

1. Which of the following institution has recently published the report “From insights to action” on Gender equality in the wake of COVID-19”?

- a) UN Women
- b) United Nations Educational, Scientific and Cultural Organization
- c) International Labour Organization
- d) Global Fund for Women

Correct Answer: A

Explanation: ‘From insights to action: Gender equality in the wake of COVID-19’ has been published by the UN Women.

This publication summarizes data, research, and policy work by UN Women’s Policy and Programme Division on the pandemic’s impact on women and girls, including the impact on extreme poverty, employment, health, unpaid care, and violence against women and girls.

The poverty rate for women was earlier projected to decrease by 2.7 per cent between 2019 and 2021, but with the coming of the pandemic, it has increased to 9.1 per cent.

By 2021, for every 100 men aged 25 to 34 living in extreme poverty (living on USD 1.90 a day or less), there will be 118 women, a gap that is expected to increase to 121 women per 100 men by 2030.

The report gave suggestions to prevent women from falling behind permanently because of the COVID-19 pandemic. These included addressing inadequate access to affordable childcare, addressing occupational segregation and gender pay gaps.

2. The monetary policy of Reserve Bank of India targets which of the following Inflation Index?

- a) Consumer Price Index (CPI) Rural
- b) Consumer Price Index (CPI) Combined
- c) Wholesale Price Index (WPI)
- d) Consumer Food Price Index (CFPI)

Correct Answer: B

Explanation: As per the RBI Act 1934 (amended 2016), the Central Government shall, in consultation with the Bank, determine the inflation target in terms of the Consumer Price Index, once in every five years.

Accordingly, the Central Government has notified 4 per cent Consumer Price Index (CPI) inflation as the target for the period from August 5, 2016 to March 31, 2021 with the upper tolerance limit of 6 per cent and the lower tolerance limit of 2 per cent.

As per the Act, the CPI Combined published by the National Statistical Office (NSO), Ministry of Statistics and Programme Implementation is used as inflation targeting index.

3. Consider the following statements regarding the DNA barcoding:

1. It is a methodology for rapidly and accurately identifying species by sequencing a short segment of standardized gene regions.
2. BIOSCAN is a global project that aims to generate barcode coverage for two million species.

Which of the statements given above is/are correct?

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

Correct Answer: C

Explanation: Statement 1 is correct. DNA barcoding is a methodology for rapidly and accurately identifying species by sequencing a short segment of standardized gene regions and comparing individual sequences to a reference database.

Statement 2 is correct. International Barcode of Life (iBOL), a Canadian not-for-profit corporation, after successful completion of BARCODE 500K in 2015, has launched project BIOSCAN in 2019 to generate barcode coverage for two million species.

Zoological Survey of India (ZSI), a subordinate organization under Ministry of Environment, Forest and Climate Change and International Barcode of Life (iBOL) have signed a Memorandum of Understanding (MoU).

The MoU will enable ZSI to participate at the Global level programmes like Bioscan and Planetary Biodiversity Mission.

4. In taxation, horizontal equity implies

- a) Similarly situated people pay the same taxes
- b) Better off people pay more taxes.
- c) Everyone pays the same amount of tax.
- d) Taxation is independent of income levels.

Correct Answer: A

Explanation: Taxation is based on the idea of Fairness. Though fairness (i.e., the first criteria of a good tax system) is not always easy to define, economists suggested inclusion of two elements in the tax system to make it fair namely, horizontal equity and vertical equity.

Individuals in identical or similar situations paying identical or similar taxes is known as horizontal equity. When 'better off people pay more taxes it is known as vertical equity.

5. Consider the following statements regarding the EASE 2.0 Index:

1. It provides Public Sector Banks a comparative evaluation showing where banks stand on the Reforms Agenda.
2. It has been released by the NITI Aayog.

Which of the statements given above is/are correct?

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

Correct Answer: A

Explanation: Statement 1 is correct. EASE (Enhanced Access and Service Excellence) Reforms Index independently measures progress on the Public Sector Banks (PSB) Reforms Agenda.

Statement 2 is incorrect. EASE 2.0 Index Results has been released recently by the Indian Banking Association (IBA). Bank of Baroda, State Bank of India, and erstwhile Oriental Bank of Commerce were felicitated for being the top three (in that order) in the 'Top Performing Banks' category according to the EASE 2.0 Index Results.

As part of the EASE Reforms, Doorstep Banking Services envisaged to provide convenience of banking services to the customers at their door step through the universal touch points of Call Centre, Web Portal or Mobile App, was inaugurated recently by the Finance Minister.

6. Consider the following statements.

1. Maize requires moderate temperature, rainfall and lots of sunshine.
2. Cotton requires high temperature, light rainfall, and less than hundred frost-free days and bright sunshine for its growth.
3. Jute grows well on alluvial soil and requires high temperature, heavy rainfall and humid climate.

Which of the above statements is/are correct?

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

Correct Answer: C

Explanation: Maize requires moderate temperature, rainfall and lots of sunshine. It needs well-drained fertile soils.

Cotton requires high temperature, light rainfall, two hundred and ten frost-free days and bright sunshine for its growth. It grows best on black and alluvial soils.

Jute was also known as the 'Golden Fibre'. It grows well on alluvial soil and requires high temperature, heavy rainfall and humid climate. This crop is grown in the tropical areas. India and Bangladesh are the leading producers of jute.

7. Consider the following statements regarding Current Account Deficit (CAD).

1. The current account measures the flow of goods, services and investments into and out of the country.
2. Current Account Deficit may help a debtor nation in the short-term.
3. High software receipts and private transfers can lower current account deficit.

Which of the above statements is/are correct?

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

Correct Answer: C

Explanation: Current Account Deficit or CAD is the shortfall between the money flowing in on exports, and the money flowing out on imports. Current Account Deficit (or Surplus) measures the gap between the money received into and sent out of the country on the trade of goods and services and also the transfer of money from domestically-owned factors of production abroad.

The current account constitutes net income, interest and dividends and transfers such as foreign aid, remittances, donations among others.

A country with rising CAD shows that it has become uncompetitive, and investors are not willing to invest there. They may withdraw their investments.

Current Account Deficit may be a positive or negative indicator for an economy depending upon why it is running a deficit. Foreign capital is seen to have been used to finance investments in many economies. Current Account Deficit may help a debtor nation in the short-term, but it may worry in the long-term as investors begin raising concerns over adequate return on their investments.

There were number of factors which led to lowering of current account deficit. One is software receipts have gone up, and also private transfers have also gone up.

8. Consider the following statements regarding the New Strategic Arms Reduction Treaty (New START):

1. It limits the number of non-deployed Inter Continental Ballistic Missiles (ICBMs).
2. The treat has been extended till 2026 by USA and Russia.

Which of the statements given above is/are correct?

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

Correct Answer: B

Explanation: The New Strategic Arms Reduction Treaty (New START) was signed April 8, 2010, in Prague by the United States and Russia and entered into force in 2011. It is an agreement for nuclear arms reduction between the United States and Russia, establishing a limit on deployed strategic warheads.

Statement 1 is incorrect. New START does not limit the number of non-deployed ICBMs and SLBMs, but it does monitor them and provide for continuous information on their locations and on-site inspections to confirm that they are not added to the deployed force.

Statement 2 is correct. The United States and Russia agreed on Feb. 3, 2021, to extend New START by five years, as allowed by the treaty text, until Feb. 5, 2026.

9. Consider the following statements regarding the RUDRAM missile:

1. It is an Anti-Radiation Missile indigenously developed in India.
2. It can detect, classify and engage targets over a wide band of frequencies.

Which of the statements given above is/are correct?

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

Correct Answer: C

Explanation: Statement 1 is correct. The RUDRAM is first indigenous anti-radiation missile of the country being developed by Defence Research and Development Organisation (DRDO).

It is a new generation Anti-Radiation Missile and was successfully Flight tested recently onto a radiation target located on Wheeler Island off the coast of Odisha.

Statement 2 is correct. It has INS-GPS navigation with Passive Homing Head for the final attack. The RUDRAM hit the radiation target with pin-point accuracy.

The Passive Homing Head can detect, classify and engage targets over a wide band of frequencies as programmed.

10. Consider the following statements regarding the Phosphine gas:

1. It is a colorless flammable gas.
2. It is an artificially produced gas and does not occur naturally.

Which of the statements given above is/are correct?

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

Correct Answer: A

Explanation: Statement 1 is correct. Phosphine is a colorless, flammable, and explosive gas at ambient temperature.

Statement 2 is incorrect. It is a natural gaseous carrier of phosphorus in its biogeochemical cycles, has been found ubiquitously present in the environment. Small amounts occur naturally from the breakdown of organic matter.

Recent discovery of phosphine on Venus has sparked debate on presence of life outside Earth.

On rocky planets such as Venus and Earth, phosphine can only be made by life—whether human or microbe.

Phosphine is manufactured as an agricultural fumigant, is used in the semiconductor industry, and is a byproduct of meth labs.

But phosphine is also made naturally by some species of anaerobic bacteria—organisms that live in the oxygen-starved environments of landfills, marshlands, and even animal guts.

11. Which of the following factors can lead to Demand-pull inflation?

1. Strong consumer demand
2. Increase in money supply
3. When prices go up
4. Technological innovation

Select the correct code:

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

Correct Answer: B

Explanation: When the aggregate demand in an economy strongly outweighs the aggregate supply, prices go up. Economists describe demand-pull inflation as a result of too many dollars chasing too few goods.

If a government reduces taxes, households are left with more disposable income in their pockets. This, in turn, leads to increased consumer spending, thus increasing aggregate demand and eventually causing demand-pull inflation.

Cost-push inflation is when prices go up.

12. Consider the following statements.

1. Deltas are formed in low tide regions, whereas Estuaries are formed in high tide region with rift valleys.
2. Estuaries are usually more fertile than delta regions.
3. Delta region continuously interacts with the ocean unlike estuaries which does not.

Which of the above statements is/are correct?

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

Correct Answer: A

Explanation: Deltas are practically wetlands that are normally formed when a fast-moving river empties its sediments before joining a slow-moving water body such as a sea or an ocean or a lake. On the other hand, estuaries are semi-enclosed water bodies that constitute of salty water. It is normally an area where a river merges with a sea.

Deltas are normally shaped like a bird's foot or fan-shaped, whereas, estuaries are fjord estuaries or tectonic estuaries.

Deltas are extremely fertile by nature that makes it suitable for agriculture and estuaries are not fertile and thus, not suitable for agriculture.

Deltas are formed in regions that experience coastal plains and low tides, whereas, estuaries are formed in regions that experience rift valleys and high tides.

13. Increased Snow cover on a water body can lead to

1. Sudden spurt in phytoplankton population which are not dependent on photosynthesis
2. Improved oxygen exchange and nutrient recycling in the lake
3. A condition of winterkill causing large scale death of fishes and organisms

Select the correct answer code:

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

Correct Answer: B

Explanation: Phytoplankton float on top surface of water bodies and require sunlight to thrive. Ice cover will reduce their breeding grounds and population.

The snow cover blocks exchange of nutrients and oxygen from the atmosphere.

Snow cover of ice on water body can effectively cut off light, plunging the waters into darkness.

Hence photosynthesis stops but respiration continues. Thus, in shallow lakes, oxygen gets depleted, and due to lack of oxygen there is large scale death of fishes and other organisms. This condition is known as winterkill.

14. Consider the following statements regarding Biofortification:

1. It aims to increase nutrient levels in crops during plant growth rather than through manual means during processing of the crops.
2. Bt-Cotton is a biofortified variety of cotton.

Which of the statements given above is/are correct?

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

Correct Answer: A

Explanation: Statement 1 is correct. Fortification is the practice of deliberately increasing the content of an essential micronutrient, i.e. vitamins and minerals (including trace elements) in a food.

Biofortification is the process by which the nutritional quality of food crops is improved through agronomic practices, conventional plant breeding, or modern biotechnology. Biofortification differs from conventional fortification in that biofortification aims to increase nutrient levels in crops during plant growth rather than through manual means during processing of the crops.

Statement 2 is incorrect. Bt cotton is a genetically modified pest resistant plant cotton variety, which produces an insecticide to combat bollworm.

Examples of biofortification projects include:

- iron-biofortification of rice, beans, sweet potato, cassava and legumes;
- zinc-biofortification of wheat, rice, beans, sweet potato and maize;
- provitamin A carotenoid-biofortification of sweet potato, maize and cassava; and
- amino acid and protein-biofortification of sorghum and cassava.

15. What is the major objective of the recent Intra-Afghan talks in Doha?

- a) Agreement on Afghanistan's future political system
- b) Resolution of Afghanistan's border dispute with Pakistan
- c) Afghanistan's relation with the United Nations system
- d) Limit the eastward expansion of ISIS

Correct Answer: A

Explanation: The Taliban and the Afghan government began historic peace talks in Doha, Qatar recently after almost two decades of war. It is aimed at shaping a power-sharing government that would end decades of war that have consumed Afghanistan and left millions dead and displaced.

India attended the start of the intra-Afghan talks in Doha and conveyed that the peace process must be Afghan-led, Afghan-owned and Afghan-controlled, that respect national sovereignty and territorial integrity of Afghanistan, promote human rights and democracy, ensure interest of minorities, women and the vulnerable, effectively address violence across the country.

16. Consider the following statements regarding Monsoon rainfall.

1. Half of India's rainfall is received from Northeast monsoon.
2. Northeast monsoon in India is almost confined to the Southern peninsula.
3. Maldives, Sri Lanka and Myanmar also record rainfall during Northeast monsoon.

Which of the above statements is/are correct?

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

Correct Answer: C

Explanation: India receives rainfall during two seasons. About 75 per cent of the country's annual rainfall is received from the Southwest monsoon between June and September. The Northeast monsoon, on the other hand, occurs during October to December, and is a comparatively small-scale monsoon, which is confined to the Southern peninsula.

Also called the winter monsoon, the rainfall associated with the Northeast monsoon is important for Tamil Nadu, Puducherry, Karaikal, Yanam, coastal Andhra Pradesh, Kerala, north interior Karnataka, Mahe and Lakshadweep.

Some South Asian countries such as Maldives, Sri Lanka and Myanmar, too, record rainfall during October to December.

Tamil Nadu records about 48 per cent (447.4 mm) of its annual rainfall (943.7 mm) during these months, making it the key factor for undertaking agricultural activities and reservoir management in the state.

17. External Aids is the best means to finance a government's fiscal deficit because

1. It brings in foreign currency that is also useful to bridge the Balance of payments (BoP) apart from its utility in developmental expenditures.
2. It does not cause crowding out effect in the domestic market and is favourable to the domestic borrowers.

Which of the above statements is/are correct?

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

Correct Answer: C

Explanation: If external aid is a grant or coming without interest, no better way to finance the deficit, if we ignore their inflationary effects.

When the domestic market has limited amount of funds, and if the government desires to borrow a large share of it to finance the fiscal deficit, it tends to raise the demand for funds in the market. This shoots the market interest rate for the funds and causes problems to the domestic investors who now have to pay a higher interest rate to avail the same loan.

If the same money is borrowed from abroad, the crowding out effect doesn't occur.

18. Consider the following statements regarding the Paris Agreement under the United Nations Framework Convention on Climate Change:

1. There is no provision under the agreement to withdraw from the agreement.
2. India has pledged to create an additional carbon sink of 2.5 to 3 billion tonnes of carbon dioxide equivalent through additional forest and tree cover by 2030.

Which of the statements given above is/are correct?

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

Correct Answer: B

Explanation: Statement 1 is incorrect. Article 28 of the Paris agreement enables parties to withdraw from the agreement after sending a withdrawal notification to the depositary, but notice can be given no earlier than three years after the agreement goes into force for the country. Withdrawal is effective one year after the depositary is notified.

After a three-year delay, the US has become the first nation in the world to formally withdraw from the Paris climate agreement.

Statement 2 is correct. India has pledged three quantitative climate change goals:

–reduction in the emissions intensity of Gross Domestic Product (GDP) by 33 to 35 percent by 2030 from 2005 level

–achieving about 40 percent cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030.

–creating an additional carbon sink of 2.5 to 3 billion tonnes of carbon dioxide equivalent through additional forest and tree cover by 2030.

19. Consider the following statements regarding the 'Moushik' microprocessor:

1. Its applications include smart cards like credit and debit cards.
2. The design and fabrication have been done indigenously in India.

Which of the statements given above is/are correct?

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

Correct Answer: C

Explanation: Both statements are correct.

Indian Institute of Technology Madras researchers have booting up a microprocessor 'Moushik'.

The design of the microprocessor, motherboard printed circuit board design, assembly and post-silicon boot-up were done at IIT Madras. The foundry-specific back-end design and fabrication were undertaken at Semi-Conductor Laboratory of Indian Space Research Organization (ISRO) in Chandigarh and manufacturing of this motherboard was done at Bengaluru.

The field application of Moushik includes smart cards, such as credit and debit cards; ID cards; travel cards for Metros and driving licences; electronic voting machines etc.

The SHAKTI Processor Program, was started as an academic initiative back in 2014 by the RISE group at IIT-Madras.

20. Which of the following is/are feature(s) of the 'Saubhagya' scheme?

1. Free electricity connections to all households in rural areas and poor families in urban areas.
2. Solar Photovoltaic (SPV) based standalone system for un-electrified households located in remote and inaccessible habitations.
3. Beneficiary households under the scheme are identified using Socio Economic and Caste Census (SECC) 2011 data.

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) All of the above

Correct Answer: D

Explanation: Pradhan Mantri Sahaj Bijli Har Ghar Yojana – “Saubhagya” was launched with an aim to achieve universal household electrification.

Statement 1 is correct. Under Saubhagya free electricity connections to all households (both APL and poor families) in rural areas and poor families in urban areas will be provided. Rural Electrification Corporation (REC) has been designated as nodal agency for the Saubhagya scheme.

Statement 2 is correct. Schemes targets for providing Solar Photovoltaic (SPV) based standalone system for un-electrified households located in remote and inaccessible villages / habitations, where grid extension is not feasible or cost effective.

Statement 3 is correct. The prospective beneficiary households for free electricity connections under the scheme would be identified using SECC 2011 data. However, un-electrified households not covered under SECC data would also be provided electricity connections under the scheme on payment of Rs. 500 which shall be recovered by DISCOMs in 10 instalments through electricity bill.

21. Consider the following statements regarding Fiscal Deficit.

1. Fiscal deficit is reflective of the total borrowing requirements of the Government.
2. A higher fiscal deficit can lead to higher interest rates in the economy.

Which of the above statements is/are incorrect?

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

Correct Answer: D

Explanation: Fiscal Deficit is the difference between the Revenue Receipts plus Non-debt Capital Receipts (NDCR) and the total expenditure.

In other words, fiscal deficit is “reflective of the total borrowing requirements of the Government”.

If the fiscal deficit ratio is too high, it implies that there is a lesser amount of money left in the market for private entrepreneurs and businesses to borrow.

Lesser amount of this money, in turn, leads to higher rates of interest charged on such lending.

So, simply put, a higher fiscal deficit means higher borrowing by the government, which, in turn, mean higher interest rates in the economy.

A high fiscal deficit and higher interest rates would also mean that the efforts of the Reserve Bank of India to reduce interest rates are undone.

22. Consider the following statements regarding Sea floor.

1. Volcanic eruptions are common along the mid-oceanic ridges.
2. The age of the rocks decreases as one moves away from the crest.
3. The ocean crust rocks are much younger than the continental rocks.

Which of the above statements is/are correct?

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

Correct Answer: B

Explanation: Sea floor spreading is verified using these phenomena:

It was realised that all along the mid-oceanic ridges, volcanic eruptions are common and they bring huge amounts of lava to the surface in this area. The sediments on the ocean floor are unexpectedly very thin.

The age of the rocks increases as one moves away from the crest.

The ocean crust rocks are much younger than the continental rocks.

The sediments on the ocean floor are unexpectedly very thin.

The deep trenches have deep-seated earthquake occurrences while in the mid-oceanic ridge areas, the quake foci have shallow depths.

23. Consider the following statements regarding Eutrophication.

1. Eutrophication is when a body of water becomes overly enriched with minerals and nutrients which induce excessive growth of algae and in turn, increases water quality.
2. Increase of phytoplankton in a water body is the response to increased levels of nutrients.

Which of the above statements is/are correct?

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

Correct Answer: B

Explanation: Eutrophication is when a body of water becomes overly enriched with minerals and nutrients which induce excessive growth of algae. This process may result in oxygen depletion of the water body. One example is an “algal bloom” or great increase of phytoplankton in a water body as a response to increased levels of nutrients.

Eutrophication is often induced by the discharge of nitrate or phosphate-containing detergents, fertilizers, or sewage into an aquatic system.

24. Consider the following statements regarding the Input Tax Credit (ITC):

1. It is a mechanism to avoid cascading of taxes.
2. The Goods and Services Tax mechanism in India does not incorporate the ITC.

Which of the statements given above is/are correct?

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

Correct Answer: A

Explanation: Statement 1 is correct. Input Tax Credit (ITC) allows a person to avail credit of tax paid on the inward supply of goods or services or both which is used or intended to be used in the course or furtherance of business.

ITC is a mechanism to avoid cascading of taxes, i.e., 'tax on tax'.

Statement 2 is incorrect. Uninterrupted and seamless chain of input tax credit is one of the key features of Goods and Services Tax.

One of the most important features of the GST system is that the entire supply chain is subject to GST to be levied by Central and State Government concurrently. As the tax charged by the Central or the State Governments would be part of the same tax regime, credit of tax paid at every stage would be available as set-off for payment of tax at every subsequent stage.

25. Which of the following pillars constitutes the Namami Gange Programme?

1. Sewerage Treatment Infrastructure
2. Afforestation
3. Industrial Effluent Monitoring

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) All of the above

Correct Answer: D

Explanation: 'Namami Gange Programme', is an Integrated Conservation Mission, a 'Flagship Programme' of the Union Government to accomplish the twin objectives of effective abatement of pollution, conservation and rejuvenation of National River Ganga.

Main pillars of the Namami Gange Programme:

Sewerage Treatment Infrastructure, River-Front Development, River-Surface Cleaning, Bio-Diversity, Afforestation, Public Awareness, Industrial Effluent Monitoring and Ganga Gram.

The implementation of the program is divided into entry-level activities (for immediate visible impact), medium term activities (to be implemented within 5 years of time frame), and, long-term activities (to be implemented within 10 years).

Prime Minister recently inaugurated several development projects in Uttarakhand under the Namami Gange Mission.

26. Which of the following are considered or counted while calculating GDP?

1. Rental value of all houses
2. Newly produced cars as well as second-hand cars
3. Pensions and scholarships given by the Government.

Select the correct answer code:

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

Correct Answer: A

Explanation: In calculating GDP, only newly produced goods are counted. Transactions in existing goods like second-hand cars are not included, as these do not involve the production of new goods. But the services provided by the agents while selling second-hand cars are counted. The agents make some money through commission which adds to the service economy.

There are imputed values as part of GDP. All houses are assumed to be rented as it is not possible for the government to check which one is owner occupied and which one is rented. Thus, rental value of all houses is part of GDP.

Transfer payments like scholarships, pensions and universal basic income that the government gives do not fetch any direct returns in terms of addition to GDP and thus are not included in the GDP.

27. Due to some reasons, if there is a huge fall in the population of species of butterflies, what could be its likely consequence/consequences?

1. Pollination of some plants could be adversely affected.
2. There could be a drastic increase in the fungal infections of some cultivated plants.
3. It could lead to a fall in the population of some species of wasps, spiders and birds.

Select the correct answer code:

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

Correct Answer: C

Explanation: Bees and butterflies play a vital role in the pollination of plants and the production of crops by transporting pollen grains from one place to another.

Statement 2 is an absurd statement.

These are some of the common predators of butterflies: wasps, ants, parasitic flies, birds, snakes, toads, rats etc. The decline in butterfly population would therefore adversely affect the food chain.

28. Which of the following conditions are good for fisheries production & catch?

1. Coastal upwelling of nutrient rich colder water
2. Abundance of phytoplankton
3. Meeting of warm and cold currents
4. Shallow continental shelves in cold regions

Select the correct answer code:

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

Correct Answer: D

Explanation: The following conditions are good for fisheries production & catch:

Coastal upwelling of nutrient rich colder water

Abundance of phytoplankton

Meeting of warm and cold currents

Shallow continental shelves in cold regions

29. Consider the following statements regarding the PINAKA Rocket System:

1. It is a beyond visual range air to air missile system.
2. It has been developed by the Dassault Aviation of France

Which of the statements given above is/are correct?

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

Correct Answer: D

Explanation: Both statements are incorrect.

PINAKA is a multiple rocket launcher produced in India and developed by the Defence Research and Development Organisation for the Indian Army. The system has a maximum range of 40 km for Mark-I and 75 km for Mark-II.

Enhanced PINAKA rocket, developed by DRDO has been successfully flight tested from Integrated Test Range, Chandipur off the coast of Odisha recently.

Enhanced version of the Pinaka rocket would replace the existing Pinaka Mk-I rockets which are currently under production.

30. Where is Dhaulasidh Hydro Project located?

- a) Himachal Pradesh
- b) Andhra Pradesh
- c) Karnataka
- d) Uttarakhand

Correct Answer: A

Explanation: The Union Government has recently given approval for the construction of 66 Megawatt Dhaulasidh hydroelectric projects in Hamirpur district, Himachal Pradesh.

It is a run of river scheme on river Beas with a concrete gravity dam. The dam would create a reservoir of about 20 Kilometer. The project is being implemented by the Satluj Jal Vidyut Nigam Limited (SJVN).

31. Which of the following national and international events monitors Ozone pollution?

1. Gothenburg Protocol
2. Bonn Convention
3. National Air Quality index
4. System of Air Quality and Weather Forecasting

Select the correct answer code:

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

Correct Answer: B

Explanation: The 1999 Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone is a multi-pollutant protocol designed to reduce acidification, eutrophication and ground-level ozone. The Protocol is part of the Convention on Long-Range Transboundary Air Pollution.

The Convention on Migratory Species (CMS), also known as the Bonn Convention, aims to conserve terrestrial, aquatic and avian migratory species throughout their range.

Ozone has been classified and monitored as one of the eight pollutants under National Air Quality index.

Ozone is monitored as one of the Pollutants under SAFAR (System of Air Quality and Weather Forecasting).

32. Which of the following are the conditions for the emergence of a tropical cyclone?

1. Large and continuous supply of warm and moist air.
2. Strong Coriolis force
3. Strong vertical wind
4. Unstable condition through the Troposphere

Select the correct answer code:

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

Correct Answer: B

Explanation: Some initial conditions for the emergence of a tropical cyclone are:

- (i) Large and continuous supply of warm and moist air that can release enormous latent heat.
- (ii) Strong Coriolis force that can prevent filling of low pressure at the centre (absence of Coriolis force near the equator prohibits the formation of tropical cyclone between 0°-5° latitude).
- (iii) Unstable condition through the troposphere that creates local disturbances around which a cyclone develops.
- (iv) Finally, absence of strong vertical wind wedge, which disturbs the vertical transport of latent heat.

33. Which of the following are the sources of arsenic contamination.

1. Weathering of rocks and minerals followed by leaching and runoff.
2. Intense exploitation of groundwater
3. Iron coprecipitation
4. Burning of coal

Select the correct answer code:

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

Correct Answer: B

Explanation: The sources of arsenic are natural or may partly stem from anthropogenic activities like intense exploitation of groundwater, application of fertilizers, burning of coal and leaching of metals from coal-ash tailings.

Arsenic is introduced into soil and groundwater during weathering of rocks and minerals followed by subsequent leaching and runoff.

Among the various arsenic removal technologies, lime softening and iron coprecipitation have been reported to be the most effective.

34. Which of the following statements correctly defines the term Aquaponics?

- a) Cultivation of marine organisms in tanks or ponds filled with seawater
- b) Growing of plants in a soil-less environment
- c) Farming marine species in compete organic environment
- d) Cultivation of plants and aquatic animals complementing each other

Correct Answer: D

Explanation: Aquaponics is cooperation between plants and fish and the term originates from the two words aquaculture (the growing of fish in a closed environment) and hydroponics (the growing of plants usually in a soil-less environment).

It is the cultivation of plants and aquatic animals in a recirculating environment. In this system, fishes eat the food and excrete waste, which is converted by beneficial bacteria to nutrients that the plants can use. In consuming these nutrients plants help to purify the water.

35. Which of the following country(s) is/are part of the Five Eyes (FVEY) group?

- 1. United States of India
- 2. Japan
- 3. United Kingdom

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) All of the above

Correct Answer: C

Explanation: The Five Eyes (FVEY) is an intelligence alliance comprising Australia, Canada, New Zealand, the United Kingdom and the United States. These countries are parties to the multilateral UKUSA Agreement, a treaty for joint cooperation in signals intelligence.

India and Japan along with the FVEY countries are opposing the end-to-end encryption of messages by social media giants such as Facebook, which they say hinder law enforcement by blocking all access to them.

36. Consider the following statements:

1. The lapse rate usually is more in winter than summer.
2. In hilly areas, a hot day followed by calm, cloudless night act as favourable condition for the phenomenon of temperature inversion.
3. If the moist air ascends rapidly to the cooler layers of the atmosphere, the water droplets freeze into ice pellets and fall to the earth as hail.

Which of the above statements is/are correct?

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

Correct Answer: C

Explanation: The lapse rate usually is more in summer than winter.

In hilly areas, a hot day followed by calm, cloudless night act as favourable condition for the phenomenon of temperature inversion.

If the moist air ascends rapidly to the cooler layers of the atmosphere, the water droplets freeze into ice pellets and fall to the earth as hail.

37. In India, deficit financing is usually resorted in order to

1. Finance the revenue deficit component
2. Undertake developmental expenditure
3. Bridge the short-term Current Account Deficit (CAD)

Select the correct answer code:

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

Correct Answer: A

Explanation: In India, revenue deficit is one of the major reasons for a large fiscal deficit. This means that the government cannot finance its revenue operations by the resources it generates.

Statement 2: This is done because the internal resources of the government are not adequate to undertake development expenditure. It must borrow money from the market.

CAD is financed by external flows. If government borrows from outside it would increase our external capital deficit, but not affect the short-term CAD.

38. Consider the following statements regarding the Paris Climate Agreement:

1. It was adopted during the United Nations Framework Convention on Climate Change's (UNFCCC) 21st Conference of Parties (COP21).
2. It aims to limit the global temperature increase in this century to 1.5 degrees Celsius above preindustrial levels, while pursuing means to limit the increase to 1 degree.
3. It also provides for a global stocktake every 5 years to assess the collective progress.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) All of the above

Correct Answer: C

Explanation: Statement 1 is correct. Paris Agreement was signed after over deliberation in Paris during the United Nations Framework Convention on Climate Change's (UNFCCC) 21st Conference of Parties (COP21) and adopted on December 12, 2015.

The agreement formally came into force on 4 November 2016, several days before the COP22.

Statement 2 is incorrect. Countries that sign on to be a part of the pact agreed to limit the century's global average temperature increase to no more than 2 degrees Celsius (3.6 degrees Fahrenheit) above the levels from the years 1850-1900 (the pre-industrial era).

The agreement also states a more rigid goal of limiting temperature increases to only 1.5 degrees Celsius (2.7 degrees Fahrenheit) above pre-industrial era levels.

Statement 3 is correct. The Paris Agreement requires all Parties to put forward their best efforts through "nationally determined contributions" (NDCs) and to strengthen these efforts in the years ahead. This includes requirements that all Parties report regularly on their emissions and on their implementation efforts. It also provides for a global stocktake every 5 years to assess the collective progress towards achieving the purpose of the agreement and to inform further individual actions by Parties.

39. Consider the following statements regarding the Soil-transmitted helminths (STH):

1. These infections are caused by species of parasitic worms.
2. STHs are considered Neglected Tropical Diseases (NTDs).

Which of the statements given above is/are correct?

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

Correct Answer: C

Explanation: Both statements are correct.

Soil-transmitted helminth infections are caused by different species of parasitic worms. They are transmitted by eggs present in human faeces, which contaminate the soil in areas where sanitation is poor. Infected children are nutritionally and physically impaired.

Soil-transmitted helminth infection is found mainly in areas with warm and moist climates where sanitation and hygiene are poor, including in temperate zones during warmer months. These STHs are considered Neglected Tropical Diseases (NTDs) because they inflict tremendous disability and suffering yet can be controlled or eliminated.

Since its launch in 2015, the National Deworming Day (NDD), a flagship program of the Ministry of Health and Family Welfare, is implemented as a biannual single day programme implemented through the platforms of schools and anganwadis. Albendazole tablet, approved by World Health Organization (WHO), is used for treatment of intestinal worms in children and adolescents as part of Mass Drug Administration (MDA) programmes globally.

40. Which of the following indicator(s) is/are measured under the Global Hunger Index (GHI)?

1. Undernutrition
2. Child wasting
3. Child mortality

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) All of the above

Correct Answer: D

Explanation: The Global Hunger Index (GHI) is a tool for comprehensively measuring and tracking hunger at global, regional, and national levels. GHI scores are based on the values of four component indicators:

Undernutrition: the share of the population that is undernourished (that is, whose caloric intake is insufficient);

Child wasting: the share of children under the age of five who are wasted (that is, who have low weight for their height, reflecting acute undernutrition);

Child stunting: the share of children under the age of five who are stunted (that is, who have low height for their age, reflecting chronic undernutrition); and

Child mortality: the mortality rate of children under the age of five (in part, a reflection of the fatal mix of inadequate nutrition and unhealthy environments).

Based on the values of the four indicators, the GHI determines hunger on a 100-point scale where 0 is the best possible score (no hunger) and 100 is the worst. Each country's GHI score is classified by severity, from low to extremely alarming.

In the 2020 Global Hunger Index, India ranks 94th out of the 107 countries. With a score of 27.2, India has a level of hunger that is serious.

41. Consider the following statements regarding Wildlife Protection Act, 1972.

1. The Act is applicable for both Flora and Fauna and extends to the whole of India.
2. Animals listed under Schedule I and part II of Schedule II are accorded highest protection.
3. Schedule V includes the animals which cannot be hunted.

Which of the above statements is/are correct?

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

Correct Answer: B

Explanation: The Wild Life Protection Act, 1972 is an Act of the Parliament of India enacted for protection of plants and animal species. The Act established schedules of protected plant and animal species.

It has six schedules which give varying degrees of protection.

Schedule I and part II of Schedule II provide absolute protection – offences under these are prescribed the highest penalties.

Species listed in Schedule III and Schedule IV are also protected, but the penalties are much lower.

Schedule V includes the animals which may be hunted. They are known as Vermins.

Schedule VI is exclusive for Plants. The specified endemic plants in Schedule VI are prohibited from cultivation and planting.

42. Consider the following statements regarding Fold Mountains.

1. Fold Mountains are created when large areas are broken and displaced vertically.
2. They are least likely to have conical peaks.

Which of the above statements is/are correct?

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

Correct Answer: D

Explanation: Fold mountains are created where two or more of Earth's tectonic plates are pushed together. At these colliding, compressing boundaries, rocks and debris are warped and folded into rocky outcrops, hills, mountains, and entire mountain ranges.

The Himalayan Mountains and the Alps are young fold mountains with rugged relief and high conical peaks. The Appalachians in North America and the Ural Mountains in Russia have rounded features and low elevation. They are very old fold mountains.

Block Mountains are created when large areas are broken and displaced vertically.

43. Consider the following statements regarding Cash reserve ratio (CRR).

1. The percentage of cash required to be kept in reserves, vis-a-vis a bank's total profits, is called the Cash Reserve Ratio.
2. Banks do not get any interest on the money that is with the RBI under the CRR requirements.
3. CRR helps in keeping inflation under control.

Which of the above statements is/are correct?

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

Correct Answer: B

Explanation: Cash reserve ratio (CRR) is a certain minimum amount of deposit that the commercial banks have to hold as reserves with the central bank.

The percentage of cash required to be kept in reserves, vis-a-vis a bank's total deposits, is called the Cash Reserve Ratio.

The cash reserve is either stored in the bank's vault or is sent to the RBI. Banks do not get any interest on the money that is with the RBI under the CRR requirements.

CRR helps in keeping inflation under control. At the time of high inflation in the economy, RBI increases the CRR, so that banks need to keep more money in reserves so that they have less money to lend further.

44. What is the objective of the recently launched EOS-01 satellite?

- a) Applications in agriculture, forestry and disaster management support
- b) 5G connectivity
- c) Internet connectivity to islands in Indian Ocean
- d) Military intelligence network

Correct Answer: A

Explanation: India's Polar Satellite Launch Vehicle, in its fifty first flight (PSLV-C49), successfully launched EOS-01 along with nine international customer satellites from Satish Dhawan Space Centre (SDSC) SHAR, Sriharikota on November 07, 2020.

EOS-01 is an earth observation satellite, intended for applications in agriculture, forestry and disaster management support.

EOS-01 is nothing but another Radar Imaging Satellite (RISAT) that will work together with RISAT-2B and RISAT-2BR1 launched last year. EOS-01 was initially named RISAT-2BR2.

With EOS-01, ISRO is moving to a new naming system for its earth observation satellites which till now have been named thematically, according to the purpose they are meant for.

45. Which of the following Indian naval project(s) is/are correctly matched?

1. Project 28 – Kamorta Class Anti-Submarine Corvettes
2. Project 75 – Kalvari Class of submarines

Select the correct answer using the code given below:

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

Correct Answer: C

Explanation: During the developmental stage of a ship or a submarine, specific projects are generally assigned a numerical character as a unique identifier to the project.

In a series production of the warship construction project, all ships/submarines of the series have common design characteristics and capabilities.

The term 'class' in the Kolkata Class refers to a series of warships constructed under Project 15A which includes Indian naval ships INS Kolkata, INS Kochi and INS Chennai. Similarly, all six submarines constructed under Project 75 are referred to as Kalvari Class of submarines.

Project 15 Destroyers – Delhi Class (Delhi, Mysore, and Mumbai)

Project 16 Frigates – Godavari Class (Godavari, Ganga and Gomti)

Project 16A Frigates – Brahmaputra Class (Brahmaputra, Betwa and Beas)

Project 17 Stealth Frigates – Shivalik Class (Shivalik, Sahyadri and Satpura)

Project 28 Anti-Submarine Corvettes – Kamorta Class (Kamorta, Kadmat, Kiltan and Kavaratti)

The Project 75I-class submarine is a follow-on of the Project 75 Kalvari-class submarine for the Indian Navy.

46. Consider the following statements regarding Temperate Rainforests.

1. Temperate rainforests are found mostly in coastal, mountainous areas.
2. Cooler temperatures and a more stable climate slow down decomposition, allowing more material to accumulate.
3. Temperate rainforests are the most biologically diverse terrestrial ecosystems in the world.

Which of the above statements is/are correct?

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

Correct Answer: C

Explanation: Temperate rainforests are located in the mid-latitudes, where temperatures are much more mild than the tropics. Temperate rainforests are found mostly in coastal, mountainous areas. Rainfall in these forests is produced by warm, moist air coming in from the coast and being trapped by nearby mountains.

Cooler temperatures and a more stable climate slow down decomposition, allowing more material to accumulate. This productivity allows many plant species to grow for incredibly long periods of time.

Tropical rainforests are the most biologically diverse terrestrial ecosystems in the world.

47. Consider the following statements about Treasury Bills (T-Bills).

1. These are issued to meet short-term mismatches in receipts and expenditure.
2. These can be issued by the government as well as blue chip companies.

Which of the above statements is/are correct?

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

Correct Answer: A

Explanation: Treasury bills or T-bills, which are money market instruments, are short term debt instruments issued by the Government of India and are presently issued in three tenors, namely, 91 day, 182 day and 364 day. Treasury bills are zero coupon securities and pay no interest. Instead, they are issued at a discount and redeemed at the face value at maturity. For example, a 91 day Treasury bill of ₹100/- (face value) may be issued at say ₹ 98.20, that is, at a discount of say, ₹1.80 and would be redeemed at the face value of ₹100/-.

48. The thickness of the troposphere is greater at the equator rather than at the poles because of

1. Rotation of the earth pushes the atmosphere near equator to greater heights
2. Convection currents leading to thermal expansion of the atmosphere at the equator

Which of the above statements is/are correct?

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

Correct Answer: C

Explanation: The troposphere is thicker at the equator than at the poles because the equator is warmer. The convection currents of air expand the thickness of the troposphere (atmosphere).

Thus the simple reason is thermal expansion of the atmosphere at the equator and thermal contraction near the poles.

Also, the rotation of the earth causes centrifugal force which is strongest near the equator and pushes the atmosphere to greater heights.

The thickness of the troposphere also varies with season. The troposphere is thicker in the summer and thinner in the winter all around the planet.

49. Consider the following statements regarding the Anti-Satellite (ASAT) Missile:

1. India conducted a successful ASAT test with Mission Shakti.
2. India is the only Asian country to have demonstrated the anti-satellite weapon technology till date.

Which of the statements given above is/are correct?

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

Correct Answer: A

Explanation: Statement 1 is correct. 'Mission Shakti' was India's first ever Anti-Satellite (ASAT) Missile Test successfully conducted on 27th March 2019 from Dr AP J Abdul Kalam Island in Odisha, where a fast-moving Indian orbiting target satellite in Low Earth Orbit (LEO) was neutralized with pinpoint accuracy.

Statement 2 is incorrect. China conducted its first acknowledged test of an anti-satellite missile in 2007. Apart from India and China, USA and Russia possess the anti-satellite weapons technology.

50. Which of the following statement correctly defines the Joint Comprehensive Plan of Action (JCPOA)?

- a) It placed significant restrictions on Iran's nuclear program
- b) It proposed lifting of sanctions from North Korea
- c) It proposed a climate partnership agreement between European Union and USA
- d) It mandated to keep global temperature rise below one-degree Celsius from pre-industrial levels

Correct Answer: A

Explanation: The Joint Comprehensive Plan of Action (JCPOA) signed by China, France, Germany, Iran, Russia, the United Kingdom, and the United States in 2015, placed significant restrictions on Iran's nuclear program in exchange for sanctions relief.

President Trump unilaterally withdrew the United States from the agreement in 2018, claiming it failed to curtail Iran's missile program and its influence in the region.

Despite European efforts to salvage the JCPOA, Iran began ignoring limitations on its nuclear program in 2019.

51. What is Thrombocytopenia?

- a) Low platelet count in blood
- b) Low red blood cell count in blood
- c) Deficiency of Vitamin K in body
- d) Deficiency of Hemoglobin

Correct Answer: A

Explanation: Thrombocytopenia is a condition that causes low levels of platelets. Platelets (thrombocytes) are colorless blood cells that help blood clot. Platelets stop bleeding by clumping and forming plugs in blood vessel injuries.

Thrombocytopenia might occur as a result of a bone marrow disorder such as leukemia or an immune system problem. Or it can be a side effect of taking certain medications.

52. Consider the following statements regarding Rupee Appreciation.

1. Rupee can appreciate because of strong foreign portfolio investments into the country.
2. Avoiding the appreciation of the rupee can strengthen the domestic manufacturing industry.

Which of the above statements is/are correct?

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

Correct Answer: C

Explanation: Rupee mostly appreciates against dollar due to higher flows into the market.

We need to avoid the appreciation of the rupee if we are to strengthen the domestic manufacturing industry. Any appreciation of the rupee facilitates more imports and less exports, adversely affecting domestic production.

53. Consider the following statements about Methanol

1. Methanol is a clean-burning fuel that produces zero smog-causing emissions and can improve air quality and related human health issues.
2. It can be produced from renewable sources also.
3. As a high-octane vehicle fuel, methanol offers excellent acceleration and power.

Which of the above statements is/are incorrect?

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

Correct Answer: A

Explanation: Methanol can be used as an energy producing fuel, transportation fuel and cooking fuel, cutting down India's oil import bill by an estimated 20% over the next few years. Unlike CNG, using methanol as a transportation fuel would require minimal alteration in the vehicles.

Methanol is a clean-burning fuel that produces fewer smog-causing emissions — such as sulphur oxides (SOx), nitrogen oxides (NOx) and particulate matter — and can improve air quality and related human health issues.

Methanol is most commonly produced on a commercial scale from natural gas. It can also be produced from renewable sources such as biomass and recycled carbon dioxide.

As a high-octane vehicle fuel, methanol offers excellent acceleration and power. It also improves vehicle efficiency.

54. The Consumer Price Index for Industrial Worker (CPI-IW) is released by which of the following institution in India?

- a) Labour Bureau
- b) National Statistical Office
- c) National Central Survey office
- d) Department of Economic Affairs

Correct Answer: A

Explanation: Consumer Price Index for Industrial Worker (CPI-IW) with base year 2016 is being compiled and maintained by Labour Bureau, an attached office of Ministry of Labour & Employment.

The new series of CPI (IW) with base 2016=100 will replace the existing series with base 2001=100 in October 2020.

As per the recommendations of International Labour Organisation (ILO), Index Review Committee (IRC) and National Statistical Commission (NSC), the base year of price index numbers should be revised at frequent intervals generally not exceeding 10 years to reflect the changes that take place in the consumption pattern of consumers.

55. Which of the following country(s) is/are members to the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP)?

- 1. Canada
- 2. Australia
- 3. United States of America

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) All of the above

Correct Answer: A

Explanation: The Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) is a free trade agreement between Canada and 10 other countries in the Asia-Pacific region: Australia, Brunei, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore and Vietnam.

It came into being after newly elected US president Donald Trump withdrew the US signature from TPP in January 2017.

56. Balance of Payments (BoP) consist of which of the following items?

- 1. Any borrowing of the Government of India from abroad
- 2. Trade Balance
- 3. FDI and FII received annually

Select the correct answer code:

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

Correct Answer: D

Explanation: BoP consists of current account and capital account.

Current account includes trade, invisibles, remittances etc.

Capital account includes borrowings and long-term investments/debts of residents/foreigners with India.

Capital inflows like FDI, FII help bridge the trade deficit and neutralize BoP.

57. Consider the following matches of mangrove sites with States they are located in.

1. Subernarekha and Dhamra: Odisha
2. Pulicat and Pichavaram: Tamil Nadu
3. Karwar and Coondapur: Maharashtra
4. Vaitarna and Veldur: Telangana

Select the correct answer code:

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

Correct Answer: A

Explanation: Mangrove Sites are as follows:

West Bengal: Sunderbans

Odisha: Bhaitarkanika, Mahanadi, Subernarekha, Devi, Dhamra, Chilika

Andhra Pradesh: Coringa, East Godavari, Krishna

Tamil Nadu: Pichavaram, Muthupet, Ramnad, Pulicat, Kazhuveli

Karnataka: Coondapur, Dakshin Kannada/Honnar, Karwar, Mangalore Forest Division

Maharashtra: Achra-Ratnagiri, Devgarj-Vijay Durg, Veldur, Kundalika Revdanda, Mumbai-Diva, Vikhroli, Shreevardhan, Vaitarna, Vasai-Manori, Malvan

58. Consider the following statements regarding Prompt Corrective Action (PCA) framework:

1. The capital to risk weighted assets ratio (CRAR), net non-performing assets (NPA) and Return on Assets (RoA) are the trigger points for banks to be put under PCA.
2. It is not applicable to co-operative banks and non-banking financial companies (NBFCs).

Which of the statements given above is/are correct?

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

Correct Answer: C

Explanation: Statement 1 is correct. Prompt Corrective Action or PCA is a framework under which banks with weak financial metrics are put under watch by the RBI.

The Reserve Bank has specified certain regulatory trigger points, as a part of prompt corrective action (PCA) Framework, in terms of three parameters, i.e. capital to risk weighted assets ratio (CRAR), net non-performing assets (NPA) and Return on Assets (RoA), for initiation of certain structured and discretionary actions in respect of banks hitting such trigger points.

Statement 2 is correct. The PCA framework is applicable only to commercial banks and not extended to co-operative banks, non-banking financial companies (NBFCs) and Financial Market Infrastructure (FMI).

59. Consider the following statements.

1. Cold water corals, in general, have greater amount of zooxanthellae than warm water corals and does not build reef-like structures.
2. Cold-water corals differ from warm water corals because the former does not contain symbiotic algae for photosynthesis and grow more slowly.

Which of the above statements is/are correct?

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

Correct Answer: B

Explanation: Corals that inhabit the colder deep waters of continental shelves and offshore canyons, ranging from 50 to over 1000m depths lack zooxanthellae and may build reef-like structures or occur solitarily.

Cold-water corals are different from their warm-water counterparts because they do not contain symbiotic algae for photosynthesis and grow more slowly. Cold-water corals obtain all their energy from organic matter and zooplankton, which they catch from the currents drifting past

Cold-water corals can be found over a wide range of latitudes, from tropical to Polar Regions, and from the shallow to the deep seas.

60. Consider the following statements regarding the Warli Folk Painting:

1. These paintings depict more social life rather than mythological characters.
2. It has been recognized as a Geographical indication.

Which of the statements given above is/are correct?

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

Correct Answer: C

Explanation: Statement 1 is correct. Maharashtra is known for its Warli folk paintings. Warli is the name of the largest tribe found on the northern outskirts of Mumbai, in Western India.

Women are mainly engaged in the creation of these paintings. These paintings do not depict mythological characters or images of deities, but depict social life. Images of human beings and animals, along with scenes from daily life are created in a loose rhythmic pattern.

These tribal paintings of Maharashtra are traditionally done in the homes of the Warlis. Painted white on mud walls, they are pretty close to pre-historic cave paintings in execution and usually depict scenes of human figures engaged in activities like hunting, dancing, sowing and harvesting.

Statement 2 is correct. The Warli paintings have been recognized as Geographical Indication.

61. Consider the following statements regarding Vegetative Propagation.

1. Plants raised by vegetative propagation can bear flowers and fruits earlier than those produced from seeds.
2. Vegetative propagation is not possible from the plants that have lost the capacity to produce seeds.
3. Plants produced through vegetative propagation are genetically similar enough to the parent plant.

Which of the above statements is/are correct?

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

Correct Answer: B

Explanation: There are many plants in which parts like the root, stem and leaves develop into new plants under appropriate conditions. This property of vegetative propagation is used in methods such as layering or grafting to grow many plants like sugarcane, roses, or grapes for agricultural purposes. Plants raised by vegetative propagation can bear flowers and fruits earlier than those produced from seeds. Such methods also make possible the propagation of plants such as banana, orange, rose and jasmine that have lost the capacity to produce seeds. Another advantage of vegetative propagation is that all plants produced are genetically similar enough to the parent plant to have all its characteristics.

62. Which of the following is a constituent of Expansionary Monetary Policy?

1. Lowering repo rate
2. Purchase of government securities by central bank from market

Select the correct answer using the code given below:

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

Correct Answer: C

Explanation: Expansionary monetary policy is when a central bank uses its tools to stimulate the economy. That increases the money supply, lowers interest rates, and increases demand. It boosts economic growth. It lowers the value of the currency, thereby decreasing the exchange rate. It is the opposite of contractionary monetary policy.

The central bank may lower the repo rate, lower statutory reserve requirements or purchase government securities through open market operations in order to increase the money supply in the market.

63. Which of the following products can be extracted from seaweeds?

1. Agar-agar
2. Iodine
3. Alginates

Select the correct answer code:

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

Correct Answer: D

Explanation: Sea weeds are macroscopic algae, which mean they have no differentiation of true tissues such as roots, stems and leaves.

They grow in, shallow coastal waters wherever sizable sub-strata is available.

Seaweeds are important as food for humans, feed for animals, and fertilizer for plants.

Seaweeds are used as a drug for goiter treatment, intestinal and stomach disorders.

Products like agar-agar and alginates, iodine which are of commercial value, are extracted from seaweeds.

By the biodegradation of seaweeds methane like economically important gases can be produced in large quantities.

They are potential indicators of pollution in coastal ecosystem, particularly heavy metal pollution due to their ability to bind and accumulate metals strongly.

Rotting seaweed is a potent source of hydrogen sulfide, a highly toxic gas.

64. Consider the following statements:

1. The soil develops on crystalline igneous rocks in areas of low rainfall.
2. They are generally poor in nitrogen, phosphorous and humus.
3. They are fertile when fine-grained and are poor in fertility when they are coarse-grained.

The above statements refer to:

- a) Laterite soil
- b) Black Soil
- c) Red and Yellow Soil
- d) None of the above

Correct Answer: C

Explanation: Red soil develops on crystalline igneous rocks in areas of low rainfall in the eastern and southern part of the Deccan Plateau. Along the piedmont zone of the Western Ghats, long stretch of area is occupied by red loamy soil. Yellow and red soils are also found in parts of Odisha and Chhattisgarh and in the southern parts of the middle Ganga plain. The soil develops a reddish colour due to a wide diffusion of iron in crystalline and metamorphic rocks. It looks yellow when it occurs in a hydrated form. The fine-grained red and yellow soils are normally fertile, whereas coarse-grained soils found in dry upland areas are poor in fertility. They are generally poor in nitrogen, phosphorous and humus.

65. Consider the following statements regarding the India International Exchange (INDIA INX):

1. It is India's first international exchange in International Financial Services Centre (IFSC) located at the Gujarat International Finance-Tec City (GIFT City).
2. It is a subsidiary of the Bombay Stock Exchange (BSE).

Which of the statements given above is/are correct?

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

Correct Answer: C

Explanation: Both statements are correct.

The India International Exchange (IFSC) Limited (India INX) is India's first international exchange in International Financial Services Centre (IFSC) located at the Gujarat International Finance-Tec City (GIFT City). India INX is a subsidiary of BSE Limited. The Exchange commenced its operations from Jan 16, 2017.

It has recently signed MoU with the Luxembourg Stock Exchange for cooperation in financial services industry, maintenance of orderly markets in securities respective country, ESG (environmental, social and governance) and green finance in the local market.

66. Which of the following is/are part of the Personal Disposable Income?

1. Non-tax Payments such as fines
2. Corporate Tax.
3. Personal Tax Payments.
4. Net Interest payments made by households

Select the correct answer code:

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

Correct Answer: D

Explanation: None of them are part of Personal Disposable Income.

In economics, personal income (PI) refers to an individual's total earnings from wages, investment enterprises, and other ventures. It is the sum of all the incomes received by all the individuals or household during a given period.

If we deduct the Personal Tax Payments (income tax, for example) and Non-tax Payments (such as fines) from PI, we obtain what is known as the Personal Disposable Income.

Personal Disposable Income (PDI) \equiv PI – Personal tax payments – Non-tax payments.

67. An ecological pyramid is a diagrammatic presentation to describe trophic levels. How does the knowledge of ecological pyramid can help us in conservation of an ecosystem?

1. It helps us to identify bio-accumulation.
2. It helps us to identify bio-magnification.
3. It helps us to recognize an invasive species.

Select the correct answer code:

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

Correct Answer: B

Explanation: Ecological pyramid doesn't give evidence on introduction of new species.

68. Consider the following statements regarding the Shukrayaan mission:

1. It is a proposed space mission of ISRO to the planet closest to the Sun.
2. It is an orbiter and lander mission to study the topography of the planet.

Which of the statements given above is/are correct?

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

Correct Answer: D

Explanation: Statement 1 is incorrect. Mercury is the planet closest to the Sun. Shukrayaan is a proposed mission to Venus (second closest planet).

Statement 2 is incorrect. The Indian Space Research Organisation (ISRO) has short-listed 20 space-based experiment proposals, including from France, for its proposed Venus orbiter mission 'Shukrayaan' to study the planet for more than four years.

ISRO was earlier eyeing June, 2023 that has now been delayed due to pandemic, future launch opportunity is either in 2024 or 2026. The optimal launch window, when Venus is closest to the Earth comes about every 19 months.

69. What is a Negative Bond Yield?

- a) Investor receives more money at the bond's maturity than the original purchase price for the bond
- b) Investor receives less money at the bond's maturity than the original purchase price for the bond
- c) Investor receives no money at the bond's maturity but is offered another bond with higher return
- d) None of the above

Correct Answer: B

Explanation: A negative bond yield is when an investor receives less money at the bond's maturity than the original purchase price for the bond.

A negative bond yield is an unusual situation in which issuers of debt are paid to borrow. In other words, the depositors, or buyers of bonds, are effectively paying the bond issuer a net amount at maturity instead of earning a return through interest income.

Negative-yield bonds attract investments during times of stress and uncertainty as investors look to protect their capital from significant erosion.

These are generally issued by central banks or governments, and investors pay interest to the borrower to keep their money with them.

70. What was the mandate of the Ashok Dalwai Committee?

- a) Doubling Farmer's Income
- b) Review of Agriculture Produce Marketing Committee (APMC) laws
- c) Reforms in Criminal Laws
- d) Electoral Reforms

Correct Answer: A

Explanation: The Union Government had constituted an inter-ministerial committee headed by Ashok Dalwai to prepare a blueprint for doubling farmers' income by 2022. The Committee submitted its final report to the Government in September 2018.

It recommended to place agricultural marketing in the Concurrent list and a greater private sector participation in agri-marketing and logistics. It suggested that farmer producer and village producer organisations (FPO/VPO) could play a critical role in integrating small and marginal farmers into the agricultural market system.

71. The drainage pattern of an area is the outcome of which of the following factors

1. Geological time period.
2. Nature of rocks
3. Structure of rocks
4. Topography
5. Amount of water flowing and periodicity of the flow.

Which of the above statements is/are correct?

- a) 1, 2, 3
- b) 1, 2, 3, 4
- c) 1, 2, 3, 4, 5
- d) 2, 3, 4, 5

Correct Answer: C

Explanation: The flow of water through well-defined channels is known as 'drainage' and the network of such channels is called a 'drainage system'. The drainage pattern of an area is the outcome of the geological time period, nature and structure of rocks, topography, slope, amount of water flowing and the periodicity of the flow.

72. Which of these activities are usually restricted (partially or fully) in National parks?

1. Hunting of wild animals
2. Destruction of habitat
3. Construction of tourist lodges
4. Collecting minor forest products

Select the correct answer code:

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

Correct Answer: D

Explanation: National parks and sanctuaries are areas of significant ecological, floral, faunal or natural significance.

Hunting of wild animals, encroachment and/or destruction of habitat, construction of tourist lodges and other such activities are prohibited in protected areas.

A National park is a protected area which is reserved for the conservation of only animals, where no human interference in any form of harvesting of timber, collecting minor forest products and private ownership rights is allowed.

But, a wildlife sanctuary is a protected area which is reserved for the conservation of only animal and human activities like harvesting of timber, collecting minor forest products and private ownership rights are allowed as long as they do not interfere with the well-being of animals.

They are notified by the State Governments; and protected by the Forest Departments under the provisions of the Wildlife (Protection) Act, 1972 & its amendments, Indian Forest Act of 1927, Forest (Protection) Act of 1980, Biological Diversity Act, 2002 and the Forest Rights Act, 2006.

73. Consider the following statements regarding indirect taxes.

1. Indirect tax is a tax levied by the Government on goods and services and not on the profit or revenue of an individual.
2. Indirect taxes are termed regressive taxing mechanism because they are charged at higher rates than direct taxes.
3. Cascading effect of tax is a situation wherein the end-consumer of any goods or service has to bear the burden of the tax to be paid on the previously calculated tax and as a result would suffer an increased price.

Which of the above statements is/are correct?

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

Correct Answer: B

Explanation: Indirect Tax is a tax levied by the Government on goods and services and not on the income, profit or revenue of an individual and it can be shifted from one taxpayer to another.

Indirect taxes are charged the same for all income groups.

Few indirect taxes: Customs Duty, Central Excise Duty, Service Tax, Sales Tax and Value Added Tax (VAT).

Cascading effect of tax is a situation wherein the end-consumer of any goods or service has to bear the burden of the tax to be paid on the previously calculated tax and as a result would suffer an increased or inflated price.

74. Which of the following is/are malaria parasites that infect humans?

1. Plasmodium falciparum
2. Plasmodium vivax
3. Plasmodium ovale

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) All of the above

Correct Answer: D

Explanation: Four kinds of malaria parasites infect humans: Plasmodium falciparum, P. vivax, P. ovale, and P. malariae. In addition, P. knowlesi, a type of malaria that naturally infects macaques in Southeast Asia, also infects humans, causing malaria that is transmitted from animal to human (“zoonotic” malaria).

falciparum is the type of malaria that is most likely to result in severe infections and if not promptly treated, may lead to death. Although malaria can be a deadly disease, illness and death from malaria can usually be prevented.

Recently it was reported that a soldier in Kerala is believed to have contracted Plasmodium ovale during his posting in Sudan.

75. Consider the following statements regarding the Poshan Abhiyaan:

1. It aims to reduce the level of stunting, under-nutrition, anemia and low birth weight babies.
2. The Ministry of Women and Child Development (MWCD) is the nodal ministry for implementing POSHAN Abhiyaan.

Which of the statements given above is/are correct?

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

Correct Answer: C

Explanation: Statement 1 is correct. Government is implementing the POSHAN Abhiyaan since December, 2017 to address the problem of malnutrition in the country.

There are a number of schemes directly/indirectly affecting the nutritional status of children (0-6 year’s age) and pregnant women and lactating mothers. In spite of these, level of malnutrition and related problems in the country is high. POSHAN Abhiyaan through robust convergence mechanism and other components would strive to create the synergy.

The programme through the targets will strive to reduce the level of stunting, under-nutrition, anaemia and low birth weight babies. It will create synergy, ensure better monitoring, issue alerts for timely action, and encourage States/UTs to perform, guide and supervise the line Ministries and States/UTs to achieve the targeted goals.

Statement 2 is correct. The Ministry of Women and Child Development (MWCD) is nodal ministry for implementing POSHAN Abhiyaan.

76. Which of the following species can be found in the Tso Kar wetland?

1. Black-necked Crane (*Grus nigricollis*)
2. Great Crested Grebe (*Podiceps cristatus*)
3. Bar-headed Geese (*Anser indicus*)

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) All of the above

Correct Answer: D

Explanation: The Tso Kar Basin is a high-altitude wetland complex, consisting of two principal waterbodies, Startsapuk Tso, a freshwater lake of about 438 hectares to the south, and Tso Kar itself, a hypersaline lake of 1800 hectares to the north, situated in the Changthang region of Ladakh.

The Tso Kar Basin is an A1 Category Important Bird Area (IBA) as per Bird Life International and a key staging site in the Central Asian Flyway.

The site is also one of the most important breeding areas of the Black-necked Crane (*Grus nigricollis*) in India. This IBA is also the major breeding area for Great Crested Grebe (*Podiceps cristatus*), Bar-headed Geese (*Anser indicus*), Ruddy Shelduck (*Tadorna ferruginea*), Brown-headed Gull (*Larus brunnicephalus*), Lesser Sand-Plover (*Charadrius mongolus*) and many other species.

77. Consider the following statements regarding Carbon Neutrality:

1. It is achieved when anthropogenic CO₂ emissions are balanced by anthropogenic CO₂ removals over a specified period.
2. India has targeted to achieve Carbon Neutrality by 2050 as per its Intended Nationally Determined Contributions (INDCs).

Which of the statements given above is/are correct?

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

Correct Answer: A

Explanation: Statement 1 is correct. Net zero carbon dioxide (CO₂) emissions are achieved when anthropogenic CO₂ emissions are balanced by anthropogenic CO₂ removals over a specified period. Net zero CO₂ emissions are also referred to as carbon neutrality.

Statement 2 is incorrect. India's Intended Nationally Determined Contributions (INDCs):

–To reduce the emissions intensity of GDP by 33%–35% by 2030 below 2005 levels;

–To increase the share of non-fossil-based energy resources to 40% of installed electric power capacity by 2030, with help of transfer of technology and low-cost international finance including from Green Climate Fund (GCF);

–To create an additional (cumulative) carbon sink of 2.5–3 GtCO₂e through additional forest and tree cover by 2030.

78. Three of the following criteria have contributed to the recognition of Western Ghats, Sri Lanka and Indo Burma regions as hotspots of biodiversity

1. Species richness
2. Vegetation density
3. Endemism
4. Ethno-botanical importance
5. Threat perception
6. Adaption of flora and fauna to warm and humid conditions

Which three of the above are correct criteria for recognizing biodiversity hotspots?

- a) 1, 2, 6
- b) 2, 4, 6
- c) 1, 3, 5
- d) 3, 4, 6

Correct Answer: C

Explanation: Vegetation density, botanical importance, adaptation of flora and fauna are not considered while recognizing hot spots of biodiversity.

79. Consider the following statements regarding Vanadium:

1. It is alloyed with iron to make shock- and corrosion-resistant steel variety.
2. High doses of vanadium are toxic to humans.

Which of the statements given above is/are correct?

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

Correct Answer: C

Explanation: Vanadium is a medium-hard, steel-blue metal. It is quite valuable in the manufacturing industry due to its malleable, ductile and corrosion-resistant qualities.

Around 80 percent of the vanadium produced is alloyed with iron to make a shock- and corrosion-resistant steel additive called ferrovanadium.

Vanadium-steel alloys are used to make extremely tough tools such as axles, armor plates, car gears, springs, cutting tools, piston rods and crankshafts.

High doses of vanadium are toxic to humans, but scientists think we may need the element in very small amounts for normal bone growth. Vanadium can be found in trace amounts in many types of food, including mushrooms, black pepper, parsley, dill weed, shellfish, beer, wine and grain.

80. Consider the following statements:

1. IN-SPACE is an independent nodal agency under Department of Space (DOS) to promote the private sector for their participation in Space Sector.
2. Private players can also use ISRO infrastructure through IN-SPACE.

Which of the statements given above is/are correct?

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

Correct Answer: C

Explanation: Government has created Indian National Space, Promotion & Authorization Centre (INSPACE), under Department of Space to encourage, promote and hand hold the private sector for their participation in Space Sector. Private players will also be able to use ISRO infrastructure through INSPACE.

It is to be established as a single window nodal agency, with its own cadre, which will permit and oversee the following activities of Non-Government Private Enterprises:

- Space activities including building of launch vehicles and satellites and providing space based services as per the definition of space activities.
- Sharing of space infrastructure and premises under the control of ISRO with due considerations to on-going activities.
- Establishment of new space infrastructure and facilities, by NGPEs, in pursuance of space activities based on safety norms and other statutory guidelines and necessary clearances.
- Initiation of launch campaign and launch, based on readiness of launch vehicle and spacecraft systems, ground and user segment.
- Building, operation and control of spacecraft for registration as Indian Satellite by NGPEs and all the associated infrastructure for the same.

81. Consider the following statements regarding the Wholesale Price Index (WPI):

1. It is a monthly price index released by the National Statistical Office.
2. Services sector is not covered under the WPI.
3. Manufactured Products has highest weightage in the WPI.

Which of the statements given above is/are correct?

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

Correct Answer: B

Explanation: Statement 1 is incorrect. Wholesale Price Index (WPI) measures the average change in the prices of commodities for bulk sale at the level of early stage of transactions. It is released by Office of the Economic Adviser on 14th of every month (or next working day) with a time lag of two weeks of the reference month and compiled with data received from institutional sources and selected manufacturing units across the country.

Statement 2 is correct. The Wholesale Price Index (WPI) is an index covering prices of products/commodities only pertaining to four sectors comprising agriculture, mining, manufacturing and electricity. The other sectors of GDP, in particular, services sector are not covered under WPI.

Statement 3 is correct. The weight of manufactured products is highest in WPI (2004-05) at 64.2%. The weight of the Primary Article is to 22.6% and the weight of Fuel & Power is 13.2%.

82. Consider the following statements regarding Long term repo operation (LTRO).

1. Long term repo operation is a tool under which the central bank provides one-year to three-year money to banks at the prevailing repo rate.
2. As per RBI guidelines, banks need not keep government securities as collateral for accessing funds under LTRO.
3. LTRO helped RBI ensure that banks reduce their marginal cost of funds-based lending rate, without reducing policy rates.

Which of the above statements is/are correct?

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

Correct Answer: B

Explanation: The Reserve Bank of India (RBI) has said it will conduct on-tap targeted long-term repo operations (LTRO) for an amount of Rs 1 lakh crore to ensure comfortable liquidity conditions in the system.

The LTRO is a tool under which the central bank provides one-year to three-year money to banks at the prevailing repo rate, accepting government securities with matching or higher tenure as the collateral.

How is it different from LAF and MSF?

While the RBI's current windows of liquidity adjustment facility (LAF) and marginal standing facility (MSF) offer banks money for their immediate needs ranging from 1-28 days, the LTRO supplies them with liquidity for their 1- to 3-year needs. LTRO operations are intended to prevent short-term interest rates in the market from drifting a long way away from the policy rate, which is the repo rate.

LTRO helped RBI ensure that banks reduce their marginal cost of funds-based lending rate, without reducing policy rates.

83. The “Mon Shugu” handmade paper belongs to which of the following State/UT?

- a) Manipur
- b) Arunachal Pradesh
- c) Sikkim
- d) Ladakh

Correct Answer: B

Explanation: Monpa Handmade paper ‘Mon Shugu’ is made from the bark of tree Shugu Sheng grown locally in Tawang and is identified by its distinctive translucent fibrous texture. The paper is weightless but its natural fibers add great tensile strength to this paper making it apt for various art works.

It has been used for writing Buddhist scriptures, manuscripts and for making prayer flags. Writing on this paper is also known to be tamper-proof. The Monpa Handmade paper industry set up in Tawang aims at engaging the local youths with this art professionally and earn.

The sale of the 1000-years old heritage Monpa handmade paper or “Mon Shugu” is quickly catching pace due to its special mention by Prime Minister in his radio program Mann ki Baat.

84. Consider the following statements

1. Shola forest-grassland ecosystem is characterized by patches of forest of stunted evergreen shola trees in the valleys and grasslands of Tamil Nadu only.
2. Exotic invasive trees like pine, acacia and eucalyptus are largely seen in Shola forests.

Which of the above statements is/are correct?

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

Correct Answer: B

Explanation: Shola forests are tropical Montane forests found in the valleys separated by rolling grasslands only in the higher elevations. They are found only in South India in the Southern Western Ghats.

The Shola forests are generally said to be found in altitudes above 2000 metres of sea-level. Although they are found from altitudes higher than 1600 metres.

Shola forests are a native only to the Southern Western Ghats.

They are found only in the high-altitude mountains of the states Karnataka, Kerala and Tamil Nadu.

Exotic invasive trees like pine, acacia and eucalyptus are largely seen in Shola forests.

85. Which of the following falls under the terminology Over-the-Top (OTT) platforms?

1. Internet Service Providers (ISP)
2. Online Audio/Video Streaming services
3. Cable TV

Select the correct answer using the code given below:

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

Correct Answer: B

Explanation: OTT stands for 'Over-the-Top' and refers to any streaming service that delivers content over the internet. The service is delivered 'over the top' of another platform.

Services like Netflix or Amazon Prime Video are video OTT services, another major OTT market is audio, with services such as Spotify.

OTT messaging services like WhatsApp, Telegram or Signal have overtaken SMS as primary text communication mode.

86. Consider the following statements regarding Alpha and beta diversity.

1. Alpha diversity is the diversity within an ecosystem which is generally described as the number of species.
2. Beta diversity is the geographic diversity which refers to the total diversity of a region.

Which of the above statements is/are correct?

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

Correct Answer: A

Explanation: Alpha is the diversity within an ecosystem which is generally described as the number of species.

Beta diversity involves the comparison of different ecosystems in environmental gradients, for example, in a mountainous area within a coastal area. Beta diversity shows us the size of the change of species from one ecosystem to another.

Gamma diversity refers to the total diversity of a region, i.e. the geographic diversity. It is the sum of the alpha diversity of various ecosystems.

87. Consider the following statements regarding Trans fats:

1. It does not occur naturally and is produced artificially.
2. Consumption of trans fats may increase the risk of heart disease.

Which of the statements given above is/are correct?

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

Correct Answer: B

Explanation: Statement 1 is incorrect. Trans fats, or trans-fatty acids, are a form of unsaturated fat.

They are found in two forms — natural, which occur in some animal products and aren't considered harmful, and artificial, which are hydrogenated vegetable oils and have serious health consequences.

Natural, or ruminant, trans fats occur in the meat and dairy from ruminant animals, such as cattle, sheep, and goats. They form naturally when bacteria in these animals' stomachs digest grass.

Statement 2 is correct. People consuming trans fats instead of other fats or carbs experienced a significant increase in LDL (bad) cholesterol without a corresponding rise in HDL (good) cholesterol and may increase risk of heart disease.

In December 2020, the FSSAI had capped TFAs in oils and fats to 3% by 2021, and 2% by 2022.

88. Consider the following statements regarding Plate tectonics.

1. The driving force behind plate tectonics is convection in the mantle.
2. At transform boundaries, crust is neither produced nor destroyed as the plates slide horizontally past each other.
3. The Mid-Atlantic Ridges are a good example of convergent boundary.

Which of the above statements is/are correct?

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

Correct Answer: A

Explanation: There are four types of plate boundaries:

Divergent boundaries — where new crust is generated as the plates pull away from each other.

Convergent boundaries — where crust is destroyed as one plate dives under another.

Transform boundaries — where crust is neither produced nor destroyed as the plates slide horizontally past each other.

Plate boundary zones — broad belts in which boundaries are not well defined and the effects of plate interaction are unclear.

Divergent boundaries occur along spreading centers where plates are moving apart and new crust is created by magma pushing up from the mantle. Picture two giant conveyor belts, facing each other but slowly moving in opposite directions as they transport newly formed oceanic crust away from the ridge crest.

Perhaps the best known of the divergent boundaries is the Mid-Atlantic Ridge.

89. The highly degraded organic matter rich in phosphorus, nitrogen and potassium in particular, resulting from the activity of earthworms is known as:

- a) Compost bedding
- b) Humus
- c) Worm casting
- d) Vermicomposting

Correct Answer: D

Explanation: Vermicomposting is a type of composting in which certain species of earthworms are used to enhance the process of organic waste conversion and produce a better end-product. It is a mesophilic process utilizing microorganisms and earthworms. Earthworms feeds the organic waste materials and passes it through their digestive system and gives out in a granular form (cocoon) which is known as vermicompost.

A wide range of organic residues, such as straw, husk, leaves, stalks, weeds etc. can be converted into vermicompost. Other potential feedstock for vermicomposting production are livestock wastes, poultry litter, dairy wastes, food processing wastes, organic fraction of MSW, bagasse, digestate from biogas plants etc.

90. Which of the following organisation publishes the Global Innovation Index (GII)?

- a) World Intellectual Property Organization (WIPO)
- b) World Economic Forum (WEF)
- c) World Bank
- d) Organisation for Economic Co-operation and Development (OECD)

Correct Answer: A

Explanation: The Global Innovation Index (GII) is co-published by Cornell University, INSEAD, and the World Intellectual Property Organization (WIPO), a specialized agency of the United Nations. The Global Innovation Index (GII), since 2007, has been providing detailed metrics about the innovation performance of countries and economies around the world.

Global Innovation Index (GII) 2020 ranked India at 48th place, up four positions since 2019.

India has maintained its growth in publications—the traditional indicator of scientific excellence. The number of publications has increased exponentially over the last 10 years. According to data from the US agency, the National Science Foundation (NSF), India is currently in third place, only behind China and the United States, with 135,788 scientific articles in the year 2018.

91. Consider the following statements regarding Phosphorus and Phosphorus Cycle.

1. Phosphorus cycle is largely atmospheric and easily dissolves in water from air.
2. Phosphorus occurs as a mineral in phosphate rocks and enters the Phosphorus cycle from erosion and mining activities.
3. Phosphorus is responsible for excessive growth of rooted and free-floating microscopic plants in water bodies.

Which of the above statements is/are correct?

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

Correct Answer: B

Explanation: Phosphorous cycle is mainly terrestrial. The main storage for phosphorus is in the earth's crust. On land phosphorus is usually found in the form of phosphates.

It occurs in large amounts as a mineral in phosphate rocks and enters the cycle from erosion and mining activities.

By the process of weathering and erosion phosphates enter rivers and streams that transport them to the ocean.

Being an important nutrient, phosphorous promotes eutrophication in lakes. Along with nitrogen related compounds it leads to undesirable situations like algal bloom.

92. Which of the following country(s) have successfully put a spacecraft in Mars's orbit?

1. Japan
2. Israel
3. United Arab Emirates

Select the correct answer using the code given below:

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

Correct Answer: C

Explanation: United Arab Emirates has put a probe called Hope in orbit around the planet, making it only the fifth spacefaring entity to do so after the US, the Soviet Union, Europe and India.

The satellite carries three instruments that will observe, among other targets, how neutral atoms of hydrogen and oxygen – remnants from Mars' once abundant water – leak into space.

On Wednesday, it will be the turn of China with its Tianwen-1 orbiter to reach Mars. Next week, on Thursday 18 February, the Perseverance robot of USA is set to arrive on Mars.

93. Which of the following rivers drain into Bay of Bengal?

1. Mahi
2. Penner
3. Subarnrekha
4. Tapti

Select the correct answer code:

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

Correct Answer: B

Explanation: Usually, large Rivers flowing on the peninsular plateau have their origin in the Western Ghats and discharge their waters in the Bay of Bengal.

Indus, Tapti, Mahi, Narmada and Sabarmati drain in the Arabian Sea. Subarnrekha, Penner and others drain in the Bay of Bengal.

94. Which of the following are part of capital receipts for the Government of India.

1. Loans raised by Government from RBI and public
2. Dividend on investments made by Government
3. Disinvestment receipts
4. Borrowings by Government through sale of Treasury Bills

Select the correct answer code:

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

Correct Answer: B

Explanation: The capital receipts are loans raised by Government from public, called market loans, borrowings by Government from Reserve Bank and other parties through sale of Treasury Bills, loans received from foreign Governments and bodies, disinvestment receipts and recoveries of loans from State and Union Territory Governments and other parties.

Revenue Budget consists of the revenue receipts of Government (tax revenues and other revenues like interest and dividend on investments made by Government, fees, and other receipts for services rendered by Government) and the expenditure met from these revenues.

95. Consider the following statements regarding the India Justice Report 2020:

1. It has been published by the Department of Justice, Ministry of Law and Justice.
2. Women comprise less than one third of the total Judges in India.
3. Maharashtra is the top ranked state on delivery of justice to people among large and mid-sized states of India.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) All of the above

Correct Answer: B

Explanation: Statement 1 is incorrect. The India Justice Report (IJR) is an initiative of Tata Trusts in collaboration with Centre for Social Justice, Common Cause, Commonwealth Human Rights Initiative, DAKSH, TISS–Prayas, Vidhi Centre for Legal Policy and How India Lives. The maiden IJR was announced in 2019.

Statement 2 is correct. The Report highlights stark conclusions, when aggregated for an all-India picture. Women comprise only 29% of judges in India. Two-thirds of the country's prisoners are yet to be convicted. In the last 25 years, since 1995, only 1.5 crore people have received legal aid, though 80% of the country's population is entitled to.

Statement 3 is correct. The second edition of the India Justice Report, India's only ranking of states on delivery of Justice to people, ranks Maharashtra once again at the top of the 18 Large and Mid-sized states (with population of over one crore each), followed by Tamil Nadu (2019: 3rd), Telangana (2019: 11th) Punjab (2019: 4th) and Kerala (2019: 2nd). The list of seven Small States (population less than one crore each) was topped by Tripura (2019: 7th), followed by Sikkim (2019: 2nd) and Goa (2019: 3rd).

96. Consider the following statements regarding the Musk Deer:

1. It is distributed throughout the Western Ghats in India.
2. It is the State animal of Uttarakhand.
3. It is protected under the Schedule I of the Wildlife Protection Act 1972.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) All of the above

Correct Answer: B

Explanation: Statement 1 is incorrect. The Musk Deer inhabits alpine forests and scrub. The Deer is typically found at elevations between 2,200 and 4,300 metres (7,250 to 14,200 feet), and is rarely found below 1,000 metres (3,280 feet).

The Indian states in which Alpine and/or Himalayan Musk deer are found include Jammu and Kashmir, Himachal Pradesh, Uttar Pradesh, Sikkim, and Arunachal Pradesh.

Statement 2 is correct. Musk Deer is the State animal of Uttarakhand state. It was showcased in front of its tableau at the Republic Day parade.

Statement 3 is correct. Musk Deer is listed under the Schedule I of the Wildlife Protection Act 1972.

Musk or Kasturi is a commonly traded wildlife product. Derived from the musk pod of the highly endangered musk deer, a high altitude Himalayan species persecuted in most of its distribution area, it is considered to be a natural perfume fixative and used in the Aryurveda, Tibetan and Unani systems of medicine.

97. Which of the following are not the tributaries of river Kaveri

1. Kabini
2. Bhima
3. Amravati
4. Koyna
5. Manjra

Select the correct answer code:

- a) 1, 3
- b) 1, 2, 3
- c) 1, 4, 5
- d) 2, 4, 5

Correct Answer: D

Explanation: Important tributaries of Kaveri river are Shimsa, Hemavathi, Honnuhole, Arkavathi, Kapila, Lakshmana Theertha, Kabini, Lokapavani, Bhavani, Noyil and Amaravathy.

Manjra is the tributary of Godavari River.

Bhima and Koyna are the tributaries of Krishna River.

98. Consider the following statements regarding Ocean deoxygenation.

1. Ocean deoxygenation is the maximum reduction of oxygen minimum zones in the world's oceans as a consequence of anthropogenic emissions of carbon dioxide.
2. Oxygen is less soluble in warmer water.
3. The areas of Sea water that is depleted of dissolved oxygen is called Anoxic waters.

Which of the above statements is/are correct?

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

Correct Answer: C

Explanation: Ocean deoxygenation is the expansion of oxygen minimum zones in the world's oceans as a consequence of anthropogenic emissions of carbon dioxide. The change has been fairly rapid and poses a threat to fish and other types of marine life, as well as to people who depend on marine life for nutrition or livelihood.

Ocean deoxygenation poses implications for ocean productivity, nutrient cycling, carbon cycling, and marine habitats.

Most of the excess heat from CO₂ and other greenhouse gas emissions is absorbed by the oceans. Warmer oceans cause deoxygenation both because oxygen is less soluble in warmer water, and through temperature driven stratification of the ocean which inhibits the production of oxygen from photosynthesis.

Anoxic waters are areas of sea water, fresh water, or groundwater that are depleted of dissolved oxygen and are a more severe condition of hypoxia.

99. Consider the following statements regarding GDP deflator.

1. The GDP deflator is basically a measure of inflation.
2. It helps show the extent to which the increase in gross domestic product has happened on account of higher prices rather than increase in output.
3. It covers only those goods and services directly consumed by households.

Which of the above statements is/are correct?

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

Correct Answer: B

Explanation: The GDP deflator, also called implicit price deflator, is a measure of inflation. It is the ratio of the value of goods and services an economy produces in a particular year at current prices to that of prices that prevailed during the base year.

This ratio helps show the extent to which the increase in gross domestic product has happened on account of higher prices rather than increase in output.

Since the deflator covers the entire range of goods and services produced in the economy — as against the limited commodity baskets for the wholesale or consumer price indices — it is seen as a more comprehensive measure of inflation.

Changes in consumption patterns or introduction of goods and services are automatically reflected in the GDP deflator. This allows the GDP deflator to absorb changes to an economy's consumption or investment patterns. Often, the trends of the GDP deflator will be similar to that of the CPI.

100. On which of the following grounds under the Information & Technology Act, 2000, the Central Government can block public access of any information through internet?

1. Interest of sovereignty and integrity of India
2. Friendly relations with foreign States
3. Public order

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) All of the above

Correct Answer: D

Explanation: Under article 69A of the Information & Technology Act if the Central Government or any of its officers specially authorised by it in this behalf is satisfied that it is necessary or expedient so to do, in the interest of sovereignty and integrity of India, defence of India, security of the State, friendly relations with foreign States or public order or for preventing incitement to the commission of any cognizable offence relating to above block for access by the public or cause to be blocked for access by the public any information generated, transmitted, received, stored or hosted in any computer resource.

The intermediary who fails to comply with the direction issued shall be punished with an imprisonment for a term which may extend to seven years and also be liable to fine.