



60 Steps To Prelims (2021) (Date : 24-04-2021)

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Question 1:

With reference to pollution by sulphur dioxide, which of the following are correct?

1. Its largest source is the burning of fossil fuels.
2. It also contributes to particulate matter (PM) pollution.
3. It damages foliage and decreases growth in plants.
4. It can contribute to acid rain.

Select the correct answer using the code given below:

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

Correct Answer : 4

Explanation

- **The largest source of pollution by sulphur dioxide is the burning of fossil fuels by power plants** and other industrial facilities. **Hence, statement 1 is correct.**
- Smaller sources of SO₂ emissions include: industrial processes such as extracting metal from ore; natural sources such as volcanoes; and locomotives, ships and other vehicles and heavy equipment that burn fuel with a high sulfur content.
- SO₂ emissions that lead to high concentrations of SO₂ in the air generally also lead to the formation of other sulfur oxides (SO_x). SO_x can react with other compounds in the atmosphere to form small particles. **These particles contribute to particulate matter (PM) pollution. Hence, statement 2 is correct.**

- At high concentrations, gaseous SO_x can harm trees and plants by **damaging foliage and decreasing growth. Hence, statement 3 is correct.**
 - SO_2 and other sulfur oxides can contribute to acid rain which can harm sensitive ecosystems. **Hence, statement 4 is correct.**
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Question 2:

Which of the following is correct regarding Pollination?

1. Pollination is the transfer of a pollen grain from the stigma to the anther
2. Pollination is the transfer of a pollen grain from the anther to the stigma.
3. Pollination is the transfer of a pollen grain from the style to the stigma.
4. Pollination is the transfer of a pollen grain from the style to the anther.

Correct Answer : 2

Explanation

- **Pollination** happens when a pollen grain moves from the **anther (male part) of a flower to the stigma (female part)**, pollination happens and it is the first step in a process that produces seeds, fruits, and the next generation of plants. **Hence, option B is correct.**
 - This can happen through self-pollination, wind and water pollination or through pollinators.
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Question 3:

Population of which of the following fauna have suffered decline due to Canine distemper virus infections?

1. Asiatic Lions
2. Malabar Civets
3. Indian Leopards
4. Bengal Fox

Correct Answer : 1

Explanation

- A deadly combination of **canine distemper virus and babesiosis**, a disease caused by tick-borne parasites, is killing Asiatic lions in the Gir forest sanctuary in Gujarat, western India, according to government officials. With this disease at least 24 lions have died in Gir forest. **Hence, option A is correct.**
 - The disease outbreak, which started a month ago, has sounded alarm bells among conservationists, and aroused a debate over how to protect the endangered species. The contagious virus poses a threat to the survival of the remaining of the 523 big cats (*Panthera leo persica*) that live across 1,884 square kilometers in the Gir forest region.
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Question 4:

'Dampier Hodges Line' demarcates which of the following geographical regions?

1. The Great Himalayas
2. Indian Sundarbans
3. Western Ghat
4. Malabar Coast

Correct Answer : 2

Explanation

- Recently scientists and wildlife experts and local NGOs have been highlighting the constant degradation of the mangrove forest in the Sunderbans, particularly in areas that are inhabited. **The Indian Sunderbans, considered to be an area south of the Dampier Hodges line**, is spread over 9,630 sq. km., of which the mangrove forests are spread over 4,263 sq. km.
 - **Dampier Hodges line** is an imaginary line, passing through 24 Parganas South and North districts (West Bengal) which indicates the northern-most limits of the estuarine zone affected by tidal fluctuations. **Hence, option B is correct.**
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Question 5:

Which of the following reports are published by the United Nations Conference on Trade and Development?

1. Trade and Development Report
2. World Investment Report
3. The Least Developed Countries Report
4. Commodities and Development Report

Select the correct answer using the code given below:

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

Correct Answer : 4

Explanation

- The **United Nations Conference on Trade and Development (UNCTAD)** was established in 1964 to promote development-friendly integration of developing countries into the world economy.
 - UNCTAD is a permanent intergovernmental body headquartered at Geneva in Switzerland.
 - Some of the reports published by it are:
 - **Trade and Development Report**
 - **World Investment Report**
 - **The Least Developed Countries Report**
 - Information and Economy Report
 - Technology and Innovation Report
 - **Commodities and Development Report**
 - **Hence, option D is correct**
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Question 6:

Harris-Todaro model is related to which of the following?

1. Spike in Inflation
2. Disguised Unemployment
3. Labour Migration
4. Food Crisis

Correct Answer : 3

Explanation

Harris-Todaro model of migration (1970) shows how rural/agricultural labourers decide to migrate to urban/ industrial spaces when the expected wage rate in the urban industrial sector is significantly higher than their present wages in the rural sector. **Hence, option C is correct.**

Question 7:

With reference to traditional festivals and the states to which they belong, consider the following pairs:

1. Wangala- Meghalaya
2. Chapchar Kut- Mizoram
3. Solung- Arunachal Pradesh
4. Cheiraoba- Manipur

Which of the pairs given above are correctly matched?

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

Correct Answer : 4

Explanation

- In Meghalaya, the Khasis celebrate Shad Suk Mynsiem, the Jaintias celebrate Behdienkhlam and the Garos celebrate **Wangala**. **Hence, the pair 1 is correctly matched.**
 - In Mizoram on the other hand, all three festivals **Chapchar Kut**, Mim Kut and Pawl Kut-are related to agriculture, during which the Mizos perform **Cheraw**, the amazing bamboo dance. **Hence, the pair 2 is correctly matched.**
 - In Arunachal Pradesh on the other hand, the Adi community celebrates **Solung**, the Apatanis celebrate Dree, the Nyishis celebrate Novum, the Galos celebrate Mopin and the Monpas celebrate Losar-all related to agriculture. **Hence, the pair 3 is correctly matched.**
 - In Manipur, while **Cheiraoba** is the Manipuri New Year festival, Lai Haraoba is celebrated to appease the sylvan deity called Umanglai, Yaoshang is the wonderful week-long Holi festival and Rath Yatra, also called Kang Chingba, is a nine-day chariot festival dedicated to Lord Jagannath. **Hence, the pair 4 is correctly matched.**
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Question 8:

With reference to Command Area Development and Water Management, consider the following statements:

1. This programme is being implemented under Pradhan Mantri Krishi Sinchai Yojana.
2. Optimization of agricultural productivity is one of the objectives of this programme.

Which of the statements given above is/are correct?

1. 1 only
2. 2 only
3. Both 1 and 2
4. Neither 1 nor 2

Correct Answer : 3

Explanation

- Command Area Development and Water Management (CADWM) work **is being implemented in 99 prioritised Accelerated Irrigation Benefit Projects (AIBP) under Pradhan Mantri Krishi Sinchai Yojana (PMKSY)/Har Khet Ko Pani (HKKP). Hence, statement 1 is correct.**
 - Under the restructured CADWM Programme, more emphasis is being given to participatory approach; thus, payment of central assistance to the state is linked with the formation of water users associations.
 - The main objectives covered under this programme are:-
 - Bridge the gap between potential created and their utilization through micro level infrastructure development and efficient farm water management practices.
 - **Optimization of agricultural productivity & production.**
 - Improvement in socio-economic conditions of farmers.
 - **Hence, statement 2 is correct.**
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Question 9:

With reference to Atal Pension Yojana, consider the following statements:

1. It can be subscribed by any Indian citizen in the age group of 18-50 years.
2. It provides a minimum guaranteed pension of Rs 1000.

Which of the statements given above is/are correct?

1. 1 only

2. 2 only
3. Both 1 and 2
4. Neither 1 nor 2

Correct Answer : 2

Explanation

- Atal Pension Yojana **can be subscribed by any Indian citizen in the age group of 18-40 years** having a bank account and its uniqueness is attributable to three distinctive benefits. **Hence, statement 1 is not correct.**
 - **It provides a minimum guaranteed pension ranging from Rs 1000 to Rs 5000** on attaining 60 years of age, Secondly the amount of pension is guaranteed for lifetime to spouse on death of the subscriber and lastly, in the event of death of both the subscriber and the spouse, entire pension corpus is paid to the nominee. **Hence, statement 2 is correct.**
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Question 10:

Which of the following crops could carry Aflatoxin?

1. Maize
2. Groundnut
3. Rice

Select the correct answer using the code given below:

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

Correct Answer : 3

Explanation

- **Aflatoxins** are a family of toxins produced by certain fungi that are found on agricultural crops such as **maize (corn), peanuts, cottonseed, and tree nuts**. The main fungi that produce **aflatoxins** are *Aspergillus flavus* and *Aspergillus parasiticus*, which are abundant in warm and humid regions of the world.

- Aflatoxin is a hidden burden. It is spread by a deadly pathogen affecting five billion people across the world, but rarely making headlines. It is not carried by birds or mosquitoes, but hidden in staple foods like maize and groundnut. **Rice could not carry aflatoxins. Hence, option C is correct**
- Common moulds, Aspergillus fungi growing naturally on food crops, can produce poisons called aflatoxins, which have serious effects on health, suppressing immune systems, hindering child growth and even causing liver cancer. Taming this fungal threat with a biotechnological double-defence line offers hope to control this toxin.
- Using innovative biotechnology approaches, researchers have developed groundnuts free from aflatoxins thanks to a double-defence line. By producing small proteins called defensins, these groundnuts can stop the deadly fungus from propagating and infecting.

Question 11:

‘Chengalikodan Nendran Banana’ got a GI tag in which state?

1. Kerala
2. Tamil Naidu
3. Karnataka
4. Telangana

Correct Answer : 1

Explanation

- **Changalikodan Nendran Banana** or famously known as Changalikodan is a GI tagged banana variety cultivated in **Chengazhikodu village** of **Thrissur District in Kerala** state of India. Chengalikodan now cultivated on the banks of the Bharathapuzha river. **Hence, option A is correct.**
- Nendran the commercial plantain variety in Kerala occupies 50 % of the total area in the state & maximum quantity of the fruit is sold locally. Small quantities are exported to the Middle east , with a target of a large Indian community.
- Also due to separate AEZ in Kerala for Banana have boosted the export of plantain. Presently shipment carried out by air is constrained by the higher expenses involved. This protocol of sea shipment is prepared with the national & international references, where the practical trials have been conducted for the quality in shipment.

Question 12:

With reference to manganese in India, consider the following statements:

1. Manganese is mainly used in the manufacturing of steel.
2. Jharkhand is the leading producer of Manganese.

Which of the statements given above is/ are correct?

1. 1 only
2. 2 only
3. Both 1 and 2
4. Neither 1 nor 2

Correct Answer : 1

Explanation

- Manganese is mainly used in the **manufacturing of steel and ferro-manganese** alloy. Nearly 10 kg of manganese is required to manufacture one tonne of steel. It is also used in manufacturing bleaching powder, insecticides and paints. **Hence, statement 1 is correct.**
 - **Odisha(not Jharkhand) is the leading producer of Manganese.** Major mines in Odisha are located in the central part of the iron ore belt of India, particularly in Bonai, Kendujhar, Sundergarh, Gangpur, Koraput, Kalahandi and Bolangir. **Hence, statement 2 is not correct.**
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Question 13:

Consider the following environment legislations:

1. The National Green Tribunal Act
2. The Coastal Regulation Zone Notifications
3. Biological Diversity Act
4. Wildlife Protection Act

Which of the following is the correct chronological sequence of the above laws?

1. 4-2-3-1
2. 4-3-2-1
3. 3-4-1-2
4. 3-2-1-4

Correct Answer : 1

Explanation

- **The National Green Tribunal Act, 2010**
 - It was enacted under India's constitutional provision of Article 21, which assures the citizens of India the right to a healthy environment.
 - The specialized architecture of the NGT will facilitate fast track resolution of environmental cases and provide a boost to the implementation of many sustainable development measures.
 - NGT is mandated to dispose of the cases within six months of their respective appeals.
- **The Coastal Regulation Zone Notifications 1991.**
 - The coastal stretches of seas, bays, estuaries, creeks, rivers and backwaters which are influenced by tidal action were declared "Coastal Regulation Zone" (CRZ) in 1991.
 - India has created institutional mechanisms such as the National Coastal Zone Management Authority (NCZMA) and State Coastal Zone Management Authority (SCZMA) for enforcement and monitoring of the CRZ Notification.
- **Biological Diversity Act, 2002**
 - India's richness in biological resources and indigenous knowledge relating to them is well recognized
 - The legislation aims at regulating access to biological resources so as to ensure equitable sharing of benefits arising from their use
 - The Commission for Agricultural Costs & Prices (CACP) is an attached office of the Ministry of Agriculture and Farmers Welfare, Government of India.
- **Wildlife Protection Act, 1972**
 - This Act provides for the protection of the country's wild animals, birds, and plant species, in order to ensure environmental and ecological security. Among other things, the Act lays down restrictions on hunting many animal species.
 - The Act was last amended in the year 2006. An Amendment bill was introduced in the Rajya Sabha in 2013 and referred to a Standing Committee, but it was withdrawn in 2015.
 - **Hence, option A is correct.**

Question 14:

With reference to World Trade Organisation, consider the following statements:

1. The WTO is not a UN specialized agency
2. All the members of WTO are also members of the United Nations.

Which of the statements given above is/are correct?

1. 1 only

2. 2 only
3. Both 1 and 2
4. Neither 1 nor 2

Correct Answer : 1

Explanation

- The WTO is not a UN specialized agency, it has maintained strong relations with the UN and its agencies since its establishment. **Hence, statement 1 is correct.**
 - The WTO-UN relations are governed by the “Arrangements for Effective Cooperation with other Intergovernmental Organizations-Relations between the WTO and the United Nations” signed on 15 November 1995.
 - The WTO Director General participates in the Chief Executive Board which is the organ of coordination within the UN system.
 - The WTO has 164 members (including European Union) and 23 observer governments (like Iran, Iraq, Bhutan, Libya etc). Whereas, The United Nations has 193 sovereign states that are members of the United Nations and have equal representation in the UN General Assembly. **Hence, statement 2 is not correct.**
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Question 15:

With reference to the Swamitva scheme, which of the following is correct?

1. It aims to guarantee tenancy rights to marginalised farmers.
2. It aims to make every farm household independent.
3. It aims to map rural inhabited lands using the latest survey methods.
4. It aims to provide patent rights to marginalised craftsmen.

Correct Answer : 3

Explanation

- The Swamitva scheme helps to **map rural inhabited lands using drones and latest survey** methods. The scheme will ensure streamlined planning, revenue collection and provide clarity over property rights in rural areas. **Hence, option C is correct.**
 - This will open up avenues for applying for loans from financial institutions by the owners. Disputes related to property would also be settled through the title deeds allotted through this scheme.
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Question 16:

Which of the following birds are migratory and fly to India every year?

1. White stork
2. Forest wagtail
3. Sarus crane
4. Rosy starling

Select the correct answer codes below:

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

Correct Answer : 2

Explanation

- India is an important migratory stop-over for migratory birds in South-East Asia. With the advent of winter every year large flocks of migratory birds fly in from Central Russia and Europe to different parts of our country.
 - Some of these are Rosy starling, Garganey duck, Forest wagtail and White stork. Sarus crane is the tallest bird of India, it cannot fly. **Hence, option B is the correct answer.**
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Question 17:

With reference to “Artificial glaciers” consider the following statements:

1. They induce moisture in the clouds so as to cause rainfall.
2. They help to mitigate the impact of climate change.

Which of the statements given above is/are correct?

1. 1 only
2. 2 only
3. Both 1 and 2
4. Neither 1 nor 2

Correct Answer : 2

Explanation

- Glacial meltwater is a necessity for most villages in Ladakh. Much of this is stored up in glaciers, which help feed vital Asian waterways like the Yangtze, Mekong and Indus rivers.
 - Normally, winter snowfall allows glaciers to replace the melted ice they lose during the springtime.
 - However, these glaciers are no longer getting enough annual snowfall to offset their lost water due to global warming and are receding.
 - **Artificial glaciers are an innovation to mitigate the impact of climate change in Ladakh. Hence, statement 2 is correct.**
 - Mr. Chewang Norphel made **canals to divert the water from the main stream to small catchment areas located near the village.** He also created a shaded area to keep the water frozen in winters. **Hence, statement 1 is not correct.**
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Question 18:

Which of the following are the advantages of Subsurface Drip Irrigation?

1. Enhanced fertiliser efficiency
2. Uniform and highly efficient water application
3. Cheap installation cost.

Select the correct answer using the code given below:

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

Correct Answer : 3

Explanation

- **Subsurface Drip Irrigation:** Subsurface Drip Irrigation (SDI) is a low-pressure, low volume irrigation system that uses buried tubes to apply water. The applied water moves out of the tubes by soil matrix suction. **Its installation cost is high. Hence, statement 3 is not correct.**
- Wetting occurs around the tube and water moves out in the soil in all directions. The potential advantages of SDI are:

- a) water conservation b) **enhanced fertiliser efficiency** c) **uniform and highly efficient water application** d) elimination of surface infiltration problems and evaporation losses, e) flexibility in providing frequent and light irrigations f) Reduced problems of disease and weeds g) lower pressure required for operation. **Hence, statement 1 and 2 are correct.**
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Question 19:

Consider the following statements about SOFIA:

1. SOFIA is a NASA project that has recently discovered water on the surface of the Moon.
2. The water has been discovered in the shadowed part of the Moon.

Which of the statements given above is/are not correct?

1. 1 only
2. 2 only
3. Both 1 and 2
4. Neither 1 nor 2

Correct Answer : 1

Explanation

- **SOFIA, the Stratospheric Observatory for Infrared Astronomy** is a joint project of NASA and the German Aerospace Center (DLR).
Launched in May 1977, it is a Boeing 747SP aircraft modified to carry a 2.7-meter (106-inch) reflecting telescope to observe the infrared universe.
 - SOFIA has discovered water on the Clavius Crater, the largest crater of the Moon, also visible from earth. **Hence, statement 1 is correct.**
The crater is a sun-lit part of the moon. **Hence, statement 2 is not correct.**
 - The Sahara desert has 100 times the amount of water than what SOFIA detected in the lunar soil.
 - The new discovery shows that the sun-lit part of the moon can also contain or retain water molecules.
 - Data from this location revealed water in concentrations of 100 to 412 parts per million - roughly equivalent to a 12-ounce bottle of water - trapped in a cubic meter of soil spread across the lunar surface.
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Question 20:

Consider the following statements:

1. The sanitation is mentioned in the concurrent list of Seventh Schedule of the Indian Constitution.
2. The responsibility of planning, funding and implementation of water resources and sanitation projects, primarily lies with the state governments.

Which of the statements given above is/are correct?

1. 1 only
2. 2 only
3. Both 1 and 2
4. Neither 1 nor 2

Correct Answer : 2

Explanation

- As per the Indian Constitution, sanitation is a state-subject under List II(Entry no. 6) of the Seventh Schedule. **Hence, statement 1 is not correct.**
 - The responsibility of planning, funding and implementation of water resources and sanitation projects, primarily lies with the state governments.
 - The Central Government plays an advisory role, and therefore, with the formulation of various policies and the Model Bills, the Centre is making efforts to develop and manage the projects and its uses in various sectors of economy. **Hence, statement 2 is correct.**
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