

QUESTION) 1: Consider the following statements with reference to Retail

Direct Scheme:

1. Retail Direct Scheme was launched by RBI to facilitate investment in government securities by retail investors.
2. Under the Retail Direct Scheme, the retail investors can place a bid only in primary issuance of all central and state government securities, but has no access to the secondary market.
3. NRIs are not eligible to invest in the Government Securities.

Which of the above statements is/are correct?

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

EXPLANATION : A)

- RBI Retail Direct Scheme was launched on 12 November 2021 as a one-stop access to facilitate investment in government securities by retail investors.
- Under the scheme, retail investors can open a Retail Direct Gilt (RDG) account using an online portal through which they can directly invest a minimum of

₹10,000 and maximum of ₹2 crore per security.

- The retail investors can not only place a non-competitive bid in primary issuance of all central and state government securities such as Treasury Bills and bonds but also access the secondary market through Negotiated Dealing System-Order Matching (NDS OM), RBI's trading system, which was previously accessible only to select financial institutions.
- Under the retail direct scheme, an NRI can open his account sitting overseas and buy government securities.

QUESTION) 2: Consider the following statements regarding Incremental capital output ratio (ICOR):

1. The incremental capital output ratio (ICOR) explains the relationship between the level of investment made in the economy and the consequent increase in GDP.
2. Higher capital output ratio shows that capital is very productive or efficient.

Which of the above statements is/are correct?

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

d) Neither 1 nor 2

EXPLANATION : A)

- The incremental capital output ratio (ICOR) is a frequently used tool that explains the relationship between the level of investment made in the economy and the consequent increase in GDP.
- ICOR indicates the additional unit of capital or investment needed to produce an additional unit of output.
- A lower capital output ratio shows that only low level of investment is needed to produce a given growth rate in the economy.
- Lower capital output ratio shows that capital is very productive or efficient.

QUESTION) 3: The Digital Payments Index (DPI) is released by?

- a) Indian Banks' Association
- b) Reserve Bank of India (RBI)
- c) NITI Aayog
- d) National Statistical Office (NSO)

EXPLANATION : b)

- The Reserve Bank had announced construction of a composite Reserve Bank of India – Digital Payments Index (RBI-DPI) with March 2018 as base to capture the extent of digitisation of payments across the country.

QUESTION) 4: Consider the following statements regarding the SARFAESI

Act:

1. The Act empowers banks to directly auction commercial properties and not the residential properties, that have been pledged with them to recover loans from borrowers.
2. The Act is applicable to only commercial banks, and not to the cooperative banks.
3. The Act is not applicable to unsecured creditors.

Which of the above statements is/are correct?

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

EXPLANATION : C)

- The SARFAESI Act was passed on December 17, 2002, in order to lay down processes to help Indian lenders recover their dues quickly.
- The SARFAESI Act essentially empowers banks and other financial institutions to directly auction residential or commercial properties that have been pledged with them to recover loans from borrowers.
- One of the major drawbacks of the Act is that it is not applicable to unsecured creditors.

QUESTION) 5: Consider the following statements regarding International Monetary and Financial Committee (IMFC):

1. The IMFC advises the IMF Board of Governors on the supervision and management of the international monetary and financial system.
2. Currently India is member of IMFC.
3. IMFC has formal decision-making powers and its recommendations are binding on the member countries.

Which of the above statements is/are correct?

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

c) 1 and 3 only

d) 2 and 3 only

EXPLANATION : b)

- The IMFC advises and reports to the IMF Board of Governors on the supervision and management of the international monetary and financial system, including on responses to unfolding events that may disrupt the system.
- Although the IMFC has no formal decision-making powers, in practice, it has become a key instrument for providing strategic direction to the work and policies of the Fund.

QUESTION) 6: Consider the following statements regarding the functions of International Monetary Fund (IMF):

1. It assists in the establishment of a multilateral system of payments and the elimination of foreign exchange restrictions.
2. It promotes high employment and reduce poverty around the world.
3. It assists member countries by temporarily providing financial resources to correct mal-adjustment in their balance of payments.

Which of the above statements is/are correct?

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

EXPLANATION : D)

- The International Monetary Fund (IMF) is working to foster global monetary cooperation, secure financial stability, facilitate international trade, promote high employment and sustainable economic growth, and reduce poverty around the world.

- The main functions of the IMF are as given below:

1) to facilitate international monetary cooperation;

2) to promote exchange rate stability and orderly exchange arrangements;

3) to assist in the establishment of a multilateral system of payments and the elimination of foreign exchange restrictions; and

4) to assist member countries by temporarily providing financial resources to correct mal-adjustment in their balance of payments (BoPs).

QUESTION) 7: Consider the following statements regarding wholesale price

index (WPI) and consumer price index (CPI) based inflation rate:

1. While WPI is dominated by the prices of primary articles, the CPI is dominated by the prices of food articles.
2. While WPI based inflation data is compiled by Ministry of Statistics and Programme Implementation (MoSPI), and CPI based inflation data is compiled by Department for Promotion of Industry and Internal Trade (DPIIT).
3. If services such as transport, education, recreation and personal care get costlier, then retail inflation will rise but there will be no impact on wholesale price inflation.

Which of the above statements is/are incorrect?

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

EXPLANATION : D)

- The CPI-based inflation data is compiled by the Ministry of Statistics and Programme Implementation (or MoSPI) and the WPI-based inflation data is put together by the Department for Promotion of Industry and Internal Trade (or

DPIIT).

- The WPI is dominated by the prices of manufactured goods while the CPI is dominated by the prices of food articles.
- A key difference that must not be missed is that the WPI does not take into account the change in prices of services — say a haircut or a banking transaction.
- But CPI does. If services such as transport, education, recreation and amusement, personal care etc. get significantly costlier, then retail inflation will rise but there will be no impact on wholesale price inflation.

QUESTION) 8: Consider the following statements regarding Generalized System of Preferences (GSP):

1. The Generalized System of Preferences (GSP) is a preferential tariff system which provides tariff reduction on various products.
2. GSP cannot be imposed on developing country.
3. GSP comes under the purview of WTO.

Which of the above statements is/are correct?

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

c) 1 and 3 only

d) 1, 2 and 3

EXPLANATION : C)

- The Generalized System of Preferences, or GSP, is a preferential tariff system which provides tariff reduction on various products.
- The concept of GSP is very different from the concept of "most favored nation" (MFN).
- MFN status provides equal treatment in the case of tariff being imposed by a nation but in case of GSP differential tariff could be imposed by a nation on various countries depending upon factors such as whether it is a developed country or a developing country.
- Both the rules comes under the purview of WTO. GSP provides tariff reduction for least developed countries but MFN is only for not discriminating among WTO members.

QUESTION) 9: Consider the following statements regarding Advisory Board for Banking and Financial Frauds (ABBFF):

1. It has been constituted by RBI.

2. It conducts first level examination of all bank frauds.

3. It periodically carry out frauds analysis in the financial system and give inputs for any policy formulation related to the frauds to the RBI.

Which of the above statements is/are correct?

a) 1 and 3 only

b) 2 and 3 only

c) 3 only

d) 1 and 2 only

EXPLANATION : C)

- The Central Vigilance Commission (CVC) has expanded the ambit of an advisory board that conducts first level examination of large bank frauds to now cover all fraud cases involving amount of Rs 3 crore and above.

- The board may also periodically carry out frauds analysis in the financial system and give inputs for any policy formulation related to the frauds to the RBI and to the CVC.

QUESTION) 10: In an economy, the term for establishments having formal existence but with close to no operations or assets is called as?

- a) Benami property
- b) Sick Industry
- c) Tax haven
- d) Ghost company

EXPLANATION : D)

- A shell corporation/ Ghost company is a corporation without active business operations or significant assets.
- These types of corporations are sometimes used illegitimately, such as to disguise business ownership from law enforcement or the public.
- Shell corporations act as tax avoidance vehicles for legitimate businesses.

QUESTION) 11: Which of the following statements best describes the term

'Tax credit'?

- a) It is a type of credit given by banks such as education loans which do not come under the purview of taxable income
- b) It is the amount of money collected from a taxpayer for a specified purpose, as tax on tax
- c) It is a sum that can be subtracted from the total payable tax by an individual.

d) It is reward given by the government for tax payers who pay the tax in advance

EXPLANATION : C)

- Tax credit is an amount that offsets the overall tax liability of a person. It is basically the sum that can be subtracted from the total payable tax by an individual.
- Tax credits are different from deductions as deductions are applicable indirectly, i.e. they help in reducing the base taxable amount of an individual, whereas tax credits directly reduce the amount of liability irrespective of the base tax liability of the tax player.

QUESTION) 12: The economic cost of food grains to the Food Corporation of

India is Minimum Support Price and bonus (if any) paid to the farmers plus?

- a) interest cost only
- b) transportation cost only
- c) procurement incidentals and distribution cost
- d) procurement incidentals and charges for godowns

EXPLANATION : C)

- The economic cost of food grains procured by the FCI is a total of MSP and bonus (if any) paid to the farmers plus the procurement incidentals and distribution cost.
- The procurement incidentals are the initial costs incurred during procurement of food grains.
- The distribution costs include freight, handling charges, storage costs in godowns, losses during transit etc.

QUESTION) 13: Consider the following statements regarding Base Year:

1. The base year is a representative year which must not experience any abnormal incidents such as droughts, floods, earthquakes etc.
2. It gives an idea about changes in purchasing power and allows calculation of inflation-adjusted growth estimates.

Which of the above statements is/are incorrect?

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

EXPLANATION : D)

- The base year of the national accounts is chosen to enable inter-year comparisons.
- It gives an idea about changes in purchasing power and allows calculation of inflation-adjusted growth estimates.
- The base year prices are termed as at constant prices. This reduces all the data to a comparable benchmark, base year price.
- The base year is a representative year which must not experience any abnormal incidents such as droughts, floods, earthquakes etc.

QUESTION) 14: Consider the following statements:

1. Irrawaddy dolphins are naturally found in coastal areas of South East Asia and West Asia.
2. Dolphin distribution in Chilika is considered to be the highest single lagoon population.

Which of the above statements is/are correct?

a) 1 only

b) 2 only

c) Both 1 and 2

d) Neither 1 nor 2

EXPLANATION : b)

- Irrawaddy dolphins are found in coastal areas in South and Southeast Asia, and in three rivers: the Irrawaddy (Myanmar), the Mahakam (Indonesian Borneo) and the Mekong. It is an endangered species.
- Dolphin distribution in Chilika is considered to be the highest single lagoon population.

QUESTION) 15: Which of the following regions of India is the natural habitat

of the 'Great Indian Hornbill'?

a) Salt marshes of western Gujarat

b) Great Himalayan Range

c) Sand deserts of northwest India

d) Western Ghats

EXPLANATION : D)

- The great Indian hornbill is one of the larger members of the hornbill family.
- It is found in the Indian subcontinent and Southeast Asia. It is naturally found in Western Ghats.

QUESTION) 16: Consider the following statements regarding Antarctic

hairgrass and Antarctic pearlwort:

1. Antarctic hairgrass and Antarctic pearlwort are Antarctica's native flowering plants.
2. They are spreading rapidly due to warming of summer air.
3. They are adapted to a very short growing season and are able to photosynthesise in snowy conditions with air temperatures below 0-degree Celsius.

Which of the above statements is/are correct?

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

EXPLANATION : D)

- Antarctica's two native flowering plants are spreading rapidly as temperatures warm.
- The primary driver of change is warming summer air, according to the study. A secondary reason is there are fewer fur seals on the island, which trample on the plants.
- The spread of these species will cause changes in soil acidity, the bacteria and fungi in the soil, and in how organic matter decomposes.
- The plants are adapted to a very short growing season and are able to photosynthesise in snowy conditions with air temperatures below 0 C.
- Despite being able to reproduce quickly and in harsh climatic conditions, they are not good at competing with other non-native plants.

QUESTION) 17: Consider the following statements regarding Permafrost:

1. Permafrost is any ground that remains completely frozen for at least two years.
2. There is approximately twice as much carbon in permafrost than is currently in the Earth's atmosphere.
3. They are located only in high latitudes around the Arctic and Antarctic regions.

Which of the above statements is/are correct?

a) 1 and 2 only

b) 1 and 3 only

c) 3 only

d) 1, 2 and 3

EXPLANATION : A)

- Permafrost is any ground that remains completely frozen—32°F (0°C) or colder—for at least two years straight.
- These permanently frozen grounds are most common in regions with high mountains and in Earth's higher latitudes—near the North and South Poles.
- Permafrost covers large regions of the Earth. Almost a quarter of the land area in the Northern Hemisphere has permafrost underneath.
- Although the ground is frozen, permafrost regions are not always covered in snow.
- Most permafrost is located in high latitudes (in and around the Arctic and Antarctic regions), but at lower latitudes alpine permafrost occurs at higher elevations.
- It can also be located in the Southern Hemisphere, just on mountain tops.

Permafrost frequently occurs in ground ice, but it also can be presented in non-porous bedrock. Permafrost is formed from ice holding all different sorts of soil, sand, and rock combination together.

QUESTION) 18: Gadgil Committee and Kasturi Rangan Committee, often seen in news, are related to:

- a) Electoral Reforms
- b) Direct Tax Reforms
- c) MSP and Agricultural Reforms
- d) None of the above

EXPLANATION : D)

- Both are related to the categorisation of the Western Ghats as Ecologically Sensitive Areas (ESA).

QUESTION) 19: Consider the following statements regarding Mangalajodi area:

1. Mangalajodi is recognised as globally important for the conservation of bird

population, where the area is used for roosting and nesting by migratory birds.

2. It is located at the edge of the Kolleru Lake in Andhra Pradesh.

Which of the above statements is/are correct?

a) 1 only

b) 2 only

c) Both 1 and 2

d) Neither 1 nor 2

EXPLANATION : A)

- The Odisha government has proposed to ban movement of mechanised fishing boats in Mangalajodi area on the banks of Chilika lake — an important bird area (IBA) — in order to provide winged guests an undisturbed ecosystem for six months every year.
- Mangalajodi is recognised as globally important for the conservation of bird population.
- The area is used for roosting and nesting by migratory birds. However, it is not protected by any statutory rules and regulation.
- The area is 8.3 square km of marshy land with emergent vegetation.

QUESTION) 20: Consider the following statements regarding Echolocation:

1. Echolocation is a process for locating distant or invisible objects.
2. The technique uses sound waves.
3. Only animals can adapt to Echolocation.

Which of the above statements is/are correct?

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

EXPLANATION : b)

- A technique used by animals such as dolphins, whales and bats to navigate their surroundings can also be used by blind people to get around better and have greater independence and well-being, researchers at Durham University in the UK have shown.
- Using the method, called 'echolocation', animals emit sounds that bounce off objects and come back to them, providing information about what is around them.
- The same technique helps blind people locate still objects by producing

clicking sounds from their mouth and hands.

QUESTION) 21: Consider the following statements regarding IPCC's Sixth

Assessment Report:

1. The Assessment Reports are the comprehensive evaluations of the state of the earth's climate.
2. They form the basis of the global response to climate change and on that basis countries across the world build their policy responses to climate change.
3. The report does not assess regional and sectoral impacts of climate change.

Which of the above statements is/are correct?

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

EXPLANATION : A)

- The Assessment Reports, the first of which had come out in 1990, are the most comprehensive evaluations of the state of the earth's climate.
- Hundreds of experts go through every available piece of relevant, published

scientific information to prepare a common understanding of the changing climate.

- These have formed the basis of the global response to climate change.
- IPCC reports form the scientific basis on which countries across the world build their policy responses to climate change.

QUESTION) 22: The term Dendrochronology denotes?

- a) Alteration of the genome of a plant by the addition of new genetic material
- b) Method of determining the age of the tree
- c) Method of Plant tissue culture used to produce clones of a plant
- d) Production of multiples of plants in the absence of seeds

EXPLANATION : b)

- The most common method of determining the age of the tree is

Dendrochronology – or tree-ring dating also called growth rings.

- Each year, roughly a tree adds to its girth, the new growth is called a tree ring.

By counting the rings of a tree, the age can be determined.

QUESTION) 23: Consider the following statements regarding Monoclonal

Antibodies:

- 1. Monoclonal antibodies are artificial antibodies that mimic the activity of our immune systems.**
- 2. They are produced through a process that involves extracting specific antibodies from human blood and then cloning them.**
- 3. They bind to specific part of the virus, thereby blocking its ability to infect healthy cells.**

Which of the above statements is/are correct?

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

EXPLANATION : D)

- What are monoclonal antibodies? To fight a viral infection, our bodies create proteins known as antibodies.**
- Monoclonal antibodies are artificial antibodies that mimic the activity of our immune systems.**
- They are produced through a process that involves extracting specific**

antibodies from human blood and then cloning them.

- These monoclonal antibodies are designed to target a virus or a specific part of one — for instance, REGEN-COV2 is a cocktail of two monoclonal antibodies developed to target the SARS-CoV-2 spike protein.
- The monoclonal antibodies bind to specific parts of the spike protein, blocking its ability to infect healthy cells.

QUESTION) 24: Consider the following statements regarding National Policy for Rare Diseases, 2021:

1. WHO defines rare disease as having a frequency of less than 1 per 10,000 people.
2. Financial support under Rashtriya Arogya Nidhi shall be provided by the Central Government for treatment of rare diseases.
3. The policy will make use of a crowdfunding mechanism to cover the cost of treatment of rare diseases.

Which of the above statements is/are correct?

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

d) 1, 2 and 3

EXPLANATION : C)

- WHO defines rare disease as having a frequency of less than 6.5-10 per 10,000 people.

National Policy for Rare Diseases, 2021:

- Financial support up to Rs. 20 lakhs under the Umbrella Scheme of Rashtriya Arogya Nidhi shall be provided by the Central Government for treatment, of those rare diseases that require a one-time treatment.
- Government will endeavour to create alternate funding mechanism through setting up a digital platform for voluntary individual and corporate donors to contribute to the treatment cost of patients of rare diseases.
- Voluntary crowd-funding for treatment.

QUESTION) 25: Consider the following statements with reference to the

PMBJP scheme:

1. Under Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP), the prices of Jan Aushadhi Medicines are cheaper at least by 50% and in some cases, by 90% of the market price of the branded medicines.

2. Apart from drugs and surgical instruments, Pradhan Mantri Bhartiya
Janaushadhi Pariyojana (PMBJP) Kendras also offer nutraceuticals products.

Which of the above statements is/are correct?

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

EXPLANATION : C)

QUESTION) 26: Chennai Declaration, sometimes seen in news is related to?

- a) Reducing Greenhouse gas emissions
- b) Promoting Green Fireworks
- c) Universal immunization of children against vaccine preventable diseases
- d) Antimicrobial Resistance

EXPLANATION : D)

- The Chennai Declaration, a consortium of doctors and health-care institutions

against Antimicrobial Resistance (AMR), was formed in 2012.

QUESTION) 27: Consider the following statements regarding Deep Ocean

Mission:

1. Deep Ocean Mission is the initiative of International Seabed Authority (ISA).
2. As part of Deep Ocean Mission, India plans to introduce deep ocean gliders to strengthen the capacity of observations in the Indian Ocean.
3. With the help of in-situ and satellite data of sea temperatures, currents and salinity, various climatic conditions and the monsoons can be predicted as much accurate as possible.

Which of the above statements is/are correct?

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

EXPLANATION : C)

- India has plans to introduce eight deep ocean gliders having 6-12 months endurance to travel from 3,000 km to 4,500 km, about 48 deep Argo floats at

6,000-metre depth at 24 locations and another 150 wave drifters to strengthen the capacity of observations in the Indian Ocean as part of its 'Deep Ocean Mission'.

- With the help of the in situ and satellite data of sea temperatures, currents, salinity etc., “we are trying to predict as much accurate as possible the various climatic conditions and the monsoons.

QUESTION) 28: Consider the following statements regarding Pradhan

Mantri Fasal Bhima Yogna (PMFBY):

1. PMFBY is a central-state scheme which aims to cushion farmers against crop loss.
2. Under the scheme, farmers only bear 1.5 to 5 per cent of the premium.
3. The scheme is made mandatory for farmers who availed institutional finance.

Which of the above statements is/are correct?

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

EXPLANATION : b)

- Introduced in the 2016-17 kharif season, PMFBY is a central-state scheme which aims to cushion farmers against crop loss.
- The central and state governments pay more than 95 per cent of the premium amount while the farmer bears 1.5-5 per cent of the premium.
- As extensive usage of technology is used to settle the claims of farmers within a stipulated time period, farmers are required to fill loss reports online which are validated by insurance companies before the compensation amount is paid directly in their accounts.
- Prior to 2020, the scheme was mandatory for farmers who availed institutional finance, but that was changed and made voluntary for all farmers.

QUESTION) 29: Consider the following statements regarding International

Space Station (ISS):

1. The ISS is the first space station to be built and operated.
2. ISS is not entirely in zero-gravity space and it does encounter a little bit of gravity.
3. Thrusters must be sent periodically, that attach themselves to the ISS for keeping it in orbit.

Which of the above statement sis/are correct?

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

EXPLANATION : b)

- The ISS is not the first space station to be built and operated. Several smaller space stations have been used earlier, the most famous of which have been the Russian Mir space station that operated in the 1980s, and the American Skylab.
- ISS is not entirely in zero-gravity space. It does encounter a little bit of gravity. Also, it loses a bit of energy as it moves around the earth. Left to itself, the ISS would fall down.
- The Russians periodically send thrusters that attach themselves to the ISS and impart the required momentum to keep it going.

QUESTION) 30: Consider the following statements regarding Vaccination:

1. Vaccination is a simple, safe, and effective way of protecting people against harmful diseases, after they come into contact with them.

2. Vaccines train the body's immune system to create antibodies, just as it does when it's exposed to a disease.

3. Vaccines are given orally, or by an injection or sprayed into the nose.

Which of the above statements is/are correct?

a) 1 and 2 only

b) 1 and 3 only

c) 2 and 3 only

d) 1, 2 and 3

EXPLANATION : C)

- Vaccination is a simple, safe, and effective way of protecting people against harmful diseases, before they come into contact with them.
- It uses your body's natural defenses to build resistance to specific infections and makes your immune system stronger.
- Vaccines train your immune system to create antibodies, just as it does when it's exposed to a disease.
- However, because vaccines contain only killed or weakened forms of germs like viruses or bacteria, they do not cause the disease or put you at risk of its complications.

QUESTION) 31: Consider the following statements regarding Mucormycosis:

1. Mucormycosis is a fungal infection caused by a group of molds called mucormycetes.
2. It affects the sinuses, the brain and the lungs and can be life-threatening in diabetic and cancer patients.
3. Soil, plants, manure, and decaying fruits and vegetables are the common sources of infection.

Which of the above statements is/are correct?

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

EXPLANATION : D)

- Mucormycosis is a serious but rare fungal infection caused by a group of molds called mucormycetes.
- These molds live throughout the environment. It is caused by exposure to mucor mould which is commonly found in soil, plants, manure, and decaying

fruits and vegetables.

- It affects the sinuses, the brain and the lungs and can be life-threatening in diabetic or severely immunocompromised individuals, such as cancer patients or people with HIV/AIDS.

QUESTION) 32: Consider the following statements regarding Toxoid

vaccines:

1. Toxoid vaccines use a toxin (harmful product) made by the germ that causes a disease.
2. They create immunity against the whole germ that cause a disease.
3. Toxoid vaccines are used to protect against Diphtheria and Tetanus.

Which of the above statements is/are correct?

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

EXPLANATION : C)

- Toxoid vaccines: Toxoid vaccines use a toxin (harmful product) made by the

germ that causes a disease.

- They create immunity to the parts of the germ that cause a disease instead of the germ itself.
- That means the immune response is targeted to the toxin instead of the whole germ.

QUESTION) 33: Consider the following statements regarding Hib

(Haemophilus Influenzae Type B):

1. Hib disease is caused by a type of bacteria and mostly affects children younger than 5 years.
2. It causes lungs and throat infection.
3. Hib does not spread through air.

Which of the above statements is/are correct?

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

EXPLANATION : b)

- Hib (Haemophilus Influenzae Type B): Hib disease is caused by a type of bacteria.
- It mostly affects children younger than 5 years, but adults with certain health conditions are also at increased risk for Hib disease.
- Hib bacteria spread through droplets in the air — like when someone who has the bacteria in their nose or throat coughs or sneezes.

QUESTION) 34: Consider the following statements regarding Allergies:

1. An allergy is an immune system response to a foreign substance that's not typically harmful to the body.
2. The allergens can include certain foods, pollen, or pet dander.
3. The body's response depends on the type of the allergen it has encountered.

Which of the above statement sis/are correct?

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

EXPLANATION : D)

- An allergy is an immune system response to a foreign substance that's not typically harmful to your body.
- These foreign substances are called allergens. They can include certain foods, pollen, or pet dander. Your immune system's job is to keep you healthy by fighting harmful pathogens.
- It does this by attacking anything it thinks could put your body in danger. Depending on the allergen, this response may involve inflammation, sneezing, or a host of other symptoms.

QUESTION) 35: Consider the following statements regarding Naturopathy:

1. Naturopathy is a system of treatment which recognises the existence of the vital curative force within the body.
2. According to Naturopathy, all diseases, their causes and treatment are one.
3. According to Naturopathy, Food is only the Medicine, no external medications are used.

Which of the above statements is/are correct?

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

d) 1, 2 and 3

EXPLANATION : D)

- Naturopathy is a system of treatment which recognises the existence of the vital curative force within the body."
- It therefore, advocates aiding human system to remove the cause of disease i.e. toxins by expelling unwanted and unused matters from human body for curing diseases.

QUESTION) 36: The application of Somatic Cell Nuclear Transfer Technology

is?

- a) Production of organisms free of diseases
- b) Production of biolarvicides
- c) Reproductive cloning of animals
- d) Manufacture of biodegradable plastics

EXPLANATION : C)

- In genetics and developmental biology, somatic cell nuclear transfer (SCNT) is

a laboratory strategy for creating a viable embryo from a body cell and an egg cell.

- The technique consists of taking an enucleated oocyte (egg cell) and implanting a donor nucleus from a somatic (body) cell.
- It is used in both therapeutic and reproductive cloning.

QUESTION) 37: Consider the following statements regarding Brucellosis:

1. Brucellosis is a viral disease.
2. It mainly infect cattle, swine, goats, sheep and dogs.
3. Person-to-person transmission of disease is rare.

Which of the above statements is/are correct?

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

EXPLANATION : C)

- Brucellosis is found globally and is a reportable disease in most countries
- The disease causes flu-like symptoms, including fever, weakness, malaise and

weight loss

- Person-to-person transmission is rare.
- Brucellosis is a bacterial disease caused by various *Brucella* species, which mainly infect cattle, swine, goats, sheep and dogs.

QUESTION) 38: Consider the following statements regarding Glaucoma:

1. Glaucoma is a progressive and degenerative disease of the optic nerve leading to irreversible blindness.
2. It only affects people of old age, and particularly those who have any chronic conditions or family history.
3. In general, glaucoma cannot be cured but it can be controlled.

Which of the above statements is/are correct?

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

EXPLANATION : C)

- Early detection of glaucoma, a progressive and degenerative disease of the

optic nerve leading to irreversible blindness, is key to arrest damage to eyes.

- Unlike cataract, this ailment is usually asymptomatic. However, timely treatment can help the patient retain useful vision lifelong.
- Glaucoma can affect people of all age groups and even those who do not have any chronic conditions or family history.
- Even children are diagnosed with congenital glaucoma. In general, glaucoma cannot be cured but it can be controlled.

QUESTION) 39: Consider the following statements regarding Fuel cell electric vehicles (FCEV):

1. A fuel-cell electric vehicle is completely an electric vehicle wherein, the internal combustion engine is replaced with a fuel-cell stack with an advanced battery system.
2. Fuel cells generate electricity through an electrochemical process.
3. The fuel cell combines hydrogen and oxygen to generate an electric current.

Which of the above statements is/are correct?

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

d) 1, 2 and 3

EXPLANATION : C)

- A fuel-cell electric vehicle is essentially a hybrid electric vehicle wherein, the internal combustion engine is replaced with a fuel-cell stack. The onboard sources of power include hydrogen as well as an
- advanced battery system.
- The fuel cell combines hydrogen and oxygen to generate an electric current, water being the only byproduct.
- Fuel cells generate electricity through an electrochemical process.
- And, there are no moving parts in the fuel cell, so they are more efficient and reliable by comparison.

QUESTION) 40: Consider the following statements regarding Gold

nanoparticles (GNPs):

1. GNPs have lower solar radiation absorbing ability than the conventional bulk gold.
2. They are capable of transferring various drugs made out of peptides, proteins, plasmid DNAs to target diseased cells of the human body

3. They are also useful in the electronics industry.

Which of the above statements is/are correct?

a) 2 only

b) 1 and 2 only

c) 2 and 3 only

d) 1, 2 and 3

EXPLANATION : C)

- Nanoparticles (NPs) have wide variety of potential applications in the fields of biomedical, optical and electronics research.
- Metallic NPs have been efficiently exploited for biomedical applications and among them GNPs are found to be effective in biomedical research.
- NPs are those materials that are at least one dimension smaller than 100 nanometres.
- GNPs are found to have greater solar radiation absorbing ability than the conventional bulk gold, which makes them a better candidate for use in the photovoltaic cell manufacturing industry.
- As nano-carriers, GNPs are capable of transferring various drugs made out of peptides, proteins, plasmid DNAs, small interfering RNAs, and

chemotherapeutic agents to target diseased cells of the human body. GNPs are also found to be useful in the electronics industry.

QUESTION) 41: Consider the following statements regarding

‘Thermoplastics’:

1. Thermoplastic materials have very high melting points.
2. Thermoplastics can be remoulded and recycled without negatively affecting the material’s physical properties.
3. PVC is an example of thermoplastic.

Which of the above statements is/are correct?

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

EXPLANATION : C)

- A thermoplastic is a material, usually a plastic polymer, which becomes soft when heated and hard when cooled. They have very low melting point.
- Thermoplastic materials can be cooled and heated several times without any

change in their chemistry or mechanical properties.

- When thermoplastics are heated, they melt to a liquid. They freeze to a glassy state when cooled enough.

QUESTION) 42: Consider the following statements regarding Integrated hybrid modular construction technology:

1. The hybrid modular construction makes the permanent structural components and auxiliary structural components independent of each other,
2. It saves the costs, time, and manpower required in construction.
3. It includes interchangeability and allow removable modules to be conveniently installed, disconnected, and relocated.

Which of the above statements is/are correct?

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

EXPLANATION : D)

- The hybrid modular construction is an innovative approach and a

revolutionary alternative to traditional building construction practices in the field of construction and technology.

- This innovative technology has fundamentally changed the methods that the construction industry has worked on.
- The hybrid modular construction relies on the idea of making the two basic units of construction, permanent structural components and auxiliary structural components, independent of each other, i.e. a permanent, traditionally built structure “host” that has a modifiable modular “component.”

QUESTION) 43: Consider the following statements regarding the principle of non-refoulement under international human rights law:

1. The principle of non-refoulement guarantees that no one should be returned to a country where they would face torture, cruel and inhuman treatment.
2. This principle applies to all migrants at all times, irrespective of migration status.

Which of the above statements is/are correct?

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

d) Neither 1 nor 2

EXPLANATION : C)

- Under international human rights law, the principle of non-refoulement guarantees that no one should be returned to a country where they would face torture, cruel, inhuman or degrading treatment or punishment and other irreparable harm.
- This principle applies to all migrants at all times, irrespective of migration status.

QUESTION) 44: Consider the following statements regarding International

Energy Agency (IEA):

1. The International Energy Agency (IEA) is a Paris-based autonomous intergovernmental organisation established in the framework of the Organisation for Economic Co-operation and Development (OECD)
2. It helps its members respond to major oil supply disruptions.
3. To become a member of the IEA, the country need not necessarily be a member of the OECD.

Which of the above statements is/are correct?

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

EXPLANATION : b)

- The International Energy Agency (IEA) is a Paris-based autonomous intergovernmental organisation established in the framework of the Organisation for Economic Co-operation and Development (OECD).
- International Energy Agency (IEA) was established in the wake of the 1973-1974 oil crisis, to help its members respond to major oil supply disruptions, a role it continues to fulfil today.
- IEA's mandate has expanded over time to include tracking and analyzing global key energy trends, promoting sound energy policy, and fostering multinational energy technology cooperation.
- Only OECD member states can become members of the IEA. But all OECD members are not IEA members.

QUESTION) 45: Consider the following statements regarding International

Renewable Energy Agency (IRENA):

1. It is the first international organisation to focus exclusively on renewable energy, addressing needs in both industrialized and developing countries.
2. World Energy Outlook report is released by IRENA.
3. IRENA is an official United Nations observer.

Which of the above statements is/are correct?

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

EXPLANATION : C)

- It is the first international organisation to focus exclusively on renewable energy, addressing needs in both industrialized and developing countries.
- It was founded in 2009 & its statute entered into force on 8 July 2010 and is headquartered in Masdar City, Abu Dhabi.
- IRENA is an official United Nations observer.
- World Energy Outlook report is released by International Energy Agency (IEA).

QUESTION) 46: The final say in regard to inclusion or exclusion of socially and economically backward classes (SEBCs) is firstly with:

- a) Supreme Court
- b) Parliament
- c) President
- d) National Commission for Backward Classes (NCBC)

EXPLANATION : C)

• The Supreme Court held that “the final say in regard to inclusion or exclusion (or modification of lists) of SEBCs is firstly with the President, and thereafter, in case of modification or exclusion from the lists initially published, with the Parliament”.

QUESTION) 47: Consider the following statements regarding the

Delimitation Commission:

1. The Delimitation Commission is appointed by the President of India and works in collaboration with the Election Commission of India.
2. It aims to determine the number and boundaries of constituencies to make

population of all constituencies nearly equal.

3. Its orders are not final and it can be questioned only before Supreme Court of India.

Which of the above statements is/are correct?

a) 1 only

b) 1 and 2 only

c) 2 and 3 only

d) 1, 2 and 3

EXPLANATION : b)

- The Commission is supposed to determine the number and boundaries of constituencies in a way that the population of all seats, so far as practicable, is the same.
- The Commission is also tasked with identifying seats reserved for Scheduled Castes and Scheduled Tribes; these are where their population is relatively large.
- Delimitation is carried out by an independent Delimitation Commission.
- The Delimitation Commission is appointed by the President of India and works

in collaboration with the Election Commission of India.

- The Constitution mandates that its orders are final and cannot be questioned before any court as it would hold up an election indefinitely.

QUESTION) 48: Which of the following employees are covered by the

Central Administrative Tribunal (CAT)?

- a) Members of the defence forces
- b) Secretarial staff of the Parliament
- c) Officers and servants of the Supreme Court
- d) None of the above

EXPLANATION : D)

- The Central Administrative Tribunal (CAT) was set up in 1985 with the principal bench at Delhi and additional benches in different states.
- The CAT exercises original jurisdiction in relation to recruitment and all service matters of public servants covered by it.
- Its jurisdiction extends to the all-India services, the Central civil services, civil posts under the Centre and civilian employees of defence services.

- However, the members of the defence forces, officers and servants of the Supreme Court and the secretarial staff of the Parliament are not covered by it.

QUESTION) 49: The economic cost of food grains to the Food Corporation of India is Minimum Support Price and bonus (if any) paid to the farmers plus:

- a) interest cost only
- b) transportation cost only
- c) procurement incidentals and charges for godowns
- d) procurement incidentals and distribution cost

EXPLANATION : D)

- Economic Cost is the total cost to FCI. It consists of Acquisition Cost and Distribution Cost.
- Acquisition cost consists of Minimum Support Price (MSP) plus procurement incidental cost. Procurement incidentals are expenses incurred during procurement till the foodgrains reach the first point of godown.
- The elements are state taxes, commission to arathias or societies, bagging materials, mandi labour, transportation from mandi to depot etc.

QUESTION) 50: With reference to cyberspace, which of the following

statements best describes the term “Trojan Horse”?

- a) A malware which monitors users' keystrokes.
- b) A malware which disables victim's access to data until ransom is paid
- c) A malware which spreads through a network by replicating itself.
- d) A type of malware that is often disguised as legitimate software

EXPLANATION : D)

- A Trojan horse or Trojan is a type of malware that is often disguised as legitimate software.
- Trojans can be employed by cyber-thieves and hackers trying to gain access to users' systems.
- Users are typically tricked by some form of social engineering into loading and executing Trojans on their systems.

QUESTION 51: The Financial Stability Report by RBI looks at which of the following aspects?

1. Are the levels of bad loans (or non-performing assets) within manageable limits.

2. Are different sectors of the economy able to get credit for economic activity.

3. Do Indian banks (both public and private) have enough capital to run their operations.

Select the correct answer code:

a) 2 only

b) 1 and 2 only

c) 2 and 3 only

d) 1, 2 and 3

EXPLANATION : D)

- The FSR looks at questions like do Indian banks (both public and private)

have enough capital to run their operations?

- Are the levels of bad loans (or non-performing assets) within manageable

limits?

- Are different sectors of the economy able to get credit (or new loans) for

economic activity such as starting a new business or buying a new house or car?

QUESTION 52: Consider the following statements regarding Development

Finance Institutions (DFIs):

1. Development Finance Institutions provide risk capital for economic development projects on noncommercial basis.
2. In India, the first DFI was operationalised before Independence, with the setting up of the Industrial Finance Corporation (IFCI).
3. During the pre-liberalised era, India had DFIs that were primarily engaged in development of industry in the country.

Which of the above statements is/are correct?

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

EXPLANATION : B)

- A development finance institution (DFI) also known as a development bank is a financial institution that provides risk capital for economic development projects on non-commercial basis.
- During the pre-liberalised era, India had DFIs which were primarily engaged in development of industry in the country.

- In India, the first DFI was operationalised in 1948 with the setting up of the Industrial Finance Corporation (IFCI).
- Subsequently, the Industrial Credit and Investment Corporation of India (ICICI) was set up with the backing of the World Bank in 1955.
- The Industrial Development Bank of India (IDBI) came into existence in 1964 to promote long-term financing for infrastructure projects and industry

QUESTION 53: Consider the following statements regarding open-ended procurement policy:

1. The procurement of paddy and wheat by Government of India (GOI) is open ended.
2. The main aim of open-ended procurement policy is to help farmers get remunerative price and prevent distress sale.
3. Under the policy, the farmers must necessarily sell his/her produce at the MSP set by the Government.

Which of the above statements is/are correct?

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

d) 1, 2 and 3

EXPLANATION : B)

- The procurement policy of Government of India (GOI) is open ended, under which paddy and wheat offered by farmers all over the country within the stipulated period (conforming to specifications prescribed in advance by GOI) are purchased for Central Pool at Minimum Support Price (MSP) by Food Corporation of India (FCI)/State Governments/State Government Agencies to help farmers get remunerative price and prevent distress sell.
- However, if any producer/farmer gets better price in comparison to MSP, he/she is free to sell his/her produce in open market.
- Coarse grains are procured at MSP by State Government as per the procurement plan prepared in consultation with FCI and approved by the Central Government.

QUESTION 54: Gross Domestic Capital Formation (GDCF), often seen in the

Budget and Economic Surveys, essentially refers to?

a) Capitalization of the Banking sector

b) Money circulation in public hands

c) Direct Retail Investment in consumer goods sector

d) Creation of Infrastructure or durable economic assets

EXPLANATION : D)

- Capital is the produced means of production or it is called produced wealth by which more wealth is possible in the economy directly and indirectly.
- Capital formation means creation of physical assets and non- physical capital consisting of public health efficiency, visible and no visible capital.
- Gross domestic capital formation is the addition to the capital stock within the domestic territory of a country during a year.
- Gross domestic capital formation includes all expenses made by household, business people and Govt, adding new durable goods to the fixed capital stock of a country.
- These assets are in the form of infrastructure such as buildings, roads canals, bridges, means of transport, machinery and other equipments.

QUESTION 55: Consider the following statements regarding Fiscal Deficit:

1. Fiscal deficit is reflective of the total borrowing requirements of the Government.

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

3. Higher fiscal deficit can lead to higher interest rates in the economy.

Which of the above statements is/are correct?

a) 1 only

b) 2 and 3 only

c) 1 and 3 only

d) 1, 2 and 3

EXPLANATION : C)

- 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.

QUESTION 56: Consider the following statements regarding Participatory

Notes (P-Notes):

1. Participatory Notes are instruments that are issued by registered FIIs to overseas investors who want to invest in the stock markets in India.
2. They are also known as offshore derivative instruments.
3. The P-Note holder enjoy voting rights in relation to shares invested through the P - Notes.

Which of the above statements is/are correct?

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

EXPLANATION : C)

- Participatory Notes, also called P-Notes or just PNs are instruments that are issued by registered FIIs to overseas investors who want to invest in the stock markets in India, without registering themselves with the market regulatory

authority SEBI.

- PNs are not used within India but by investors abroad. Hence, they are also known as offshore derivative instruments.
- They are used by clients of FIIs who do not wish to directly participate in the stock market in India, but do it through the FIIs using PNs.
- The P-Note holder also does not enjoy any voting rights in relation to security/shares referenced by the P-Note.

QUESTION 57: The term 'Unicorn Company' often seen news means?

- a) Privatisation of any loss-making state-owned company
- b) Privately held start-up company valued at over US\$1 billion
- c) A public sector company merged with another public sector company
- d) Foreign multinational company doing business in India

EXPLANATION : B)

- In business, a unicorn is a privately held startup company valued at over US\$1 billion.

QUESTION 58: Which of the following is the primary objective of monetary

policy in India?

- a) Tackling stressed assets of banks
- b) Maintaining low levels of unemployment
- c) Appreciate the exchange value of rupee in the Forex markets
- d) Maintaining price stability

EXPLANATION : D)

- The Reserve Bank of India (RBI) is vested with the responsibility of conducting monetary policy with the primary objective of maintaining price stability while keeping in mind the objective of growth.

QUESTION 59: Sariska Tiger Reserve, recently seen in news is located in?

- a) Gujarat
- b) Rajasthan
- c) Madhya Pradesh
- d) Uttar Pradesh

EXPLANATION : B)

- Sariska Tiger Reserve is located in Rajasthan.

QUESTION 60: The term “London Convention”, often seen in news, is related to?

- a) Child labour
- b) Antimicrobial Resistance
- c) Marine pollution
- d) Cyber crimes

EXPLANATION : C)

- The London Convention: Its objective is to promote the effective control of all sources of marine pollution and to take all practicable steps to prevent pollution of the sea by dumping of wastes and other matter.

QUESTION 61: Green Term Ahead Market (GTAM), sometimes seen in news is related to?

- a) Biofuel import and export
- b) Mining cryptocurrency using renewable energy

c) Trading in renewable energy

d) Trading of forest produce

EXPLANATION : C)

- Karnataka distribution companies (discoms) have become the top seller of renewable energy under the Green Term Ahead Market (GTAM) at the Indian Energy Exchange Limited (IEX).
- On 21 August 2020, the green term-ahead market (GTAM), a power trading platform, was launched to enable bulk electricity buyers (discoms; corporates with a contracted load of 1 MW or above) to procure renewable energy (RE) on a short-term basis from sellers (merchant RE projects or discoms having surplus RE beyond their renewable purchase obligations or RPOs).

QUESTION 62: Consider the following statements regarding 'Extended producer responsibility' (EPR):

1. India first introduced EPR to manage Plastic waste and later extended to electronic-waste.
2. EPR puts the financial and/or physical onus on manufacturers for the treatment, recycling and disposal of products after a consumer has used and

disposed of them.

3. The Plastic Waste Management Rules 2016 (PWMR) made importers of plastic that use plastic for packaging accountable for managing the end waste.

Which of the above statements is/are correct?

a) 1 and 2 only

b) 2 only

c) 2 and 3 only

d) 1, 2 and 3

Solution - C

- **Extended producer responsibility' (EPR) puts the financial and/or physical onus on manufacturers--meaning plastic producers, importers and brand-owners--for the treatment, recycling, reuse or disposal of products after a consumer has used and disposed of them.**

- **India first introduced EPR to manage electronic-waste in 2012. It extended EPR to plastic manufacturers after the Plastic Waste Management Rules 2016 (PWMR) were notified in 2016.**

- **The PWMR made producers and importers of plastic as well as brand owners that use plastic for packaging accountable for managing the end waste.**

QUESTION 63: Consider the following statements regarding

Intergovernmental Panel on Climate Change (IPCC):

1. IPCC is a joint initiative of World Meteorological Organization (WMO) and United Nations Development Programme (UNDP).
2. IPCC reports are a key input into international climate change negotiations.
3. The IPCC conducts its own research on Climate Change and provide the public scientific information on climate change.

Which of the above statements is/are correct?

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

EXPLANATION : B)

- Created in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP).
- IPCC reports are also a key input into international climate change negotiations.

- The IPCC is an organization of governments that are members of the United Nations or WMO.
- Thousands of people from all over the world contribute to the work of the IPCC. The IPCC does not conduct its own research.
- The Intergovernmental Panel on Climate Change (IPCC) was established by the United Nations to provide the public scientific information on climate change.

QUESTION 64: Making Peace with Nature report, recently seen in news is released by?

- a) Conservation International
- b) World Wide Fund for Nature (WWF)
- c) UN Environment
- d) World Economic Forum

EXPLANATION : C)

- The first UNEP synthesis report is titled: “Making Peace With Nature: A scientific blueprint to tackle the climate, biodiversity and pollution emergencies” and is based on evidence from global environmental assessments.

QUESTION 65: While burning hydrocarbon fuels, if we see a blue flame it

means that the fuel is?

- a) made of unsaturated hydrocarbons
- b) made of saturated hydrocarbons
- c) Wet
- d) burning completely

EXPLANATION : B)

- In saturated hydrocarbons complete combustion of the fuel takes place but in the unsaturated hydrocarbons incomplete combustion takes place.
- Hence saturated hydrocarbons give a blue flame while unsaturated hydrocarbons burn with a sooty flame.

QUESTION 66: Which among the following statements best describes the

term 'Black Gold':

- a) Coal and its derivatives
- b) Gold extracted from Placer deposits
- c) Petroleum and its derivatives

d) Residual that remain after Gold extraction

EXPLANATION : C)

- Petroleum is found between the layers of rocks and is drilled from oil fields located in off-shore and coastal areas.

- This is then sent to refineries which process the crude oil and produce a variety of products like diesel, petrol, kerosene, wax, plastics and lubricants.

- Petroleum and its derivatives are called Black Gold as they are very valuable.

QUESTION 67: The twinkling of a star is due to?

a) Oscillation of starlight

b) Atmospheric reflection of starlight

c) Atmospheric refraction of starlight

d) Change in the position of the star

EXPLANATION : C)

- The twinkling of a star is due to atmospheric refraction of starlight.

- The starlight, on entering the earth's atmosphere, undergoes refraction

continuously before it reaches the earth.

QUESTION 68: Consider the following statements regarding Census and Socio-Economic Caste Census (SECC):

1. Census is a statutory exercise conducted under the provisions of the Census Act 1948.

2. All information collected under the Census is be published in the local areas for public scrutiny.

3. All the personal information given in the Socio-Economic Caste Census (SECC) is open for use by Government departments to grant and/or restrict benefits to households.

Which of the above statements is/are correct?

a) 2 only

b) 1 and 3 only

c) 2 and 3 only

d) 1, 2 and 3

EXPLANATION : B)

- The Census is a statutory exercise conducted under the provisions of the Census Act 1948 and Rules made there under.
- All information collected under the Census is confidential and will not be shared with any agency - Government or private.
- Certain information collected under the NPR will be published in the local areas for public scrutiny and invitation of objections.
- According to the SECC website, “all the personal information given in the Socio-Economic Caste Census (SECC) is open for use by Government departments to grant and/or restrict benefits to households”.

QUESTION 69: Indian Cyber Crime Coordination Centre (I4C), sometimes seen in news works under?

- a) Ministry of Electronics and Information Technology
- b) Niti Ayog
- c) Ministry of Home Affairs (MHA)
- d) Minister for Science & Technology

EXPLANATION : C)

- Indian Cyber Crime Coordination Centre (I4C) established under Ministry of

Home affairs (MHA) to act as a nodal point at National level in the fight against cybercrime by providing a platform to deal with cybercrimes in a coordinated and comprehensive manner.

QUESTION 70: Consider the following statements regarding Cyber Crime

Volunteers Programme:

1. Cyber Crime Volunteers Programme aims to allow citizens to register themselves as Cyber Crime Volunteers in the role of Unlawful Content Flaggers.
2. This is the first time a state-sponsored lateral surveillance has been implemented in India.
3. The programme will help law enforcement agencies in identifying, reporting and in the removal of illegal/unlawful online content.

Which of the above statements is/are correct?

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

EXPLANATION : B)

- As per the official website of the National Cyber Crime Reporting Portal, the programme will help law enforcement agencies in identifying, reporting and in the removal of illegal/unlawful online content.
- This form of surveillance, which enables citizens to “watch over” one another is called lateral surveillance.
- This is not the first time state-sponsored lateral surveillance has been implemented in India.
- For example, the CPlan App in Uttar Pradesh launched for keeping a tab on anti-social elements, is designed to receive inputs from certain identified individuals in villages across the State.

QUESTION 71: Consider the following statements regarding Zoonotic

Diseases:

1. Zoonotic diseases have impacted humankind since the beginning of its association with animals.
2. Increased incidences of zoonotic diseases in recent times are a direct consequence of Large-scale deforestation and encroachment of pristine natural ecosystems.
3. Out of all the human disease-causing pathogens identified so far, only around

10% are of animal origin.

Which of the above statements is/are correct?

a) 3 only

b) 1 and 2 only

c) 1 and 3 only

d) 1, 2 and 3

EXPLANATION : B)

- Zoonotic diseases, impact humankind since the beginning of its association with animals.
- They are also the most numerous ones. Out of all the human disease-causing pathogens identified so far, over 60% are of animal origin.
- These include the causative agents for several well-known human and livestock diseases such as Tuberculosis, Brucellosis, Anthrax, Leptospirosis, and Rabies.

QUESTION 72: Consider the following statements regarding Thalassemia:

1. Thalassemia is an inherited blood disorder characterised by less oxygen-

carrying protein (haemoglobin) and fewer red blood cells in the body than normal.

2. Blood stem cell transplant is the long-term course of treatment for Thalassemia.

3. Iron supplements have to be given for those undergoing frequent blood transfusions as it leads to iron deficiency.

Which of the above statements is/are correct?

a) 2 only

b) 1 and 2 only

c) 1 and 3 only

d) 1, 2 and 3

EXPLANATION : B)

- Thalassemia is an inherited blood disorder characterised by less oxygen-carrying protein (haemoglobin) and fewer red blood cells in the body than normal.

- Doctors have advised that a blood stem cell transplant would be the best long-term course of treatment.

- Those with thalassemia have to undergo regular blood transfusions.

Additionally, they have to be on regular iron chelation therapy to remove the excess iron from the body.

- The excess iron that accumulates in the body owing to frequent blood transfusions can affect vital organs leading to complications.

QUESTION 73: To study which one of the following was a spacecraft launched that would be farthest from the Sun and that would run exclusively on solar power?

- a) Mars' Atmosphere
- b) Venus's moons
- c) Kuiper belt
- d) Jupiter's Trojan asteroids

EXPLANATION : D)

- 'Lucy' Mission is NASA's first mission to explore the Jupiter Trojan asteroids.
- When Lucy is making its flybys, it will break the record for the farthest from the sun a spacecraft has run exclusively on solar power.

QUESTION 74: Methanoic acid is normally found in?

a) Human Blood

b) Human Brain

c) Muscles

d) Ant Stings

EXPLANATION : D)

- Formic acid, systematically named methanoic acid, is the simplest carboxylic acid.
- It is an important intermediate in chemical synthesis and occurs naturally, most notably in some ants.

QUESTION 75: Which of the following are the applications of gene-editing

technology?

1. It can boost disease resistance in humans & increase life span.
2. It can be used to protect endangered species or bring to life extinct species.
3. It can slow down the spread of diseases by eliminating its means of transmission.

Select the correct answer code:

a) 2 only

b) 1 and 2 only

c) 2 and 3 only

d) 1, 2 and 3

EXPLANATION : D)

- Potential applications of gene-editing technology - Human genome editing can be used to treat many human diseases & genetic disorders like HIV/AIDS, haemophilia etc.
- It could substantially bolster disease resistance in humans & increase life span.
- It could form the basis of highly efficient & cost-effective next generation antibiotics (based on bacteriophage viruses).
- Gene editing can be used to protect endangered species or bring to life extinct species. It can be used to grow healthier food (via fortification) and increasing harvest.
- It has the potential to slow down the spread of diseases by eliminating its means of transmission. E.g. Gene editing can be used to introduce sterile mosquitoes into the environment.

QUESTION 76: Consider the following statements regarding Cell Membrane:

1. The cell membrane, also called the plasma membrane, is found in all cells and

separates the interior of the cell from the outside environment.

2. The cell membrane consists of a lipid bilayer that is semipermeable.

3. It does not allow diffusion of gases like oxygen and carbon dioxide.

Which of the above statements is/are correct?

a) 1 and 2 only

b) 1 and 3 only

c) 2 only

d) 1, 2 and 3

EXPLANATION : A)

- The cell membrane, also called the plasma membrane, is found in all cells and separates the interior of the cell from the outside environment.
- The cell membrane consists of a lipid bilayer that is semipermeable. The cell membrane regulates the transport of materials entering and exiting the cell.
- Some substances (small molecules, ions) such as carbon dioxide (CO₂) and oxygen (O₂), can move across the plasma membrane by diffusion, which is a passive transport process.

QUESTION 77: Consider the following statements regarding Rickets:

1. Rickets is a condition that results in weak or soft bones in children.
2. The most common cause of rickets is a vitamin C deficiency.
3. It is classified as neglected tropical disease.

Which of the above statements is/are correct?

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

EXPLANATION : A)

- Rickets is a condition that results in weak or soft bones in children.

Complications may include bone fractures, muscle spasms, or an abnormally curved spine.

- The most common cause of rickets is a vitamin D deficiency. This can result from eating a diet without enough vitamin D.

QUESTION 78: Which of the following living organisms gives litmus?

- a) Algae
- b) Protozoa

c) Lichen

d) Virus

EXPLANATION : C)

- Litmus is a water-soluble mixture of different dyes extracted from lichens.
- It is often absorbed onto filter paper to produce one of the oldest forms of pH indicator, used to test materials for acidity.

QUESTION 79: Head on Generation (HOG) technology, recently seen in news is related to?

a) Lithium-Ion Batteries

b) Railways

c) Artificial Intelligence

d) Internet of Things

EXPLANATION : B)

- Head on Generation (HOG)—is being adopted by the Indian Railways, power supply is tapped from overhead power lines and distributed to train coaches.

- The system runs the train's 'hotel load' (the load of air conditioning, lights, fans, and pantry, etc.) by drawing electricity from the overhead electric lines through the pantograph.

QUESTION 80: Yeast, which is used to make bread, belongs to the group?

- a) Protozoa
- b) Bacteria
- c) Protista
- d) Fungi

EXPLANATION : D)

- Yeasts are eukaryotic, single-celled microorganisms classified as members of the fungus kingdom.

QUESTION 81: Consider the following statements regarding NISAR mission:

1. NISAR is a satellite wholly developed by ISRO, that will detect movements of the earth's surface.
2. It will help track changes in croplands, hazard sites and to monitor crises such

as volcanic eruptions.

3. It uses synthetic aperture radar that produces high-resolution images.

Which of the above statements is/are correct?

a) 2 only

b) 1 and 2 only

c) 2 and 3 only

d) 1, 2 and 3

EXPLANATION : C)

- NASA and ISRO are collaborating on developing a satellite called NISAR, which will detect movements of the planet's surface as small as 0.4 inches over areas about half the size of a tennis court.

- The satellite is planned to launch in 2023 into a near-polar orbit and will scan the globe every 12 days over the course of its three-year mission of imaging the Earth's land, ice sheets and sea ice to give an "unprecedented" view of the planet.

- The name NISAR is short for NASA-ISRO-SAR. SAR here refers to the synthetic aperture radar that NASA will use to measure changes in the surface of the Earth.

- Essentially, SAR refers to a technique for producing high-resolution images.

Because of the precision, the radar can penetrate clouds and darkness, which means that it can collect data day and night in any weather.

QUESTION 82: Istanbul Convention, sometimes seen in news is related to?

- a) Criminalising acts of financing of terrorism
- b) Protection of Ozone layer
- c) Protecting Cultural and natural heritage
- d) Preventing Violence Against Women

EXPLANATION : D)

• The Council of Europe established the Istanbul Convention, a human rights treaty, with the aim to prevent and prosecute all forms of violence against women, promote gender equality and ensure protection and rehabilitation of women who are victims of violence.

QUESTION 83: Eastern Economic Forum, sometimes seen in news is the initiative of?

- a) Japan
- b) China
- c) Russia
- d) United States of America

EXPLANATION : C)

- Eastern Economic Forum is an international forum held each year in Vladivostok, Russia, for the purpose of encouraging foreign investment in the Russian Far East.

QUESTION 84: Which of the following countries has announced to achieve

the goal of fewer than 5% of the population smoking daily by 2025?

- a) China
- b) South Korea
- c) New Zealand
- d) Germany

EXPLANATION : C)

- New Zealand plans to ban young people from ever buying cigarettes in their lifetime in one of the world's toughest crackdowns on the tobacco industry.
- The New Zealand government said while existing measures like plain packaging and levies on sales had slowed tobacco consumption, the tougher steps were necessary to achieve its goal of fewer than 5% of the population smoking daily by 2025.

QUESTION 85: Consider the following statements about National

Commission for Women (NCW):

1. It has all the powers of a civil court.
2. It can attend to cases of harassment of women and order appropriate punishments.
3. It can review the Constitutional and Legal safeguards for women.

Which of the above statements is/are correct?

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

EXPLANATION : A)

- The National Commission for Women was set up as statutory body in January 1992 under the National Commission for Women Act, 1990 to : • review the Constitutional and Legal safeguards for women;
- recommend remedial legislative measures;
- facilitate redressal of grievances and advise the Government on all policy matters affecting women.
- The commission also has the powers that are vested upon with a civil court.

QUESTION 86: What is common to the places called Idukki, Parambikulam and Aliyar?

- a) Pre-historic cave painting
- b) Buddhist archaeological sites
- c) Underground cave system
- d) Water reservoirs

EXPLANATION : D)

- Parambikulam Dam is an embankment dam on the Parambikulam River.

- The Idukki Dam is a double curvature Arch dam constructed across the Periyar River.
- Aliyar Reservoir is a reservoir located in Aliyar village in Tamil Nadu.

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QUESTION 88: Jaapi, Xorai and Gamosa are primarily associated with which

state?

- a) Manipur
- b) Nagaland
- c) Assam
- d) Mizoram

EXPLANATION : C)

- Decorative jaapis (field hats), hand-woven gamosas and bell-metal xorais - important symbols of Assamese identity and culture are abundantly seen in political campaigns across the state.
- The jaapi is a conical hat made of bamboo and covered with dried tokou leaves.
- The Gamosa, which literally translates to a cloth to wipe one's body. Used at home as a towel or in public functions to felicitate dignitaries or celebrities.
- Xorai: Made of bell-metal, the xorai essentially a tray with a stand at the bottom, with or without a cover can be found in every Assamese household.

QUESTION 89: Which of the following states/Union Territories has the highest percentage of forest area to the total geographical area?

- a) Mizoram
- b) Arunachal Pradesh
- c) Lakshadweep
- d) Madhya Pradesh

EXPLANATION : C)

- The Union Territory of Lakshadweep has the highest forest cover of 90.33% .
- Among states, Mizoram has the highest forest cover of 85.41%.

QUESTION 90: State of the Global Climate Report is being released by?

- a) United Nations Environment Programme (UNEP)
- b) Intergovernmental Panel on Climate Change (IPCC)
- c) World Meteorological Organisation (WMO)
- d) German watch

EXPLANATION : C)

- The World Meteorological Organisation is publishing the report since 1993.
- The report mainly documents indicators of climate system such as increasing

land and ocean temperatures, greenhouse gas concentrations, melting ice, sea-level increase, glacier retreat and extreme weather.

- The report also highlights the impacts of climate change on socio-economic development, food security, migration and marine ecosystems.

QUESTION 91: Consider the following statements:

1. Climate Change Performance Index (CCPI) tracks countries' efforts to combat climate change and is published by UNEP.
2. UNFCCC can impose penalty if a country fails to meet Nationally Determined Contributions (NDCs) under the Paris Climate Pact.

Which of the above statements is/are incorrect?

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

EXPLANATION : C)

- Published annually since 2005, the Climate Change Performance Index (CCPI) tracks countries' efforts to combat climate change.

- As an independent monitoring tool it aims to enhance transparency in international climate politics and enables comparison of climate protection efforts and progress made by individual countries.
- Germanwatch, the NewClimate Institute and the Climate Action Network publish the index annually.
- If a country fails to meet its NDCs, there is no penalty.

QUESTION 92: Consider the following statements regarding Agricultural

Markets and Farmer Friendly Reforms Index (AMFFRI):

1. Agricultural Markets and Farmer Friendly Reforms Index evaluates Indian states on the extent to which each of them undertook required agri-reforms.
2. A high AMFFRI rank implies the state is undertaking desired reforms.
3. AMFFRI is the initiative of the Department of Agriculture, Co-operation and Farmers Welfare.

Which of the above statements is/are correct?

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

d) 1, 2 and 3

EXPLANATION : A)

- NITI Aayog's Agricultural Markets and Farmer Friendly Reforms Index — AMFFRI, an index that evaluates Indian states on the extent to which each of them undertook required agri-reforms; a low AMFFRI rank implies the state is undertaking desired reforms.
- It was found that states that undertook reforms, and were thus ranked low on AMFFRI, witnessed a relatively faster agri-GDP growth rate and states which did not undertake required reforms, and thus were ranked high on the AMFFRI, witnessed relatively lower agri-GDP growth rates.

QUESTION 93: 'SWIFT' a mechanism often seen in news is related to?

- a) Emergency deployment of armed forces
- b) Sanctions imposed by UN
- c) IAEA protocol
- d) Financial transactions

EXPLANATION : D)

- The Society for Worldwide Interbank Financial Telecommunication, legally S.W.I.F.T. SC, is a Belgian cooperative society providing services related to the execution of financial transactions and payments between banks worldwide.
- Its principal function is to serve as the main messaging network through which international payments are initiated.

QUESTION 94: With reference to United Nations General Assembly (UNGA), consider the following statements:

1. Voting in the General Assembly on certain important questions is by a three-fourth majority of those present and voting.
2. The resolutions passed by the General Assembly do not have the binding forces over the member nations.
3. Emergency special sessions of the UNGA can be called by the Security Council, if supported by at least eight members.

Select the correct statements:

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

d) 1 and 3 only

EXPLANATION : B)

- Emergency special sessions can be called by the Security Council, if supported by at least seven members, or by a majority of Member States of the United Nations.
- If enough votes are had, the Assembly must meet within 24 hours, with Members being notified at least twelve hours before the opening of the session.

QUESTION 95: Which of the following group of countries border Russia?

- a) Latvia, Romania, Estonia
- b) Finland, Georgia, Hungary
- c) Azerbaijan, Kazakhstan, Lithuania
- d) Belarus, Uzbekistan, Ukraine

Solution(c)

- Russia is bounded to the north and east by the Arctic and Pacific oceans, and it has small frontages in the northwest on the Baltic Sea at St. Petersburg and at the detached Russian oblast (region) of Kaliningrad (a part of what was once

East Prussia annexed in 1945), which also abuts Poland and Lithuania.

- To the south Russia borders North Korea, China, Mongolia, and Kazakhstan, Azerbaijan, and Georgia.
- To the southwest and west it borders Ukraine, Belarus, Latvia, and Estonia, as well as Finland and Norway

QUESTION 96: Consider the following statements regarding United Nations

Environment Programme:

1. The United Nations Environment Assembly is UNEP's governing body which meets every two years
2. UNEP hosts the secretariats of The Minamata Convention on Mercury and Stockholm Convention on Persistent Organic Pollutants among others.

Choose the correct statements

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

EXPLANATION : C)

- UNEP hosts the secretariats of several multilateral environmental agreements and research bodies, including The Convention on Biological Diversity (CBD), The Minamata Convention on Mercury, The Convention on Migratory Species and The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Stockholm Convention on Persistent Organic Pollutants.

QUESTION 97: Consider the following statements regarding 'International Criminal Court':

1. It was established by the Rome Statute.
2. The ICC may only investigate and prosecute crimes committed within member states.
3. India is a signatory but has not ratified the treaty to join ICC.

Select the correct statements:

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

EXPLANATION : A)

- The ICC began operations on 1 July 2002, upon the entry into force of the Rome Statute, a multilateral treaty that serves as the court's foundational and governing document.
- India is neither ratified nor a signatory the Rome Statue.

QUESTION 98: 'Intergovernmental Panel on Climate Change (IPCC)' was established by?

- a) World Bank and International Union for Conservation of Nature (IUCN)
- b) United Nations Development Programme(UNDP) and World Economic Forum(WEF)
- c) World Meteorological Organization(WMO) and United Nations Environment Programme(UNEP)
- d) Climate Action Network and United Nations Framework Convention on Climate Change(UNFCCC)

EXPLANATION : C)

- The Intergovernmental Panel on Climate Change (IPCC) is an intergovernmental body of the United Nations responsible for advancing knowledge on human-induced climate change.

- It was established in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP), and later endorsed by United Nations General Assembly.
- Headquartered in Geneva, Switzerland, it is composed of 195 member states.

QUESTION 99: Consider the following statements:

1. Aadhaar is neither considered a proof of residence nor a proof of citizenship
2. Aadhaar data is collected by UIDAI(Unique Identification Authority of India) a statutory body established by Information Technology Act, 2009

Select the correct statements

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

EXPLANATION : D)

- Aadhaar is considered a proof of residence and not a proof of citizenship, Aadhaar does not itself grant any rights to domicile in India.
- Aadhaar data is collected by the Unique Identification Authority of India

(UIDAI), a statutory authority established in January 2009 by the Government of India, under the jurisdiction of the Ministry of Electronics and Information Technology, following the provisions of the Aadhaar (Targeted Delivery of Financial and other Subsidies, benefits and services) Act, 2016

QUESTION 100: Consider the following statements regarding 'Biosimilars':

1. Biosimilar is a biological product that is very similar to a reference biologic and for which there are no clinically meaningful differences in terms of safety, purity, and potency.
2. Unlike with generic drugs, biosimilars generally exhibit lower molecular complexity.
3. Biosimilars are officially approved versions of original innovator products and can be manufactured only when the original product's patent is valid.

Select the correct statements:

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

EXPLANATION : A)

- Unlike with generic drugs of the more common smallmolecule type, biologics generally exhibit high molecular complexity and may be quite sensitive to changes in manufacturing processes.
- Despite that heterogeneity, all biopharmaceuticals, including biosimilars, must maintain consistent quality and clinical performance throughout their lifecycle.
- Biosimilars are officially approved versions of original "innovator" products and can be manufactured when the original product's patent expires. Reference to the innovator product is an integral component of the approval.