C. Second World War

Answer Justification :

Justification: The Indian National Army was an armed force formed by Indian nationalists in 1942 in Southeast Asia during World War II. Its aim was to secure Indian independence from British rule. It formed an alliance with Imperial Japan in the latter's campaign in the Southeast Asian theatre of WWII.

The army was first formed in 1942 under Mohan Singh, by Indian PoWs of the British-Indian Army captured by Japan in the Malayan campaign and at Singapore. This first INA collapsed and was disbanded in December that year after differences between the INA leadership and the Japanese military over its role in Japan's war in Asia.

It was revived under the leadership of Subhas Chandra Bose after his arrival in Southeast Asia in 1943. The creation of the INA by Netaji Subhash Chandra Bose during the Second World War was the clearest manifestation of the linkages established between India and overseas Indians during the freedom struggle.

73. D. In the year 1960

Answer Justification :

Justification & Learning: You can eliminate such questions by understanding the geo-political scenario then. Had the treaty not been signed, the Indo-Pak 1965 war could have been a disaster because India, being an upper riparian state, could have choked Pakistan's water supply. The India-Pakistan Indus Waters Treaty was signed by Nehru and General Ayub Khan in 1960. Despite all ups and downs in the Indo-Pak relations, A long-term dispute about the sharing of river waters was resolved through mediation by the World Bank.

We will cover the details of the treaty later. It is an important topic and will keep popping up.

74. C. 3 only

Answer Justification :

Justification: India has opposed these treaties since they were selectively applicable to the nonnuclear powers and legitimised the monopoly of the five nuclear weapons powers. Thus, India

opposed the indefinite extension of the NPT in 1995 and also refused to sign the Comprehensive Test Ban Treaty (CTBT). India conducted a series of nuclear tests in May 1998, demonstrating its capacity to use nuclear energy for military purposes. Pakistan soon followed, thereby increasing the vulnerability of the region to a nuclear exchange.

The international community was extremely critical of the nuclear tests in the subcontinent and sanctions were imposed on both India and Pakistan, which were subsequently waived. India's nuclear doctrine of credible minimum nuclear deterrence professes "no first use" and reiterates India's commitment to global, verifiable and non-discriminatory nuclear disarmament leading to a nuclear weapons free world.

75. B. C. Rajagopalachari

Answer Justification :

Justification: C. Rajagopalachari (1878-1972) was a senior leader of Congress and literary writer. He was a close associate of Mahatma Gandhi and a member of Constituent Assembly. He was also the first Indian to be the Governor General of India (1948-1950) and a minister in Union Cabinet.

He later became Chief Minister of Madras state. He was first recipient of the Bharat Ratna Award and founded Swatantra Party in 1959.

76. D. 1, 2 and 3

Answer Justification :

Justification: He (1875-1950) was a leader of the freedom movement; Congress leader; and a follower of Mahatma Gandhi. He was also the Deputy Prime Minister and first Home Minister of independent India and played an important role in the integration of Princely States with India. He was a member of important committees of the Constituent Assembly on Fundamental Rights, Minorities and Provincial Constitution.

77. A. 1 only

Answer Justification :

Justification: The Bombay Plan is the name commonly given to a World War II-era set of proposals for the development of the post-independence economy of India. The plan, published in 1944/1945 by eight leading Indian industrialists, proposed state intervention in the economic development of the nation after independence from the United Kingdom (which took place in

1947). Titled A Brief Memorandum Outlining a Plan of Economic Development for India, the signatories of the Plan were Jamshedji Ratanji Dadabhoy Tata, Ghanshyam Das Birla, Ardeshir Dalal, Sri Ram, Kasturbhai Lalbhai, Ardeshir Darabshaw Shroff, Sir Purshottamdas Thakurdas and John Mathai.

The Plan went through two editions: the first was published in January 1944. This first edition became "Part I" of the second edition, published in 2 volumes in 1945 under the editorship of Purushottamdas Thakurdas.

Although Jawaharlal Nehru, the first Prime Minister of India, did not officially accept the plan, "the Nehruvian era witnessed [what was effectively] the implementation of the Bombay Plan; a substantially interventionist state and an economy with a sizeable public sector.

78. D. 1 and 2 only

Answer Justification :

Justification: The Second FYP stressed on heavy industries. It was drafted by a team of economists and planners under the leadership of P. C. Mahalanobis. If the first plan had preached patience, the second wanted to bring about quick structural transformation by making changes simultaneously in all possible directions.

S1: Before this plan was finalised, the Congress party at its session held at Avadi near the then Madras city, passed an important resolution. It declared that 'socialist pattern of society' was its goal.

This was reflected in the Second Plan. The government imposed substantial tariffs on imports in order to protect domestic industries. Such protected environment helped both public and private sector industries to grow.

79. B. 2 only

Answer Justification :

Justification: Statement 1: It took more than a decade for India and China to resume normal relations. It was in 1976 that full diplomatic relations were restored between the two countries. Atal Behari Vajpayee was the first top level leader (he was then External Affairs Minister) to visit China in 1979. Later, Rajiv Gandhi became the first Prime Minister after Nehru to visit China. Since then, the emphasis is more on trade relations between the two countries.

Statement 2: The cause of the war was a dispute over the sovereignty of the widely separated Aksai Chin and Arunachal Pradesh border regions. Aksai Chin, claimed by India to belong to Kashmir and by China to be part of Xinjiang, contains an important road link that connects the

Chinese regions of Tibet and Xinjiang. China's construction of this road was one of the triggers of the conflict. There were other related issues as well such as annexation of Tibet.

80. A. Demchok

81. D. 2 only

Answer Justification :

Justification: It includes:

A set of high material quality-of-life indicators coinciding with low per-capita incomes, both distributed across nearly the entire population of Kerala. A set of wealth and resource redistribution programmes that have largely brought about the high material quality-of-life indicators.

High levels of political participation and activism among ordinary people along with substantial numbers of dedicated leaders at all levels. Kerala's mass activism and committed cadre were able to function within a largely democratic structure, which their activism has served to reinforce. During the 1970s, the economists noted that despite low incomes, the state had high literacy rates, healthy citizens, and a politically active population. Researchers began to delve more deeply into what was going in the Kerala Model, since human development indexes seemed to show a standard of living which was comparable with life in developed nations, on a fraction of the income.

The development standard in Kerala is comparable to that of many first world nations, and is widely considered to be the highest in India at that time.

82. D. 1, 2 and 3

Answer Justification :

Justification: A marxist in his youth; JP was the founder general secretary of the Congress Socialist party and the Socialist Party.

A hero of the 1942 Quit India movement; he declined to join Nehru's cabinet; and after 1955 quit active politics. He became a Gandhian and was involved in the Bhoodan movement, negotiations with the Naga rebels, peace initiative in Kashmir and ensured the surrender of decoits in Chambal.

He was also the leader of Bihar movement, he became the symbol of opposition to Emergency and was the moving force behind the formation of Janata Party.

83. B. 1 and 2 only

Answer Justification :

Justification: Statement 3: Non-alignment is not neutrality. Neutrality refers principally to a policy of staying out of war. States practising neutrality are not required to help end a war. They do not get involved in wars and do not take any position on the appropriateness or morality of a war. Non-aligned states, including India, were actually involved in wars for various reasons. They also worked to prevent war between others and tried to end wars that had broken out.

S1 and 2: The first non-aligned summit was held in Belgrade in 1961.

This was the culmination of at least three factors:

cooperation among the five founder countries (described below), growing Cold War tensions and its widening arenas, and the dramatic entry of many newly decolonised African countries into the international arena. By 1960, there were 16 new African members in the UN. NAM went back to the friendship between three leaders — Yugoslavia's Josip Broz Tito, India's Jawaharlal Nehru, and Egypt's leader Gamal Abdel Nasser — who held a meeting in 1956.

Indonesia's Sukarno and Ghana's Kwame Nkrumah strongly supported them. These five leaders came to be known as the five founders of NAM. The first summit was attended by 25 member states. Over the years, the membership of NAM has expanded. The latest meeting, the 14th summit, was held in Havana in 2006. It included 116 member states and 15 observer countries.

84. A. 1 and 2 only

Answer Justification :

Justification: Most countries of western Europe sided with the US and those of eastern Europe joined the Soviet camp. That is why these were also called the 'western' and the 'eastern' alliances.

85. A. 1 only

Answer Justification :

Justification: Statement 1: LTBT banned nuclear weapon tests in the atmosphere, in outer space and under water. Signed by the US, UK and USSR in Moscow on 5 August 1963. Entered into force on 10 October 1963.

Statement 2: Strategic Arms Limitation Talks I (SALT-I)

The first round of the Strategic Arms Limitation Talks began in November 1969. The Soviet leader Leonid Brezhnev and the US President Richard Nixon signed the following in Moscow on 26 May 1972 – a) Treaty on the limitation of Anti-Ballistic Missile Systems (ABM Treaty); and b) Interim Agreement on the limitation of strategic offensive arms. Entered into force on 3 October 1972.

Statement 3: Strategic Arms Reduction Treaty I (START-I)

Treaty signed by the USSR President Mikhail Gorbachev and the US President George Bush (Senior) on the reduction and limitation of strategic offensive arms in Moscow on 31 July 1991

86. C. Both 1 and 2

Answer Justification :

Justification: The collapse of communism was followed in most of these countries by a painful process of transition from an authoritarian socialist system to a democratic capitalist system. The model of transition in Russia, Central Asia and east Europe that was influenced by the World Bank and the IMF came to be known as ‘shock therapy’.

Shock therapy varied in intensity and speed amongst the former second world countries, but its direction and features were quite similar. Each of these countries was required to make a total shift to a capitalist economy, which meant rooting out completely any structures evolved during the Soviet period. Above all, it meant that private ownership was to be the dominant pattern of ownership of property.

Privatisation of state assets and corporate ownership patterns were to be immediately brought in. Collective farms were to be replaced by private farming and capitalism in agriculture. This transition ruled out any alternate or ‘third way’, other than state-controlled socialism or capitalism.

87. A. United Nations Security Council (UNSC)

Answer Justification :

Learning: The United Nations Disarmament Commission was first established on 11 January 1952 by United Nations General Assembly Resolution 502 (VI). This commission was put under the jurisdiction of the United Nations Security Council and its mandate included: preparing proposals for a treaty for the regulation, limitation and balanced reduction of all armed forces and all armaments, including the elimination of all weapons of mass destruction.

However, this commission only met a few times, and was followed by a succession of other disarmament-focused bodies: the Ten-Nation Disarmament Committee (1960), the Eighteen Nation Committee on Disarmament (1962), the Conference of the Committee on Disarmament (1969) and, finally, the Conference on Disarmament (1979), which still meets to this day.

88. D. 1, 2, 3 and 4

Answer Justification :

Learning: Created in 1997, UNDG brings together 32 UN agencies and groups, plus five observers working on various development issues. At the global level, the UNDG serves as a high-level forum for joint policy formation and decisionmaking. The UNDG meets three to four times a year under the chairmanship of the UNDG Chair.

89. B. 4123

Answer Justification :

Justification: Statement 1: The Soviet–Afghan War lasted over nine years, from December 1979 to February 1989. Insurgent groups known collectively as the mujahideen, as well as smaller Maoist groups, fought a guerrilla war against the Soviet Army and the Democratic Republic of Afghanistan government, mostly in the rural countryside.

Statement 2: After several weeks of civil unrest, the East German government announced on 9 November 1989 that all East Germany citizens could visit West Germany and West Berlin. Crowds of East Germans crossed and climbed onto the Wall, joined by West Germans on the other side in a celebratory atmosphere

Statement 3: The dissolution of the Soviet Union occurred on December 26, 1991, officially granting self-governing independence to the Republics of the Soviet Union.

Statement 4: The Russian Revolution was a pair of revolutions in Russia in 1917 which dismantled the Tsarist autocracy and led to the rise of the Soviet Union.

90. D. None

Answer Justification :

Justification: Statement 1: Power of veto" refers to the veto power wielded solely by the five permanent members of the United Nations Security Council (China, France, Russia, United Kingdom, and United States), enabling them to prevent the adoption of any "substantive" resolution, as well as decide which issues fall under "substantive" title.

Statement 2: The veto is exercised when any permanent member—the so-called "P5"—casts a "negative" vote on a "substantive" draft resolution. Abstention or absence from the vote by a permanent member does not prevent a draft resolution from being adopted.

91. A. 1 and 2 only

Answer Justification :

Justification: Statement 3: All members have equal voting rights and all decisions are taken unanimously but the major economic powers such as the US, EU and Japan have managed to use the WTO to frame rules of trade to advance their own interests.

It has over 150 members. The developing countries often complain of non-transparent procedures and being pushed around by big powers.

92. B. An autonomous organization working under the aegis of the Ministry of Law and Justice

Answer Justification :

Learning: It was registered under the Societies Act, 1860 in 1995.

It is an autonomous organization working under the aegis of the Ministry of Law and Justice, Government of India with its headquarters in New Delhi and Regional Centres in Hyderabad and Bengaluru.

It has been established to promote, popularize and propagate alternative dispute resolution methods to facilitate earlier resolution of disputes and to reduce the burden of arrears in courts

93. A. 1, 2 and 3 only

Answer Justification :

Justification: Statement 2 and 3: IFAD provides low interest loans and grants to developing countries to finance innovative agricultural and rural development programmes and projects. So, 2 and 3 are correct.

Statement 4: 176 countries are members of the IFAD, and these are grouped into three lists: List - A: Developed Countries; List - B: Oil Producing Countries; and List - C: Developing Countries. India is in List - C. Since 1979, IFAD has provided financial support to India through projects in the realm of agriculture, rural development, tribal development, etc. So, 4 is incorrect.

Learning: The Governing Council is the highest decision-making body of IFAD. The Governing Council meets annually.

The Executive Board of IFAD, headed by the President, is responsible for oversight of the several operations of IFAD. The members and alternate members are elected for three-year team

94. B. 1, 3 and 4 only

Answer Justification :

Justification: Statement 1: These organs vote simultaneously but separately. In order to be elected, a candidate must receive an absolute majority of the votes in both bodies. This sometimes makes it necessary for a number of rounds of voting to be carried out. In order to ensure a measure of continuity, one third of the Court is elected every three years. Judges are eligible for re-election.

Statement 2: The Court is competent to entertain a dispute only if the States concerned have accepted its jurisdiction in one or more of the following ways: by entering into a special agreement to submit the dispute to the Court; by virtue of a jurisdictional clause, through the reciprocal effect of declarations made by them.

Statement 4: The International Court of Justice acts as a world court. The Court has a dual jurisdiction : it decides, in accordance with international law, disputes of a legal nature that are submitted to it by States (jurisdiction in contentious cases); and it gives advisory opinions on legal questions at the request of the organs of the United Nations or specialized agencies authorized to make such a request (advisory jurisdiction).

95. D. 1, 2 and 3

Answer Justification :

Justification: Statement 1 and 2: It is a United Nations programme with the mandate to protect refugees, forcibly displaced communities and stateless people, and assist in their voluntary repatriation, local integration or resettlement to a third country.

It was created in 1950, during the aftermath of World War II. Its headquarters are in Geneva, Switzerland and it is a member of the United Nations Development Group. The UNHCR has won two Nobel Peace Prizes, once in 1954 and again in 1981

Statement 3: Called ProGres, this database was created during the Kosovo War in the 1990s. The database today contains data on over 11 million refugees, or about 11% of all displaced persons globally.

The database contains biometric data, including fingerprints and iris scans and is used to determine aid distribution for recipients. The results of using biometric verification has been successful. When introduced in Kenyan refugee camps of Kakuma and Dadaab in the year 2013, the UN World Food Programme was able to eliminate \$1.4m in waste and fraud.

96. C. 1, 3 and 4 only

Answer Justification :

Justification: Statement 1: The IAEA was created in 1957 in response to the deep fears and expectations generated by the discoveries and diverse uses of nuclear technology. The Agency's genesis was U.S. President Eisenhower's "Atoms for Peace" address to the General Assembly of the United Nations in 1953.

Statement 3: IAEA technical cooperation projects provide expertise in fields where nuclear techniques offer advantages over other approaches, or where nuclear techniques can usefully supplement conventional means. All Member States are eligible for support through technical cooperation projects, although in practice these tend to focus on the needs and priorities of less developed countries.

Statement 4: INIS hosts one of the world's largest collections of published information on the peaceful uses of nuclear science and technology. The International Nuclear Information System (INIS) was established in 1969 by the IAEA, in collaboration with interested Member States and some international organizations. It is operated by the Agency in collaboration with over 150 members.

97. D. 1, 2 and 3

Answer Justification :

Justification: Statement 1 and 2: Its activities are focused on the developing countries. It works for human development (education, health), agriculture and rural development (irrigation, rural services), environmental protection (pollution reduction, establishing and enforcing regulations), infrastructure (roads, urban regeneration, electricity) and governance (anti-corruption, development of legal institutions). It provides loans and grants to the member-countries. In this way, it exercises enormous influence on the economic policies of developing countries.

It is often criticised for setting the economic agenda of the poorer nations, attaching stringent conditions to its loans and forcing free market reforms. Statement 3: Linked to the United Nations through special agreements, the separate, autonomous specialized agencies of the UN family set standards and guidelines, help formulate policies, provide technical assistance, and other forms of practical help in virtually all areas of economic and social endeavour such as World Bank, ILO, WHO etc.

98. C. 2 only

Answer Justification :

Justification: Statement 1: NATO membership is open to “any other European state in a position to further the principles of this Treaty and to contribute to the security of the North Atlantic area.”

Statement 2: A “NATO decision” is the expression of the collective will of all 28 member countries since all decisions are taken by consensus. NATO is committed to the peaceful resolution of disputes. If diplomatic efforts fail, it has the military capacity needed to undertake crisis-management operations. These are carried out under the Washington Treaty - NATO’s founding treaty - or under a UN mandate, alone or in cooperation with other countries and international organizations.

Statement 3: The Membership Action Plan (MAP) is a NATO programme of advice, assistance and practical support tailored to the individual needs of countries wishing to join the Alliance.

99. A. Australia Group

Answer Justification :

Justification: Option A: The Australia Group, an informal group of countries (now joined by the European Commission) was established in 1985 after the use of chemical weapons by Iraq in 1984. Its members are supposed to maintain export controls on a uniform list of several chemical compounds.

Option B: The Missile Technology Control Regime (MTCR) is a multilateral export control regime. It is an informal and voluntary partnership among countries to prevent the proliferation of certain category of missile and unmanned aerial vehicle technology.

Option C: The Wassenaar Arrangement was established to contribute to regional and international security and stability by promoting transparency and greater responsibility in transfers of conventional arms and dual-use goods and technologies **Option D:** It deals with nuclear fuel and supplies.

100. D. None of the above

Answer Justification :

Justification & Learning: The president is the head of the delegation from the Security Council member state that holds the rotating presidency. The rotation takes place in alphabetical order of the

member states' official United Nations names in English. Non-members are not entitled for the Presidency, so C is incorrect