



Telangana State Backward Classes Employability  
Skill Development and Training Centre

**GOVT OF TELANGANA**  
**TELANGANA BC STUDY CIRCLES (TSBCE SDTC)**  
**(DEPARTMENT OF BC WELFARE)**

**TSLPRB**  
**GS MODEL QUESTION PAPERS**  
**(STUDY MATERIAL AND MCQs WITH KEY FOR SI & PC)**  
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TS BC Study Circles



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Civils Prelims 2022 (Scheduled on 5.6.2022)  
Model Questions (for GS Paper )  
Set No. 1 {Prepared on 22 .5.2022 }

For Study purpose

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1)Consider the following with reference to 'Energy for Sustainable Growth' .

1)'Energy for Sustainable Growth' not only resonates with the Indian tradition but is a pathway to achieve future needs and aspirations. Prime Minister of India said that sustainable growth is possible only through sustainable energy sources.

2)The Prime Minister reiterated his commitment made at Glasgow to reach Net Zero by 2070.

3)He also mentioned his vision of LIFE pertaining to an environmentally sustainable lifestyle.

4)India is providing leadership in the global collaborations like International Solar Alliance. He also talked of target of achieving 500 gigawatt non-fossil energy capacity and achieving 50 per cent of installed energy capacity through non-fossil energy by 2030.

5)"Whatever targets India has set for itself, I do not see them as a challenges but as opportunity. India is moving with this vision in last few years and the same has been taken forward at policy level in this year's budget", he said. This budget has announced 19.5 thousand crore for high-efficiency solar module manufacturing which will help in making India a global hub for manufacturing and R&D of solar modules and related products.

6)Referring to recently announced National Hydrogen Mission, the Prime Minister said India can become hub of green hydrogen given its inherent advantage in the form of abundant renewable energy power. He asked for private sector efforts in the area.

7)Shri Modi also pointed towards challenge of energy storage which has received significant attention in the budget. "Provisions have also been made in this year's budget regarding battery swapping policy and inter-operability standards. These will reduce the problems faced in the use of electric vehicles in India," he said.

8)The Prime Minister emphasized that along with energy production, energy saving is equally important for sustainability. "You should work on how to make more Energy Efficient A/C, Efficient heaters, geysers, ovens in our country", he exhorted the participants.

Which of the statements given above is / are correct ?

- (a)1 and 2 only
- (b)4,5,6,7 2 only
- (c) 1, 2, ,3,4,5,6,7
- (d) 6 and 7

Ans: c

2)Consider the following with reference to LEB bulbs :

1)Stressing the need to prioritize energy efficient products, the Prime Minister gave the example of promotion of LED bulbs at large scale.

2) He said that first the government brought down the cost of LED bulbs by promoting production and then 37 crore LED bulbs were distributed under Ujala scheme.

3) This has led to saving of forty eight thousand million Kilo Watt Hour electricity and saving of about 20 thousand crore rupees in the electricity bills of poor and middle class families.

4) Furthermore, annual carbon emission saw a decline of 4 crore tonnes. Local bodies are saving 6 thousand crore rupees every year due to adoption of LED bulbs in street lights, he added.

Which of the statements given above is / are correct ?

- (a) 1 and 2 only
- (b) 2 and only
- (c) 1, 2, ,3,4
- (d) None of these

Ans: c

3) Consider the following with reference to Coal Gasification :

1) Coal gasification is a clean alternative to coal, the Prime Minister noted. In this year's budget, for coal gasification, 4 pilot projects have been announced which will help in firming up technical and financial viability of these projects.

2) Similarly, the government is also continuously promoting ethanol blending. The Prime Minister told the gathering about the extra differential excise duty for unblended fuel.

3) Recalling recent inauguration of Gobardhan Plant in Indore, the Prime Minister said that private sector can establish 500 or 1000 such plants in the country over next two years.

4) The Prime Minister talked about the future upsurge in the energy demand in India and underlined the criticality of transition towards renewable energy.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 1 and 2 only
- (c) 1, 2, and 3,4
- (d) None

Ans: c

4) Consider the following with reference to coal and coal gasification :

1) India has total reserve of 307 Billion Tonnes of thermal coal and about 80% of coal produced is used in thermal power plants.

2) Coal is a resource India is well endowed with and intends to use it for purposes other than energy generation in environmentally sustainable manner.

3) With global concerns on climate change and development of renewable energy, diversification of coal for its sustainable use has been identified as the future course for the country. Coal gasification is considered a cleaner option.

4) Gasification facilitates utilization of chemical properties of coal.

5) Syn Gas produced from coal can be used to produce Gaseous Fuels such as Hydrogen (Blue coupled with CCUS), Substitute Natural Gas (SNG or Methane), Di-Methyl Ether (DME), Liquid Fuels such as Methanol, Ethanol, Synthetic diesel and Chemical like Methanol derivatives, Olefins, Propylene, Mono-Ethylene Glycol (MEG), nitrogenous fertilizers including Ammonia,

DRI, Industrial Chemicals along with Power Generation. These products will help move towards self-sufficiency under *Atmanirbhar Bharat Abhiyaan*.

6) In line with the above objective, Ministry of Coal has taken initiatives for coal gasification and it has prepared National Mission document to achieve 100 MT coal gasification by the year 2030. Policy incentivizing coal gasification provides for rebate in revenue share in coal block auction and also linkage for the same.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 1 and 2 only
- (c) 1, 2, and 3,4,5,6
- (d) None

Ans: c

5) Consider the following with reference to Sagar parikrama :

1) The voyage Sagar Parikrama as Phase –I programme shall started on 5th March 2022 from Mandvi and ended at Porbandar on 6th March 2022.

2) The entire distance will be covered from the coastline of Mandvi on the coast of the Arabian Sea in the Kutch district of Gujarat, situated at the estuary where the river Rukmavati meets the Gulf of Kutch.

3) The journey of "Sagar Parikrama" started with Gujarat State.

4) The Bardoli Satyagraha, in the state of Gujarat, India during the British Raj, was a major episode of civil disobedience and revolt in the Indian Independence Movement on 12 June 1928. The movement was eventually led by Sardar Vallabhbhai Patel, and its success gave rise to Patel becoming one of the main leaders of the independence movement, especially resolving farmers issues.

5) Gujarat has a coastal length of 1214 km, covering 16 coastal districts having huge diversity of marine based ecosystems and development opportunities.

6) Fisher folk, vendors and industries have a direct stake in the development of fisheries sector in economic value, especially exports.

7) The journey of *Sagar Parikrama* shall focus on sustainable balance between the utilization of marine fisheries resources for food security of nation and livelihoods of coastal fisher communities and protection of marine ecosystems.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 1, 2, 3 only
- (c) 1, 2, and 3,4,5,6,7
- (d) 6 and 7

Ans: c

6) Consider the following with reference to Khawthilanguipui (Karnaphuli)-Tuichawng River:

1) Shri Sarbananda Sonowal reviewed the ongoing projects, including the important Kaladan Multi Modal Transport project in Mizoram with top officials from Inland Waterways Authority (IWAI), Transport Department, Public Works Department (PWD) of Mizoram to develop the inland water transport (IWT) in Aizwal

2) Plans are afoot to develop the inland water transport at Khawthilangtuipui (Karnaphuli)-Tuichawng River stretching upto 23 kms. The total cost of this project Rs 22.93 crore. The PSW Ministry has sanctioned a total of Rs 6.17 crore under Central Sector Scheme. The minister was also apprised about the Hydrographical Survey & Techno Economic Feasibility study conducted covering a stretch of 87.136 kms between River Tiawng at Khamrang village in Mizoram to Gharmura in Assam.

3) A detailed report to develop IWT at River Chhimituipui was submitted. It has now been decided to conduct Detail Hydrographic Survey and Techno Economic Feasibility Survey on this river from Tupui D to Lomasu stretching upto 138.26 kms. The cost of this survey is budgeted at Rs 82.30 lakhs.

Which of the statements given above is / are correct ?

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

Ans: c

7) Consider the following :

1) Reiterating India's commitment to climate action and energy transition, Prime Minister urged discussion on key budget announcements like Rs 19500 crore allocation for PLI for high efficiency PV solar modules, Green Hydrogen Mission, Coal Gasification, Battery storage and clean cooking among others.

2) The industry leaders gave several concrete suggestions which included support for indigenous manufacturing for solar modules which may be extended to the entire value chain, including subcomponents and materials. This would enable growth of ancillary industry, including in MSME sector. Regarding Green Hydrogen, the industry welcomed the recent announcement of banking provisions and ISTS waiver for Green Hydrogen.

3) It was suggested that to further optimize the cost of Green Hydrogen production, a mechanism for Inter-State banking of RE may be considered.

4) For Green Hydrogen, it was suggested that Government may consider incentivising both domestic manufacturing of electrolyzers through a PLI mechanism and Green hydrogen end use. Industry leaders suggested that Solar cooking through both electric and thermal routes may be promoted. Startups have developed hybrid stoves that can work both on gas and solar power, these may also be explored. Rooftop solar promotion efforts may be intensified, given its huge potential. Carbon pricing mechanism would be beneficial for emerging technologies. Government may also consider incentivising Carbon capture and utilization.

5) Circular Economy principles were also discussed which are being considered in MNRE's committee on the subject. MNRE would be taking time bound action for implementation of the budget announcements.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 1 and 2 only
- (c) 1, 2, and 3,4,5
- (d) None

Ans: c

8) Consider the following with reference to ARIES ?

1) Aryabhata Research Institute of Observational Sciences (ARIES) is one of the leading research institutes which specializes in observational Astronomy & Astrophysics, Solar Physics and Atmospheric Sciences.

2) The main research interests of Astronomy & Astrophysics division are in solar, planetary, stellar, galactic and extra-galactic astronomy including stellar variabilities, X-ray binaries, star clusters, nearby galaxies, quasars, and inherently transient events like supernovae and highly energetic gamma ray bursts. ARIES hosts three existing optical telescopes 3.6m DOT (India's largest), 1.3m DFOT and 1.04m ST and the upcoming 4m ILMT along with a 206.5 MHz ST Radar.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 1 and 2 only
- (c) 2 only
- (d) None

Ans: b

9) Consider the following Mula – Mutha River Projects:

1) PM laid the foundation stone of rejuvenation and pollution abatement of Mula-Mutha River projects.

2) Rejuvenation will be done in 9 Km stretch of the river at a project cost of more than Rs. 1080 crores.

3) It will involve works such as river edge protection, interceptor sewage network, public amenities, boating activity etc.

4) Mula-Mutha River pollution abatement project will be implemented on the concept of "One City One Operator" at a cost of over Rs 1470 crore. A total of 11 sewage treatment plants will be constructed under the project, with a combined capacity of around 400 MLD.

5) Prime Minister also launched 140 e-buses and e-bus depot constructed at Baner.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 1 and 2 only
- (c) 1, 2, and 3,4,5
- (d) None

Ans: c

10) Consider the following with reference to National Waterway -1 (River Ganga ) and NW-2

1) Union Minister of Ports, Shipping & Waterways and AYUSH, Shri Sarbananda Sonowal received the maiden voyage of food-grains from Patna to Pandu via Bangladesh in Guwahati

2)The vessel started its sail from Patna on National Waterway-1 (river Ganga) and passed through Bhagalpur, Manihari, Sahibganj, Farakka, Tribeni, Kolkata, Haldia, Hemnagar; Indo Bangladesh Protocol (IBP) route through Khulna, Narayanganj, Sirajganj, Chilmari and National Waterway-2 through Dhubri, and Jogighopa covering a distance of 2,350 km.

2)The dignitaries welcomed this wonderful beginning that has the potential to revolutionise cargo movement. Another vessel MV Ram Prasad Bismil with two barges Kalpana Chawla and APJ Abdul Kalam started voyage from Haldia on 17<sup>th</sup> Feb 22 and is on the way to Pandu. The vessel is carrying 1800MT Tata steel and already reached Bangladesh Border at Dhubri. The ODC (over Dimensional cargo, 252 MT) of Numaligarh Bio-refinery reached Silghat on 15<sup>th</sup> February from Haldia through IWT via IBP route. Another ODC (250MT) consignment is also on the way to Silghat.

3)The IWAI is also planning to run a regular scheduled service on these routes. The protocol on Inland water transit and Trade (PIWTT) between India & Bangladesh will be optimally beneficial when we can unlock the value from the cargo trade in the region. To improve the navigability, two stretches of IBP routes, i.e., Sirajganj-Daikhowa and Ashuganj-Zakiganj are also being developed at a cost of Rs. 305.84 crore on an 80:20 share basis (80% being borne by India and 20% by Bangladesh).

4)The development of these stretches is expected to provide seamless navigation to NER via the IBP route. The contracts for dredging on the two stretches for providing and maintaining requisite depth for a period of seven years (from 2019 to 2026) are underway. Once the IBP Route no. 5 & 6 from Maia near Farakka in India to Aricha in Bangladesh, the IWT distance connecting NW1 to NW2 (North Eastern Region) will further reduced by nearly 1000 km, which will reduce time and cost to a great extent.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 1 and 2 only
- (c) 1, 2, and 3,4
- (d) None

Ans: c

11)Consider the following with reference to Wadia Institute of Himalayan Geology (WIHG) :

1)WIHG has been a dedicated research institute on Himalayan Geosciences for understanding geodynamic evolution of the mighty Himalaya; scientific explanation of geo-hazards caused by earthquakes, landslides, avalanches, flash floods, etc. with a view to provide an assessment, management and mitigation; and exploration of Geo-resources such as geothermal, minerals, ore bodies, hydrocarbons, springs, riverine system, etc. that can be exploited in a scientific manner for socioeconomic development. He said that the institute is actively involved in studying glacial dynamics and the climate-tectonic interaction in the present climate change scenario.

2)WIHG has been monitoring several glaciers in Uttarakhand, Union Territory of J&K, Ladakh and Sikkim, and has envisaged a plan for long-term monitoring of glaciers and lakes on continual mode by establishing a network of meteorological, hydrological, seismological stations, online transmission of data through VSAT/GSM, automatic analysis/modelling, and integration of data through AI/ML algorithms 24X7, setting up standard operating procedure (SOP), issuing alert to stakeholders, sensitization to locals for responding at the time of consequences for effective execution of an early warning system is the need of the hours.

Which of the statements given above is / are correct ?

- (a) 1 only

- (b) 1 and 2 only
  - (c) 2 only
  - (d) None
- Ans: b

12) Consider the following with reference to landslides in Himalayas and geothermal fields :

1) Dr. Singh said that the intensity and frequency of landslides have been increased recently due to excessive rainfall, which have been felt by both the Uttarakhand and Himachal Pradesh Himalaya.

2) To meet the requirement, WIHG has prepared the landslides susceptibility maps in regional scale for both the states, and in local scale for the Nainital and Mussoorie towns, and Bhagirathi, Goriganga and Kali rivers valley, which can be used for the city developers, planners, local administrators to avoid the consequences.

3) The WIHG has mapped 40 geothermal springs each in the Uttarakhand and Himachal Pradesh Himalaya, and has been trying to generate 5 MegaWatt of electricity at initial stage by a binary power plant at Tapovan. If successful, this will be expanded to all geothermal fields for space heating and conversion into electrical energy without any carbon footprint.

Which of the statements given above is / are correct ?

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

Ans: c

13) Consider the following with reference to Ukraine ?

1) Ukraine is the second-largest European country, after Russia.

2) Lying between latitudes 44° and 53° N, and longitudes 22° and 41° E., it is mostly in the East European Plain.

3) Ukraine covers an area of 603,628 square kilometres (233,062 sq mi), with a coastline of 2,782 kilometres (1,729 mi)

4) The landscape of Ukraine consists mostly of fertile plains (or steppes) and plateaus, crossed by rivers such as the Dnieper (*Dnipro*), Seversky Donets, Dniester and the Southern Bug as they flow south into the Black Sea and the smaller Sea of Azov. To the southwest, the delta of the Danube forms the border with Romania.

5) Ukraine's various regions have diverse geographic features ranging from the highlands to the lowlands. The country's only mountains are the Carpathian Mountains in the west, of which the highest is Hoverla at 2,061 metres (6,762 ft), and the Crimean Mountains, in the extreme south along the coast

6) Ukraine also has a number of highland regions such as the Volyn-Podillia Upland (in the west) and the Near-Dnipro Upland (on the right bank of Dnieper). To the east there are the south-western spurs of the Central Russian Upland over which runs the border with the

Russian Federation. Near the Sea of Azov can be found the Donets Ridge and the Near Azov Upland. The snow melt from the mountains feeds the rivers and their waterfalls.

7) Significant natural resources in Ukraine include iron ore, coal, manganese, natural gas, oil, salt, sulphur, graphite, titanium, magnesium, kaolin, nickel, mercury, timber and an abundance of arable land.

8) Ukraine has many environmental issues. Some regions lack adequate supplies of potable water. Air and water pollution affects the country, as well as deforestation, and radiation contamination in the northeast stemming from the 1986 accident at the Chernobyl Nuclear Power Plant.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 1 and 2 only
- (c) 1, 2, and 3,4,5,6,7,8
- (d) None

Ans: c

14) Consider the following with reference to Pollution and Discussions in meetings (CAQM) :

1) The theme of the first session of Day-2 was "Abating Vehicular and Industrial Pollution in NCR". Discussions revolved around shift to cleaner fuels like PNG in the industries and transport sector; the road map for PNG network, infrastructure and supply in the entire NCR; E-mobility as a potential solution for addressing vehicular pollution; ways to reduce emissions from the vehicles in the transport sector; and regulation of emission from large scale use of DG sets.

2) The next session centred around sustainable agricultural stubble management, prevention and control of crop residue burning along with strategies, methodologies and schemes for both in-situ and ex-situ management of crop.

3) The last session of Day-2 of "Dialogue towards Clean Air" comprised of ingenious discussions on Greening and Plantation Measures for Abatement of Air Pollution, including the urban forestry initiatives by MoEFCC like the Nagar Van Scheme, etc. The Government of Haryana also presented their account of greening initiatives to curb air pollution in the State.

4) Whether it is about vehicular pollution, industrial emissions, stubble burning, roadside dust generation, solid waste management, vehicular pollution, use of DG sets, etc. the Commission for Air Quality Management in NCR & Adjoining Areas (CAQM) is taking up every issue with utmost concern and it has pulled out all the stops to issue necessary Directions and Advisories to tackle it effectively.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 1 and 2 only
- (c) 1, 2, and 3,4
- (d) None

Ans: c

15) Consider the following with reference to National Supercomputing Mission (NSM) & Param Ganga :

1) The National Supercomputing Mission (NSM) which is being steered jointly by Ministry of Electronics & Information Technology (MeiTY) and the Department of Science and Technology

(DST) and implemented by Centre for Development of Advanced Computing (C-DAC) and Indian Institute of Science (IISc), Bangalore, has progressed significantly.

2)The four major pillars of the NSM, namely, Infrastructure, Applications, R&D, HRD, have been functioning efficiently to realize the goal of developing indigenous supercomputing eco system of the nation.

3)C-DAC has been entrusted the responsibility to design, development, deployment and commissioning of the supercomputing systems under the build approach of Mission.

4)The Mission plans to build and deploy 24 facilities with cumulative compute power of more than 64 Petaflops.

5)Till now C-DAC has deployed 11 systems at IISc, IITs, IISER Pune, JNCASR, NABI-Mohali and C-DAC under NSM Phase-1 and Phase-2 with a cumulative compute power of more than 20 Petaflop

6)Under the build approach, C-DAC is building an indigenous supercomputing ecosystem in a phased manner, which is leading to indigenously designed and manufactured supercomputers. It has designed and developed a compute server "Rudra" and high-speed interconnect "Trinetra" which are the major sub-assemblies required for supercomputers.

7)Some of the large-scale applications which are being developed under NSM include the following.

- NSM Platform for Genomics and Drug Discovery.
- Urban Modelling: Science Based Decision Support Framework to Address Urban Environment Issues (Meteorology, Hydrology, Air Quality).
- Flood Early Warning and Prediction System for River Basins of India.
- HPC Software Suite for Seismic Imaging to aid Oil and Gas Exploration.
- MPPLAB: Telecom Network Optimization.

8)As part of its tireless journey of success, NSM has now deployed "PARAM Ganga", a supercomputer at IIT Roorkee, with a supercomputing capacity of 1.66 Petaflops. The system is designed and commissioned by C-DAC under Phase 2 of the build approach of the NSM.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 1 and 2,3,4,5
- (c) 1, 2, and 3,4,5,6,7,8
- (d) 6 and 7

Ans: c

16) Consider the following about NEAT :

1)National Educational Alliance for Technology (NEAT) is an initiative to provide the use of best-developed technological solutions in the education sector to enhance the employability of the youth on a single platform for learners' convenience.

2)These solutions use Artificial Intelligence for a personalized and customized learning experience for better learning outcomes and skill development in the niche areas.

3)AICTE, MoE is acting as the facilitator in the process while ensuring that the solutions are freely available to a large number of socially and economically backward students.

4) NEAT has 58 Education Technology Companies with 100 products that help to develop employable skills, capacity building, and bridge learning gaps.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 1 and 2
- (c) 1, 2, and 3,4
- (d) None of these

Ans: c

17) Consider the following :

1) Scheme on Green Energy Corridor (GEC) Phase-II for Intra-State Transmission System (InSTS) for addition of approximately 10,750 circuit kilometres (ckm) of transmission lines and approx. 27,500 Mega Volt-Amperes (MVA) transformation capacity of substations.

2) The scheme will facilitate grid integration and power evacuation of approximately 20 GW of Renewable Energy (RE) power projects in seven States namely, Gujarat, Himachal Pradesh, Karnataka, Kerala, Rajasthan, Tamil Nadu and Uttar Pradesh.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) None of these

Ans: c

18) Consider the following :

1) We are hopeful that the cargo ships will start sailing over Brahmaputra towards the later part of 2022. The dredging work at critical junctures of the river has already been initiated by the ministry.

2) The Bangladesh government, with support from Government of India, is also working on the Jamuna river to make the 2000 kms long waterway from Sadiya to Haldia via Bangladesh a smooth passage.

3) Sharing the vision of Prime Minister's vision of Gati Shakti, the minister said that the northeastern region will play a critical role in resuscitate the economic prosperity of India.

4) In order to provide a springboard for the region to act as a catalyst in India's economic rebound, there have been efforts to build waterways of the region & connect it to major ports in the Bay of Bengal. This will not only unlock the economic potential of the region but allow the landlocked region a direct access to the international trading routes.

5) The minister said that the government is working tirelessly to connect Mizoram, Tripura and Assam to strategic ports in Myanmar (Sittwe port) and Bangladesh (Mongola & Chittongong ports).

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 1 and 2,3
- (c) 1, 2, and 3,4,5
- (d) None of these

Ans: c

19) Consider the following :

The two main objectives of Azadi Ka Amrit Mahotsav are

- 1) to try to revive the immortal saga of the unsung martyrs who made supreme sacrifice for the country's freedom and
- 2) to connect with the development of the country by awakening the spirit of patriotism in the new generation

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2
- (c) Both 1 and 2
- (d) None of these

Ans: c

20) Consider the following about Mangoes :

- 1) The Agricultural and Processed Food Products Export Development Authority (APEDA) said that this would also provide an opportunity for the export of other delicious varieties of mangoes from North and East India such as *Langra, Chausa, Dushehri, Fazli*, etc from Uttar Pradesh, Bihar and West Bengal.
- 2) traditional mango production belts such as Maharashtra, Uttar Pradesh and Andhra Pradesh and Telangana.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) None of these

Ans: c

21)

- 1) "Gati Shakti – The revolutionary Multi-Modal Connectivity for Integrated & Seamless Supply Chain"
- 2)

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) None of these

Ans: c

22) India State of Forest Report 2021' prepared by the Forest Survey of India (FSI) which has been mandated to assess the forest and tree resources of the country.

Which of the following is correct ?

1)The total forest and tree cover of the country is 80.9 million hectare which is 24.62 percent of the geographical area of the country. As compared to the assessment of 2019, there is an increase of 2,261 sq km in the total forest and tree cover of the country. Out of this, the increase in the forest cover has been observed as 1,540 sq km and that in tree cover is 721 sq km.

2)Increase in forest cover has been observed in open forest followed by very dense forest. Top three states showing increase in forest cover are Andhra Pradesh (647 sq km) followed by Telangana (632 sq km) and Odisha (537 sq km).

2)Area-wise Madhya Pradesh has the largest forest cover in the country followed by Arunachal Pradesh, Chhattisgarh, Odisha and Maharashtra. In terms of forest cover as percentage of total geographical area, the top five States are Mizoram (84.53%), Arunachal Pradesh (79.33%), Meghalaya (76.00%), Manipur (74.34%) and Nagaland (73.90%).

3)17 states/UT's have above 33 percent of the geographical area under forest cover. Out of these states and UT's, five states/UTs namely Lakshadweep, Mizoram, Andaman & Nicobar Islands, Arunachal Pradesh and Meghalaya have more than 75 percent forest cover while 12 states/UTs namely Manipur, Nagaland, Tripura, Goa, Kerala, Sikkim, Uttarakhand, Chhattisgarh, Dadra & Nagar Haveli and Daman & Diu, Assam, Odisha, have forest cover between 33 percent to 75 percent.

4)Total mangrove cover in the country is 4,992 sq km. An increase of 17 sq Km in mangrove cover has been observed as compared to the previous assessment of 2019. Top three states showing mangrove cover increase are Odisha (8 sq km) followed by Maharashtra (4 sq km) and Karnataka (3 sq km).

5)Total carbon stock in country's forest is estimated to be 7,204 million tonnes and there an increase of 79.4 million tonnes in the carbon stock of country as compared to the last assessment of 2019. The annual increase in the carbon stock is 39.7 million tonnes.

Which of the statements given above is / are correct ?

- (a)1 only
  - (b)1 and 2,3,4,5
  - (c) 1, 2 only
  - (d) 4 and 5
- Ans: b

23)Consider the following :

1)Major earthquake events in last 30,000 years resulted in spectacular changes in landscape of the Katrol Hill Fault in the Kachchh region in Gujarat, a study conducted on sediment samples revealed. These surprising geological facts about the seismic history of the fault in the recent geological past necessitate a revised seismic hazard assessment and mitigation strategies in Kachchh Basin, owing to its close proximity to industrial corridor and major settlements, including Bhuj city.

2)Earthquakes are one of the natural hazards that geologists are still grappling with its complex nature. The complexity is attributed to its widespread occurrence through space and time. Seismicity in Kachchh region is highly complex as it is characterized by multiple seismic sources in the form of several East-West trending fault lines, which release continuously accumulating tectonic stresses at intervals producing earthquakes.

3)Real-time monitoring of earthquakes since the occurrence of devastating 2001 Bhuj earthquake indicate that most of the faults in the region, viz., Kachchh Mainland Fault (KMF), South Wagad Fault (SWF), Gedi Fault (GF), and Island Belt Fault (IBF) are seismically active.

4)However, seismic activity along other faults like the Katrol Hill Fault (KHF) is not apparent, thus making the task of seismic hazard estimation and mitigation in the region a scientifically complex process.

Which of the statements given above is / are correct ?

- (a)1 only
- (b)1 and 2,3,4
- (c) 1, 2 only
- (d) None of these

Ans: b

24) Consider the following about exports :

1)India's overall exports (Merchandise and Services combined) in December 2021 are estimated to be USD 57.87 Billion, exhibiting a positive growth of 25.05 per cent over the same period last year and a positive growth of 23.35 per cent over December 2019. Overall imports in December 2021 are estimated to be USD 72.35 Billion, exhibiting a positive growth of 33.86 per cent over the same period last year and a positive growth of 40.30 per cent over December 2019

2)India's overall exports (Merchandise and Services combined) in April-December 2021 are estimated to be USD 479.07 Billion, exhibiting a positive growth of 36.31 per cent over the same period last year and a positive growth of 20.25 per cent over April-December 2019. Overall imports in April-December 2021 are estimated to be USD 547.12 Billion, exhibiting a positive growth of 57.33 per cent over the same period last year and a positive growth of 18.57 per cent over April-December 2019.

Which of the statements given above is / are correct ?

- (a)1 only
- (b)2 only
- (c) Both 1 and 2
- (d) None of these

Ans: c

25) Consider the following about 'Go Electric Campaign :

1)As part of the endeavor of Government of India for E-Mobility transition, Ministry of Power along with Ministry of Road Transport and Highways, Ministry of Heavy Industries and NITI Aayog has launched a nationwide "Go Electric" Campaign.

2)This Campaign is to educate the general public on the benefits of e-mobility, inform the potential EV owners about the Government incentives for EV adoption, generate curiosity and transform the same into demand, discredit misinformation against Electric Vehicles and bring together multiple stakeholders under single platform.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) None of these

Ans: c

26)Consider the following about Purple Revotion :

1)"Purple Revolution" is Jammu & Kashmir's contribution to "Start-ups India", an initiative that was launched by Prime Minister Narendra Modi in 2016 and today we are observing the first National Start-up Day.

2)Briefing about the Aroma Mission launched by the Union Ministry of Science & Technology through the Council of Scientific & Industrial Research (CSIR), which has led to the well-known "Purple Revolution" in India , the Minister informed that the CSIR had, to begin with introduced high-value essential oil bearing lavender crop through its Jammu based laboratory, Indian Institute of Integrative Medicines (IIIM) for cultivation in districts Doda, Kishtwar, Rajouri and later also in the other districts including Ramban, Pulwama, etc.

3)In a brief span of time, aroma/lavender cultivation has become a popular option in farming for agricultural Start-up, he said.

Which of the statements given above is / are correct ?

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

Ans: c

27) Consider the following about Deep Ocean Mission :

1)Government had approved the Deep Ocean Mission (DOM) in June, 2021 to be implemented by the Ministry of Earth Sciences at a total budget of Rs. 4077 Crore for 5 years. DOM is a multi-ministerial, multi-disciplinary programme with emphasis on development of deep-sea technology

2)Deep sea technology includes development of manned Submersible rated for 6000 metre water depth along with technologies for deep sea mining, exploration of deep-sea

mineral resources and marine biodiversity, acquisition of a research vessel for ocean exploration, deep sea observations, and capacity building in Marine Biology

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) None of these

Ans: c

28) Consider the following about CCUS:

1) Under a strict climatic regime, we can realize the identification and adoption of a right balance of portfolio of emission curtailment technologies. Carbon Capture, Utilization, and Storage (CCUS) is among one such key pathways to reduce emissions while continuing to develop sustainably at an unprecedented pace.

2) CCUS clearly aligns with five of the seventeen Sustainable Development Goals (SDGs), namely, climate action; clean energy; industry, innovation, and infrastructure; responsible consumption and production; and partnerships to achieve the goals," he said at the first workshop on thematic of Carbon Capture.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1 and 2
- (d) None of these

Ans: c

29) Consider the following of Export of Engineering Goods :

1) Exports of Engineering Goods jumped to USD 81.8 Billion during April-December 2021 (Provisional) as compared to USD 52.9 Billion during same period in the previous year (2020), registering a stupendous growth of 54%. Engineering Goods sector constitutes the largest, more than 27%, share of India's total exports basket during the period.

2) India's top five export destinations for the Engineering Goods sector in April-November 2021 (as per latest available data, share per cent mentioned in bracket) are: USA (14.7%), China (5.8%), UAE (5.1%), Italy (4%) & Germany (3.4%).

3) The Engineering Goods sector comprises of metal products, industrial machinery and equipment, automobiles and its components, transport equipment, bicycles, medical devices and renewable equipment.

Which of the statements given above is / are correct ?

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

Ans: c

30) Consider the following about ISRO :

1) In 2022, ISRO also has the distinction of launching GSAT-21, the first fully funded satellite of NSIL (New Space India Limited) and will be owned as well as operated by NSIL. This Communication Satellite will meet the DTH (Direct to Home) application needs.

2) The status of Gaganyaan programme and said that there had been a delay in timeline because of the COVID and other constraints but now things have again fallen back on the track and all the systems needed for the first unmanned mission are getting realised. Following the first unmanned mission, the second unmanned mission "Vyommitra" will carry Robot and this will then be followed by the Human Mission.

3) The Minister was also informed that the Indian Astronauts have successfully undergone Generic Space Flight Training in Russia. A dedicated ad-hoc astronaut training centre has also been established at Bengaluru for Gaganyaan specific training.

4) The preparations for the Human Mission, said the ISRO Chief, involve in-flight demonstration of Crew Escape System functioning in lower atmosphere (less than 10 Kms). The exercise recovery of the crew module after impacting in Sea is also being worked out.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 1 and 2
- (c) 1, 2, and 3,4
- (d) None of these

Ans: c

31) Consider the following about PMG Portal :

1) PMG portal of Invest India is a unique institutional mechanism to facilitate resolution of bottlenecks in infrastructure projects with investments upward of ₹ 500 crores and do milestone-based project monitoring of the same.

2) Presently, PMG is monitoring 1,351 under implementation projects with total anticipated investment of approximately INR 48.94 lakh crore. Projects of infrastructure ministries such as Road, Transport and Highways; Railways; Petroleum and Natural Gas; New and Renewable Energy; Power; etc are listed on the portal.

3) The PMG mechanism allows project proponents to raise issues with concerned government agencies which are causing hindrances in implementation of projects.

Which of the statements given above is / are correct ?

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

Ans: c

32) Consider the following about India's exports of Gems and Jewellery :

India's exports of Gems and Jewellery shot up by a whopping 71% during the first three quarters of the current Financial Year, April-December 2021(Provisional) over the same

period previous year. The sector clocked USD 28.9 Billion exports as compared to USD 16.9 Billion during same period in the year 2020. Compared to the same period before the Covid pandemic struck, the Gems and Jewellery sector registered a growth of 3% over USD 28.0 Billion achieved in April-December 2019.

Centre has laid out four points to make India's Gems & Jewellery a pioneer industry in the world:

1. Focus on Design (creation of patented designs) in order to increase value add of our products and make our manufacturing more profitable.
2. Diversification of export products: Emphasis on products like pearls, silver, platinum, synthetic stones, artificial diamonds, fashion jewellery, non-gold jeweller, etc.
3. Collaboration with other nations for cost-effective methods to enhance production of fusion jewellery, and
4. Promote Lab-Grown Diamond: They are environment friendly & affordable and will contribute to India's export as well as generate employment.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 1 and 2
- (c) 1, 2, and 3,4
- (d) 6 and 7

Ans: c

33) Consider the following :

- 1) Prime Minister Shri Narendra Modi hosted the first India-Central Asia Summit in virtual format on 27 January 2022,
- 2) It was attended by Presidents of the Republic of Kazakhstan, Kyrgyz Republic, Republic of Tajikistan, Turkmenistan and Republic of Uzbekistan.
- 3) This first India-Central Asia coincided with the 30<sup>th</sup> anniversary of establishment of diplomatic relations between India and Central Asian countries.

Which of the statements given above is / are correct ?

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

Ans: c

34) Consider the following about Summer/Zaid Season in agriculture sector :

1) An interaction session was also organized with Agriculture Production Commissioners and Principal Secretaries of all the States in four groups to share the achievements, challenges and strategies to be adopted in respective states for increasing area coverage, production and productivity during summer/Zaid season in agriculture sector.

2) The objective of *Zaid* conference is to review and assess the crop performance during the preceding crop seasons and fix crop-wise targets for summer season in consultation with State Governments. The Minister assured full support to ensure supply of critical inputs and facilitate adoption of innovative technologies with a view to enhance production and

productivity of the crops. The priority of government is to increase production of oilseeds and pulses where large imports are required.

3)The Government has taken new initiatives through various programmes for cultivation of summer crops such as pulses, coarse cereals, nutri-cereals, and oilseeds. Though more than half of cultivated area in summer season is under pulses, oilseeds and nutri-cereals, the farmers with irrigation source are growing rice and vegetables during the summer season.

4)He highlighted that area under cultivation of zaid crops including rice has increased progressively 2.7 times from 29.71 lakh hectares in 2017-18 to 80.46 lakh hectares in 2020-21.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 1 and 2
- (c) 1, 2, and 3,4
- (d) None of these

Ans: c

35) Consider the following about India's exports of Electronic Goods :

1)India's exports of Electronic Goods touched USD 1.67 Billion last month, registering a growth of 33.99% over \$1.25 Bn logged in December 2020. During April-December 2021, the Sector Exports registered a growth of 49% to USD 11.0 Billion (Provisional) over USD 7.4 Billion during same period in the year 2020. As compared to April-December 2019 (USD 8.8 Billion) and April-December 2014 (USD 4.8 Billion), exports of Electronic Goods registered a growth of 26% and 131% respectively.

2)Top 5 export destinations in April-November 2021 (latest available, share% in bracket) are: U S A (18%), UAE (16.6%), China (7.6%), Netherland (4.5%) & Germany (4.2%).

3)Mobile Phones constitute a major chunk of India's Electronics Goods sector exports. The sector includes IT Hardware (laptops, tablets), Consumer electronics (TV and audio), Industrial electronics, Auto electronics, Electronic components, LED Lighting, Strategic electronics, PCBA, Wearables and hearables, and Telecom equipment.

Which of the statements given above is / are correct ?

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

Ans: c

36) Consider the following about 'Panchamrit':

1)Reiterating India's commitments to the ambitious targets announced by Prime Minister Shri Narendra Modi in the form of five nectar elements "Panchamrit" including the ambitious target of 500 GW of non-fossil energy at the COP 26 summit held in Glasgow in November 2021, Minister for Environment, Forest and Climate Change, Shri Bhupender, Yadav stated that India has embarked upon one of the most ambitious energy transition programmes in the world.

2) At COP26, Prime Minister Shri Narendra Modi presented an ambitious agenda for India's contribution to the global efforts to combat climate change.

3) PM's vision of 5 Panchamrit or nectar elements involves installation of 500 GW non fossil energy capacity by 2030, reduction in emissions intensity of GDP by 45% over 2005 levels, 50% electric installed capacity coming from non-fossil sources by 2030, 1 billion tonnes reduction in carbon emissions till 2030 and India to become net-zero by 2070.

4) The call of Prime Minister at COP26 to the world community to embrace the mantra of LIFE- Lifestyle for Environment, for the mass movement on sustainable lifestyles for combating climate change will help the global community to accelerate climate actions and to bridge the gaps in global climate resilient transition.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 1 and 2
- (c) 1, 2, and 3,4
- (d) None of these

Ans: c

37) Consider the following about Swachh Bharat Mission – Urban 2.0 :

1) Swachh Bharat Mission-Urban 2.0, launched on 1<sup>st</sup> October 2021, aims to achieve the vision of 'Garbage Free Cities' over the next five years through remediation of legacy dumpsites, construction and demolition waste and plastic waste management.

2) Additionally, sustainable sanitation through faecal sludge and used water management will be a key focus under SBM-U 2.0.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) None of these

Ans: c

38) Consider the following :

1) Phytorid Plant: In Dhorka village of Gurugram district, a Phytorid Plant which is fed by drain water and having a capacity of 75 kld was constructed in 2019. It was designed for hydraulic loading of 0.8 m<sup>3</sup>/d/m<sup>2</sup> and organic loading of 3.4 g of BOD<sub>5</sub>/m<sup>2</sup>/h. The parameters of the treated water collected at the outlet are as per discharge norms.

2) Phytorid is a subsurface mixed flow constructed wetland system.

3) The phytorid system is a stand-alone sewage treatment system, based on natural treatment methods which have distinct advantages over conventional treatment plants. The technology is recommended for decentralized plants with varying capacities.

Which of the statements given above is / are correct ?

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

Ans: c

39) Consider the following about Exports of Marine Products :

1) Exports of Marine Products registered a growth of 35% to USD 6.1 Billion during April-December 2021 (Provisional) as compared to USD 4.5 Billion during same period in the year 2020. As compared to April-December 2019 (USD 5.5 Billion) and April-December 2014 (USD 4.4 Billion), exports of Marine Products registered a growth of 12% and 38% respectively.

2) Top 5 export destinations in April-November 2021 (latest available, share% in bracket) are: USA (44.5%), China (15.3%), Japan (6.2%), Vietnam (4%) & Thailand (3%).

3) Frozen shrimps constitute the major share in India's Marine Products exports items with 74% share in value terms (USD); Frozen Fish (7%), Others (6%) and Frozen Squid (5%) constitute the other major items in the Marine Products exports basket in FY2020-21.

4) Others category included primarily Surimi and Surimi analogue (imitation) products.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 1 and 2
- (c) 1, 2, and 3,4
- (d) None of these

Ans: c

40) Consider the following about PMMSY :

1) The Prime Minister Shri Narendra Modi launched the Pradhan Mantri Matsya Sampada Yojana (PMMSY) in May 2020 with an array of 100 diverse activities.

2) With a budget of Rs. 20,050 crore, it is by far the largest investment to bring about Blue Revolution through sustainable and responsible development of fisheries sector in India.

3) PMMSY, being implemented over a period of 5 years from FY 2020-21 to FY 2024-25 in all States/Union Territories, has set a target of Rs. 1,00,000 crore fisheries export, additional 70 lakh tonnes fish production, and generation of 55 lakh employment in the years to come.

Which of the statements given above is / are correct ?

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

Ans: c

41) Consider the following about exports of RTE, RTC, RTS :

1) The export of products under Ready to Eat (RTE), Ready to Cook (RTC) and Ready to Serve (RTS) segment have registered an CAGR of 10.4 per cent from 2011-12 to 2020-21.

2) India exported more than \$ 2.14 billion worth of final food products in 2020-21.

3) Since final food products are time saving and readily available, the demand for food items under the categories of RTE, RTC and RTS has increased manifold in recent years.

Which of the statements given above is / are correct ?

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

(d) None of these

Ans: c

42) Consider the following :

1) In this period of Amrit Mahotsav, special events related to great personalities of the country are also inspiring us. My government is celebrating the sacred occasions of the 400th Prakash Parv of Guru Tegh Bahadur Ji, the 150th birth anniversary of Sri Aurobindo, the 150th birth anniversary of V.O. Chidambaram Pillai and the 125th birth anniversary of Netaji Subhas Chandra Bose with grandeur.

2) From this year onwards, the government has started the Republic Day celebrations from January 23, the birth anniversary of Netaji.

Which of the statements given above is / are correct ?

(a) 1 only

(b) 1 and 2

(c) 2 only

(d) None of these

Ans: b

43) Consider the following :

1) The present government believes that remembering the past and learning from it are equally important for a secure future of the country.

2) Observance of 'Veer Bal Diwas' on 26th December in the memory of sacrifice of Sahibzadas and 'Vibhajan Vibhishika Smriti Diwas' on 14th August is a reflection of this thinking.

3) The government also decided to celebrate the birth anniversary of Bhagwan Birsa Munda on 15th November as 'Jan-jatiya Gaurav Diwas' as a tribute to him.

Which of the statements given above is / are correct ?

(a) 1 only

(b) 1 and 2

(c) 1, 2, and 3

(d) None of these

Ans: c

44) Consider the following about combined Index of Eight Core Industries :

1) The combined Index of Eight Core Industries stood at 141.3 in December 2021, which is an increase of 3.8 per cent (provisional) as compared to December 2020. The production of

Coal, Natural Gas, Refinery Products, Fertilizers, Cement and Electricity industries increased in December 2021 over the corresponding period of last year.

2) Index of Eight Core Industries (ICI) for the Month of December, 2021.

3) ICI measures combined and individual performance of production in selected eight core industries viz. Coal, Crude Oil, Natural Gas, Refinery Products, Fertilizers, Steel, Cement and Electricity.

4) The Eight Core Industries comprise 40.27 percent of the weight of items included in the Index of Industrial Production (IIP).

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 1 and 2
- (c) 1, 2, and 3,4
- (d) None of the above

Ans: c

45) The Eight Core Industries comprise 40.27 percent of the weight of items included in the Index of Industrial Production (IIP). Consider the following :

1) Coal – Coal production (weight: 10.33 per cent) increased by 5.2 per cent in December, 2021 over December, 2020. Its cumulative index increased by 10.6 per cent during April to December, 2021-22 over corresponding period of the previous year.

2) Crude Oil – Crude Oil production (weight: 8.98 per cent) declined by 1.8 per cent in December, 2021 over December, 2020. Its cumulative index declined by 2.6 per cent during April to December, 2021-22 over the corresponding period of previous year.

3) Natural Gas - Natural Gas production (weight: 6.88 per cent) increased by 19.5 per cent in December, 2021 over December, 2020. Its cumulative index increased by 22.4 per cent during April to December, 2021-22 over the corresponding period of previous year.

4) Petroleum Refinery Products – Petroleum Refinery production (weight: 28.04 per cent) increased by 5.9 per cent in December, 2021 over December, 2020. Its cumulative index increased by 10.0 per cent during April to December, 2021-22 over the corresponding period of previous year.

5) Fertilizers – Fertilizers production (weight: 2.63 per cent) increased by 3.5 per cent in December, 2021 over December, 2020. Its cumulative index decreased by 0.1 per cent during April to December, 2021-22 over the corresponding period of previous year.

6) Steel – Steel production (weight: 17.92 per cent) declined by 1.0 per cent in December, 2021 over December, 2020. Its cumulative index increased by 22.1 per cent during April to December, 2021-22 over the corresponding period of previous year.

7)Cement – Cement production (weight: 5.37 per cent) increased by 12.9 per cent in December, 2021 over December, 2020. Its cumulative index increased by 26.1 per cent during April to December, 2021-22 over the corresponding period of previous year.

8)Electricity – Electricity generation (weight: 19.85 per cent) increased by 2.5 per cent in December, 2021 over December, 2020. Its cumulative index increased by 9.4 per cent during April to December, 2021-22 over the corresponding period of previous year.

Which of the statements given above is / are correct ?

- (a)1 only
- (b)1 and 2
- (c) 1, 2, and 3,4,5,6,7,8
- (d) None of the above

Ans: c

46) Consider the following :

1)The President said that the government has integrated different ministries to work in a synergised manner under the Pradhan Mantri Gatishakti National Master Plan to accelerate infrastructure development.

2)Expressing confidence that the plan was going to usher in a new era of multi-modal transport in India, he said that in the future, the railways, highways and airways in India will no longer be separate and isolated infrastructures, but will be an integrated resource to the country.

Which of the statements given above is / are correct ?

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

Ans: b

47) Consider the following about the inflow of foreign money into India :

1)The inflow of 48 billion dollars in investment in the first seven months of the current financial year was a testimony to the belief the global investor community has in India's growth story.

2)Net capital flows were higher at US\$ 65.6 billion in the first half of 2021-22, on account of continued inflow of foreign investment, revival in net external commercial borrowings, higher banking capital and additional special drawing rights (SDR) allocation.

3)As of end-November 2021, India was the fourth largest forex reserves holder in the world after China, Japan and Switzerland.

Which of the statements given above is / are correct ?

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

Ans: c

48)

Consider the following about Hoysala Temples :

1)The Hoysala Temples of Belur, Halebid and Somnathapura in Karnataka have been finalised as India's nomination for consideration as World Heritage for the year 2022-2023.

2)The 'Sacred Ensembles of the Hoysala' are on UNESCO's Tentative list since 15th April, 2014 and represent one of the highest points of human creative genius and stand testimony to the rich historical and cultural heritage of our country.

3)The sacred ensembles of the Hoysalas, built in the 12th-13th centuries and represented here by the three components of Belur, Halebid and Somnathapura, attest to the creativity and skill of the Hoysala artists and architects who built these masterpieces of a kind never seen before or since.

4)The Hoysala architects used their profound knowledge of temple architecture in different parts of India to their advantage.

5)The Hoysala temples have a basic Darvidian morphology but show strong influences of the Bhumija mode widely used in Central India, the Nagara traditions of northern and western India, and the Karntata Dravida modes favoured by the Kalyani Chalukyas.

6)Therefore, the Hoysala architects made considered and informed eclectic selections of features from other temple typologies which they further modified and then complemented with their own particular innovations. The result was the birth of a completely novel 'Hoysala Temple' form.

Which of the statements given above is / are correct ?

- (a)1 only
- (b)1 and 2
- (c) 1, 2, and 3,4,5,6
- (d) None of the above

Ans: c

49) The Union Minister for Finance & Corporate Affairs, Smt. Nirmala Sitharaman presented the Economic Survey 2021-22 in Parliament .

Consider the following :

1) Indian economy estimated to grow by 9.2 percent in real terms in 2021-22 (as per first advanced estimates) subsequent to a contraction of 7.3 percent in 2020-21.

2) GDP projected to grow by 8- 8.5 percent in real terms in 2022-23.

3) The year ahead poised for a pickup in private sector investment with the financial system in good position to provide support for economy's revival.

4) Projection comparable with World Bank and Asian Development Bank's latest forecasts of real GDP growth of 8.7 percent and 7.5 percent respectively for 2022-23.

5) As per IMF's latest World Economic Outlook projections, India's real GDP projected to grow at 9 percent in 2021-22 and 2022-23 and at 7.1 percent in 2023-2024, which would make India the fastest growing major economy in the world for all 3 years.

Which of the statements given above is / are correct ?

(a) 1 only

(b) 1 and 2

(c) 1, 2, and 3,4,5

(d) None of the above

Ans: c

50) ) The Union Minister for Finance & Corporate Affairs, Smt. Nirmala Sitharaman presented the Economic Survey 2021-22 in Parliament .

Consider the following:

1) Agriculture and allied sectors expected to grow by 3.9 percent; industry by 11.8 percent and services sector by 8.2 percent in 2021-22.

2) On demand side, consumption estimated to grow by 7.0 percent, Gross Fixed Capital Formation (GFCF) by 15 percent, exports by 16.5 percent and imports by 29.4 percent in 2021-22.

3) Macroeconomic stability indicators suggest that the Indian Economy is well placed to take on the challenges of 2022-23.

4) Combination of high foreign exchange reserves, sustained foreign direct investment, and rising export earnings will provide adequate buffer against possible global liquidity tapering in 2022-23.

5) Economic impact of "second wave" was much smaller than that during the full lockdown phase in 2020-21, though health impact was more severe.

6) Government of India's unique response comprised of safety-nets to cushion the impact on vulnerable sections of society and the business sector, significant increase in capital expenditure to spur growth and supply side reforms for a sustained long-term expansion.

7) Government's flexible and multi-layered response is partly based on an "Agile" framework that uses feedback-loops, and the use of eighty High Frequency Indicators (HFIs) in an environment of extreme uncertainty.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 1 and 2
- (c) 1, 2, and 3,4,5,6,7
- (d) None of the above

Ans: c

51) Services Sector contributed over 50% to India's GDP, highlighted the Economic Survey 2021-22 which was tabled by the Union Minister for Finance and Corporate Affairs, Smt. Nirmala Sitharaman in Parliament . The Survey also noted that Services Sector registered a steady recovery during the first half of the current fiscal year. *"Overall, the Services Sector grew by 10.8% Year on Year (YoY) in first half (H1) 2021-22"*, stated the Survey.

Consider the following about Trade In Services :

- 1) IT-BPM (Information technology - Business Process Management) Sector
- 2) Startups and Patents
- 3) Tourism Sector
- 4) Ports, Shipping and Waterways Services
- 5) Space Sector

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 1 and 2
- (c) 1, 2, and 3,4,5
- (d) None of the above

Ans: c

52) Consider the following about Nominal GDP , Real GDP , PCI of India, and PFCE :

1) Nominal GDP or GDP at current prices for the year 2020-21 is estimated at Rs.198.01 lakh crore as against Rs.200.75 lakh crore for the year 2019-20, showing a contraction of 1.4 per cent during 2020-21 as compared to growth of 6.2 per cent during 2019-20.

2. Real GDP or GDP at constant (2011-12) prices for the years 2020-21 and 2019-20 stands at Rs.135.58 lakh crore and Rs.145.16 lakh crore, respectively, showing a contraction of 6.6 per cent during 2020-21 as compared to growth of 3.7 per cent during 2019-20.

3.Per Capita Income i.e. Per Capita Net National Income at current prices is estimated at Rs.1,32,115 and Rs.1,26,855 respectively for the years 2019-20 and 2020-21.

4.Per Capita PFCE at current prices for the years 2019-20 and 2020-21 is estimated at Rs.91,254 and Rs.88,775 respectively

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 1 and 2
- (c) 1, 2, and 3,4
- (d) None of the above

Ans: c

53) Consider the following :

1)GVA at basic prices (Production Approach) = Output at basic price - Intermediate Consumption

2)GVA at basic prices (Income Approach) = CE + OS/MI + CFC + Production taxes less Production subsidies<sup>(i)</sup>

3)GDP =  $\Sigma$  GVA at basic prices + Product taxes less Product subsidies<sup>(ii)</sup>

3)NDP/NNI = GDP/GNI - CFC

4)GNI = GDP + Net primary income from ROW (Receipts less payments)

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 1 and 2
- (c) 1, 2, and 3,4
- (d) None of the above

Ans: c

54)Consider the following :

1)Primary Incomes = CE + Property and Entrepreneurial Income

2) NNDI = NNI + other current transfers<sup>(iii)</sup> from ROW, net (Receipts less payments)

3) GNDI = NNDI + CFC = GNI + other current transfers<sup>(iii)</sup> from ROW, net (Receipts less payments)

4) Gross Capital Formation<sup>(iv)</sup> (Financing Side) = Gross Savings + Net Capital Inflow from ROW

5) GCF (Expenditure Side) = GFCF + CIS + Valuables

6) Gross Disposable Income of Govt. = GFCE + Gross Saving of General Government

7) Gross Disposable Income (GDI) of Households = GNDI - GDI of Govt. - Gross Savings of All Corporations

Which of the statements given above is / are correct ?

(a) 1 only

(b) 1 and 2

(c) 1, 2, and 3, 4, 5, 6, 7

(d) None of the above

Ans: c

55) Consider the following :

1) *Production taxes or subsidies are paid or received with relation to production and are independent of the volume of actual production. Some examples are:*

2) *Production Taxes - Land Revenues, Stamps & Registration fees and Tax on profession*

3) *Production Subsidies - Subsidies to Railways, Subsidies to village and small industries.*

Which of the statements given above is / are correct ?

(a) 1 only

(b) 1 and 2

(c) 1, 2, and 3

(d) None of the above

Ans: c

56) Consider the following :

1) *Product taxes or subsidies are paid or received on per unit of product. Some examples are:*

*Product Taxes- Excise duties, Sales tax, Service Tax and Import, Export duties*

*Product Subsidies- Food, Petroleum and fertilizer subsidies.*

2) Other Current Transfers refers to current transfers other than the primary incomes.

3) Gross Capital Formation (GCF) at the current as well as the constant prices is estimated by two approaches: – (i) through flow of funds, derived as Gross Saving plus net capital flow from Rest of the World (RoW); and (ii) by the commodity flow approach, derived by the type of assets. The estimates of GCF through the flow of funds approach are treated as the firmer estimates. GCF by industry of use and by institutional sectors does not include 'valuables' and therefore, these estimates are lower than the estimates available from commodity flow approach.

Which of the statements given above is / are correct ?

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

Ans: c

TS BC STUDY CIRCLE

Civils Prelims 2022 (Scheduled on 5.6.2022)  
Model Questions (for GS Paper )  
Set No. 2 {Prepared on 23 .5.2022 }

For Study purpose

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1)Consider the following with reference to the term 'Inflation' :

1)Headline inflation is measured by year-on-year changes in the all-India consumer price index (CPI) produced by the National Statistical Office (NSO).

2) Core CPI, i.e., CPI excluding food and fuel is worked out by eliminating the groups 'food and beverages' and 'fuel and light' from the headline CPI.

3) The CPI diffusion index, a measure of dispersion of price changes, categorises items in the CPI basket according to whether their prices have risen, remained stagnant or fallen over the previous month. A reading above 50 for the diffusion index signals a broad expansion or generalisation of price increases and a reading below 50 signals broad-based price decline

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1, 2, ,3
- (d) None of these

Ans: c

2) Consider the following with reference to 'movements in inflation' ?

1)Historical decomposition estimates the contribution of each shock to the movements in inflation over the sample period (Q4:2010-11 to Q4:2021-22) based on a vector autoregression (VAR) with the following variables (represented as the vector  $Y_t$ ) – crude oil prices; exchange rate (INR per US\$), asset price (BSE Sensex), CPI; the output gap; rural wages; the policy repo rate; and money supply (M3 ).

2)All variables other than policy repo rate are growth rates.

3)The VAR can be written in reduced form as:  $Y_t = c + A Y_{t-1} + e_t$  ; where  $e_t$  represents a vector of shocks.

4)Using Word decomposition,  $Y_t$  can be represented as a function of its deterministic trend and sum of all the shocks  $e_t$  . This formulation facilitates decomposition of the deviation of inflation from its deterministic trend into the sum of contributions from various shocks.

Which of the statements given above is / are correct ?

- (a) 1 and 2 only

- (b) 2 only
  - (c) 1, 2, 3, 4
  - (d) None of these
- Ans: c

3) Consider the following in the context of Consumer Expenditure Survey:

1) The CPI weighting diagrams use the modified mixed reference period (MMRP) data based on the 2011-12 Consumer Expenditure Survey conducted by the National Sample Survey Office (NSSO).

2) Under MMRP, data are collected on expenditure incurred for frequently purchased items – edible oil, eggs, fish, meat, vegetables, fruits, spices, beverages, processed foods, pan, tobacco and intoxicants – during the last seven days; for clothing, bedding, footwear, education, medical (institutional), durable goods, during the last 365 days; and for all other food, fuel and light, miscellaneous goods and services including non-institutional medical services, rents and taxes, data relate to the last 30 days.

Which of the statements given above is / are correct ?

- (a) 1 and 2 only
- (b) 2 only
- (c) 1 only
- (d) None of these

Ans: a

4) What are the drivers of private consumption?

- 1) Income, wealth, inflation,
- 2) interest rate and
- 3) consumer confidence

Which of the statements given above is / are correct ?

- (a) 1 and 2 only
- (b) 2 only
- (c) 1, 2, 3 are potential determinants of private consumption
- (d) None of these

Ans: c

5) : Consider the following :

1) Private Sector Investment Cycle Drivers: An Investigation with Firm-Level Data

2) A revival in the investment cycle is vital for ensuring a durable recovery.

3) Despite congenial financial conditions and a strengthening of corporate balance sheets – moderation in listed firms' leverage in terms of debt/asset and debt/equity ratios – private investment remains weak in India

Which of the statements given above is / are correct ?

- (a) 1 and 2, 3 only

- (b) 2 only
  - (c) 1 only
  - (d) None of these
- Ans:a

4) Consider the following about Gati Shakti :

1)Gati Shakti – the National Master Plan for Multi-modal Connectivity – incorporates the infrastructure schemes of various Ministries and State Governments such as Bharatmala, Sagarmala, inland waterways, dry/land ports and UDAN for integrated planning and coordinated implementation of infrastructure connectivity projects.

2)The multi-modal plan will help improve India’s logistics network and competitiveness, providing integrated and seamless connectivity for the movement of people, goods and services from one mode of transport to another.

Which of the statements given above is / are correct ?

- (a)1 and 2 only
- (b) 2 only
- (c) 1 only
- (d) None of these

Ans:a

5) Consider the following about agriculture :

1)GVA in agriculture and allied activities expanded by 3.0 per cent in H2, supported by adequate and wellspread southwest and northeast monsoon rains, good reservoir levels and improved soil moisture, which helped rabi acreage to increase by 1.5 per cent over the previous year.

2)Foodgrains production touched a new record in 2021-22 with both kharif and rabi output exceeding the final estimates for 2020-21 as well as the targets .

3)The production of pulses in 2021- 22 rose by 5.9 per cent, while oilseeds and sugarcane production achieved record levels.

Which of the statements given above is / are correct ?

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

Ans:a

10) Consider the following :

1)Horticulture production fell by 0.4 per cent to 3,332.5 lakh tonnes during 2021-22 due to lower output of tomato, other vegetables, spices, flowers, aromatics and medicinal plants; the output of total fruits and onion production, on the other hand, rose.

2)Allied activities – livestock, forestry and fishing – impart substantial resilience to the agricultural sector as a whole.

3) Though allied activities have a share of around 45 per cent in the overall GVA of the sector, their contribution to growth in aggregate agricultural GVA for 2020-21 was higher at 68 per cent. Which of the statements given above is / are correct ?

- (a) 1, 2, 3 only
- (b) 2 only
- (c) 3 only
- (d) None of these

Ans: a

12) Consider the following :

1) High-frequency indicators of the rural economy suggest a mixed picture during H2 .

2) Agriculture and allied exports and agriculture credit registered robust growth in H2.

3) Demand for jobs under the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) was lower than a year ago due to higher rabi sowing, although it was still above pre-pandemic levels.

4) Sales of tractors, fertilisers and two-wheelers remained lower than in the previous year.

Which of the statements given above is / are correct ?

- (a) 1, 2, 3, 4 only
- (b) 2 only
- (c) 4 only
- (d) None of these

Ans: a

13) Consider the following :

1) The agricultural sector will benefit from measures announced in the Union Budget 2022-23 which include strengthening public and private investment in agriculture, research and education, promotion of domestic oilseed production, use of Kisan drones, delivery of digital and high-tech agriculture services.

2) The Ken-Betwa River Linking Project with an outlay of Rs.44,605 crore aims to bring 9.1 lakh hectare area under irrigation.

3) Under the PM Gati Shakti plan, transport and infrastructure facilities will be expanded/upgraded to revamp agri-supply chain efficiency.

Which of the statements given above is / are correct ?

- (a) 1, 2, 3 only
- (b) 2 only
- (c) 3 only
- (d) None of these

Ans:a

14) Consider the following :

1) Industrial activity lost momentum in H2 (2021-2022), as manufacturing was affected by supply side shortages and input cost pressures .

2) Mining activity was supported by coal and natural gas, offsetting the contraction in crude oil production.

Which of the statements given above is / are correct ?

(a) 1 2 only

(b) 2 only

(c) 1 only

(d) None of these

Ans:a

15) Consider the following, during financial year 2021-2022 about electricity generation:

1) Electricity generation edged up by 2.4 per cent in Q3 over the corresponding period of the previous year and 7.6 per cent over its 2019-20 level.

2) Electricity generation from thermal and renewable sources increased by 1.0 per cent and 6.0 per cent, respectively, in Q3 .

3) The thermal generation was hindered for a short period due to coal supply bottlenecks owing to unseasonal rains impacting domestic coal production and dispatches on the one hand and higher import prices of coal sharply curtailing imports on the other .

4) In Q4, electricity generation growth improved to 4.0 per cent .

Which of the statements given above is / are correct ?

(a) 1 2, 3,4 only

(b) 2 only

(c) 4 only

(d) None of these

Ans:a

16) Consider the following about Services sector during 2021-2022

1) Services sector activity grew by 5.7 per cent in H2 and crossed its pre-pandemic level (8.0 per cent over 2019-20).

2) The contact-intensive services, viz., trade, hotels, transport, and communication inched towards normalisation, though their rebound was held back by the Omicron variant.

3) Construction activity contracted in H2 due to unseasonal rains in Q3 .

4) Among its proximate indicators, finished steel consumption contracted in Q3 as well as Q4, while cement production rose in December-February after a temporary setback in November, 2021.

Which of the statements given above is / are correct ?

- (a) 1, 2, 3, 4 only
- (b) 2 only
- (c) 4 only
- (d) None of these

Ans: a

17) Consider the following about Asset Purchase Programmes :

1) Asset purchase programs (APPs) have been undertaken by several central banks (including EMEs i.e., Emerging Market Economies) following the COVID-19 outbreak to ease monetary and financial conditions in support of economic recovery (IMF, 2020).

2) APPs lower yields through two main channels, viz., (i) the supply channel by which an APP announcement can immediately moderate the risk premium in anticipation of reduced net supply of government bonds in the market; and (ii) the signalling channel as market participants may perceive the recourse to an APP as an indication that the economic outlook is weak necessitating lower policy rates for a longer period.

Which of the statements given above is / are correct ?

- (a) 1, 2 only
- (b) 2 only
- (c) 1 only
- (d) None of these

Ans: a

18) Consider the following about APPs in India :

1) In the Indian context, the Reserve Bank purchased G-secs of Rs. 2.2 lakh crore under G-SAP in H1:2021-22 to anchor yield expectations in the context of the large borrowing programme of the Government.

2) Asset purchases under G-SAP were different from regular open market operation (OMO) purchases as (i) these provided an upfront commitment on amounts in contrast to regular OMOs, which are discretionary; (ii) the size of G-SAP auctions was larger than conventional OMOs; and (iii) purchases included both liquid and illiquid securities.

3) The market response to the nine G-SAP auctions was favourable.

4) The last two auctions were liquidity neutral with purchases being offset by simultaneous sales of an identical amount (special OMOs).

Which of the statements given above is / are correct ?

- (a) 1, 2, 3, 4 only
- (b) 2 only
- (c) 4 only
- (d) None of these

Ans: a

19) Consider the following :

Geopolitical hostilities in Ukraine are casting a strong downside to the global macroeconomy. The immediate direct hit on commodities and financial markets has aggravated, with financial sanctions and retaliation.

1)The closure of shipping routes and air space, suspension of logistic and shipping services and shutting down of pipelines, on account of sanctions/apprehensions/ voluntary private decisions are creating a new wave of supply disruptions. This is likely to further add to freight costs, ultimately feeding into inflation and impacting trade and output.

2)A surge in geopolitical risk is associated with significant economic contraction, particularly in emerging market economies .

3)Russia and Ukraine were the 11th and 55th largest economies in the world in 2020, accounting for about 1.7 per cent and 0.2 per cent, respectively, of the world's nominal GDP. Their shares in world exports at 2.3 per cent and 0.3 per cent, respectively, notwithstanding, they have a dominant influence on supplies of key commodities, resulting in an outsized impact on inflation, trade and output at the global level.

4)The world runs a high exposure to fuel, gas, some agro, wood products, edible oil, wheat, minerals and metals produced by these two countries . Global food inflation and food security are hostage to the war, as are energy-dependent nations and fertiliser importers, including India.

5)There are second-order spillovers too – it is estimated that the global light vehicle production would be reduced by 2.6 million units in 2022 and 2023 as the conflict has disrupted supplies of vehicle components, including electric power communication parts, palladium, aluminium, nickel and semiconductor grade neon

Which of the statements given above is / are correct ?

- (a) 1, 2, 3 only
- (b) 2 only
- (c) ,1,2,3,4,5
- (d) None of these

Ans:c

20) Consider the following :

Since the release of the October 2021 Monetary Policy Report (MPR) by Reserve Bank of India, the global economic environment has drastically altered, with the escalating geopolitical situation clouding the outlook for both growth and inflation in India and across the world warranting a revision in forecasts.

1)Amidst persisting global supply chain disruptions, elevated energy and input prices and tighter labour markets, apprehensions of heightened global financial and commodity market volatility come together in a perfect storm.

2)Brent crude prices crossed US\$ 130 per barrel on March 8, 2022 and have hovered in the US\$ 100-120 range since mid-March, posing the biggest risk to India's economic prospects and putting the global recovery at heightened risk.

3)The Bloomberg commodity index spiked by around 10 per cent since the war erupted on February 24 and 52 per cent on a year-on-year basis (as on April 5, 2022) as supply concerns exacerbated across commodities.

4)Gold prices crossed US\$ 2,000 per ounce on safe haven demand before some correction.

5)Global food prices were at an all-time high in February 2022 and are expected to harden further in view of potential supply disruptions.

6)With inflation turning out to be persistent and broad-based and well above targets, major advanced economies (AEs) quickened the pace of unwinding of their ultra-accommodative monetary policies.

7)A number of emerging market economies (EMEs) have been in a tightening mode since 2021, and more are expected to follow.

8)Sovereign bond yields in major AEs had hardened substantially in anticipation of a faster and steeper tightening of policy rates, but geopolitical risks have imparted high volatility as risk sentiment experiences sudden and sizeable shifts by every passing day.

9)Equity markets have seen sharp corrections since the start of the calendar year with the market volatility index rising to a one-year high amidst geopolitical tensions.

10)Currency markets have turned highly volatile in response to these developments, with the US dollar index reaching its highest since June 2020 due to flight to safety.

Which of the statements given above is / are correct ?

(a) 1, 2, 3 only

(b) 2 only

(c) 1,2,3,4,5,6,,8,9,10

(d) None of these

Ans:c

21) NITI Aayog released the State Energy and Climate Index-Round 1 on 11 April 2022.

The index released by NITI Aayog Vice Chairman , in the presence of NITI Aayog Member , and CEO, secretaries of various government departments and stakeholders from the energy sector.

Consider the following :

1)The State Energy and Climate Index (SECI) Round-1 aims to rank states and UTs on six parameters: (1) Discoms' Performance (2) Access, Affordability and Reliability of Energy (3) Clean Energy Initiatives (4) Energy Efficiency (5) Environmental Sustainability; and (6) New Initiatives.

2)These parameters include a total of 27 indicators.

3)Based on the outcome of SECI Round-1 scores, states and union territories have been categorized into three groups: 'Front Runners', 'Achievers', and 'Aspirants'.

4)The index can be used by the states and UTs to benchmark their performance against their peers, analyze the potential challenges to develop better policy mechanisms, and efficiently manage their energy resources.

Which of the statements given above is / are correct ?

(a) 1, 2, 3,4 only

(b) 2 only

- (c) 3 only  
(d) None of these  
Ans:a

22) Consider the details of the satellites included in the Earth Observation Satellite (EOS) series of ISRO are as follows:

- 1)EOS-01: Earth Observation satellite meant for Agriculture, Forestry & disaster management support
- 2)EOS-02: Technology demonstration satellite for various new technologies with applications that include agriculture, forestry, geology, hydrology etc. and forming the payload for SSLV-1.
- 3)EOS-03 : First Agile Earth Observation satellite in Geostationary orbit and applications which include near real time imaging, quick monitoring of natural disasters, spectral signatures for agriculture, forestry etc.
- 4)EOS-04 : Radar Imaging satellite meant to provide high quality images under all weather conditions for applications such as Agriculture, Forestry & Plantations, Soil Moisture & Hydrology and Flood Mapping.
- 5)EOS-05 : Earth Observation Satellite in the Geostationary Orbit.
- 6)EOS-06 : Earth Observation satellite meant for applications, which include ocean related services and advisories towards potential fishing zone forecast , ocean state forecast

Which of the statements given above is / are correct ?

- (a)1 2, 3,4,5,6 only  
(b) 2 only  
(c) 3 only  
(d) None of these  
Ans:a

23) Dwelling on the reasons for the failure of the launch of the EOS-3 satellite, it is said, initial investigations with the post-flight data conducted immediately after the launch indicated that an anomaly in the Cryogenic Upper Stage led to failure of the mission. A National level Failure Analysis Committee (FAC) consisting of experts from academia & ISRO was immediately constituted to identify the causes of the anomaly in the Cryogenic Upper Stage of GSLV, that led to mission abort and to recommend corrective actions for future missions.

Consider the following :

- 1)The Committee observed that the build-up of pressure in the propellant (Liquid Hydrogen or LH2) tank during the flight was not normal leading to a lower tank pressure at the time of ignition of the engine. This resulted in anomalous operation of the Fuel Booster Turbo Pump (FBTP) mounted inside the LH2 tank which feeds the main turbopump of the engine resulting in insufficient flow of Liquid Hydrogen into the engine thrust chamber.

2)Detailed studies indicate that the most likely reason for the observed reduction in LH2 tank pressure is a leak in the respective Vent and Relief Valve (VRV), which is used for relieving the excess tank pressure during flight. Computer simulations as well as multiple confirmatory ground tests, closely simulating the conditions in the GSLV-F10 flight, validated the analysis by the FAC.

3)It is informed that the Failure Analysis committee has recommended improvements to enhance the robustness of the Cryogenic Upper Stage for future GSLV missions.

4)The GSLV vehicle with the required modifications in the Cryogenic Upper Stage is expected to be ready by the third quarter of 2022.

5)The satellite identified for the next GSLV mission is expected to be ready for launch in the fourth quarter of 2022.

Which of the statements given above is / are correct ?

(a) 1, 2, 3,4,5 only

(b) 2 only

(c) 3 only

(d) None of these

Ans:a

24)Consider the following :

1)The percentage of e-waste collected, dismantled & recycled/ disposed out of the total e-waste generated in the country from twenty-one (21) types of electrical and electronic equipment (EEE) notified Under the E-Waste (Management) Rules, 2016 during the last three years is given below:

2)Ministry has notified E-Waste (Management) Rules, 2016 which were further amended in 2018for management of electronic waste generated due to discarding of electronic equipment by the consumers. The rules came into force since 1<sup>st</sup> October, 2016and have the following specific objectives:

3)Extended Responsibility to producers to manage a system of E-waste collection, storage, transportation and environmentally sound dismantling and recycling through EPR Authorization (EPRA).

4)To promote and encourage establishment of an efficient e-waste collection mechanism.

5)To promote environmentally safe and sound recycling through authorized dismantlers and recyclers of e-waste.

6)To minimize illegal recycling / recovery operations.

7)Reduce hazardous substances in Electrical and Electronic Equipment (EEE).

8)The EEE after their useful life when they become e-waste, may not cause any harm to health and environment if it is stored safely. However, if un-scientific and crude methods are used for processing for retrieval of useful components or material or if the material is disposed in open, then it may cause health risks and damage to environment. Under the E-Waste (Management) Rules, 2016, collection and processing of e-waste can be carried out only by Producers or their authorised associates/ partners, authorised dismantlers, recyclers and authorised refurbisher. Non-compliance of the E-Waste (Management) Rules, 2016 may lead to adverse impact on environment and human health. Following steps have been taken to curb informal collection and unscientific dismantling and recycling of e-waste:

Which of the statements given above is / are correct ?

- (a) 1, 2, 3, 4, 5, 6, 7, 8 only
- (b) 2 only
- (c) 3 only
- (d) None of these

Ans:a

25)Consider the following :

1)Under EPRA, a producer is required to get its e-waste managed only through an authorized dismantler or recycler of e-waste.

2)Central Pollution Control Board (CPCB) grants EPRA only to those producers who have set up a system of collection of e-waste through authorised entity as per the above said rules.

3)An Action Plan for enforcement of E-Waste (Management) Rules, 2016, across the country is in place since May, 2019. The action plan is to be implemented by all the States/UTs and State Pollution Control Boards (SPCBs)/Pollution Control Committees (PCCs) are required to submit their quarterly progress reports to CPCB to review progress. In the said action plan, checking informal traders, dismantlers, recyclers of e-waste have been taken-up as one of the action points. Drives for identification of informal activities are to be done by all the SPCBs along with district administration of the State. An e-waste management review portal has also been developed for uploading status & progress of e-waste action plan.

4)Actions, such as, constitution of teams for carrying out drives, issuing of notices, closure of operation, seizing the E-Waste against the informal processing are being taken up by the SPCBs/PCCs. Seventeen SPCBs/ PCCs started the drive against informal recycling as per the aforesaid Action Plan during Financial Year 2020-2021.

5)Under the aforesaid rules, provisions have been made for recognition and registering of workers involved in dismantling and recycling of E-Waste. Under Rule 12(1) of the said rules, State Government has been entrusted with the responsibility to ensure earmarking or allocation of industrial space or shed for E-Waste dismantling and recycling in the existing and upcoming industrial park, estate and industrial clusters.

Which of the statements given above is / are correct ?

- (a) 1, 2, 3 only
- (b) 2 only

- (c) 3 only
  - (d) None of these
- Ans:a

Which of the statements given above is / are correct ?

- (a) 1, 2, 3, 4, 5 only
  - (b) 2 only
  - (c) 3 only
  - (d) None of these
- Ans:a

26) At the 26th session of the Conference of the Parties (COP26) to the United Nations Framework Convention on Climate Change (UNFCCC) held in Glasgow, United Kingdom, India shared the mantra of LIFE - Lifestyle for Environment - to combat climate change.

Consider the following :

1) The United Nations has created a framework of 17 Sustainable Development Goals (SDG), which is a comprehensive strategy to reorient economies toward long-term sustainability. The SDGs address issues such as health and education, inequity, climate change, and the preservation of our oceans and forests, among others. Goal 12 of the SDG is to ensure sustainable consumption and production patterns focussing on waste management (both municipal and hazardous), food loss reduction, waste recycling and reuse, and sustainability in industries such as tourism.

2) SDG 12 calls for a change in present lifestyle to one that is more sustainable.

3) As part of the United Nations Decade of Action for attainment of SDGs, India has initiated several measures for promoting Resource Efficiency and Circular Economy, including for prevention and management of waste. Concepts of Extended Producer Responsibility (EPR) and Circular Economy are based on principles of reduce-reuse-recycle and are relevant for promoting sustainable consumption and production.

4) NITI Aayog has constituted Committees for development of circular economy (CE) action plans for different categories of wastes.

5) MoEFCC is the Nodal Ministry for Circular Economy Action Plan for Tyre and Rubber and has notified on 16.02.2022 'Guidelines on the Extended Producer Responsibility (EPR) for Plastic Packaging' under Plastic Waste Management Rules, 2016.

Which of the statements given above is / are correct ?

- (a) 1, 2, 3, 4, 5 only
  - (b) 2 only
  - (c) 3 only
  - (d) None of these
- Ans:a

27) Consider the following :

In January 2018, MoEFCC launched the Green Good Deeds (GGDs) movement as a social movement with the aim to bring about mass environmental awareness in the society at all levels.

1)GGDs are simple, practical steps that every individual may perform in day-to-day life in order to adopt an environment-friendly lifestyle.

2)A compilation of such deeds has also been published under the title ‘Green Deeds & Habits for Sustainable Environment’.

3)Promotion of GGDs among school and college students has been taken up under the National Green Corps (NGC) “Eco-club” programme. Cleanliness drives, plantation drives, awareness on waste management, minimizing use of single-use plastic, eco-friendly celebration of festivals, etc. are some of the activities undertaken by Eco-club students.

Which of the statements given above is / are correct ?

- (a) 1, 2, 3 only
- (b) 2 only
- (c) 3 only
- (d) None of these

Ans:a

28) Consider the following :

The Ministry of Environment, Forest and Climate Change has notified the Guidelines on the Extended Producer Responsibility (EPR) for Plastic Packaging vide Plastic Waste Management Amendment Rules, 2022, on 16<sup>th</sup> February, 2022.

1)The enforceable prescription of targets for reuse of rigid plastic packaging and use of recycled plastic content in plastic packaging will reduce the use of fresh plastic material for the manufacture of plastic packaging.

2)The use recycled plastic in packaging for processed food and reuse of rigid plastic packaging food contact applications is subject to the standards and regulations issued under the Food Safety and Standards Act, 2006 (34 of 2006) by the Food Safety and Standards Authority of India.

Which of the statements given above is / are correct ?

- (a)Both 1 and 2
- (b) 1 only
- (c) 2 only
- (d) None of these

Ans:a

29) Consider the following :

1)Indian tent turtle is listed in Schedule –I of the Wild Life (Protection) Act, 1972 and is thereby provided the highest degree of protection.

2)There are no reports to indicate that the Indian tent turtle is on the verge of extinction due to illegal mining in Narmada River.

Which of the statements given above is / are correct ?

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

- (c) 1 only  
(d) None of these  
Ans:a

30) Consider the following :

The following action has been taken by Government to further enhance the production and supply of coal in the country:

**1) Commercial Auction of coal on revenue share mechanism:** Auction of commercial mining on Revenue Sharing Mechanism was launched on 18.06.2020 by Hon'ble Prime Minister. Under this scheme, total of 2 tranches have been successfully completed and third Tranche is currently under process. From these two tranches total of 28 coal mines have been successfully auctioned for which Vesting order have in signed for 27 coal mines.

**2) Rolling auction:** In order to expedite the process for conducting auction and to carryout more rounds of auction in a year, a mechanism of rolling auctions of coal mines has been planned. Under this mechanism, upon completion of the electronic auction process of a tranche, the next tranche of auction would be launched for following mines:

3) Mines where no bid or only single bid was received in the previous tranche of auction (except for those mines where Ministry of Coal decides to go for second attempt of auction)

4) New mines, if any, identified by Ministry of Coal.

5) In the current III tranche of commercial auction, total of 48 coal mines have been rolled over from the II tranche of mines.

**6) Single Window Clearance:** The Union government has already launched Single Window Clearance portal on 11.01.2021 for the coal sector to speed up the operationalisation of coal mines. It is an unified platform that facilitates grant of clearances and approvals required for starting a coal mine in India. Now, the complete process shall be facilitated through Single Window Clearance Portal, which will map not only the relevant application formats, but also process flow for grant of approval or clearances.

**7) Project Management Unit (PMU):** Project Management Unit has been appointed by Ministry for handholding of coal block allottees for obtaining various approvals / clearances for early operationalisation of coal mines.

Which of the statements given above is / are correct ?

- (a) 1, 2, 3, 4, 5, 6, 7 only  
(b) 2 only

- (c) 3 only
  - (d) None of these
- Ans:a

30) Government of India in its Budget 2022-2023 has announced establishment of Digital University. Consider the following :

- 1)The University will provide access to students across the country for world-class quality universal education with personalised learning experience at their doorsteps.
- 2)This will be made available in different Indian languages and ICT formats.
- 3)The University will be built on a networked hub-spoke model, with the hub building cutting edge ICT expertise. The best public universities and institutions in the country will collaborate as a network of hub-spokes.
- 4)The Department of Higher Education, in consultation with University Grants Commission (UGC), All India Council for Technical Education (AICTE) and other stakeholders has initiated the process to ensure the early start of this digital university.

Which of the statements given above is / are correct ?

- (a) 1, 2, 3, 4 only
- (b) 2 only
- (c) 3 only
- (d) None of these

Ans:a

31) Consider the following about melting of glaciers in the Indian Himalayan region:

The government has carried out studies and maintains data regarding melting of glaciers in the Indian Himalayan region.

1)Several Indian institutes/universities/organizations (Geological Survey of India (GSI), Wadia Institute of Himalayan Geology(WIHG), National Centre for Polar and Ocean Research (NCPOR), National Institute of Hydrology(NIH), Space Application Centre (SAC), Indian Institute of Science (IISc) etc.) monitor Himalayan glaciers for various scientific studies including glacier melting and have reported accelerated heterogeneous mass loss in Himalayan glaciers.

2)The mean retreat rate of Hindu Kush Himalayan glaciers is  $14.9 \pm 15.1$  meter/annum (m/a); which varies from  $12.7 \pm 13.2$  m/a in Indus,  $15.5 \pm 14.4$  m/a in Ganga and  $20.2 \pm 19.7$  m/a in Brahmaputra river basins. However, glaciers in the Karakoram region have shown comparatively minor length change ( $-1.37 \pm 22.8$  m/a), indicating the stable conditions.

3)Ministry of Earth Sciences (MoES) through its center National Centre for Polar and Ocean Research (NCPOR) has been monitoring six glaciers in the Chandra basin (2437km<sup>2</sup> area) in western Himalaya since 2013.

4)A state-of-the-art field research station 'Himansh' established in Chandra basin and operational since 2016 for conducting field experiment and expeditions to glaciers.

5) The rate of annual mass balance (melting) ranging from  $-0.3 \pm 0.06$  meter water equivalent per year ( $m\ w.e.y^{-1}$ ) to  $-1.13 \pm 0.22$   $m.w.e.y^{-1}$  during 2013-2020 is observed. Similarly, a mean thinning of  $\sim 50 \pm 11$  m with a mean annual mass loss of  $-1.09 \pm 0.32$   $m.w.e. a^{-1}$  was observed for the Baspa basin during 2000-2011.

6) GSI has conducted studies on melting of the glaciers by assessment of mass balance on nine glaciers and also carried out monitoring the recession/ advancement of 76 glaciers in Himalayan region. Majority of Himalayan glaciers are observed melting/ retreating at varying rates in different regions.

Which of the statements given above is / are correct ?

- (a) 1, 2, 3, 4, 5, 6 only
- (b) 2 only
- (c) 3 only
- (d) None of these

Ans: a

32)

Department of Science and Technology (DST) has supported various R&D projects for studying Himalayan Glaciers under the National Mission for Sustaining Himalayan Ecosystem (NMSHE) and National Mission on Strategic Knowledge for Climate Change (NMSKCC). The mass balance studies conducted for some Himalayan glaciers by University of Kashmir, Sikkim University, IISc and WIHG, revealed that majority of Himalayan glaciers are melting or retreating at varying rates.

Consider the following :

1) WIHG is monitoring a few glaciers in Uttarakhand, which reveal that the Dokriani Glacier in the Bhagirathi basin is retreating at 15-20 m/a since 1995, whereas Chorabari Glacier in the Mandakini basin is retreating at 9-11 m/a during 2003-2017.

2) WIHG is also monitoring Durung-Drung and Pensilungpa glaciers in Suru basin, Ladakh, which are retreating at 12 m/a and  $\sim 5.6$  m/a, respectively.

3) NIH has been conducting several studies for the assessment of runoff from melting of glaciers at catchment and basin scales across Himalaya.

4) Melting glaciers have significant impact on water resources of Himalayan rivers due to change in glacier basin hydrology, downstream water budget, impact on hydropower plants due to variation in discharge, flash flood and sedimentation. They also increase in risk related to glacier hazards due to enhanced number and volume of glacier lakes, accelerated flash flood and Glacial Lake Outburst Floods (GLOFs), impact on agro practices in high Himalayan region etc.

5) Divecha Centre for Climate Change, IISc Bangalore under the aegis of DST has investigated Satluj River basin and reported that there will be an increase in glacier melt contribution until the middle of the century and then there will be a decline. Numerous small glaciers located in the low altitude region of the Satluj basin indicate significant loss in the area till the middle of the century, creating a scarcity of water during the dry summer season.

6)The melting of glaciers is a natural process and cannot be controlled. However, melting of glaciers does increase the risks related to glacier hazards.

7)Various Indian institutes, organizations and universities are monitoring the Himalayan glaciers using remote sensing data at large scale to assess the calamities associated with the melting. Recently, the National Disaster Management Authority (NDMA) in collaboration with the Swiss Development Corporation (SDC), prepared the Guidelines, Compendium and Summary for Policy Makers on the management of the Glacial Lake Outburst Floods (GLOFs).

Which of the statements given above is / are correct ?

- (a) 1, 2, 3, 4, 5, 6, 7 only
- (b) 2 only
- (c) 3 only
- (d) None of these

Ans:a

33) Consider the following:

1)Ministry of Mines has announced the National Mineral Policy 2019 (“NMP 2019”) in March, 2019 which replaced the National Mineral Policy 2008. Subsequently, the Mines and Minerals (Development and Regulation) Act (MMDR Act) 1957 was amended in the years 2020 and 2021.

2)The objectives of Mineral Laws (Amendment) Act, 2020 is to allow State Governments to take advance action for auction of mineral blocks before the expiry of lease period and to allow transfer of statutory clearances, permissions etc. to a new lessee facilitate seamless continuity of mining operations.

3)Further, the MMDR Amendment Act, 2021 *inter alia* provides for increasing mineral production and time bound operationalisation of mines, increasing employment and investment in the mining sector, maintaining continuity in mining operations after change of lessee, increasing the pace of exploration and auction of mineral resources and resolving long pending issues that have slowed the growth of the sector.

4)These reforms will ensure self sufficiency in mineral requirement of the country.

Which of the statements given above is / are correct ?

- (a) 1, 2, 3, 4 only
- (b) 2 only
- (c) 3 only
- (d) None of these

Ans:a

34) Consider the following about Green Hydrogen :

1)Green H<sub>2</sub> is produced through electrolysis of water using electricity produced from renewable energy.

2) Green H<sub>2</sub> is not commercially viable at present. However, with declining costs of renewable power generation and electrolyzers, production of green hydrogen is likely to become cost competitive in future.

3) Ministry of New and Renewable Energy (MNRE) has proposed setting up of National Hydrogen Energy Mission with an aim to develop and scale up green hydrogen production technology, make it affordable and widely accessible.

4) The steel sector has also been made a stakeholder in the Mission. Under this initiative, it has been proposed to set up pilot plants with part funding from Government to explore the feasibility of using green H<sub>2</sub> in Direct Reduced Iron (DRI) production, by partly replacing natural gas with H<sub>2</sub> in gas based DRI plants. Based on the success of the pilot projects, the gas based DRI units shall be encouraged for large scale adoption of the process.

Which of the statements given above is / are correct ?

- (a) 1, 2, 3, 4 only
  - (b) 2 only
  - (c) 3 only
  - (d) None of these
- Ans: a

35) Consider the following about Natural Farming :

1) Natural farming is a traditional indigenous livestock based agricultural practices which gives freedom to farmers from all kinds of externally purchased inputs like chemical fertilizer or pesticides as well as organic fertilizers like vermicompost, organic manure, biofertiliser, bio-pesticides hence reduce the cost of farming and thereby provide benefit mostly to small and marginal farmers.

2) Transition of natural farming requires large scale access to natural farming techniques as farmers shift from traditional fertilizer and pesticide based system to a system where no inorganic chemical is added to the farm.

3) Government is implementing Bhartiya Prakritik Krishi Padhati (BPKP) introduced during 2020-21 as a sub scheme of Paramparagat Krishi Vikas Yojana (PKVY) for the promotion of agro-ecological farming system which have many variants and is based on sound ecological principles and traditional indigenous practices including Natural Farming.

4) The scheme is generic in nature and gives freedom to farmers to adopt indigenous practices with emphasis on exclusion of all synthetic chemical inputs and also promotes on-farm biomass recycling with major stress on biomass mulching, use of cow dung-urine formulations and other plant-based preparations.

5) Training through capacity building is integral part of the scheme. Under BPKP, financial assistance of Rs 12200/ha for 3 years is provided for cluster formation, training capacity building, organising conferences and continuous handholding by trained personnel, certification and residue analysis.

6) An area of 4.09 lakh ha area has been covered under natural farming and a total fund of Rs. 4980.99 lakh has been released to 8 States namely Andhra Pradesh, Chhattisgarh, Kerala, Himachal Pradesh, Jharkhand, Odisha, Madhya Pradesh and Tamil Nadu. Apart from this an

additional area of 5.68 lakh ha has been approved for 3 States namely Andhra Pradesh, Rajasthan & Uttar Pradesh.

Which of the statements given above is / are correct ?

- (a) 1, 2, 3, 4, 5, 6 only
- (b) 2 only
- (c) 3 only
- (d) None of these

Ans: a

36)

Welcoming the Summary of Policymakers (SPM) and the Working Group III (WG3) contribution to the Sixth Assessment Report (AR6) of the Intergovernmental Panel on Climate Change (IPCC), Minister for Environment, Forest and Climate Change, said in his tweet message that the historical responsibility of developed countries for consuming the carbon budget is scientifically established by the report, and called for the need of taking deep and urgent global emissions reduction.

Consider the following :

The report justifies India's emphasis on equity at all scales in climate action and sustainable development. Equity is essential for

- 1) The social and economic transformation required for climate mitigation,
- 2) Manage the negative consequences of climate mitigation on vulnerable populations,
- 3) Enable just transition towards low-emissions development,
- 4) And ensure sustainable development.

Which of the statements given above is / are correct ?

- (a) 1, 2, 3, 4 only
- (b) 2 only
- (c) 3 only
- (d) None of these

Ans: a

37) Consider the following about Plastic Waste :

The Union Minister of Environment, Forest & Climate Change, launched 'Prakriti', a mascot to spread greater awareness among masses about small changes that can be sustainably adopted in our lifestyle for a better environment, and various green initiatives taken by Ministry of Environment, Forest & Climate Change and Central Pollution Control Board (CPCB) to ensure effective Plastic Waste Management (PWM) in the country and senior officials of the government.

1) To tackle the challenge of plastic pollution, the Prime Minister, announced India's pledge to phase out Single Use Plastics (SUPs) by 2022.

2) Taking the momentum forward and stressing on the need for active public participation, the Union Minister for Environment, Forest & Climate Change also administered 'Swachh Bharat Harit Bharat Green Pledge' to the gathering.

3) Plastic has become one of the most pressing environmental issues that we are facing today.

4) India is generating about 3.5 Million Tonnes of plastic waste annually and the per capita plastic waste generation has almost doubled over the last five years. Plastic Pollution adversely affects our ecosystems and is also linked to air pollution.

Which of the statements given above is / are correct ?

- (a) 1, 2, 3, 4 only
- (b) 2 only
- (c) 3 only
- (d) None of these

Ans: a

38) Consider the following **green initiatives for plastic waste management launched**:

1) National Dashboard on Elimination of Single Use Plastic and Plastic Waste Management (MoEFCC) to bring all stakeholders including Central Ministries/ Departments, State/UT Governments at one place and track the progress made for elimination of single use plastic (SUP) and effective management of plastic waste.

2) Extended Producer Responsibility (EPR) Portal for Plastic Packaging (CPCB) for improving accountability, traceability, transparency and facilitating ease of reporting compliance to EPR Obligations by Producers, Importers and Brand-owners

3) Mobile App for Single Use Plastics Grievance Redressal (CPCB) to empower citizens to check sale/usage/manufacturing of SUP in their area and tackle the plastic menace.

4) Monitoring module for SUP (CPCB), for local bodies, SPCBs/PCCs and CPCB, to inventorize details of SUP production/ sale & usage in commercial establishments at district level, and on-ground enforcement of ban on SUP.

5) Industrial production of Graphene from Waste Plastic (G B Pant NIHE & NRDC) to promote more industries to come forward to up cycle plastic waste

Which of the statements given above is / are correct ?

- (a) 1, 2, 3, 4, 5 only
- (b) 2 only
- (c) 3 only
- (d) None of these

Ans: a

39)

Consider the following :

1)The State Energy & Climate Index (SECI) Round I ranks the states' performance on 6 parameters, namely, (1) DISCOM's Performance (2) Access, Affordability and Reliability of Energy (3) Clean Energy Initiatives (4) Energy Efficiency (5) Environmental Sustainability; and (6) New Initiatives. The parameters are further divided into 27 indicators.

2)Based on the composite SECI Round I score, the states and UTs are categorized into three groups: Front Runners, Achievers, and Aspirants.

3)The states have been categorized based on size and geographical differences as larger states, smaller states, and UTs.

4)Gujarat, Kerala, and Punjab have been ranked as the top three performers in the category of larger states.

5)Goa, emerged as the top-performing state in the smaller states category, followed by Tripura, and Manipur.

6) Among UTs, Chandigarh, Delhi, and Daman & Diu/Dadra & Nagar Haveli are the top performers.

7)Detailed state profiles and scorecards have been included in the report which provides a comprehensive snapshot of each state and union territory on the various parameters.

Which of the statements given above is / are correct ?

(a) 1, 2, 3, 4, 5, 6, 7 only

(b) 2 only

(c) 3 only

(d) None of these

Ans:a

40)

Consider the following :

1)Speaking on the occasion, Vice Chairman, NITI Aayog said that there is a need to convert our efforts towards achieving the 'Panchamrit' targets announced by the hon'ble PM at COP-26, Glasgow into a peoples' movement.

2)In order to do this, the role of the States is going to be critical. Governance innovation and mutual learning by states shall go a long way in improving outcomes and SECI Round I is the right step in this direction.

Which of the statements given above is / are correct ?

(a)Both 1 and 2

(b) 2 only

(c) 1 only

(d) None of these

Ans:a

41) Consider the following :

1) A group of scientists have computationally designed a hybrid material which can absorb greenhouse gas methane, converting it to clean Hydrogen and also simulated a process of capturing carbon dioxide in-situ and converting it to high purity hydrogen from non-fuel grade bioethanol. They have also designed a facility that can test such materials and help further carbon capture research at the institute

2) Responding to the challenge, in a series of researches on carbon capture and utilization scientists from Indian Institute of Chemical Technology (IICT), Hyderabad have not only computationally designed a hybrid material that can capture methane and also act as catalyst to convert it to high purity hydrogen, but also simulated and designed a process for *in situ* capture of carbon dioxide and its conversion to high purity hydrogen from non-fuel grade bioethanol through a mechanism called the optimized intensified chemical looping reforming.

3) The later research has been published in the Elsevier journal Chemical Engineering and Processing  
Which of the statements given above is / are correct ?

- (a) 1, 2, 3 only
- (b) 2 only
- (c) 3 only
- (d) None of these

Ans: a

41)

Consider the following :

1) Facial recognition System is part of the Digi Yatra initiative of the government for providing passengers seamless and hassle-free experience at airports. It is to be implemented in a phased manner.

2) The first phase is planned at Kolkata, Varanasi, Pune, Vijayawada, Bangalore, Delhi and Hyderabad Airports by March 2023.

3) Preliminary testing of the Digi Yatra Biometric boarding system with registration for the 'Day of Travel' at these airports has been completed.

Which of the statements given above is / are correct ?

- (a) 1, 2, 3 only
- (b) 2 only
- (c) 3 only
- (d) None of these

Ans: a

42) Consider the following regarding coal mines in India :

1) As per the Inventory of India published by GSI for Coal and Lignite as on 01.04.2021, the total assessed geological coal resource is 352125.97 million tonnes.

2) The cumulative coal production since 1950 up to 2020-21 is 17,297.94 million tonne as per Coal Controller, Ministry of Coal, Government of India.

3) As per present rate of demand/consumption of coal there is sufficient resources of coal in India.

4) Every year CMPDI is adding about 4000-6000 MT of proved resources in the coal inventory of India. There is no threat of coal resources for future coal demand in our country at present rate of extraction / demand.

5)The total number of blocks under Coal India Limited (CIL) is 456 as on 01.04.2021.  
6)The coal demand is expected to remain in the range of 1,192 – 1,325 Million Tonnes by 2030.

7)The cumulative coal production since 1950 up to 2020-21 is 17,297.94 million tonne as per Coal Controller, Ministry of Coal, Govt. of India.

8)As per present rate of demand/ consumption of coal there is sufficient coal resource in India which may provide thermal power.

9)Total 391 coal mines (operational) are being operated under Government agencies (CIL/SCCL/NLCIL).

10)In North Eastern Region, the coal mines being operated under Government agencies are coal mines of North Eastern Coalfields, Coal India Limited, Margherita. At present only Tirap Colliery and Tikak Colliery are being operated and mining is being carried out only in Tikak Colliery.

11)Recently direction have been issued regarding successful bidder of 02 coal blocks located in Assam viz Garampani and Koilajan cola blocks

Which of the statements given above is / are correct ?

- (a) 1, 2, 3, 4, 5 only
- (b) 2 only
- (c) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
- (d) None of these

Ans:c

43) India's merchandise import in March 2022 was USD 59.07 billion, an increase of 20.79% over USD 48.90 billion in March 2021 and an increase of 87.68% over USD 31.47 billion in March 2020.

Consider the following :

Top 10 major commodity groups covering 77% of total imports in April 2021-March 2022, are

- 1)Petroleum, Crude & products
- 2)Electronic goods
- 3)Gold
- 4) Machinery, electrical & non-electrical

Which of the statements given above is / are correct ?

- (a) 1, 2, 3, 4, only
- (b) 2 only
- (c) 3 only
- (d) None of these

Ans:a

44) India achieved an all-time high annual merchandise exports of USD 417.81 billion in FY 2021-22, an increase of 43.18% over USD 291.81 billion in FY2020-21 and an increase of 33.33% over USD 313.36 billion in FY2019-20.

Consider the following :

Top 10 major commodity groups covering 80% of total exports in April 2021-March 2022, are

- 1) Engineering goods
- 2) Petroleum products
- 3) Gems and Jewellery
- 4) Organic and Inorganic chemicals

Which of the statements given above is / are correct ?

- (a) 1, 2, 3, 4 only
- (b) 2 only
- (c) 3 only
- (d) None of these

Ans: a

45) India's trade deficit in March 2022 was USD 18.69 billion, while it was USD 192.41 billion during April 2021-March 2022.

Consider the following :

1) Value of non-petroleum imports was USD 40.66 billion in March 2022 with a positive growth of 5.26% over non-petroleum imports of USD 38.63 billion in March 2021 and a positive growth of 89.79% over non-petroleum imports of USD 21.42 billion in March 2020.

2) Value of non-oil, non-GJ (gold, silver & Precious metals) imports was USD 36.18 billion in March 2022 with a positive growth of 31.21% over non-oil and non-GJ imports of USD 27.58 billion in March 2021 and a positive growth of 93.52% over non-oil and non-GJ imports of USD 18.70 billion in March 2020

3) Non-oil, non-GJ (Gold, Silver & Precious Metals) imports was USD 369.19 billion in April 2021-March 2022, recording a positive growth of 43.39%, as compared to non-oil and non-GJ imports of USD 257.47 billion in April 2020-March 2021 and a positive growth of 26.98% over USD 290.74 billion in April 2019-March 2020.

Which of the statements given above is / are correct ?

- (a) 1, 2, 3 only
- (b) 2 only
- (c) 3 only
- (d) None of these

Ans: a

46) Consider the following :

1) Procurement of wheat has recently commenced in Rabi Marketing Season 2022-23 in the States of Madhya Pradesh, Haryana, Punjab and Uttar Pradesh.

2) A quantity of 34917 MT of wheat has been procured upto 03.04.2022 benefitting 3510 farmers with MSP value of Rs. 70.36 crore.

Which of the statements given above is / are correct ?

- (a) Both 1 and 2

- (b) 1 only
  - (c) 2 only
  - (d) None of these
- Ans:a

47) Consider the following :

1)The paddy procurement is progressing smoothly in Kharif Marketing Season (KMS) 2021-22 at MSP from farmers.

2)A quantity of 750.29 LMT of Paddy has been procured in KMS 2021-22 upto 03.04.2022 in procuring States/UTs.

3) About 108.01 Lakh farmers have been benefitted with MSP value of Rs. 1,47,055.95 crore

Which of the statements given above is / are correct ?

- (a) 1, 2, 3 only
  - (b) 2 only
  - (c) 3 only
  - (d) None of these
- Ans:a

48) Consider the following :

1)At present, the domestic production of edible oils is unable to meet the country's domestic demand.

2)The Country has to rely on a large scale on imports to meet the gap between demand and supply.

3)Around 56% of the edible oils segment consumed in the country is met through imports. The recent geo-political events have pushed the international prices of all edible oils to all time high levels. Hence, a need was felt to inspect the domestic market participants to ensure that no unfair practices are being resorted to by unscrupulous elements like hoarding and profiteering.

4)In order to curb the rising edible oil prices owing to overall global inflation in commodities brought about by current geo-political situation and the supply chain disruptions, the Government has notified a Central Order on 30<sup>th</sup> March, 2022 amending the Removal of Licensing Requirements, Stock Limits and Movement Restrictions on Specified Foodstuffs Order, 2016 and its Central Order dated 3<sup>rd</sup> February, 2022 by extending the stock limits for all Edible Oils and Oilseeds put together for a period upto 31<sup>st</sup> December, 2022 for all States/Union Territories.

5)This order is effective from 1<sup>st</sup> April, 2022 upto 31<sup>st</sup> December 2022. Six States viz Uttar Pradesh, Karnataka, Himachal Pradesh, Telangana, Rajasthan & Bihar which had issued their own control order in pursuance of Central Order dated 8<sup>th</sup> Oct. 2022 have also been brought under the purview of the latest order with effect from 1<sup>st</sup> April, 2022. With the issue of this Central Order, all States/UTs have been

brought under one single order. It is mentioned that the six states mentioned above were earlier exempted from the Central Order dated 3<sup>rd</sup> Feb. 2022 as they had issued their own Central Orders.

Which of the statements given above is / are correct ?

- (a) 1, 2, 3, 4, 5 only
- (b) 2 only
- (c) 3 only
- (d) None of these

Ans: a

49)

Department of Animal Husbandry & Dairying, Ministry of Fisheries, Animal Husbandry and Dairying has conducted the latest i.e., 20th Livestock Census in 2019 in participation with all States and Union Territories.

It covers all domesticated animals and its headcounts for total 16 species of animals like Cattle, Buffalo, Mithun, Yak, Sheep, Goat, Pig, Horse, Pony, Mule, Donkey Camel, Dog, Rabbit and Elephant and poultry birds (Fowl, Duck, Turkeys and other poultry birds) possessed by the households, household enterprises/non-household enterprises and institutions at their site. Moreover, the 20th livestock census is indeed a unique attempt as for the first-time data collected in using tablets computers to digitize household level data through online transmission from the field. Some of the significant findings of the 20th Livestock Census is summarized :

Consider the following:

1) The total Livestock population is 536.76 million in the country showing an increase of 4.8% over Livestock Census-2012.

2) The total Livestock population in rural and urban area is 514.11 million and 22.65 million respectively with percentage share of 95.78% for rural and 4.22% for urban area.

3) Total Bovine population (Cattle, Buffalo, Mithun and Yak) is 303.76 million in 2019 which shows an increase of 1.3% over the previous census.

4) The total number of Cattle in the country is 193.46 million in 2019 showing an increase of 1.3 % over previous Census.

5) The Exotic/Crossbred and Indigenous/Non-descript Cattle population in the country is 51.36 million and 142.11 million respectively.

6) The Indigenous/Non-descript Female Cattle population has increased by 10% in 2019 as compared to previous census.

Which of the statements given above is / are correct ?

- (a) 1, 2, 3,4,5,6 only
- (b) 2 only
- (c) 3 only
- (d) None of these

Ans:a

50) Consider the following :

- 1)Considering the number and past trends over last two decades, there is no livestock species which are on the verge of extinction.
- 2)However, only Camel and Donkey population is showing declining trends over last four Livestock Censuses i.e., 17<sup>th</sup> (2003), 18<sup>th</sup> (2007), 19<sup>th</sup> (2012) and 20<sup>th</sup> (2019) Livestock Census.

Which of the statements given above is / are correct ?

- (a) 1 and 2 only
- (b) 1 only
- (c) 2 only
- (d) None of these

Ans:a

51) Consider the following Livestock census:

1)The population of the total Exotic/Crossbred Cattle has increased by 29.3% in 2019 as compared to previous census.

2)There is a decline of 6% in the total Indigenous (both descript and non-descript) Cattle population over the previous census. However, the pace of decline of Indigenous Cattle population during 2012-2019 is much lesser as compared to 2007-12 which was about 9%.

3)The total Buffalo in the country is 109.85 million showing an increase of about 1.1% over previous Census.

4)The total Milch Animals (in-milk and dry) in Cows and Buffalo is 125.75 million, an increase of 6.0 % over the previous census.

5)The total Sheep in the country is 74.26 million in 2019, increased by 14.1% over previous Census.

6)The Goat population in the country in 2019 is 148.89 million showing an increase of 10.1% over the previous census.

7)The total Pigs in the country is 9.06 million in the current Census, declined by 12.03% over the previous Census.

8)The total Mithun and Yak in the country is 3.9 lakh and 58thousand in 2019, increased by 29.5% and 24.9% respectively over previous Census.

9)The total Horses and Ponies in the country is 3.4 lakhs in 2019, decreased by 45.2% over previous Census.

10)The total population of Mules and Donkeys in the country is 84thousand and 1.2 lakhs in 2019, decreased by 57.1% and 61.2% respectively over previous Census.

11)The total Camel population in the country is 2.5 lakhs in 2019, decreased by 37.1% over previous Census.

12)The total Poultry in the country is 851.81 million in 2019, increased by 16.8% over previous Census.

13)The total Backyard Poultry in the country is 317.07 million in 2019, increased by 45.8% over previous Census.

14)The total Commercial Poultry in the country is 534.74 million in 2019, increased by 4.5% over previous Census.

15)Total number of Stray Cattle and Stray Dogs in 2019 is 50 lakhs and 153 lakhs respectively in the country.

Which of the statements given above is / are correct ?

(a) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 only

(b) 2 only

(c) 3 only

(d) None of these

Ans: a

52) Consider the following :

1)The Garib Kalyan Rojgar Abhiyaan (GKRA) was launched on 20th June 2020, for a period of 125 days, with resource envelop of Rs. 50,000 crore to boost employment and livelihood opportunities for migrant workers returning to villages and similarly affected citizens in rural area.

2)The Abhiyaan adopted a multipronged strategy of providing immediate employment & livelihood opportunities to the distressed, to saturate the villages with public infrastructure and creation of livelihood assets to boost the income generation activities and enhance long term livelihood opportunities by giving focus on 25 works (including works under Mahatma Gandhi National Rural Employment Guarantee Scheme) in 116 selected districts across 6 States namely Bihar, Jharkhand, Madhya Pradesh, Odisha, Rajasthan and Uttar Pradesh.

3)The GKRA ended on 22nd October, 2020 and a total of 50.78 crore person-days employment were provided with a total expenditure of Rs. 39,293 crore during the Abhiyaan.

Which of the statements given above is / are correct ?

- (a) 1, 2, 3 only
- (b) 2 only
- (c) 3 only
- (d) None of these

Ans:a

TS BC STUDY CIRCLE

Civils Prelims 2022 (Scheduled on 5.6.2022)  
Model Questions (for GS Paper )  
Set No. 3 {Prepared on 24 .5.2022 }

For Study purpose

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1)Consider the following about the stages of a cyclonic storm prediction:

The Director General, India Meteorological Department, briefed the Committee about the current status of a low pressure area in the Bay of Bengal, which is likely to intensify into a cyclonic storm by 3<sup>rd</sup> December.

1)It is expected to cross the coasts of Andhra Pradesh and Odisha by the morning of 4<sup>th</sup> December, with wind speeds ranging from 90 kmph to 100 kmph, accompanied by heavy rainfall and tidal waves in the coastal districts of these states.

2)The cyclonic storm is likely to affect the districts of Srikakulam, Vishakhapatnam and Vijayanagaram in Andhra Pradesh and coastal districts of Odisha.

3)It is also likely to bring heavy to very heavy rainfall in the coastal areas and Gangetic parts of West Bengal

4)Prime Minister directed officials to take every possible measure to ensure that people are safely evacuated and to ensure maintenance of all essential services such as Power, Telecommunications, health, drinking water etc. and that they are restored immediately in the event of any disruption. 5)He further directed them to ensure adequate storage of essential medicines & supplies and to plan for unhindered movement. He also directed for 24\*7 functioning of control rooms.

6)India Meteorological Department (IMD) informed that low pressure region in the Bay of Bengal is expected to intensify into Cyclone Jawad and is expected to reach coast of North Andhra Pradesh – Odisha around morning of Saturday 4th December 2021, with the wind speed ranging upto 100 kmph.

7)It is likely to cause heavy rainfall in the coastal districts of Andhra Pradesh, Odisha & W.Bengal. IMD has been issuing regular bulletins with the latest forecast to all the concerned States.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1, 2, ,3
- (d) None of these

Ans: c

2) Consider the following :

Conducting elections in India is a mammoth task with over 937 million registered electors in the country by now.

1) ECI sets up polling booths within walking distance of every village, hamlet and habitation with the aim of 'No Voter to be Left Behind'.

2) While sharing the experience of conducting elections in six states amidst the COVID pandemic, it is that mentioned several initiatives adapted to ensure smooth conduct of elections despite challenges posed.

3) It is highlighted steps like curtailing the maximum number of voters at a polling station from 1500 to 1000 and extending polling hours by an hour in order to decongest polling spaces; postal ballot facility for 80+ senior citizens, PwDs and COVID affected individuals where ECI literally brought the polling station to their doorstep.

4) The speaker of the talk also gave an insight into the participation of women in Indian elections, which has seen remarkable increase over the years.

5) It is pointed out ECI's efforts at digitization & use of technology, citing example of Electronic Voting Machines, VVPATs and mobile apps like c-vIGIL app for citizens to report violation of Model Code of Conduct; the Electronically Transmitted Postal Ballot System facility for service voters and those posted at our missions abroad

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1, 2, 3, 4, 5
- (d) None of these

Ans: c

3) Consider the following about agroforestry scheme:

1) Sub-Mission on Agroforestry Scheme is being implemented by this Department since 2016-17 to encourage tree plantation on farm land in a complementary and integrated manner with crops and livestock, to help the farmers to get additional income and make their farming systems more climate resilient and adaptive.

2) The Agro-forestry scheme envisages a lot of quantifiable benefits like additional income, protection from crop damage, higher carbon sequestration along with climate change adaptation and mitigation

Which of the statements given above is / are correct ?

- (a) 1 only

- (b) 2 only
- (c) Both 1 and 2
- (d) None of these

Ans: c

4) Consider the following :

1) The Government of India plans to migrate towards technology based yield estimation from the conventional Crop Cutting Experiment (CCE) based yield estimation approach.

2) Towards this, few pilot studies have been initiated by taking various Government and Private Agencies On-board. During Kharif 2019, pilot studies were conducted through 12 agencies in 64 districts of 15 States for 9 crops envisaging innovative technologies such as High Resolution Satellite data (Optical and microwave), Unmanned Aerial Vehicle (UAV), Advanced multi-parameter crop models, Mobile Applications for Field Data Collection, Artificial intelligence/ Machine learning approach, Sensor Networks, Internet of Things, Field based digital photographs, Hand held instruments and Scientifically designed Sampling Plans.

3) These approaches were validated in Rabi 2019-20 in 15 blocks of 6 States.

4) The pilot studies were scaled up to 100 districts with the help of 07 agencies for Paddy crop in Kharif - 2020, and for Paddy and Wheat in Rabi season of 2020-21 in 100 districts of 13 states.

5) The agencies have submitted the technical reports to Mahalanobis National Crop Forecast Centre (MNCFC)

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1, 2, 3, 4, 5
- (d) None of these

Ans: c

5) Consider the following :

1) As per Provisional Estimates of Annual National Income, released by National Statistical Office (NSO), Ministry of Statistics and Programme Implementation (MoSPI) on 31st, May 2021, the share of Agriculture and Allied Sectors in total Gross Value Added (GVA) of the country has increased from 18.4% in 2019-20 to 20.2% in 2020-21 at current prices.

2) The Gross Value Added of Agriculture and Allied Sectors at current price has increased from 33.94 lakh crore in 2019-20 to 36.16 lakh crore in 2020-21.

3) In order to facilitate the marketing of agricultural produce of the farmers during the COVID-19 pandemic, the Government had issued advisory to States/Union Territories (UTs) to facilitate

Direct Marketing, enabling direct purchase from the farmers/ Farmer Producer Organizations (FPOs)/ Cooperatives etc. by liberalizing regulations under respective State Agricultural Produce Market Committee (APMC) Acts.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1, 2, ,3
- (d) None of these

Ans: c

6) Consider the following :

Government undertakes periodical review of performance of various schemes. Due to Government's interventions from time to time, the following achievements were recorded and new schemes were initiated for the benefit of farmers:-

- (1) Food grain production has increased from 265.05 million tonnes in 2013-14 to record 305.43 million tonnes in 2020-21 (Third advance estimate) which is the highest ever food grain production.
- (2) Government has increased the MSP for all mandated Kharif, Rabi and other commercial crops with a return of at least 50 per cent over all India weighted average cost of production from 2018-19.
- (3) Launch of PM-KISAN in 2019 -an income support scheme to farmers providing Rs. 6000 per year in 3 equal installments.
- (4) PMFBY was launched in 2016 addressing problems of high premium rates for farmers and reduction in sum insured due to capping. In past 5 Years of implementation 29.22 crore farmer applicants enrolled and over 8.83 crore (Provisional) farmer applicants have received claims of over Rs. 101875 crore.
- (5) Institutional credit increased from Rs.7.3 lakh crore in 2013-14 to Rs. 16.5 lakh crore in 2021-22.
- (6) Soil Health Cards have been issued free of cost to nearly 11 crore farmers under a nationwide program.
- (7) Paramparagat Krishi VikasYojana (PKVY) was initiated in 2015-16 to promote organic farming in the country. Two-year achievement under PKVY scheme-19043 clusters have been formed and an area of 3.81 lakh ha has been covered benefitting 9.52 lakh farmers.
- (8) Neem Coated Urea has been introduced since 2015-16 to ensure long availability of nutrients in the soil by slow release of nitrogen. It has also helped in curtailing diversion of urea for non-agricultural activities.

(9) Within a year of the launch of AIF, the scheme mobilized Rs.7700 Crore agriculture infrastructure in the country for more than 7300 projects.

10) Scheme for Formation and Promotion of 10,000 FPOs launched with a total budgetary provision of Rs. 6865 Crore in February 2020.

(11) A National Bee and Honey Mission (NBHM) has been launched in 2020 as part of the AtmaNirbhar Bharat Abhiyan. Rs.500 crore for the period 2020-2021 to 2022-2023 has been allocated for the sector.

(12) Per Drop More Crop component of Pradhanmantri Krishi Sinchai Yojana (PMKSY\_PDMC) aims to increase water use efficiency at the farm level through Micro Irrigation technologies, i.e., drip and sprinkler irrigation systems.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
- (d) None of these

Ans: c

7) Consider the following :

1) The guidelines of the various beneficiary oriented schemes of Ministry of Agriculture & Farmers Welfare provide that States and other implementing agencies should incur at least 30% expenditure on women farmers.

2) These schemes include Support to State Extension Programmes for Extension Reforms, National Food Security Mission, National Mission on Oilseed & Oil Palm, National Mission on Sustainable Agriculture, Sub-Mission for Seed and Planting Material, Sub-Mission on Agricultural Mechanization and Mission for Integrated Development of Horticulture.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) None of these

Ans: c

8) Consider the following for coal supply :

1) There is no shortage of coal in the country.

- 2) Due to increased demand of power, less power generation by imported coal based power plants and some interruption in supply of coal due to heavy rains, the coal stock at the power plants depleted to 7.2 MT (sufficient for 4 days) as on 8<sup>th</sup> October, 2021.
- 3) Subsequently with increased coal supplies, the coal stock has started increasing and has now reached 16.74 MT (sufficient for 9 days) as on 25.11.2021. Coal India Limited (CIL) has dispatched around 54 Million Tonnes (MT) more coal during April - October'21 in comparison to the same period of last year. 4) CIL has dispatched 291.72 MT coal during this period, against 237.75 MT during the same period of last fiscal.
- 5) The coal stock at CIL pithead was 40.23 MT as on 08.10.2021 and 32.30 MT as on 24.11.2021.

Which of the statements given above is / are correct ?

- (a) 1 only  
(b) 2 only  
(c) 1, 2, 3, 4, 5  
(d) None of these

Ans: c

9) Consider the following in connection with Scientific Expedition to Antarctica :

- 1) First batch of 23 scientists and support staff reached the Maitri station on November 10, 2021 under the 41<sup>st</sup> Indian Scientific Expedition to Antarctica (ISEA) launched recently.
- 2) The 41<sup>st</sup> expedition has two major objectives. The first encompasses geological exploration of the Amery ice shelf at Bharati station to understanding the geological link between India and Antarctica in the past. The second goal involves ice core drilling work near the Maitri station, focusing primarily towards improving the understanding of Antarctic climate, westerly winds, sea ice and greenhouse gases.
- 3) Apart from these, other long-term observations in the field of geology, glaciology, ocean observations, and upper atmospheric sciences are continuing.

Which of the statements given above is / are correct ?

- (a) 1 only  
(b) 2 only  
(c) 1, 2, 3  
(d) None of these

Ans: c

10) Consider the following about Population Census 2021 :

- 1) The intent of the Government for conducting Census 2021 was notified in Gazette of India on 28<sup>th</sup> March, 2019.
- 2) Due to outbreak of COVID-19 pandemic, the Census 2021 and related field activities have been postponed.

3)The forthcoming Census is to be the first digital Census. Mobile App for collection of data and a Census Portal for management and monitoring of various Census related activities have been developed.

4)In Census, the castes and tribes which are specifically notified as Scheduled Castes and Scheduled Tribes as per the Constitution (Scheduled Castes) Order 1950 and the Constitution (Scheduled Tribes) Order, 1950, as amended from time to time, are enumerated.

5)The State Governments of Bihar, Maharashtra and Odisha have requested to collect caste details in the forthcoming Census.

6)The Government of India has not enumerated caste wise population other than SCs and STs in Census since independence.

7)The names of the mother tongue and two other languages known in order of proficiency are to be recorded by the enumerator in the forthcoming Census as responded by each person.

Which of the statements given above is / are correct ?

(a) 1 only

(b) 2 only

(c) 1, 2, 3,4,5,6,7

(d) None of these

Ans: c

11) Consider the following about gold :

1)As per National Mineral Inventory, the total resources of primary gold ore in the country as on 1.4.2015 are estimated at 501.83 million tonnes with 654.74 tonnes of gold metal and out of this, Bihar is endowed with 222.885 million tonnes (44%) of ore containing 37.6 tonnes of metal.

2)These resources of gold in Bihar are categorized under United Nations Framework Classification[UNFC] code-333 (128.885 million tonnes containing 21.6 tonnes metal) and UNFC code-334 (94 million tonnes containing 16 tonnes metal).

3)The entire resource of gold ore in Bihar is located in Sono area of Jamui district.

4)During the last five years, Geological Survey of India [GSI], an attached office of Ministry of Mines, has carried G4 stage 'reconnaissance survey' for gold in parts of West Champaran district and G3 stage 'preliminary exploration' in Gaya district of Bihar following the guidelines of UNFC.

5)In West Champaran district, G4 stage exploration was carried out for placer gold in foothills of Siwalik Himalayas, but the average concentration of placer gold in this area is low (0.0061ppm to 1.96 ppm) and no resource has been estimated.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1, 2, 3, 4, 5
- (d) None of these

Ans: c

12) Consider the following about women reservation :

1) Article 243D of the Constitution of India provides for not less than one-third reservation for women out of total number of seats to be filled by direct election and number of offices of chairpersons of Panchayats.

2) However, as per the information available with the Ministry, 21 States namely, Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Sikkim, Tamil Nadu, Telangana, Tripura, Uttarakhand and West Bengal, have made provision of 50% reservation for women in Panchayati Raj Institutions in their respective State Panchayati Raj Acts.

3) In respect of remaining States, Constitutional provision as prescribed in Article 243D applies.

4) 'Panchayat', being 'Local Government', is a State subject and part of Seventh Schedule of the Constitution.

5) Accordingly, all Panchayat related matters, including representation of women in Panchayat systems, are governed by the respective State Panchayati Raj Acts and rules, subject to the provisions of the Constitution. However, Government has been encouraging increased involvement of women in the functioning of Panchayats through active participation in the Gram Sabha meetings for preparation of Gram Panchayat Development Plans and various schemes being implemented by the Panchayats. The Ministry has also issued advisories to the States to facilitate holding of separate Ward Sabha and Mahila Sabha meetings prior to Gram Sabha meetings, enhancing the presence and participation of women in Gram Sabha and Panchayat meetings, allocation of Panchayat funds for women centric activities, combating the evil of women trafficking, female foeticide, child marriage etc.

6) Article 280 (3) (bb) of the Constitution of India provides for the Finance Commission to make recommendations regarding the measures needed to augment the Consolidated Fund of a State to supplement the resources of the Panchayats in the State on the basis of the recommendations made by the Finance Commission of the State. Accordingly, to improve the functioning of Panchayati Raj Institutions, including women related activities; funds have been recommended by Central Finance Commissions successively.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1, 2, 3, 4, 5, 6
- (d) None of these

Ans: c

13) Consider the following about Vehicle Scapping Policy :

- 1) The Vehicle Scapping Policy includes a system of incentives/dis-incentives for creation of an ecosystem to phase out older, unfit polluting vehicles.
- 2) The policy is based on the criterion of fitness of the vehicle.
- 3) In order to enforce provisions of the policy, rules have been issued/amended under the framework of the Motor Vehicles Act, 1988 and Central Motor Vehicle Rules, 1989.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1, 2, 3
- (d) None of these

Ans: c

14) Consider the following about ISRO and IN-SPACe :

- 1) As part of the space sector reforms, the Indian National Space Promotion and Authorisation Centre (IN-SPACe) is created to ensure greater participation of private sector in space activities.
- 2) While ISRO will largely focus on developing newer technologies, undertaking technology demonstrator missions, first-of-its kind satellites, space science missions, human space flights while ensuring continuity of missions to cater to national imperatives, New Space India Limited (NSIL) is entrusted with the realization operational satellites, launch vehicles and services.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) None of these

Ans: c

15) Consider the following about Greenfield airports :

- 1) During the last 3 years, six **Greenfield airports** have become operational:

2) These are Kannur Airport in Kerala (2018), Pakyong Airport in Sikkim (2018), Kalaburagi Airport in Karnataka (2019), Kurnool Airport in Andhra Pradesh (2021), Sindhudurg Airport in Maharashtra (2021) and Kushinagar Airport in Uttar Pradesh (2021).

3) In addition, during the last 3 years, construction of Greenfield airports at Navi Mumbai in Maharashtra, Mopa in Goa, Hirasar in Rajkot, Jewar (Noida) in Uttar Pradesh and Hollongi in Itanagar, Arunachal Pradesh are being undertaken.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1, 2, 3
- (d) None of these

Ans: c

16) Consider the following about Flood Management :

1) Erosion, movement and deposition of sediment in a river are natural regulating functions of a river.

2) Rivers tend to maintain a balance between the silt load carried & silt load deposited, maintaining a river regime.

3) Soil erosion caused by heavy floods is a matter of concern as it leads to several associated problems like changes in river course, causing loss of land, damages to the embankments, etc.

4) Flood management including erosion control falls within the purview of the States. Flood management and anti-erosion schemes are formulated and implemented by concerned State Governments as per their priority. The Union Government supplements the efforts of the States by providing technical guidance and also promotional financial assistance for management of floods in critical areas.

5) The Government of India has been making continuous efforts to assist the State Governments in effective flood management and erosion control. Morphological Studies by various IIT and NIIT have been carried out for major rivers like Ganga, Sharda, Rapti, Kosi, Bagmati, Subansari, Krishna, Mahanadi Mahanada, etc.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1, 2, 3, 4, 5
- (d) None of these

Ans: c

17) Consider the following about ground water pollution :

1) Central Ground Water Board (CGWB) generates ground water quality data of the country on a regional scale as part of its ground water quality monitoring program and various scientific studies.

2) These studies indicate the occurrence of contaminants such as Fluoride, Arsenic, Nitrate, Iron and Heavy Metals beyond permissible limits in various States / UTs.

3) The ground water contamination is mostly geogenic in nature and does not show significant change over the years.

4) However, nitrate contamination is mostly anthropogenic and its spread has been noticed in some areas, particularly areas adjoining habitations.

5) Further, nitrate contamination can also be caused by excessive use of fertilizers.

Which of the statements given above is / are correct ?

(a) 1 only

(b) 2 only

(c) 1, 2, 3, 4, 5

(d) None of these

Ans: c

18) Government has taken various initiatives for promotion of electric vehicles in the country.

Consider the following :

(1) GST on electric vehicles has been reduced from 12% to 5%; GST on chargers/ charging stations for electric vehicles has been reduced from 18% to 5%.

(2) Ministry of Power released a notification on charging infrastructure standards permitting private charging at residences and offices.

(3) Ministry of Road Transport & Highways (MoRTH) announced that battery-operated vehicles will be given green license plates and be exempted from permit requirements.

(4) MoRTH issued a notification advising states to waive road tax on EVs, which in turn will help reduce the initial cost of EVs.

(5) Ministry of Housing & Urban Affairs (MoHUA) amended the Model Building Byelaws 2016 to establish charging stations and infrastructure in private and commercial buildings.

Which of the statements given above is / are correct ?

(a) 1 only

(b) 2 only

(c) 1, 2, 3, 4, 5

(d) None of these

Ans: c

19) Consider the following about Global Hunger Index 2021 report :

1) As per Global Hunger Index 2021 report prepared by 'Welthungerhilfe' and 'Concern Worldwide', India's score is 27.5 and it has ranked 101 among 116 countries.

2) Global Hunger Index is based on four indicators - Undernourishment, Child Stunting, Child Wasting and Child Mortality.

3) Global Hunger Index (GHI) does not reflect India's true picture as it is a flawed measure of 'Hunger'. It should not be taken at face value as it is neither appropriate nor representative of hunger prevalent in a country. Out of its four indicators, only one indicator, i.e., undernourishment, is directly related to hunger. The two indicators, namely, Stunting and Wasting are outcomes of complex interactions of various other factors like sanitation, genetics, environment and utilisation of food intake apart from hunger which is taken as the causative/outcome factor for stunting and wasting in the GHI.

4) Also, there is hardly any evidence that the fourth indicator, namely, child mortality is an outcome of hunger

Which of the statements given above is / are correct ?

(a) 1 only

(b) 2 only

(c) 1, 2, 3, 4

(d) None of these

Ans: c

20) Consider the following elephants and bees RE-HAB :

1) Buoyed by the success of its innovative Project RE-HAB (Reducing Elephant-Human Attacks using Bees) in Karnataka, Khadi and Village Industries Commission (KVIC) has now replicated the project in Assam.

2) Chairman KVIC, launched Project RE-HAB at Village Mornoi in Goalpara district of Assam which severely grapples with elephant-human conflicts. The project has been implemented in Assam with the support of the local forest department.

3) Surrounded by dense forests, a large part of Assam is infested by elephants with 332 human deaths reported between 2014 and 2019 due to elephant attacks.

4) Under Project RE-HAB, "Bee-fences" are created by setting up bee boxes in the passage ways of elephants to block their entrance to human territories. The boxes are connected with a string so that when elephants attempt to pass through, a tug or pull causes the bees to swarm the elephant herds and dissuade them from progressing further. It is a cost-effective way of reducing human-wild conflicts without causing any harm to the animals. It is scientifically recorded that

elephants are annoyed by the honey bees. Elephants also fear that the bee swarms can bite their sensitive inner side of the trunk and eyes. The collective buzz of the bees is annoying to elephants that force them to return.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1, 2,3,4
- (d) None of these

Ans: c

21) Consider the following about PM GatiShakti National Master Plan :

1)The PM GatiShakti National Master Plan (NMP) is an integrated plan depicting all the existing and proposed development initiatives of various Ministries/Departments for better synergy.

2)The NMP will help in achieving the objective of an 'Aatmanirbhar Bharat' by providing visibility to various stakeholders involved in development of infrastructure. It will incorporate the infrastructure schemes of various Ministries and State Governments. Economic Zones like textile clusters, pharmaceutical clusters, defense corridors, electronic parks, industrial corridors, fishing clusters, agri zones etc. will also be covered under the master plan.

3)This will boost economic growth, attract investments and enhance the country's global competitiveness.

4)During a presentation made by Special Secretary, Logistics Division, DPIIT, the ministry wise progress on the targets set under the PM GatiShakti were discussed. The Ministry of Road Transport and Highways has completed 1,41,190 Kms of National Highways as on 31st March 2022 out of the set target of 2,00,000 kms for 2024-25.

5)Similarly, Ministry of Petroleum and Natural Gas has completed laying of gas pipeline of 20,000 kms out of 34,500 for the same time period. The Ministry of Power has already surpassed its target for laying of the transmission network of 4,54,200 kms till the end of March 2022.

6)The Department of Telecommunication has created the OFC network of 33,00,997 kms as on 31st March 2022 against the set target of 50,00,000 kms for 2024-25.

7)The benefits and on-ground impact of the PM GatiShakti National Master Plan portal were also illustrated. Various ministries/departments and state governments have started using this portal for integration and synchronization of implementation efforts, optimization of cost and time at the stage of planning of infrastructure projects.

To achieve its objective to provide 50 Mbps of bandwidth to the citizens under the National Broadband Mission, planning for connecting all the non-fiberized towers through the OFC is being done through the PM GatiShakti NMP. All the non-fiberized towers and existing OFC Network is mapped on the Department of Telecommunication GatiShakti Portal.

8)Based on the data and Planning criteria, the tool is being developed to get the length of required OFC and cost of OFC Laying.

9)The portal has also been used by the Dedicated Freight Corridor Corporation of India Limited (DFCCIL), Ministry of Railways for firming the alignment for the East-West, East-Coast and North-South Dedicated Freight Corridors (DFCs) to minimize disruption, cost and time overruns in project implementation.

10)To meet the rising demand for air connectivity, the Ministry of Civil Aviation AAI (MoCA) has used this portal to identify the land acquisition requirements, land use analysis and road connectivity for expansion of the Jolly Grant Airport, Dehradun, Uttarakhand. AAI benefitted in terms of timely planning, and cost saving as use of this portal replaced the need for physical survey.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1, 2, 3,4,5,6,7,8,9,10
- (d) None of these

Ans: c

22) Consider the following :

1)National Health Authority (NHA), the implementing agency for Ayushman Bharat Digital Mission (ABDM) has extended an open invitation to all interested parties for sharing their Expression of Interest (EoI) for developing innovative solutions that shall help build a national digital health ecosystem for India. This collaborative approach will not just help speed up the development but also will help in making digital public goods available to public and/or private entities.

2)Ayushman Bharat Digital Mission (ABDM) aims to create a seamless online platform that will enable interoperability within the digital healthcare ecosystem. The mission has been conceptualized as a set of 'digital building blocks'. Each building block is seen as a 'digital public good' that can be used by any entity in the digital health ecosystem and provides key capabilities that enable the ABDM vision.

3) “The ABDM endeavours to give impetus to open and interoperable standards in the digital health ecosystem. Such an undertaking will not only expedite Universal Health Coverage goals in India, but also have ripple effects on the global health ecosystem. However, such an ambition requires all hands-on-deck. In this regard, the National Health Authority is giving an open call inviting all interested parties to contribute to the Unified Health Interface (UHI), Health Claims Protocol (HCP), and various other open-source digital public goods being created to expand the digital health ecosystem.”

4)ABDM has developed building blocks and interoperable APIs to offer a seamless digital healthcare experience for all stakeholders – health facilities, patients and healthcare professionals. The key building blocks of ABDM are - ABHA, Healthcare Professionals Registry (HPR), Health Facility Registry (HFR) and Health Information Exchange & Consent Manager (HIE-CM).

5)These building blocks are designed to enable identification of participating entities (health care providers, patients and health professionals) and enable exchange of interoperable health data with patient consent. The digital ecosystem developed is now accessible to health facilities and health tech players for integration.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1, 2, 3,4,5
- (d) None of these

Ans: c

23) Consider the following :

1)The approved scheme of RGSA will help more than 2.78 lakh Rural Local Bodies including Traditional Bodies across the country to develop governance capabilities to deliver on SDGs through inclusive local governance with focus on optimum utilisation of available resources. The key principles of SDGs, i.e. leaving no one behind, reaching the farthest first and universal coverage, along with gender equality will be embedded in the design of all capacity building interventions including trainings, training modules and materials.

2)Priority will be given to subjects of national importance principally under themes, namely: (i) Poverty free and enhanced livelihood in villages, (ii) Healthy Village, (iii) Child Friendly Village, (iv) Water Sufficient Village, (v) Clean and Green Village, (vi) Self-Sufficient Infrastructure in Village, (vii) Socially Secured Village, (viii) Village with Good Governance, and (ix) Engendered Development in Village.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2,
- (d) None of these

Ans: c

24) The Central Government released the Tenth and Eleventh Edition of the Status Paper on the Government Debt, which provides a detailed analysis of the overall debt position of the Government of India. The Central Government has been bringing-out an Annual Status Paper on Government Debt since 2010-11.

Consider the following :

1) This paper enhances transparency by providing a detailed account of debt operations during the year 2019-20 and 2020-21 and an assessment of the health of the public debt portfolio based on internationally accepted debt performance indicators.

2) The Government's debt portfolio is characterised by prudent risk profile.

3) Conventional indicators of debt sustainability, i.e., Debt/ GDP ratio, interest payment to revenue receipts, shares of short-term debt/ External debt/ FRBs in total debt indicate that the debt profile of the Government is comfortably placed in terms of debt sustainability parameters.

4) The Paper also includes a chapter on Medium Term Debt Management Strategy of the Central Government

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1, 2, 3,4
- (d) None of these

Ans: c

25) Consider the following about Quantum Computers :

Quantum mechanics like any physical theory is based on experiments. This means that experiments are used to justify some axioms from which the full theory can be logically deduced. While a large section of the scientific community is invested in building devices towards quantum computing applications, a separate community is invested in precision tests of fundamental aspects of quantum theory itself.

A group of scientists from the Raman Research Institute (RRI), an autonomous institute of the Department of Science and Technology in a collaborative research have used quantum computers to perform some precision tests of the fundamental aspects of the quantum theory called Sorkin and Peres tests. The first is a test of the probabilistic aspect of quantum mechanics which helps calculate the chances of events happening while the second is a test of an aspect of the superposition principle, which expresses the fact that quantum objects may behave as waves -- throwing two stones in a pond gives a wave pattern which is the sum of two waves.

Consider the following :

1)The use of a quantum computer to perform tests of crucial quantum principles in the research published as rapid communication letter in the journal *Physical Review Research* has led to the natural emergence of an entirely new research direction for the physics community that brings together diverse research disciplines under one unifying umbrella.

2)As quantum computers are scalable quantum systems, this could provide a universal programmable setup for quantum experiments. A quantum circuit, which is like a low-level program for quantum computers, could be a Rosetta stone that allows translation of experiments from one physical system to another.

3)As a corollary, the scientists have also shown that quantum mechanics is true and the tests can be used as a benchmark to evaluate how well a quantum computer performs. "Our method provides a nice way to create well defined benchmarks for quantum computers so that we know exactly how error prone they are, by using the very foundations of quantum theory as the benchmarking tool," s

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1, 2, 3
- (d) None of these

Ans: c

26) Consider the following about White Spot Syndrome Virus :

Scientists have developed a handy diagnostic tool that detects an aquaculture pathogen known as the White Spot Syndrome Virus (WSSV). The peptide-based diagnostic tool by scientists of Agharkar Research Institute (ARI), an autonomous institute of the Department of Science and Technology (DST) has been granted patent on 31 March 2022 as an alternative biorecognition element.

Consider the following :

1)Infection caused by the WSSV to the shrimp *Penaeus vannamei* results in huge loss of crop.

2) This high value super-food is susceptible to a wide range of viral and bacterial pathogens and the probability of occurrence of infections is rather high.

3) Improved nutrition, probiotics, disease resistance, quality control of water, seed and feed, immuno-stimulants and affordable vaccines play an important role in enhancing the production.

4) Technologies for early and rapid detection of pathogens on the field will help fish and shell-fish farming which provides significant export revenue to the country which is a leading supplier of shrimp to the USA.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1, 2, 3, 4
- (d) None of these

Ans: c

27) Consider the following :

The State Energy & Climate Index (SECI) Round I ranks the states' performance on 6 parameters

- (1) DISCOM's Performance
- (2) Access, Affordability and Reliability of Energy
- (3) Clean Energy Initiatives
- (4) Energy Efficiency
- (5) Environmental Sustainability; and
- (6) New Initiatives.

7) The parameters are further divided into 27 indicators. Based on the composite SECI Round I score, the states and UTs are categorized into three groups: Front Runners, Achievers, and Aspirants.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1, 2, 3, 4, 5, 6
- (d) None of these

Ans: c

28) Consider the following :

Outlining the water scenario in India and key government schemes in water and wastewater sector, the audience was appraised with the success of 'Catch the Rain: Where it Falls, When it Falls' campaign under the Jal Shakti Abhiyan.

Consider the following :

1) Namami Gange Programme and shed light on some of the positive outcomes and impact of the project was outlined. Discussions were there about Arth Ganga and informed the audience about its six verticals – Zero Budget Natural Farming, Livelihood Generation Opportunities, Cultural Heritage & Tourism, Monetisation and Reuse of Sludge & Wastewater, Public Participation and Institutional Building.

2) Focus of the Phase-II of Namami Gange Programme will be on sewerage infrastructure creation in the tributaries of Ganga such as Yamuna and scaling up of PPP development efforts. It is reiterated the commitment of NMCG to develop a circular economy model focused on reclaim, reuse and recycling. One of the key areas of work in the future, he added, will be faecal sludge and septage management in urban local bodies and rural areas.

3) Responding to a question on sludge management, it is said: "Tonnes of sludge is generated every day and we aim to develop a circular economy based on sludge management," adding, "Under Arth Ganga, which aims at connecting people with the river, we are trying to give some economic benefit to the stakeholders/people so that they have some interest in ensuring the river is clean."

4) It is added that as per the directions of the NGT, a campaign is being run to keep the river stretches across India clean and drive the States to assess the total generated sewerage and the existing capacity and use the various schemes of the government to reduce the gap ensuring not a single drop of wastewater goes into the river.

5) "This will generate a lot of sludge – one of the verticals of Arth Ganga is 'Zero Budget Natural Farming' which aims at facilitating the natural farming process by providing natural manure/soil conditioner made out of sludge and reduce the use of chemicals and fertilizers by the farmers thereby developing a circular economy model in sludge management with economic benefits to the stakeholders (farmers in this case)."

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1, 2, 3, 4, 5
- (d) None of these

Ans: c

29) Consider the following :

1) Two famous world-renowned tourist attractions - Somnath Temple and Gir National Park are located near Keshod. Keshod Airport is owned by Airports Authority of India (AAI).

2) Initially, the airport was refurbished and revived in late 1980s to facilitate scheduled operations. Since last 21 years, commercial aircraft has not landed at this airport.

3)AAI has invested an amount of Rs. 25 crores to upgrade Keshod airport for resurfacing of Runway, procurement of Aircraft Crash Fire Tender (ACFT), new Civil Enclave including Terminal Building, Apron for two ATR-72 types of aircraft and Link Taxiway, etc

4)The new UDAN flight route will bring Keshod on the national air map and add convenience & comfort to travelers of this region as Keshod is a tourist destination in Junagarh district of Gujarat and it is surrounded by Arabian Sea and beautiful forests.

5)Somnath Temple and Gir National Park are located near Keshod. It is pertinent to mention that at present, it takes about 16 Hours to travel by road from Keshod to Mumbai which will be reduced to just 1 hour 25 minutes with commencement of new flight

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1, 2, 3,4,5
- (d) None of these

Ans: c

30)Consider the following :

- 1)Brass from Jamnagar,
- 2)engineering from Rajkot and
- 3)clock industry of Morbi,
- 4)it gives a feeling of 'mini Japan

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1, 2, ,3,4
- (d) None of these

Ans: c

31)Consider the following :

Ministry of Panchayati Raj organized the National Level Conference on Localization of Sustainable Development Goals (LSDGs), focusing on

- 1)Theme 5: Clean & Green Village and
- 2)Theme 4: Water Sufficient Village, aligned with broader Sustainable Development Goals.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) None of these

Ans: c

32) Consider the following about Sugar Production In India :

India's Sugar Exports witnessed an astounding growth of 291% from USD 1,177 million in FY 2013-14 to USD 4600 million in FY 2021-22. As per DGCI&S data, India exported sugar to 121 countries across the globe.

- 1) Uttar Pradesh, Maharashtra and Karnataka account for nearly 80 percent of the total sugar production in the country.
- 2) The other major sugarcane-producing states are Andhra Pradesh, Gujarat, Madhya Pradesh, Odisha, Tamil Nadu, Bihar, Haryana, and Punjab.
- 3) Notably, India is the world's second-largest sugar producer after Brazil.
- 4) Since 2010-11, India has consistently produced surplus sugar, comfortably exceeding the domestic requirements.
- 5) The record exports would enable the sugar producers to reduce their stocks and would also benefit the sugarcane farmers, as the increased demand for Indian sugar is likely to improve their realizations.
- 6) The significant rise in agri-exports is also seen as a testimony of the government's commitment to increase farmers' income by boosting exports of agricultural and processed food products of the country.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1,2,3,4,5,6
- (d) None of these

Ans: c

33) Consider the following :

- 1) The annual rate of inflation is 14.55% (Provisional) for the month of March, 2022 (over March, 2021) as compared to 7.89% in March, 2021.
- 2) The high rate of inflation in March, 2022 is primarily due to rise in prices of crude petroleum and natural gas, mineral oils, basic metals, etc owing to disruption in global supply chain caused by Russia-Ukraine conflict.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) None of these

Ans: c

**34)** In line with the vision of the Prime Minister for promoting drone technology and its use in India and to facilitate the use of Kisan drones, as announced in budget document 2022-23; the Department in consultation with all the stakeholders of this sector, has brought out Standard Operating Procedures (SOPs) for use of drones in pesticide and nutrient application that provide precise instructions for effective and safe operations of drones.

Consider the following:

- 1) As part of continuing efforts to make drone technologies to reach all farmers, the Ministry has issued orders granting an interim approval for spray of nearly all the registered pesticides formulations using drones.
- 2) These pesticide formulations are those whose safety and efficacy has already been evaluated on different crops and are already being used in the country using other methods.
- 3) The application of pesticides using drones will not only make it easier for farmers to efficiently protect plants from pests, but will also eventually help in increasing their incomes through reduced input costs.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1,2,3
- (d) None of these

Ans: c

**35)** Consider the following :

1) Department of Agriculture and Farmers Welfare (DAFW), Ministry of Agriculture and Farmers Welfare, through the Directorate of Plant Protection, Quarantine & Storage (DPPQS), Faridabad has been catering to Indian exporters and importers of agriculture commodities and Indian Pesticide Industry, through its two portals namely, Computerized Registration of pesticide (CROP) and Plant Quarantine Information System (PQIS).

2) Realising the need for quicker disposal of applications related to **export/import of agricultural commodities and pesticides registration, a more coordinated** integration with external systems and stakeholders, and to bring in greater transparency in the existing online system, DAFW launched two redeveloped online portals.

Which of the statements given above is / are correct ?

- (a) 1 only

- (b) 2 only
- (c) Both 1 and 2
- (d) None of these

Ans: c

36) Consider the following:

1) Wheat procurement has recently commenced in Rabi Marketing Season 2022-23 in states of MP, Haryana, Punjab, UP, Uttarakhand, Chandigarh, HP, Gujarat and Rajasthan. A quantity of 69.24 LMT of wheat has been procured upto 17.4.2022 benefitting 5.86 Lakh farmers with MSP value of Rs.13951.41 Crores

2) The paddy procurement is progressing smoothly in Kharif Marketing Season (KMS) 2021-22 at MSP from farmers.

3) A quantity of 754.08 LMT of Paddy (includes Kharif Crop 750.95 LMT and Rabi Crop 3.14 LMT) has been procured in KMS 2021-22 upto 17.04.2022 in procuring States/UTs.

4) Till now about 108.90 Lac farmers have been benefitted with MSP value of Rs. 1,47,800.28 crore.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1,2,3,4
- (d) None of these

Ans: c

37) Consider the following :

1) Extreme and early heat in March forced authorities in Pali to release water from the Jawai dam built on the Jawai river, a tributary of the Luni which flows through Pali (District), Rajasthan

2) The crocodiles found in Jawai are muggers or marsh crocodiles (*Crocodylus palustris*) which are freshwater specialists. They are found all over south Asia — India, Pakistan, Sri Lanka, Nepal and Bangladesh — as well as south-eastern Iran.

3) The mugger is found in 15 Indian states, with the largest populations in the middle Ganges (Bihar-Jharkhand) and Chambal (Madhya Pradesh, Gujarat and Rajasthan) basins.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1,2,3
- (d) None of these

Ans: c

38) Consider the following :

1) Unlike other air pollutants – ozone is good and bad for us.

2) First, the news about good ozone: the hole in the ozone layer is finally starting to heal, UNEP/WMO reported. This layer is about 20-30 km up in the air, protects life from sun's harmful ultraviolet light by absorbing the radiation which otherwise would potentially damage exposed life forms near the surface.

3) Now, the news about the bad ozone—this time it comes from India. According a new study published in Geophysical Research Letters, the ground level ozone pollution damaged 6 million tonnes of crops in India. This ground-level ozone is formed in the air by nitrogen oxides and hydrocarbon emitted from vehicles and other sources like cook stoves reacting in the presence of sunlight.

This ozone is close to ground, so as a strong oxidant it is notorious for damaging lungs and vegetation. This ground-level ozone is the main component of smog. Even at relatively low levels, ozone can cause health effects. People with lung disease, children, older adults, and people who are active outdoors may be particularly sensitive to ozone.

4) "India could feed 94 million people with the lost wheat and rice crops, about a third of the country's poor," said , an atmospheric scientist at the Indian Institute of Tropical Meteorology (IITM) in Pune, India, and lead author of the new study. There are about 270 million Indians who live in poverty, according to the study.

Which of the statements given above is / are correct ?

(a) 1 only

(b) 2 only

(c) 1,2,3,4

(d) None of these

Ans: c

39) Consider the following with reference to Crops and Ozone Pollution :

1) Wheat – one of the country's major food sources – saw the largest loss (by weight) of the four crops studied in the paper, with ozone pollution damaging 3.5 million tonnes (3.8 million US tonnes) of the crop in 2005. The losses in case of another major food source, rice, was 2.1 million tonnes (2.3 million U S tonnes), according to the study.

2) Cotton – one of India's major commercial crops — lost more than 5 per cent of its 3.3 million

tonnes (3.6 million U.S. tons) annual output in 2005, costing the country \$70 million, according to the research

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) None of these

Ans: c

40) Consider the following about Degrai Oran and GIB in Rajasthan :

1) GIB is a large bird, about 1 m in height with a wing-span of 2 m, and an adult weighs up to 18 kg. As per the last count in 2018, there were only 150 GIBs in the country and 122 of them were in Jaisalmer.

2) The remaining 28 were sighted in Gujarat, Maharashtra and Karnataka. "Since then, the population has declined further, and now less than 100 GIBS remain in the wild,"

3) In June 2019, the forest department in Rajasthan, along with the Wildlife Institute of India, Dehradun, started a GIB breeding centre in the Desert National Park situated north of the oran, where they collect eggs from the wild and hatch them in captivity. The initiative has started to restore the population.

4) "We have hatched 16 GIBs in captivity from eggs collected from the wild," said scientist at the Wildlife Institute of India.

5) "GIBs are slow breeders and lay only one egg every year, that too in the wild. The eggs are sometimes destroyed by cattle, or eaten by larger animals. Radheshyam Bishnoi of Godawan Community Conservation Project, is a community-driven initiative in the region.

6) Degrai Oran is in the middle of a 13,000 square kilometre wide biodiversity-rich land that is among the last natural habitats of the Great Indian Bustard (GIB). But what towers over everything else in the landscape of this *oran* — sacred groves — are windmills

7)The open stretch of land, which receives long hours of sunlight and speedy wind, has become a hub of green energy with windmills and solar photovoltaic dotting it. More solar power plants and transmission towers are under construction.

8)"This is the largest and one of the last orans in the area," said, a camel handler from Sanwata village, adjoining the oran near Jaisalmer. For centuries, the trees in the oran, spread over 60,000 bighas (approximately 100 sq km), have remained untouched by the people in the villages.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1,2,3,4,5,6,7,8
- (d) None of these

Ans: c

41) Consider the following :

1)Without nitrogen, an essential nutrient, plants grow slowly and produce smaller flowers and fruits. Their leaves turn yellowish and are less nutritious to insects, birds and animals. The issue of declining nitrogen availability is not new. "It has been on the scientific radar for a long time,"

2)Tropical and boreal forests may be particularly vulnerable.

3)Plants grow quickly when exposed to high carbon dioxide (CO<sub>2</sub>) concentrations. Thus, their demand for nitrogen also goes up, the experts wrote in the review.

4)High CO<sub>2</sub> levels dilute plant nitrogen, triggering a cascade of effects that lower the availability of nitrogen. Other factors contributing to nitrogen decline include warming and disturbances, including wildfire.

5)Declining nitrogen availability can be linked to insect apocalypse. Plants with low nitrogen levels can encourage swarming in some species of locusts.

6)Further, low nitrogen availability could limit plants' ability to capture CO<sub>2</sub> from the atmosphere, the review warned.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1,2,3,4,5,6
- (d) None of these

Ans: c

42) Consider the following South West Monsoon :

- 1) The southwest monsoon contributes 74.9 per cent to the annual rainfall in India and irrigates over half of India's agricultural land. The quantity of rainfall or its failure directly impacts India's agriculture, especially the kharif crop season which is heavily dependent on the monsoon.
- 2) Moreover, the new all India annual rainfall has also decreased by 16.18 mm for the country to 1,160.1 mm, from the earlier normal of 1,176.9 mm.
- 3) The IMD termed this decrease as a part of a natural "multi-decadal epochal variability" of dry and wet epochs of all India rainfall. It noted that currently, the southwest monsoon is passing through a 'dry epoch' which started in the decade of 1971-80.
- 4) La Nina means the large-scale cooling of ocean surface temperatures in the central and eastern equatorial Pacific Ocean, together with changes in the tropical atmospheric circulation, namely winds, pressure and rainfall.
- 5) "As sea surface temperature conditions over the Pacific and the Indian Oceans are known to have strong influence on the Indian monsoon, IMD is carefully monitoring the evolution of sea surface conditions over these ocean basins"

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1,2,3,4,5
- (d) None of these

Ans: c

43) Consider the following:

- 1) Celebrating World Heritage Day on 19<sup>th</sup> April 2022, National Monuments Authority organized a unique Heritage Walk early this morning around the historical Anang Tal, Mehrauli, an 11th Century mini lake built by the founder King of Delhi Anang Pal Tomar in 1052 AD.
- 2) The Hindu dynasty of Tomars ruled Delhi and the name itself has come from the Dhillikapuri of which several stone inscriptions were found by General Cunningham during British ASI period.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) None of these

Ans: c

44) Consider the following Green Hydrogen :

1)The plant at Jorhat, Assam, produces Green Hydrogen from the electricity generated by the existing 500kW Solar plant using a 100 kW Anion Exchange Membrane (AEM) Electrolyser array. The use of AEM technology is being used for the first time in India.

2)This plant is expected to increase its production of green hydrogen from 10 kg per day to 30 kg per day in future. The company has initiated a detailed study in collaboration with IIT Guwahati on blending of Green Hydrogen with Natural Gas and its effect on the existing infrastructure of OIL

3)Oil India Limited (OIL) has taken the first significant step towards Green Hydrogen Economy in India with the commissioning of India's First 99.999% pure Green Hydrogen pilot plant, with an installed capacity of 10 kg per day at its Jorhat Pump Station in Assam. The plant was commissioned in a record time of 3 months.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1,2,3
- (d) None of these

Ans: c

45) Consider the following :

1)Notably, India is the world's second-largest rice producer after China. The record exports would enable the rice producers to reduce their stocks and would also benefit the farmers as the increased demand for Indian Rice is likely to improve their realizations. The significant rise in agri-exports is also seen as a testimony of the government's commitment to increase farmers' income by boosting exports of agricultural and processed food products of the country.

2)The major rice producing states are West Bengal, Uttar Pradesh, Punjab, Tamil Nadu, Andhra Pradesh, Bihar, Chhattisgarh, Odisha, Assam, and Haryana.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) None of these

Ans: c

46) Consider the following :

1) India's non-basmati rice exports witnessed an astounding growth of 109 % from USD 2925 million in FY 2013-14 to USD 6115 million in FY 2021-22.

2) As per DGCIS data, India exported rice to over 150 countries across the globe in 2021-22. India exported more than USD one million to 76 countries out of the 150 countries reported in 2021-22, 3) It indicates the diversification of India's rice export over the years.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1,2,3
- (d) None of these

Ans: c

47)

Special focus is given on oilseeds, pulses and nutria-cereals.

Post monsoon, rainfall has been in excess over normal and about 55.76 lakh hectares was under cultivation during summer. Following government policy, there has been reduction in area under rice with corresponding increase in pulses and oilseeds cultivation. Government has worked out requirement of seed and fertilizers and will ensure their timely supply.

Consider the following :

1) The priority of government is agro-ecological based crop planning for diversion of land from excess commodities like rice and wheat. to deficit commodities like oilseeds and pulses and high value export earning crops.

2) Government is giving high priority to Crop Diversification with focus on Self Sufficiency in Oilseeds&Pulses and Promotion of Oil Palm.

3) Consultations with all stake holders like major states, researchers, industries and policy makers have been held to finalize a National Policy Frame Work for Crop Diversification Programme in the country. All states should work towards crop diversification for making agriculture sustainable, profitable and self sufficient in deficit commodities.

4) The Minister stated that the centre and states would work together to ensure pesticides and seeds availability to reduce input costs for farmers. He urged that there should be a strategy to replace Urea with Nano-urea. He declared that the government would continue to lay emphasis on natural and organic farming.

5) On exports the Minister said that while agriculture exports have increased, attention should be paid on quality products so that they can compete in International Markets. Exporters and farmers both should benefit.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1,2,3,4,5
- (d) None of these

Ans: c

48) Consider the following regarding worst weather storms in **Province of KwaZulu-Natal, South Africa** :

- 1) The Climate Justice Charter Movement (CJCM) wants the government to be found guilty of “culpable homicide” for its acts of omission to “prevent further emissions and to protect the vulnerable from increased inequality and poverty”. The organisation has filed documents in this regard with the South African Police Services.
- 2) The Climate Justice Charter emerged out of six years of campaigning, during the worst drought in South Africa’s history by the South African Food Sovereignty Campaign and the Cooperative and Policy Alternative Centre.
- 3) Since April 11, 2022, the **Province of KwaZulu-Natal experienced what is one of the worst weather storms in the history of our country**. The heavy rainfall that has descended on our land over the past few days has wreaked untold havoc and unleashed massive damage to the lives and infrastructure.
- 4) The South African National Defence Force (SANDF) said April 18, 2022 that it had been instructed to activate 10,000 troops for flood-related tasks, including mop-up work and transporting aid.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1,2,3,4
- (d) None of these

Ans: c

49) Consider the following :

- 1) The fishing community in Odisha demanded an increase in livelihood support from the Centre during the annual 61-day fishing ban across the East Coast that commenced April 15, 2022, according to an official of the state fisheries department.
- 2) The ban was imposed to facilitate fish breeding in the sea and prohibits fishing through mechanised boats, big vessels and trawlers.
- 3) Each family gets a compensation of Rs 4,500 under the central government’s saving-cum-relief scheme during the period to make up for their losses.
- 4) They want this amount to be increased to Rs 15,000.
- 5) The ban extends to the Indian Exclusive Economic Zone (EEZ) beyond territorial waters on the East Coast (including Andaman & Nicobar Islands) and the West Coast (including Lakshadweep Islands).
- 6) It will come into effect in the West Coast from June 1, 2022, said the department official
- 7) During the ban period, all kinds of trawlers and mechanised boats longer than 8.5 metres are prohibited from entering the sea for fishing activities, said , deputy director of fisheries (marine), Odisha government.
- 8) The traditional non-motorised fishing boats, less than 8.5m in length, however, will be exempted from this uniform ban imposed in the Indian EEZ beyond territorial waters
- 9) The union also urged the government to include women under the scheme, as several of them are involved in different fishing activities like transporting and selling. Their earnings have also taken a hit because of the ban

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1,2,3,4,5,6,7,8,9
- (d) None of these

Ans: c

50) Consider the following :

- 1) Indian agriculture is dominated by small and marginal farmers with average land holdings size of less than 1.1 ha.
- 2) These small and marginal farmers constituting more than 86 % of the total land holdings are facing tremendous challenges both in production and post-production scenarios like access to production technology, quality inputs at reasonable prices, seed production, custom hiring, value addition, processing, credit, investments and most importantly markets.
- 3) Hence, collectivization of such producers through formation of FPOs is very important to address such challenges and enhance their incomes.
- 4) Realizing the need to form and promote FPOs across the country, Government formulated a dedicated Central Sector Scheme "Formation & Promotion of 10,000 Farmer Producer Organizations (FPOs) and the same was launched by Hon'ble Prime Minister on 29.02.2020 at Chitrakoot (UP) for implementation.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1,2,3,4
- (d) None of these

Ans: c

51) The Formation & Promotion of 10,000 Farmer Producer Organizations (FPOs) scheme is based on produce cluster approach to enhance production, productivity, market access, promote diversification, value addition, processing and export and also to create agri based employment opportunities with the aim to economically empower farmers.

Consider the following :

- 1) The FPOs to be eligible under the scheme for financial benefit and technical handholding are required to be registered either under Companies Act, 2013 or States' Co-operative Societies Act with minimum number of 300 farmers in plain areas and 100 farmers in hilly and NER.
- 2) Under the scheme, there is provision for financial support of maximum Rs.18.00 lakh per FPO for 3 years as management cost to make them sustainable and economically viable .
- 3) To strengthen the financial base of FPOs and entail them to avail collateral free loan, there is also provision for matching equity grant of maximum Rs. 2000/- per member with ceiling of Rs,

15 lakh /FPO and Credit Guarantee facility upto bankable project loan of Rs. 2.00 crore respectively.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1,2,3
- (d) None of these

Ans: c

52) Under the scheme CBBOs have been provisioned as the professional agency with a critical role to play as they are to engage themselves all along the value chain starting right from mobilization of farmers, baseline survey, identification of produce clusters, formation of groups, registration and capacity building to preparation of business plan, execution thereof with assurance to provide the market to the FPOs. They are also to establish cardinal link with Implementing Agencies and FPOs.

Consider the following:

- 1) The role of Cluster Based Business Organisations (CBBOs) should be to strengthen Farmer Producer Organisations (FPOs) so that farmers seek them out. FPO is not merely a company, it is a collective for the benefit of farmers.
- 2) Emphasising this in the key note address at the inaugural session of the National Conference of Cluster Based Business Organisations (CBBOs) Union Agriculture Minister said that more and more farmers should be part of FPOs.
- 3) It is said that earlier around 7,000 FPOs were made but they could not last and a new scheme of FPOs was launched by the Prime Minister with an outlay of Rs. 6865 crore. At a time when the country is observing Azadi ka Amrit Mahotsav the government is making every effort for the prosperity of farmers.
- 4) Union Minister of State for Agriculture also said that farmers should be enthusiastic about joining FPOs. At the conference Union Agriculture Minister also launched the logo for 10,000 FPOs Scheme.

Which of the statements given above is / are correct ?

- (a) 1 only
- (b) 2 only
- (c) 1,2,3,4
- (d) None of these

Ans: c

**53) Consider the following :**

**Major Groups of WPI are**

- (1) Primary Articles (Weight 22.62%)**
- (2) Fuel & Power (Weight 13.15%)**
- (3) Manufactured Products (Weight 64.23%)**

Which of the statements given above is / are correct ?

- (a) 1 only

- (b) 2 only
  - (c) 1,2,3
  - (d) None of these
- Ans: c

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