

**Q.1) Yellow Cake, an item of smuggling across border is**

- a) Uranium oxide
- b) A crude form of heroin
- c) A crude form of cocaine
- d) Unrefined gold

**Q.1) Solution (a)**

Yellow cake is mined uranium oxide. It is used in Uranium enrichment to be further used in nuclear reactors.

**Q.2) Barium in a suitable form is administered to patients before an X-ray examination of the stomach, because**

- a) barium allows X-rays to pass through the stomach on account of its transparency to X-rays
- b) barium compound, like magnesium sulphate helps in cleaning the stomach before X-ray examination
- c) barium is a good absorber of X-rays and this helps the stomach to appear clearly in contrast with the other regions in the picture
- d) barium salts are white in colour and this helps the stomach to appear clearly in contrast with other regions in the pictures

**Q.2) Solution (c)**

Barium sulfate is a metallic compound that shows up on X-rays and is used to help see abnormalities in the esophagus and stomach. When taking the test, you drink a preparation containing this solution. The X-rays track its path through your digestive system.

**Q.3) Which of the following are the correct differences between fertilizers and Manures?**

1. A fertilizer is an inorganic substance which is rich in one element while manure is a natural substance obtained by decomposition of organic material.
2. Fertilizers are prepared in factories while manures can be prepared in the fields.
3. Manure provides humus to the soil while fertilizer does not.

**Select the code from below:**

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

**Q.3) Solution (d)**

Fertilizers	Manure
A fertiliser is an inorganic salt.	Manure is a natural substance obtained by the decomposition of cattle dung, human waste and plant residues.
A fertilizer is prepared in factories	A manure can be prepared in the fields
It does not provide any humus to the soil	Manure makes the soil rich in humus.
Fertilizers are very rich in plant nutrients like nitrogen, potassium and phosphorus.	Manure is relatively less rich in plant nutrients.

**Q.4) Which of the following statements correctly explains the process of Pasteurisation?**

- a) Covering a substance with dry salt to prevent the formation of bacteria.
- b) Use of Sodium Benzoate and Sodium bisulphate to preserve eatables.
- c) Boiling a substance and suddenly cooling it down to kill the bacteria.
- d) None of the above

**Q.4) Solution (c)**

Pasteurization is a process that kills microbes (mainly bacteria) in food and drink, such as milk, juice, canned food, and others.

It was invented by French scientist Louis Pasteur during the nineteenth century. In 1864 Pasteur discovered that heating beer and wine was enough to kill most of the bacteria that caused spoilage, preventing these beverages from turning sour. The process achieves this by eliminating pathogenic microbes and lowering microbial numbers to prolong the quality of the beverage. Today, pasteurisation is used widely in the dairy industry and other food processing industries to achieve food preservation and food safety.

The process involves heating a beverage to a sufficiently high temperature and then suddenly cooling it to kill the bacteria. It increases the shelf life of the beverage without changing its taste

and chemistry.

**Q.5) Plastics are very versatile material and can be used for various purposes. Consider the following statements regarding plastics:**

1. Plastics that can be easily deformed by heating are called Thermoplastics.
2. Bakelite and melamine are the examples of thermoplastics.
3. Bakelite is a poor conductor of electricity and is used for making electric switches.

**Which of the above statements are correct?**

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

**Q.5) Solution (c)**

Some plastic articles can bend easily while some break when forced to bend. When we add hot water to a plastic bottle, it gets deformed. Such plastic which gets deformed easily on heating and can be bent easily are known as thermoplastics. Polythene and PVC are some of the examples of thermoplastics. These are used for manufacturing toys, combs and various types of containers.

On the other hand, there are some plastics which when moulded once, cannot be softened by heating. These are called thermosetting plastics. Two examples are bakelite and melamine. Bakelite is a poor conductor of heat and electricity. It is used for making electrical switches, handles of various utensils, etc. Melamine is a versatile material. It resists fire and can tolerate heat better than other plastics. It is used for making floor tiles, kitchenware and fabrics which resist fire.

**Q.6) Which of the following type of energy is stored as Latent Heat?**

- a) Chemical energy
- b) Electrical energy
- c) Mechanical energy
- d) Thermal energy

**Q.6) Solution (d)**

Easy direct question.

The latent heat is normally expressed as the amount of heat (in units of joules or calories) per mole or unit mass of the substance undergoing a change of state. In easy terms, the heat required to convert a solid into a liquid or vapour, or a liquid into a vapour, without change of temperature.

**Q.7) The one thing that is common to all fossil fuels is that they:**

- a) Were originally formed in marine environment
- b) Contain carbon
- c) Have undergone the same set of geological processes during their formation
- d) Represent the remains of one living organisms

**Q.7) Solution (b)**

Direct easy question.

All the fossil fuels are organic fuels containing carbon or hydrocarbons. These burn in the presence of air to generate heat and release carbon dioxide and water vapour.

Fossil fuels can have marine or continental origin. Usually coal has continental origin while Petroleum has marine origin. Also they are derived from different source living organisms and have gone through different set of geological processes during their formation.

**Q.8) Which of the following elements have a sedimentary cycle for nutrient recycling?**

- 1. Phosphorous
- 2. Sulphur
- 3. Nitrogen

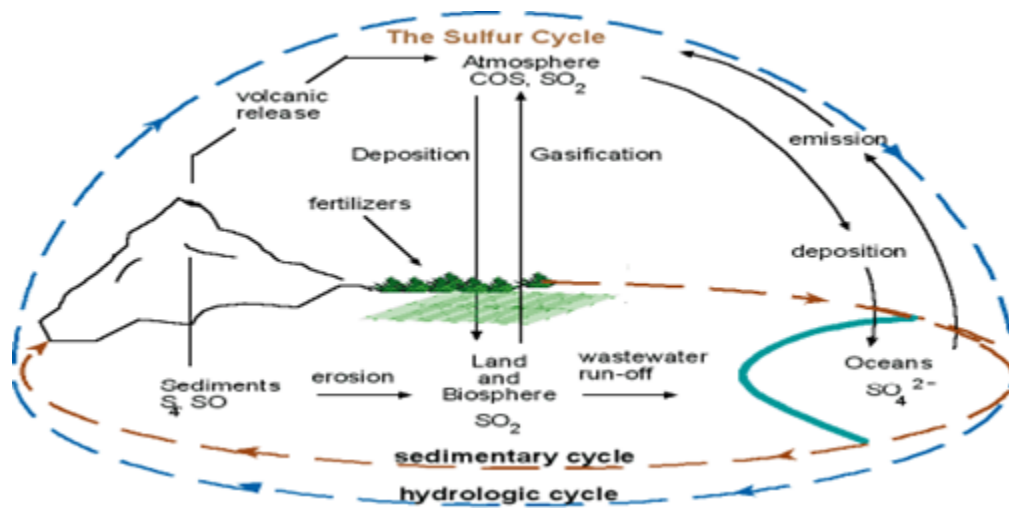
**Choose the correct answer using the codes given below**

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

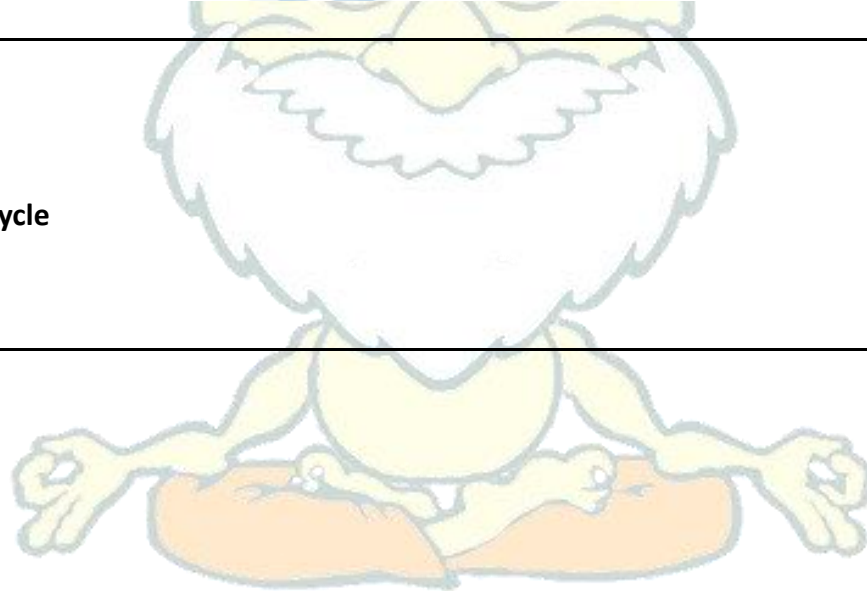
**Q.8) Solution (a)**

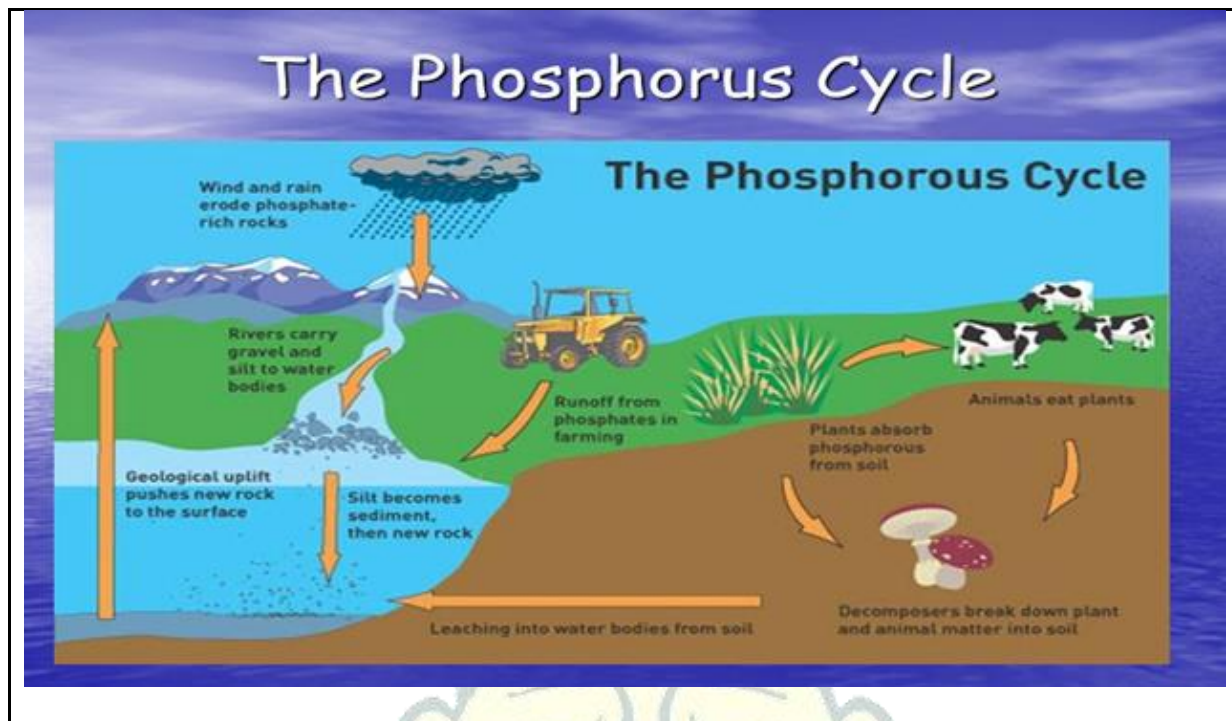
**Basic Information:**

**Sulphur cycle**



**Phosphorus cycle**





**Q.9) Recently, the Department of Science and Technology (DST) has approved the use of antiviral nano-coatings on anti-Covid-19 masks. Which 'elements' are expected to boost the protection provided by these masks?**

- a) Silver and Zinc
- b) Silver and Gold
- c) Calcium and Zinc
- d) Magnesium and Lead

**Q.9) Solution (a)**

**Basic Information:**

- Recently, the Department of Science and Technology (DST) has approved the use of antiviral nano-coatings on anti-Covid-19 masks.
- These coatings have been approved for Triple Layer Medical masks and N-95 respirator, as a part of the Mission on Nano Science and Technology (MNST or commonly known as Nano Mission).
- The **antiviral nano-coating** has been developed using **N9 blue silver** which will be

modified to form **nanocomplexes with Zinc** (Zn, atomic number-30) compounds to achieve a synergistic effect. Subsequently, it will be applied as coatings on facemasks and other Personal Protection Equipment (PPEs).

- N9 blue nanosilver is a highly potent antimicrobial agent and has been developed at SMITA Research Lab, Indian Institute of Technology (IIT) Delhi.
- Silver (Ag, atomic number-47) is known to have strong antimicrobial activity against bacteria, viruses and fungus

**Q.10) Which of the following statements about Graphite are correct?**

1. It is an organic compound.
2. It is a good conductor of electricity unlike other allotropes of carbon.
3. It is used as a lubricating agent because of its layered structure.

**Select the code from below:**

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

**Q.10) Solution (d)**

**Basic Information:**

- Graphite and diamond are the two mineral forms of carbon. Diamond forms in the mantle under extreme heat and pressure. Most graphite found near Earth's surface was formed within the crust at lower temperatures and pressures. Graphite and diamond share the same composition but have very different structures.
- The carbon atoms in graphite are linked in a hexagonal network which forms sheets that are one atom thick. These sheets are poorly connected and easily cleave or slide over one another if subjected to a small amount of force. This gives graphite its very low hardness, its perfect cleavage, and its slippery feel.
- In contrast, the carbon atoms in diamond are linked into a frameworks structure. Every carbon atom is linked into a three-dimensional network with four other carbon atoms

with strong covalent bonds. This arrangement holds the atoms firmly in place and makes diamond an exceptionally hard material.

**Q.11) Which of the following statements about 'Carbon nanotubes' (CNT) is incorrect?**

- a) They are isotopes of Carbon.
- b) They can be synthesised in labs.
- c) They exhibit extraordinary strength and unique electrical properties.
- d) They are efficient conductors of heat.

**Q.11) Solution (a)**

**Note: Question asks for incorrect statement/s.**

**Basic Information:**

- Carbon nanotubes (CNTs) are an allotrope (**not isotope**) of carbon.
- They take the form of cylindrical carbon molecules and have novel properties that make them potentially useful in a wide variety of applications in nanotechnology, electronics, optics and other fields of materials science.
- They exhibit extraordinary strength and unique electrical properties, and are efficient conductors of heat.
- Inorganic nanotubes have also been synthesized.

**Q.12) Which of the following is *not* an advantage of nano-pharmaceuticals over the conventional pharma products?**

- a) Immediate recovery from ailment
- b) Reduction in cost of drug delivery
- c) Accurate detection of diseases
- d) Reduced collateral damage to the body

**Q.12) Solution (a)**

**Note: question asks for incorrect statement/s.**



**Basic Information:**

Immediate recovery from the disease is a non-reality as body needs some time to build itself back.

**Benefits of nano-pharmaceuticals include:**

- It overcomes the limitations of the conventional drug delivery systems and precision targeting via nanopharmaceuticals **reduces toxic systemic side effects**, resulting in **better patient compliance**.
- They offer the **ability to detect diseases** at much earlier stages and the diagnostic applications could build upon conventional procedures using nanoparticles.
- Nano pharmaceutical **reduces the cost of drug discovery**, design & development and **enhances the drug delivery process**.

**Q.13) Which of the following statements about the Deoxyribonucleic acid is correct?**

- a) It is stable under alkaline conditions.
- b) It contains the ribose sugar.
- c) It contains adenine, uracil, cytosine, and guanine bases.
- d) It is found mainly in nucleus and cytoplasm.

**Q.13) Solution (a)**

**Basic Information:**

**DNA and RNA**

- DNA stands for deoxyribonucleic acid, while RNA is ribonucleic acid. Although DNA and RNA both carry genetic information, there are quite a few differences between them.
- **DNA contains the sugar deoxyribose**, while RNA contains the sugar ribose. The only difference between ribose and deoxyribose is that ribose has one more -OH group than deoxyribose, which has -H attached to the second (2') carbon in the ring.
- DNA is a double-stranded molecule while RNA is a single stranded molecule.
- **DNA is stable under alkaline conditions** while RNA is not stable.
- DNA and RNA perform different functions in humans. DNA is responsible for storing

and transferring genetic information while RNA directly codes for amino acids and as acts as a messenger between DNA and ribosomes to make proteins.

- DNA and RNA base pairing is slightly different since **DNA uses the bases adenine, thymine, cytosine, and guanine**; RNA uses adenine, uracil, cytosine, and guanine. Uracil differs from thymine in that it lacks a methyl group on its ring.
- **DNA is found mainly in nucleus**, whereas RNA is found in both nucleus and cytoplasm.
- It is assumed that RNA came into existence before DNA.

**Q.14) Which of the following can be considered as a chemical change?**

1. Melting of ice
2. Soaring of milk
3. Crystallization of sodium chloride

**Choose the correct option**

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

**Q.14) Solution (c)**

**Explanation:**

Both melting of ice and crystallization of sodium chloride is an example of physical change whereas the Soaring of milk represents a chemical change.

**Q.15) Which of the following methods is suitable for preventing an iron frying pan from rusting?**

- a) Applying grease
- b) Applying paint
- c) Applying a coating of zinc
- d) None of these

**Q.15) Solution (c)**

**Explanation**

Zinc has slow corrosion rate that is why it is used frequently as rust-preventive coating. This process is called as Galvanization.

**Q.16) Consider the following statements with reference to Surfactants**

1. A surfactant is a substance that reduces the surface tension of a liquid in which it is dissolved.
2. Surfactants are used in soaps and detergents.
3. They are known to cause soil pollution.

**Which of the above statements is/are correct?**

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

**Q.16) Solution (d)**

A surfactant is a substance that reduces the surface tension of a liquid in which it is dissolved.

When dissolved in water a surfactant gives a product the ability to remove dirt from surfaces such as the human skin, textiles, and other solids. Surfactants are routinely deposited in numerous ways on land and into water systems, whether as part of an intended process or as industrial and household waste. Some of them are known to be toxic to animals, ecosystems, and humans, and can increase the diffusion of other environmental contaminants.

The two major surfactants used in the year 2000 were linear alkylbenzene sulfonates (LAS) and the alkyl phenol ethoxylates (APE). They break down in the aerobic conditions found in sewage treatment plants and in soil to the metabolite nonylphenol, which is thought to be an endocrine disruptor.

**Q.17) Consider the following statements with respect to Chlorination of water.**

1. Chlorine can be used as chlorine gas, sodium hypochlorite, and calcium hypochlorite.

2. It kills cells by first damaging the cell membrane, entering the cell, and disrupting cell respiration and DNA activity

**Which of the above statements is/are correct?**

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

**Q.17) Solution (c)**

Chlorine can be used as chlorine gas, sodium hypochlorite, and calcium hypochlorite. All of these produce nascent chlorine which is harmful if inhaled directly.

Chlorine inactivates a microorganism by damaging its cell membrane. Once the cell membrane is weakened, the chlorine can enter the cell and disrupt cell respiration and DNA activity (two processes that are necessary for cell survival).

**Q.18) The Function of a Catalyst in Chemical reaction is to**

- a) Stop the reaction.
- b) Initiate the reaction.
- c) Decrease the speed of reaction.
- d) Increase the speed of reaction.

**Q.18) Solution (d)**

Catalyst is a substance that increases the rate of chemical reaction without undergoing any chemical change itself.

**Q.19) Consider the following statements about the Hydrogen atom (Protium).**

- a) It has 1 proton and 1 one electron.
- b) It has 1 neutron and 1 electron.
- c) It has 1 proton, 1 neutron and 1 electron.
- d) It has 1 proton, 2 neutrons and 1 electron.

**Q.19) Solution (a)**

Protium atom of Hydrogen  ${}^1\text{H}_1$  that is the most common type has 1 proton and 1 electrons. It does not have any neutron.

Neutron is present in deuterium used in Heavy water.

**Q.20) Consider the following statements regarding the Litmus Used in Litmus Test.**

1. Litmus is extracted from group of fungus.
2. Chlorine gas turns blue litmus paper white.

**Which of the above statements is/are correct?**

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

**Q.20) Solution (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.

The main use of litmus is to test whether a solution is acidic or basic. Wet litmus paper can also be used to test for water-soluble gases that affect acidity or alkalinity; the gas dissolves in the water and the resulting solution colors the litmus paper. For instance, ammonia gas, which is alkaline, colors the red litmus paper blue.

Chemical reactions other than acid-base can also cause a color change to litmus paper. For instance, chlorine gas turns blue litmus paper white – the litmus dye is bleached, because of presence of hypochlorite ions. This reaction is irreversible, so the litmus is not acting as an indicator in this situation.

**Q.21) Buldhana Pattern' has won national recognition recently. What is this term related to?**

- a) It is a Japanese method of afforestation to reduce global warming.
- b) It is a method of water conservation.
- c) It is a method of in situ conservation of wild Animals.
- d) It was a pattern of Ancient petroglyph painting.

**Q.21) Solution (b)**

**About Buldhana Pattern of Water Conservation:**

- The Synchronization of national highway construction and water conservation was achieved for the first time in Buldhana district, by using soil from the water bodies, nallas and rivers.
- This consequently lead to the increase in capacity of water for the first time in Buldhana. storage across the water-bodies in Buldana district and it came to be known as 'Buldhana Pattern'. • The cost efficient 'Buldhana pattern of road-construction nation-wide, especially in the regions which are facing problem of water scarcity.
- Another 'Tamswada Pattern of water conservation project taken up in Nagpur and Wardha district in which rain water harvesting, conservation and groundwater recharge works were done in order to increase the water storage capacity of natural water bodies situated in these two districts of Eastern Vidarbha.
- Creation of State Water Grid and adopting water Conservations works under 'Buldana Pattern will increase the agriculture production and bring prosperity in farmer's economic life in Vidarbha.

**Q.22) Recently “Whitsun reef” was in news, consider the following statements with respect to Whitsun Reef.**

1. It is a part of South China Sea.
2. It is disputed between China and Vietnam.

**Which of the following statement given above is/are correct?**

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

**Q. 22) solution (a)**

**Explanation**



Recently, Philippines reported 200 Chinese vessels at this disputed reef. The boomerang shaped reef is also called Julian Felipe and is claimed by both China and Philippines. It is located in South China Sea.

**Q.23) consider the following statement about the functions of national pharmaceutical pricing authority:**

1. To implement and enforce the provisions of the Drugs Price Control Order (DPCO), 1995/2013.
2. To monitor the availability of drugs, identify shortages, if any, and to take remedial steps.
3. To deal with all legal matters arising out of the decisions of the Authority.

**Which of the following statement given above is/are correct?**

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

**Q.23) solution (d)**

### Explanation

The National Pharmaceutical Pricing Authority was set up as an attached office of the Department of Chemicals and Petrochemicals (now Department of Pharmaceuticals since July, 2008) on 29th August 1997. It has been entrusted inter-alia, with the following functions

1. To implement and enforce the provisions of the Drugs Price Control Order (DPCO), 1995/2013 in accordance with the powers delegated to it.
2. To undertake and/or sponsor relevant studies in respect of pricing of drugs/formulations.
3. To monitor the availability of drugs, identify shortages, if any, and to take remedial steps.
4. To collect/maintain data on production, exports and imports, market share of individual companies, profitability of companies etc. for bulk drugs and formulations.
5. To deal with all legal matters arising out of the decisions of the Authority.
6. To render advice to the Central Government on changes/revisions in the drug policy.
7. To render assistance to the Central Government in the parliamentary matters relating to the drug pricing.

**Q.24) Word happiness report has been published amid Covid-19 assessing the happiness among the nations: Who publishes the report.**

- a) United Nations Development Program
- b) United Nations Sustainable Development Solutions Network
- c) World economic forum
- d) World Bank

**Q.24) solution (b)**

### Explanation

#### World Happiness Report 2021

- World Happiness Report 2021 focuses on the effects of COVID-19 on happiness and how countries have differed in their success in reducing the deaths and maintaining connected and healthy societies.
- Finland has been ranked as the happiest country in the world followed by Iceland, Denmark.
- India ranked 139 (out of 149 countries) while neighboring countries like Pakistan is on 105th, Bangladesh on 101st and China on 84th.
- India ranked 140th in 2019 and 144th in 2020.



**Key highlights of the report**

- Trust and the ability to count on others are major supports to life evaluations, especially in the face of crises.
- Factors supporting successful COVID-19 strategies include confidence in public institutions.

**Q.25) Recently the terms “Heptachlor, Tetradifon, Aldicarb, Metoxuron,” has been in news with respect to -**

- a) Migratory birds along the Asian flyway.
- b) Pesticides Banned for manufacture, import and use.
- c) Invasive species of Western Ghats.
- d) Extinct birds native to north eastern states.

**Q.25) solution (b)**

**Explanation**

**'Draft Order Banning of Insecticides Order 2020'**

The draft released in May 2020, provided for banning import, manufacture, sale, transport, distribution and use of 27 pesticides which are also declared extremely hazardous by World Health Organization.

However, draft was criticized by both industry and farmers. > The Indian pesticide industry is estimated at 219,000 crores, while exports are pegged at 21,000 crores. The list of chemicals account for about a fifth of the total industry. > Also, banning these affordable chemicals would affect food security by increasing the cost of cultivation.

**About pesticide regulation –**

- A pesticide is any substance used to kill, repel, or control certain forms of plant or animal life that are considered to be pests. > Pesticide Includes herbicides, fungicides, insecticides, disinfectants and compounds.
- Of the Pesticides notified for the ban, eight are fungicides, 12 insecticides and seven are herbicides.

**Regulation –**

- Currently, pesticides are regulated under Insecticides Act, 1968 and the Insecticides Rule, 1971.
- Monitoring of Pesticide Residues at National Level' scheme- under which samples of Vegetables, fruits and other crops are collected from the retail outlets, markets, and farm-gate. etc. and analyzed by enlisted NABL laboratories for pesticide residues.

**Q.26) Recently the Helium has been a matter of debate in India; consider the following statement with respect to Helium in India:**

1. India has been self-sufficient in its need and does not import helium at all.
2. One of the most important applications of helium is in magnetic resonance imaging (MRI).

**Which of the following statement given above is/are correct?**

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

**Q.26) solution (b)**

**Explanation**

India has been a net importer of helium and US has been the main supplier catering to India's demand However, U.S. is planning to switch off export of helium from 2021. • One alternative is India's Rajmahal volcanic basin is the store house of helium that can meet country's requirement.

**About Helium:**

It is colorless, odorless, tasteless, inert and a noble gas. Application includes: magnetic resonance imaging (MRI) and, in rockets, in nuclear reactors, production of fiber optics cable etc.

**Q.27) Recently Suez Canal has been in news. Which of the following ocean/sea has not been connected to the Suez Canal?**

- a) Red sea

- b) Mediterranean sea
- c) Indian Ocean
- d) Baltic sea

**Q.27) solution (d)**

**Explanation**

Recently Suez Canal has been blocked by a large cargo ship.

**About Suez Canal**

- Suez Canal, a human-made waterway, connects Mediterranean to Indian Ocean via the Red Sea and provides the shortest sea link between Asia and Europe.
- It was opened for navigation in 1869 and Egypt nationalized it in 1956.
- Suez Canal is one of the world's most heavily used shipping lanes, carrying over 12% of world trade by volume, 8% of Liquefied Natural gas and 1 billion barrels of oil (everyday).



**Q.28) Recently the campaign 'Jal Shakti Abhiyan: Catch the Rain' has been launched. Consider the following statement with respect to it:**

1. The Campaign will be undertaken across the rural areas in the limited identified districts of the country.

2. Gram Sabhas will take 'Jal Shapath' for water conservation.
3. It is launched as a Jan Andolan to take water conservation at the grass-roots level through people's participation.

**Which of the following statement given above is/are correct?**

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

**Q.28) solution (b)**

**Explanation**

Indian Prime Minister launched the '**Jal Shakti Abhiyan: Catch the Rain**' campaign on World Water Day i.e. on 22nd March 2021.

**About the campaign**

- The Campaign will be undertaken across the country, in both rural and urban areas.
- **Theme:** "Catch the rain, where it falls, when it falls".
- It will be implemented from 22nd March 2021 to 30th November 2021 – the pre-monsoon and monsoon periods in the country.
- It is launched as a Jan Andolan to take water conservation at the grass-roots level through people's participation.
- It is intended to encourage all stakeholders to create rainwater harvesting structures suitable to the climatic conditions and subsoil strata, to ensure proper storage of rainwater.
- After the event, Gram Sabhas will be held in all Gram Panchayats of each district (except in the poll-bound states) to discuss issues related to water and water conservation.
- Gram Sabhas will also take 'Jal Shapath' for water conservation.

**Q.29) The terms "Jaapi, Xorai and Gamosa" has been in news recently with respect to:**

- a) These are local handicraft products of Assam region.
- b) Tribal groups inhabiting north eastern region.
- c) Butterflies recently identified in the central Indian region.
- d) Products identified under programme "one district one products" in Uttar Pradesh.

**Q.29) Solution (a)**

**Explanation**

Decorative jaapis (field hats), hand-woven gamosas and bell-metal xorais are making frequent appearances in Assam due to upcoming Assembly elections.

**About the products**

**Jaapi:** It is a conical hat made of bamboo and covered with dried tokou (a palm tree found in rainforests of Upper Assam) leaves. Today, the bulk of Assam's jaapis are made by artisans based in a cluster of villages in Nalbari district.

**Gamosa:** It has wide-ranging uses. It can be used at home as a towel (uka gamosa) or in public functions (phulam/floral gamosa) to felicitate dignitaries or celebrities.

**Xorai:** It is made of bell-metal. It essentially is a tray with a stand at the bottom, with or without a cover. It can be found in every Assamese household.

**Q.30) Consider the following statement about the MSP for MFP scheme:**

1. The responsibility of purchasing MFP on MSP will be with State designated agencies.
2. The Minimum Support Price would be determined by the Ministry with technical help of TRIFED.
3. The Ministry of Tribal Affairs will be the nodal Ministry for implementation and monitoring of the scheme.

**Which of the following statement given above is/are correct?**

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

**Q.30) Solution (d)**

MFP through Minimum Support Price (MSP)

This was a measure towards social safety for MFP gatherers, who are primarily members of the Scheduled Tribes (STs) most of them in Left Wing Extremism (LWE) areas.

The scheme had Rs. 967.28 crore as Central Government share and Rs. 249.50 crore as the

States share for the current Plan period.

**Coverage:**

- Earlier, the scheme was extended only to Scheduled Areas in eight states and fixed MSPs for 12 MFPs. Later expanded to all states and UTs.
- Total number of MFPs covered under the list include 49.

**Implementation:**

- The responsibility of purchasing MFP on MSP will be with State designated agencies.
- To ascertain market price, services of market correspondents would be availed by the designated agencies particularly for major markets trading in MFP.
- The scheme supports primary value addition as well as provides for supply chain infrastructure like cold storage, warehouses etc.
- The Ministry of Tribal Affairs will be the nodal Ministry for implementation and monitoring of the scheme. The Minimum Support Price would be determined by the Ministry with technical help of TRIFED.

**Read the following passages and answer the questions that follow each passage. Your answer to these questions should be based on passage only.**

**Passage 1**

Nature writing is nonfiction or fiction prose or poetry about the natural environment. Nature writing encompasses a wide variety of works, ranging from those that place primary emphasis on natural history facts (such as field guides) to those in which philosophical interpretation predominate. It includes natural history essays, poetry, essays of solitude or escape, as well as travel and adventure writing.

Nature writing often draws heavily on scientific information and facts about the natural world; at the same time, it is frequently written in the first person and incorporates personal observations of and philosophical reflections upon nature.

Modern nature writing traces its roots to the works of natural history that were popular in the second half of the 18th century and throughout the 19th. An important early figure was the "parson-naturalist" Gilbert White (1720 – 1793), a pioneering English naturalist and ornithologist. He is best known for his Natural History and Antiquities of Selborne (1789).

**Q.31) Which of the following statement best summarizes the above passage?**

- The passage talks about the life and lessons of Gilbert White, a profound naturalist and ornithologist.
- The passage talks about how the nature writing is missing in the modern era and needs to be revived.
- The passage talks about from where the writers draw inspiration for nature writing, and how its importance is diminishing in the modern era.
- The passage talks about what nature writing is, the different type of nature writing, its style, and about the roots and pioneer of modern nature writing.

**Q.31) Solution (d)**

It can be inferred from the given passage that, it talks about the form of nature writing in the first paragraph.

The different types of nature writing, its style, and about the roots, are mentioned in the 2nd paragraph. Finally the passage talks about pioneer of modern nature in the last paragraph.

Hence, option d is correct.

**Passage 2**

Many sociologists have argued that there is functional relationship between education and economic system. They point to the fact that mass formal education began in industrial society. They note that the expansion of the economies of industrial societies is accompanied by a corresponding expansion of their educational systems. They explain this correspondence in terms of the needs of industry for skilled and trained manpower, needs which are met by the educational system. Thus, the provision of mass elementary education in Britain in 1870 can be seen as a response to the needs of industry for a literate and numerate workforce at a time when industrial processes were becoming more complex and the demand for technical skills was steadily growing.

**Q.32) The industry needs a literate work-force because**

- its expansion needs sound learning
- it relies heavily on expertise
- it promotes a competitive spirit
- its operations need intricate technical knowledge

**Q.32) Solution (d)**

Refer to the following excerpt from the passage,

“Thus, the provision of mass elementary education in Britain in 1870 can be seen as a response to the needs of industry for a literate and numerate workforce at a time when industrial processes were becoming more complex and the demand for technical skills was steadily growing.....”

From this we can infer that option d is the correct answer.

**Directions for the following two questions:**

Each of the questions below starts with a few statements, followed by four conclusions numbered 1, 2, 3 and 4. You have to consider every given statement as true, even if it does not conform to the accepted facts. Read the conclusions carefully and then decide which of the conclusion(s) logically follow(s) from the given statements, disregarding commonly known facts.

**Q.33) In each question two/three statements followed by four conclusions numbered I to IV have been given. You have to take the given statements to be true even if they seem to be at variance with commonly known facts and then decide which of the given conclusions logically follow from the given statements disregarding commonly known facts.**

**Statements:**

- I. Some boys are scholars.
- II. Some teachers are boys.
- III. All scholars are observers

**Conclusions:**

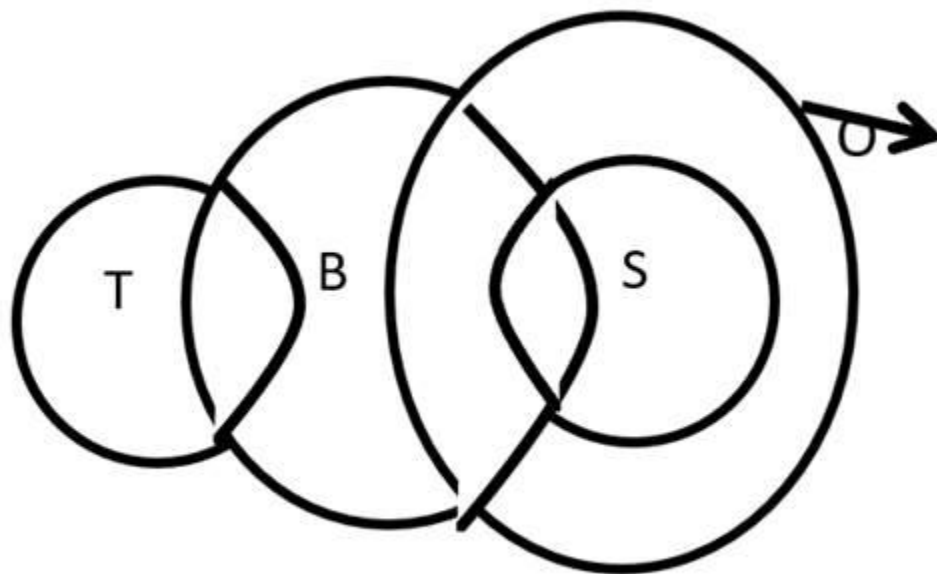
1. Some scholars are boys
2. Some scholars are not boys
3. Some observers are boys
4. Some teachers are scholars

**Choose the correct code**

- a. Only conclusion 1 and conclusion 3 follow
- b. Either conclusion 1 or 2 and conclusion 3 follow
- c. Conclusions 1, 3, and 4 follow
- d. None of the above

**Q.33) Solution (a)**





Since some boys are scholars, thus some scholars are boys too.

As all scholars are observers, thus some observers are boys too.

So, conclusions 1 and 3 follow

**Q.34) In each question two/three statements followed by four conclusions numbered I to IV have been given. You have to take the given statements to be true even if they seem to be at variance with commonly known facts and then decide which of the given conclusions logically follow from the given statements disregarding commonly known facts.**

**Statements:**

- I. Some questions are answers.
- II. Some answers are writers.
- III. All the writers are poets.

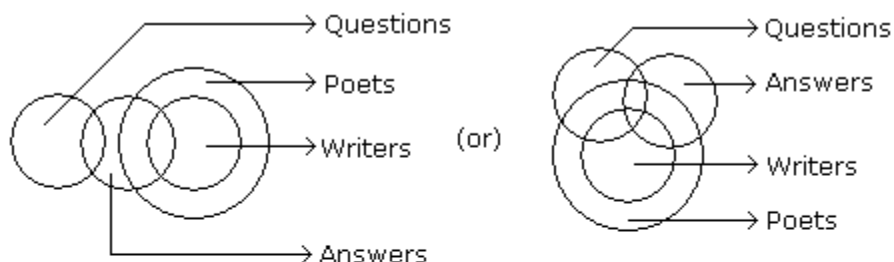
**Conclusions:**

1. Some writers are answers.
2. Some poets are questions.
3. All the questions are poets.
4. Some poets are answers.

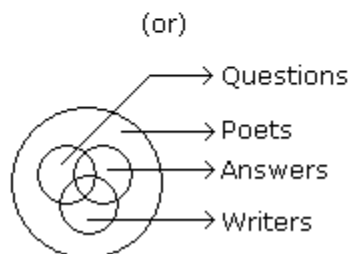
Choose the correct code

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

**Q.34) Solution (b)**



Only (1) and (4) follow.



**Q.35) This question is based on the following letter/ number/symbol arrangement. Study it carefully and answer the question:**

7 D 5 # A B 1 % K \$ 4 E J F 3 \* 2 H I @ L 6 Q U © 9 M T 8 W

**How many such symbols are there in the above arrangement each of which is immediately preceded by a vowel and also immediately followed by a number?**

- a) None
- b) One
- c) Two
- d) Three

**Q.35) Solution (b)**

The arrangement looks like, Vowel Symbol Number

From the above arrangement, we can find only one such combination. i.e. U@9.

