

TNPSC Previous Years' Original Questions & Answers

SCIENCE

GROUP I – 2025

PHYSICS

1. One Rutherford is equal to

- A) 10^8 disintegrations per second
- B) 10^4 disintegrations per second
- C) 10^6 disintegrations per second
- D) 1 disintegrations per second

Explanation:

Ans : (C)

The Rutherford (Rd) is a non-SI unit of radioactivity named after the famous physicist Ernest Rutherford, who made pioneering contributions to nuclear physics and the understanding of radioactive decay.

- ◆ 1 Rutherford = 1,000,000 disintegrations per second
- ◆ That is, 1 Rd = 10^6 disintegrations/second

This unit measures how many atomic nuclei are decaying (or disintegrating) in one second. Radioactivity is essentially the process of unstable atoms losing energy by emitting radiation, and this is counted in disintegrations per second.

SI Equivalent:

The internationally accepted SI unit for radioactivity is the Becquerel (Bq):

- ◆ 1 Becquerel = 1 disintegration per second Therefore:
- 1 Rutherford = 10^6 Bq

Example:

If a radioactive sample has an activity of 2 Rd, it means it undergoes 2 million disintegrations per second, or 2×10^6 Bq.

2. Kessler syndrome refers to

- A) Radio Frequency Interference in space
- B) Light Pollution in space
- C) Accumulation satellite fragments, spent rocket stages and other discarded materials in space
- D) Formation of Cirrus, Cumulus, Cumulo Nimbus clouds that distract s the light penetration

Explanation:

Ans : (C)

The Kessler Syndrome, proposed by NASA scientist Donald J. Kessler in 1978, refers to a scenario in which the density of objects in low Earth orbit (LEO) — including defunct satellites, spent rocket stages, and space debris — becomes so high that collisions between objects cause a chain reaction.

In this chain reaction:

- ◆ A single collision creates a cloud of debris.
- ◆ That debris increases the likelihood of further collisions.
- ◆ Over time, this can make certain orbits unusable due to the high risk of damage to active satellites or spacecraft.

This phenomenon poses a major risk to:

- ◆ Communication satellites
- ◆ Weather and navigation systems
- ◆ Manned space missions, including the International Space Station

Real-World Examples

- ◆ In 2009, a defunct Russian satellite (Kosmos 2251) collided with a working American satellite (Iridium 33), generating over 2,000 trackable debris pieces.
- ◆ In 2007, China conducted an anti-satellite missile test (ASAT), which destroyed its own weather satellite, creating over 3,000 pieces of debris — one of the largest single debris-generating events.

CHEMISTRY

3. Which of the statements are True?

- i) Octane number increases with chain length.
- ii) Cycloalkanes have higher Octane number than straight chain alkanes.
- iii) Alkenes and aromatic hydrocarbon have higher Octane number than straight chain alkanes
- iv) Branched chain alkanes have lower octane number than straight chain alkanes.

Select the correct answer :

- A) (i) and (iv)
- B) (i) and (ii)
- C) (ii) and (iii)
- D) (i), (ii), (iii) and (iv)

Explanation:

Ans : (C)

i) Octane number increases with chain length.-False

In general, as the chain length of straight-chain alkanes increases, the octane number decreases. This is because longer straight-chain hydrocarbons are more prone to knocking (premature combustion in engines), which is undesirable. For example, n-heptane (C_7H_{16}) has an octane number of 0, while n-octane (C_8H_{18}) would have an even lower octane rating if it were used as a reference (but n-octane isn't a primary reference). Shorter chains or branched chains have higher octane numbers.

ii) Cycloalkanes have higher octane numbers than straight-chain alkanes.-True

Cycloalkanes (like cyclohexane) generally have higher octane numbers compared to straight-chain alkanes because their cyclic structure resists knocking better than linear chains. For example, cyclohexane has a higher octane number than n-hexane.

iii) Alkenes and aromatic hydrocarbons have higher octane numbers than straight-chain alkanes.-True

- ◆ Alkenes (like isobutene) typically have higher octane numbers than straight-chain alkanes because the double bond increases resistance to knocking.

◆ Aromatic hydrocarbons (like benzene, toluene) have very high octane numbers due to their stable ring structures. For example, toluene has an octane number of ~120, much higher than n-heptane (0).

iv) Branched-chain alkanes have lower octane numbers than straight-chain alkanes.-False

Branched-chain alkanes (like isooctane, the standard for 100 octane) have higher octane numbers than straight-chain alkanes. Branching reduces knocking, which is why fuels are often formulated with branched hydrocarbons.

4. Which of the following statements are correct about PFAS?

- i) PFAS is per and poly fluoro alkyl substances.
- ii) It is used in paint industries.
- iii) PFAS are endocrine disrupters.

Select the correct answer :

- A) (i) and (ii) are correct
- B) (ii) and (iii) are correct
- C) (i) and (iii) are correct
- D) (i) only correct

Explanation:

Ans : (*)

PFAS (Per- and Polyfluoroalkyl Substances) are a large group of human-made chemicals used since the 1940s in various industrial and consumer products. They are known for their water-, grease-, and stain-resistant properties, which make them useful in products like non-stick cookware (e.g., Teflon), waterproof clothing, firefighting foam, food packaging, and more.

PFAS are often called "forever chemicals" because they are extremely persistent in the environment and human body, meaning they do not break down easily. Exposure to PFAS has been linked to various health risks, including hormonal (endocrine) disruption, liver damage, decreased fertility, immune system effects, and certain cancers.

Due to their persistence and potential harm, PFAS are now a major environmental and public health concern, with many countries working to regulate and reduce their use.

(i) PFAS is per and poly fluoro alkyl substances.

Correct

PFAS stands for Per- and Polyfluoroalkyl Substances. These are a large group of synthetic chemicals known for their strong carbon-fluorine bonds, making them highly resistant to degradation.

(ii) It is used in paint industries.

Correct

PFAS are added to paints and coatings for their:

- ◆ Water repellency
- ◆ Stain resistance
- ◆ Chemical resistance
- ◆ Smooth spreading & leveling properties and Durability and weather resistance

(iii) PFAS are endocrine disrupters.

Correct

Some PFAS compounds are known to interfere with the endocrine system, affecting hormonal balance and potentially leading to health issues like reproductive disorders, developmental problems, and even cancer.

All the statements are correct.

5. Reason and Assertion type :

Assertion [A] : Overloading of Nitrogen in the environment can cause an imbalance to the natural nitrogen cycle.

Reason [R] : Nitrogen becomes a pollutant when it escapes into the environment and reacts with other organic compounds.

Select the correct answer :

- A) [A] is true but [R] is false
- B) Both [A] and [R] are true; and [R] is the correct explanation of [A]
- C) [A] is false, [R] is true
- D) Both [A] and [R] are true, but [R] is not the correct explanation of [A]

Explanation:

Ans : (B)

Assertion [A] is true: Overloading of nitrogen — often due to excessive use of chemical fertilizers and industrial emissions — disrupts the natural nitrogen cycle. It can lead to environmental problems such as eutrophication in water bodies, soil acidification, and loss of biodiversity.

Reason [R] is also true: When nitrogen compounds like nitrates, ammonia, or nitrogen oxides escape into the environment, they can react with other substances, forming pollutants like smog, ozone, or particulate matter. This makes nitrogen a pollutant when present in excess or in the wrong form.

Since the escape and reactivity of nitrogen compounds in the environment directly explain how overloading disrupts the nitrogen cycle, [R] is the correct explanation of [A].

BIOLOGY

6. Match the following hormone with the disorder caused :

- | | |
|--------------------|-----------------------|
| a) Insulin | 1. Cushing's syndrome |
| b) Thyroxine | 2. Diabetes insipidus |
| c) Glucocorticoids | 3. Acromegaly |
| d) Growth hormone | 4. Goitre |
| | 5. Diabetes Mellitus |

Codes:

- | | a) | b) | c) | d) |
|------|----|----|----|----|
| A) 5 | 1 | 2 | 3 | |
| B) 2 | 4 | 3 | 1 | |
| C) 5 | 4 | 1 | 3 | |
| D) 2 | 4 | 1 | 3 | |

Explanation:

(a) Insulin

Primary disorder: Diabetes Mellitus (Type 1 or Type 2)

- ◆ Insulin is produced by the pancreas and regulates blood glucose levels. Deficiency or resistance to insulin leads to Diabetes Mellitus.

(b) Thyroxine

Primary disorder: Goitre

- ◆ Thyroxine (T4) is a thyroid hormone. Deficiency or imbalance can lead to thyroid enlargement, known as Goitre.

(c) Glucocorticoids (e.g., Cortisol)

Primary disorder: Cushing's syndrome

- ◆ Excess glucocorticoids (often due to overproduction or medication) cause Cushing's syndrome, characterized by weight gain, high blood pressure, and other symptoms.

(d) Growth Hormone (GH)

Primary disorder: Acromegaly (in adults) or Gigantism (in children)

- ◆ Overproduction of growth hormone in adults leads to Acromegaly, characterized by enlarged bones and tissues.

Incorrect Matches:

- ◆ Diabetes insipidus is caused by issues with Antidiuretic Hormone (ADH), not insulin or glucocorticoids.
- ◆ Cushing's syndrome is not linked to thyroxine or growth hormone. Cushing syndrome is a hormonal disorder caused by prolonged exposure to high levels of Cortisol, a steroid hormone produced by the adrenal glands.

7. Choose the right matches :

- 1) Carotenoid - $C_{55}H_{70}O_5N_4Mg$
- 2) Chlorophyll 'a' - $C_{55}H_{72}O_5N_4Mg$
- 3) Chlorophyll 'b' - $C_{55}H_{70}O_6N_4Mg$
- 4) Xanthophyll - $C_{50}H_{70}O_5Mg$

Select the correct answer :

- A) (1) and (2) are correct
- B) (3) and (4) are correct
- C) (2) and (3) are correct
- D) (1) and (4) are correct

Explanation:

1. Carotenoid ($C_{55}H_{70}O_5N_4Mg$)

- ◆ **Incorrect.** Carotenoids are hydrocarbons (e.g., β -carotene, $C_{40}H_{56}$) or oxygenated derivatives (xanthophylls, e.g., $C_{40}H_{56}O_2$), but they do not contain nitrogen (N) or magnesium (Mg).
- ◆ The given formula resembles a chlorophyll structure, not a carotenoid.

2. Chlorophyll 'a' ($C_{55}H_{72}O_5N_4Mg$)

- ◆ **Correct.** This is the correct formula for chlorophyll a: $C_{55}H_{72}O_5N_4Mg$
Contains 4 nitrogen atoms and 1 magnesium atom in its porphyrin ring.

Ans : (C)

3. Chlorophyll 'b' ($C_{55}H_{70}O_6N_4Mg$)

- ◆ **Correct.** This is the molecular formula of chlorophyll 'b'. It differs from chlorophyll 'a' by having a formyl group ($-CHO$) instead of a methyl group ($-CH_3$), changing the formula to $C_{55}H_{70}O_6N_4Mg$

4. Xanthophyll ($C_{50}H_{70}O_5Mg$)

- ◆ **Incorrect.** Xanthophylls are oxygenated carotenoids (e.g., lutein, $C_{40}H_{56}O_2$) and do not contain magnesium (Mg). The given formula is incorrect.

8. The Nobel Prize in Medicine was awarded to Victor Ambros and Gary Ruvkun for their discovery of

- A) Expression Sequence Tags
- B) Micro RNA
- C) DNA micro array
- D) SNP's

Explanation:

Ans : (B)

Victor Ambros and Gary Ruvkun were awarded the 2024 Nobel Prize in Physiology or Medicine (shared with Sydney Brenner) for their discovery of microRNAs (miRNAs) and their role in gene regulation.

Key Contribution:

- ◆ Ambros and Ruvkun identified small non-coding RNA molecules (miRNAs) that regulate gene expression by binding to messenger RNA (mRNA), leading to gene silencing.
- ◆ Their work revolutionized understanding of genetic regulation and opened new fields in RNA biology.

MicroRNAs (miRNAs) are:

- ◆ Short RNA molecules (about 21–23 nucleotides long)
- ◆ Non-coding: they do not code for proteins
- ◆ Involved in post-transcriptional regulation of gene expression

They function by:

1. Binding to complementary sequences on target mRNAs (usually in the 3' untranslated region)
2. Leading to either:
 - mRNA degradation, or
 - Repression of translation

This process reduces the amount of protein that get produced from that mRNA.

Before this discovery, it was believed that gene regulation was mostly controlled by proteins (transcription factors, repressors, etc.). But miRNAs revealed a whole new layer of RNA-based gene regulation.

Key impacts:

Developmental Biology

- miRNAs regulate key genes involved in timing of cell differentiation and organ development

Cancer

- Many miRNAs are found to be abnormally expressed in tumors
- miRNAs regulate key genes involved in timing of cell differentiation and organ development

Neurological Disorders

- Linked to diseases like Alzheimer's, Parkinson's, and autism

Therapeutics

- Targeting miRNAs is now a promising strategy for drug development
- miRNA mimics or inhibitors are in clinical trials

9. **The biological oxygen demand is the amount of dissolved oxygen required by in water.**

- A) Microbes B) Plants
C) Animals D) Seaweeds

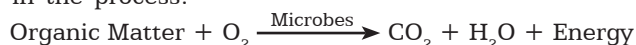
Explanation:

Ans : (A)

Biological Oxygen Demand (BOD) is a key indicator of water quality that measures the amount of **dissolved oxygen** required by **microorganisms** (mainly aerobic bacteria) to decompose organic matter present in a water sample. When organic waste such as plant debris, sewage, or industrial effluents enters a water body, microbes begin breaking it down. During this process, they consume oxygen. The greater the amount of organic matter, the more oxygen is needed for its decomposition.

BOD is usually measured over a **period of five days at 20°C**, and it reflects the level of organic pollution in the water. A **high BOD indicates a high level of biodegradable material**, which means more oxygen is being consumed by microbes, potentially leading to oxygen depletion. This can harm aquatic life such as fish, which rely on dissolved oxygen to survive. On the other hand, low BOD levels suggest that the water is relatively clean and contains less organic waste.

- ◆ Microbes (Option A) are the primary agents of organic decomposition.
- ◆ They metabolize organic pollutants, consuming oxygen in the process:



- ◆ Plants (B), Animals (C), and Seaweeds (D) respire but do not significantly contribute to BOD because they do not decompose organic waste.

Significance of BOD:

- ◆ High BOD = High organic pollution (e.g., sewage discharge, agricultural runoff).
- ◆ Low BOD = Cleaner water (e.g., mountain streams).
- ◆ BOD levels > 5 mg/L indicate polluted water unsuitable for aquatic life.

10. **Reason and Assertion type :**

Assertion [A] : University students think more critically about the new subjects and situation they encounter.

Reason [R] : University professors encourage conceptual learning and understanding of the new subject concepts at the primary levels.

Select the correct answer :

- A) [A] is true but [R] is false

B) Both [A] and [R] are true; and [R] is correct explanation of [A]

C) [A] is false but [R] is true

D) [A] and [R] are true, but [R] is not the correct explanation of [A]

Explanation:

Ans : (D)

Assertion [A] is true:

University students do tend to think more critically about new subjects and situations. This is because higher education encourages analytical thinking, exposure to multiple perspectives, and application of knowledge.

Reason [R] is also true:

University professors do promote conceptual learning and deeper understanding. However, the statement wrongly mentions "primary levels", which is inaccurate in the context of university education. Professors work at higher levels of education, not primary levels.

Additionally, even if we overlook the mention of "primary levels," Reason [R] is not the direct explanation of why university students think critically. Critical thinking develops from a combination of factors like student maturity, curriculum design, and exposure to complex ideas — not only because professors promote conceptual learning.

11. **Match the following and find out the correct sequence.**

- | | |
|----------------------|---|
| a) Abiotic component | 1. The crushed cane after extraction of juice |
| b) Bagasse | 2. Animals that feed on other animals |
| c) Carcinogen | 3. Non-living component in an eco system |
| d) Carnivorous | 4. Toxic organic compound causing cancer |

Codes:

- | | a) | b) | c) | d) |
|----|----|----|----|----|
| A) | 1 | 2 | 3 | 4 |
| B) | 2 | 3 | 4 | 1 |
| C) | 3 | 1 | 4 | 2 |
| D) | 4 | 1 | 2 | 3 |

Explanation:

Ans : (C)

Abiotic Component – Non-living Component in an Ecosystem

- ◆ In an ecosystem, abiotic components refer to the non-living physical and chemical elements that influence and shape the environment. These include factors such as sunlight, temperature, water, air, soil, minerals, and pH levels. Though they are not living, abiotic components play a crucial role in supporting life by directly affecting the survival, growth, and reproduction of living (biotic) organisms. For example, the amount of sunlight and rainfall determines the

genetic variation. Hence, Statements 1 and 2 are considered correct according to the given options.

21. What is the characteristic features of colour-blindness. Given below.

- A) Absence of rod cells in retina
- B) Absence of cone cells in retina
- C) Absence of lusture in lens
- D) Lack of colour pigments in the Eye

Explanation :

Ans. (B)

Colour blindness is a vision disorder caused by the absence or malfunction of cone cells in the retina. Cone cells are responsible for detecting different colours, especially red, green, and blue. People with colour blindness have difficulty distinguishing certain colours, most commonly red and green. The condition is usually inherited and is more common in males because the responsible genes are located on the X chromosome.

22. Match the following :

- | | |
|--------------------------|-------------------------|
| a) Agaricus bisporus | 1. Milky mushroom |
| b) Pleurotus flabellatus | 2. Button mushroom |
| c) Volvariella volvacea | 3. Oyster mushroom |
| d) Calocybe indica | 4. Paddy straw mushroom |

a) b) c) d)

A) 2 3 4 1

B) 2 4 1 3

C) 2 1 4 3

D) 1 2 3 4

Explanation :

Ans. (A)

Agaricus bisporus is popularly known as the button mushroom, the most widely cultivated edible mushroom. Pleurotus flabellatus belongs to the oyster mushroom group. Volvariella volvacea is commonly called the paddy straw mushroom, cultivated on rice straw. Calocybe indica is known as the milky mushroom, a tropical species widely cultivated in India because of its high yield and adaptability to warm climatic conditions.

23. 2018 Nobel prize was awarded to James P. Allison and Tasuku Honjo for their contribution on

- A) Cancer therapy
- B) AIDS therapy
- C) Malaria therapy
- D) Leprosy therapy

Explanation :

Ans. (A)

The 2018 Nobel Prize in Physiology or Medicine was awarded jointly to James P. Allison and Tasuku Honjo for developing cancer immunotherapy. Their research showed how the body's immune system can be activated to attack cancer cells by blocking immune checkpoint proteins such as CTLA-4 and PD-1. This breakthrough revolutionized cancer treatment and has significantly improved survival rates for patients with several types of advanced cancers.

24. Match it

- | List I (Event) | List II (Day) |
|---------------------|----------------|
| a) World AIDS Day | 1. December 10 |
| b) Navy Day | 2. December 5 |
| c) World Soil Day | 3. December 4 |
| d) Human Rights Day | 4. December 1 |

- | | a) | b) | c) | d) |
|----|----|----|----|----|
| A) | 4 | 3 | 2 | 1 |
| B) | 3 | 4 | 1 | 2 |
| C) | 4 | 1 | 3 | 2 |
| D) | 1 | 2 | 3 | 4 |

Explanation :

Ans. (A)

World AIDS Day is observed on 1 December to raise awareness about HIV/AIDS. Indian Navy Day is celebrated on 4 December to commemorate the success of Operation Trident during the 1971 Indo-Pak War. World Soil Day is observed on 5 December to promote sustainable soil management. Human Rights Day is celebrated on 10 December, marking the adoption of the Universal Declaration of Human Rights in 1948.

25. The success of Green Revolution ensured food security in India. But today it is under contraversies. With reference to Green Revolution.

- 1. Overuse of chemicals
- 2. Vanishing bio-diversity
- 3. Drying aquifers
- 4. Use of bio-pesticides

Which of the above is/are have caused land degradation

- A) 1, 2 and 3 only
- B) 1, 2, 3 and 4
- C) 1 and 2 only
- D) 1 and 4 only

Explanation :

Ans. (A)

The Green Revolution greatly increased food production but also created environmental concerns. Excessive use of chemical fertilizers and pesticides degraded soil quality, loss of biodiversity reduced ecological balance, and over-extraction of groundwater led to the drying of aquifers. These factors contributed to land degradation and reduced long-term agricultural sustainability. In contrast, the use of bio-pesticides is environmentally friendly and helps reduce pollution rather than causing land degradation.

26. The green house gases

- A) Absorb and remit IR radiations partially towards earth
- B) Only absorb IR radiation and does not emit.
- C) Only emit IR radiation towards earth.
- D) Reflect the IR radiation

Explanation :

Ans. (A)

Greenhouse gases such as carbon dioxide, methane, water vapour, and nitrous oxide absorb infrared (IR) radiation emitted by the Earth's surface. They then re-emit part of this energy back toward the Earth, trapping heat in the atmosphere. This natural greenhouse effect keeps the Earth warm enough to support life. However, excessive greenhouse gas emissions due to human activities enhance global warming and contribute to climate change.

27. Which of the following is ketohexose ?

- A) Glucose
- B) Fructose
- C) Ribose
- D) Galactose

Explanation :

Ans. (B)

Fructose is a ketohexose, meaning it contains six carbon atoms and a ketone functional group. It is commonly

known as fruit sugar and is naturally found in fruits, honey, and many vegetables. In contrast, glucose and galactose are aldohexoses, while ribose is an aldopentose. Fructose is one of the sweetest naturally occurring sugars and serves as an important source of energy.

28. The complete manure is that which supplies to the soil

- A) S, K and N B) N, P and K
C) S and N D) S, N and P

Explanation : **Ans. (B)**

A complete manure or complete fertilizer supplies the three essential primary plant nutrients: Nitrogen (N), Phosphorus (P), and Potassium (K). Nitrogen promotes leafy growth, phosphorus supports root development and flowering, while potassium improves disease resistance and overall plant health. Fertilizers containing all three nutrients are commonly known as NPK fertilizers and are widely used to enhance soil fertility and increase agricultural productivity.

29. Which one of the following is not reserve food of fungi?

- A) Glycogen B) Fat
C) Starch D) Both (A) and (B)

Explanation : **Ans. (C)**

Fungi store their reserve food mainly as glycogen and fats (lipids). Unlike green plants, fungi do not synthesize or store starch because they lack chlorophyll and are heterotrophic organisms. They obtain nutrients by absorbing organic matter from their surroundings. Therefore, starch is not a reserve food material in fungi, making it the correct answer.

30. Which among the following is used to treat sewage?

- A) Diatom Fucus B) Chondrus, Chara
C) Chlorella, Chlamydomonas
D) Chondrus, Gracilaria

Explanation : **Ans. (C)**

Chlorella and Chlamydomonas are green algae commonly used in sewage treatment. They absorb nutrients such as nitrates and phosphates from wastewater while releasing oxygen through photosynthesis. The oxygen supports the growth of aerobic bacteria, which decompose organic waste efficiently. These algae help reduce water pollution, improve water quality, and play an important role in biological wastewater treatment systems.

31. Which of the following is the symptom of the protein deficiency disorder, "Kwashiorkor"?

- A) Fatty Liver B) Pigeon Chest
C) Burning feet D) Pot belly

Explanation : **Ans. (D)**

Kwashiorkor is a severe protein deficiency disease commonly affecting young children. Its characteristic symptoms include a pot belly (distended abdomen) due to fluid accumulation (oedema), swollen legs, stunted growth, muscle wasting, skin changes, and discoloured hair. The condition usually occurs when the diet contains enough calories but lacks adequate protein. Early diagnosis and protein-rich nutrition are essential for recovery.

32. Rejection is not occurs, when tissues or organs are transplanted from

1. Same individual 2. Identical twins
3. Two different species
A) 1 alone B) 2 alone
C) 1 and 2 D) 3 alone

Explanation : **Ans. (C)**

Transplant rejection does not occur when tissues or organs are transplanted within the same individual (autograft) or between identical twins (isograft) because their genetic makeup is identical. Since the immune system recognizes the transplanted tissue as its own, no immune rejection takes place. In contrast, transplantation between different species (xenograft) usually triggers a strong immune response, leading to rejection

33. An Ecosystem means

- A) Biotic community
B) Biotic community and its non-living things
C) Non-living things D) Population

Explanation : **Ans. (B)**

An ecosystem consists of a biotic community (plants, animals, and microorganisms) interacting with the abiotic environment (air, water, soil, sunlight, and minerals). These living and non-living components function together through energy flow and nutrient cycling. Ecosystems may be natural, such as forests and lakes, or artificial, such as agricultural fields. The interaction between organisms and their physical environment maintains ecological balance.

34. Which among the following atmospheric layer is most important for all biological activity?

- A) Stratosphere B) Troposphere
C) Mesosphere D) Ionosphere

Explanation : **Ans. (B)**

The troposphere is the lowest layer of the atmosphere and contains most of the Earth's air, water vapour, and weather phenomena. It supports all biological activities by providing oxygen for respiration, carbon dioxide for photosynthesis, and suitable temperatures for life. Nearly all living organisms exist within or depend on processes occurring in the troposphere, making it the most important atmospheric layer for sustaining life.

35. Find the following statement is not correct-based on the geological time scale

- A) Cambrian – China
B) Carboniferous – Dominance of carbon
C) Eocene – Daybreak
D) Holocene – Complete

Explanation : **Ans. (A)**

The term Cambrian is derived from Cambria, the Latin name for Wales, where rocks of this age were first studied. Therefore, associating the Cambrian period with China is incorrect. The Carboniferous period is associated with extensive coal formation, Eocene means "dawn of recent life," and Holocene refers to the present geological epoch. Hence, only Statement A is incorrect.

36. Which country scientist created world's first single chromosome yeast

- A) China B) Australia
C) USA D) Japan

Explanation : **Ans. (A)**

Scientists from China created the world's first yeast with a single synthetic chromosome, marking a major achievement in synthetic biology. By combining the yeast's 16 chromosomes into a single functional chromosome, researchers demonstrated that complex chromosome engineering is possible without affecting the organism's survival. This breakthrough enhances understanding of genome organization and could contribute to advances in biotechnology, genetic engineering, industrial fermentation, and biomedical research.

STATISTICAL INSPECTOR - 2018

PHYSICS

1. The Chairman of International Atomic Energy Agency (IAEA) is?

- A) Hans Felix B) Yukiya Amano
C) Sterling Gole D) Enely Crazon

Explanation : **Ans. (B)**

Yukiya Amano, a Japanese diplomat, served as the Director General of the International Atomic Energy Agency (IAEA) from 2009 to 2019. He succeeded Mohamed ElBaradei and led the agency in areas including nuclear safeguards, nuclear safety, security, and the peaceful use of nuclear energy.

2. Four identical copper cylinders are painted differently. If they are all heated to the same temperature and left in vacuum, which will cool rapidly?

- A) Painted shiny white B) Painted rough black
C) Painted shiny black D) Painted rough white

Explanation : **Ans. (B)**

Heat transfer by radiation is important when an object is placed in a vacuum, because conduction and convection are greatly reduced. The rate of thermal radiation depends on the emissivity of the surface. Rough black surfaces have high emissivity and are therefore the best emitters of thermal radiation. Shiny surfaces have low emissivity and radiate heat less effectively. Hence, among the given copper cylinders, the rough black-painted cylinder cools most rapidly.

3. Ohm's law does not apply to?

- A) A.C. Circuits B) Conductors
C) Semiconductors
D) Conductors when there is a change in temperature

Explanation : **Ans. (C)**

Ohm's law is expressed as:

$$V = IR$$

where V = potential difference, I = current, and R = resistance. For an ohmic conductor, resistance remains constant when physical conditions such as temperature are unchanged. In semiconductors, resistance varies with temperature, applied voltage, and carrier concentration. Thus, the relationship between voltage and current is generally nonlinear:

$$V \neq IR \text{ (with constant } R\text{)}$$

Therefore, semiconductors generally do not obey Ohm's law.

4. Raman effect is due to

- A) Incoherent Scattering
B) Coherent Scattering
C) No Scattering
D) Refraction

Explanation : **Ans. (A)**

The Raman Effect is the phenomenon in which light undergoes inelastic scattering when it interacts with molecules. During this interaction, a small fraction of the incident photons exchange energy with the rotational or vibrational energy levels of the molecules. Consequently, the scattered light has a frequency different from that of the incident light.

Unlike Rayleigh scattering, where there is no change in frequency and the scattering is elastic, Raman scattering involves a change in photon energy. Therefore, Raman scattering is generally described as inelastic (incoherent) scattering, not coherent scattering. The effect was discovered by C. V. Raman in 1928, for which he received the Nobel Prize in Physics in 1930.

5. Hydraulic lift, hydraulic press and hydraulic brake work on

- A) Newton's law B) Archimede's law
C) Pascal's law D) Bernoulli's law

Explanation : **Ans. (C)**

Hydraulic machines operate based on Pascal's law, which states that pressure applied to an enclosed fluid is transmitted equally and undiminished in all directions. The basic relation is:

$$P = F/A$$

where P is pressure, F is applied force, and A is area. In a hydraulic press or lift, a small force applied to a smaller piston produces a larger force on a larger piston. Hydraulic brakes similarly transmit pressure through brake fluid to operate the braking mechanism.

CHEMISTRY

6. Nitrous acid, oxalic acid and acidified solution of FeSO_4 are examples for

- A) Reducing agents B) Oxidising agents
C) Additive agents D) Both (A) and (B)

Explanation : **Ans. (A)**

Nitrous acid (HNO_2), oxalic acid ($\text{H}_2\text{C}_2\text{O}_4$), and acidified ferrous sulphate (FeSO_4) can act as reducing agents because they can donate electrons or undergo oxidation during chemical reactions. In acidified FeSO_4 , Fe^{2+} ions can be oxidised to Fe^{3+} ions, allowing FeSO_4 to reduce another substance. Similarly, oxalic acid can be oxidised to carbon dioxide, while nitrous acid can undergo oxidation depending on the reaction conditions. These substances therefore exhibit reducing properties.

7. Blister copper is

- A) 98% pure copper B) 96% pure copper
C) 90% pure copper D) 92% pure copper

Explanation : **Ans. (A)**

Blister copper is an intermediate product obtained during the extraction and refining of copper from its ores. After smelting and converting, the molten copper contains

approximately 98–99% copper, along with impurities such as iron, sulphur, and other metals. During the converting process, sulphur dioxide escapes and produces characteristic blisters on the surface, giving the metal its name. Further electrolytic refining increases the purity of copper to about 99.9% or higher.

8. Which of the following could act as a propellant for rockets ?

- A) Liquid hydrogen + Liquid nitrogen
- B) Liquid oxygen + Liquid argon
- C) Liquid hydrogen + Liquid oxygen
- D) Liquid nitrogen + Liquid oxygen

Explanation :

Ans. (C)

Liquid hydrogen (LH₂) and liquid oxygen (LOX) form a highly efficient rocket propellant combination. Liquid hydrogen acts as the fuel, while liquid oxygen acts as the oxidizer. Their combustion releases a large amount of energy and produces high-temperature gases that are expelled through the rocket nozzle to generate thrust. The overall reaction is:



This combination provides high specific impulse and has been widely used in space-launch systems.

9. Which of the following is not a Lewis acid?

- A) BF₃
- B) AlCl₃
- C) BeCl₂
- D) BaCl₂

Explanation :

Ans. (D)

A Lewis acid is a substance capable of accepting an electron pair. BF₃, AlCl₃, and BeCl₂ are electron-deficient compounds and can accept electron pairs from Lewis bases. For example, boron in BF₃ has an incomplete octet and can accept an electron pair. BaCl₂ is an ionic compound that dissociates into Ba²⁺ and Cl⁻ ions and is not normally considered a Lewis acid in this context. Therefore, BaCl₂ is the incorrect Lewis-acid classification.

BIOLOGY

10. Who performed First Heart transplant in (1967)?

- A) Christian Barnard
- B) Jan Donald
- C) Willem Kolff
- D) Ian Donald

Explanation :

Ans. (A)

Dr. Christiaan Barnard, a South African cardiac surgeon, performed the world's first successful human-to-human heart transplant on 3 December 1967 at Groote Schuur Hospital in Cape Town. The recipient was Louis Washkansky, who received the heart of a donor who had died following a severe brain injury. The operation marked a major breakthrough in cardiac surgery and organ transplantation, demonstrating that transplantation of a human heart could be successfully achieved.

11. National Doctor's day is celebrated on?

- A) July 12th
- B) July 1st
- C) June 12th
- D) June 1st

Explanation :

Ans. (B)

In India, National Doctors' Day is observed on 1 July every year. The day commemorates the birth anniversary of Dr. Bidhan Chandra Roy, a distinguished physician, freedom fighter, and former Chief Minister of West

Bengal. Dr. Roy was born on 1 July 1882 and died on 1 July 1962. National Doctors' Day recognizes the valuable contributions of doctors to healthcare and public health and highlights their service to society.

12. Symbiosis is an interaction between two species in which

- A) Both live together in direct contact
- B) Both are benefitted
- C) One benefits and other is neither benefitted nor harmed
- D) One benefits and other is harmed

Explanation :

Ans. (A)

Symbiosis refers to a close and long-term biological interaction between organisms of different species. In the traditional definition, the organisms live in close association or direct contact with each other. The interaction may be beneficial to both, beneficial to one, or harmful to one partner. Mutualism is a type of symbiosis in which both organisms benefit, while commensalism benefits one without affecting the other. Thus, symbiosis is broader than mutualism.

13. Which of the following is incorrectly matched?

- A) Turner's syndrome – 44 autosome + XO
- B) Klinefelter's syndrome – 44 autosome + XXY
- C) Down's syndrome – 44 autosome + XYY
- D) Super female – 44 autosome + XXX

Explanation :

Ans. (C)

Turner's syndrome has 45 chromosomes, with 44 autosomes and a single X chromosome (45,X). Klinefelter's syndrome occurs in males with an additional X chromosome (47,XXY). Down's syndrome is caused by trisomy 21, meaning there are three copies of chromosome 21; its chromosome complement is generally 47 chromosomes (47,XX,+21 or 47,XY,+21). Super female (Triple-X syndrome) has 47,XXX chromosomes. XYY describes XYY syndrome, not Down's syndrome.

14. Dodo is a _____ animal?

- A) Endangered
- B) Critically endangered
- C) Rare
- D) Extinct

Explanation :

Ans. (D)

The Dodo (Raphus cucullatus) was a flightless bird that lived on Mauritius, an island in the Indian Ocean. It became extinct during the late 17th century, mainly because of human activities, hunting, habitat changes, and the introduction of non-native animals. The Dodo has no surviving population today. Therefore, it is classified as an extinct species, rather than endangered or critically endangered. It is widely regarded as a symbol of human-caused extinction.

15. Trace elements required for plant growth

- A) N, P, K
- B) Ca, Mg, Fe
- C) Mn, Zn, Cu
- D) C, H, O

Explanation :

Ans. (C)

Trace elements (micronutrients) are mineral nutrients required by plants in very small quantities, but they are essential for normal growth and metabolism. Important

Codes :

	a)	b)	c)	d)
A)	3	2	4	1
B)	3	4	2	1
C)	2	3	1	4
D)	2	1	4	3

Explanation :

Ans : (B)

Madan Mohan Malavia - Along with Annie Besant in 1911 decided to work for a Hind University in Varanasi and through a Parliamentary legislation. It was established in 1916. When he left the vice-chancellorship, it was succeeded by S.Radhakrishnan who later became the President of India. And in 2014, M.M. Malavia was awarded Bharat Ratna posthumously.

Indian National Congress (INC) was founded by A.O. Hume on December 28, 1885.

In 1916, two Home rule movements were launched in the country, one under the leadership of Bal Gangadhar Tilak and the other under Annie Besant. Tilak founded Home Rule league at the Bombay provincial congress at Belgaum in April 1916. Annie Besant founded the second league at Adyar in September 1916.

The Indian National Army - Azad Hind Fauj was an armed force formed by Indian nationalists in 1942, in southeast Asia during world war II by S.C. Bose.

313. Which is not correctly matched ?

- A)** Rahmat Ali - Pakistan
- B)** Vinoba Bhave - Second Individual Satyagrahi
- C)** Linlithgow - August Offer
- D)** Rajaji - Kulakalvi Thittam

Explanation :

Ans : (B)

Chaudhry Rehmat Ali Gujjar was a Pakistani and he advocated for the creation of the state of Pakistan.

The first individual Satya grahi was Acharya Vinoba Bhave. The second was Jawaharlal Nehru and the third one was Brahma Datt. He was one of the inmates of the Gandhi's Ashram.

When the congress ministries in the provinces resigned, the British woke up and wanted to get support of the congress for war.

In march 1940, at Ramgarh session in Bihar, congress demanded a provisional National Government to be set up by passing a resolution. And the demand was responded by Lord Linlithgow in the sort of a proposal which is called August offer. On August 8, 1940, Lord Linlithgow, viceroy made the proposal at Simla, promising the expansion of the Executive Council to include more Indians, the establishment of an advisory council giving full weight to minority opinion and Indians' right to frame their own Constitution.

In 1953, Kula Kalvi Thittam was introduced by C. Rajagopalachari.

About the year 1952, in Madras State, nearly 1.2 million children had enrolled in class 1, but only one third reached even the fifth class. Mostly they joined their fathers' professions. Rajaji, by this time in 1953 introduced a controversial 'Kula Kalvi Thittam' (Hereditary Education

Policy). This policy envisaged only 3 hours schooling every day and introduction of two shifts in elementary schools. In the first shift, the students would study and in the second session the students would go home to learn the livelihoods of their parents. It received wide criticism from many including EVR (Periyar) Demonstrations continued. Finally the scheme was abandoned.

314. Ramsay Macdonald, the British Prime Minister announced the communal award on

- A)** 16th August, 1932
- B)** 20th September, 1932
- C)** 17th November, 1932
- D)** 16th August, 1946

Explanation :

Ans : (A)

On 16 August 1932 the British Prime Minister Ramsay MacDonald made an announcement, which came to be known as the **Communal Award**. According to this award, the depressed classes were considered as a separate community and as such provisions were made for separate electorates for them. Mahatma Gandhi protested against the Communal Award and went on a fast unto death in the Yeravada jail on 20 September 1932. Finally, an agreement was reached between Dr Ambedkar and Gandhi. This agreement came to be called as the **Poona Pact**. The British Government also approved it. Accordingly, 148 seats in different Provincial Legislatures were reserved for the Depressed Classes in place of 71 as provided in the Communal Award.

315. Choose the incorrect pair from the following.

- A)** Sarvajanik Sabha - M.G. Ranade
- B)** Indian National Congress - A.O. Hume
- C)** London Indian Association - Dadabai Naoroji
- D)** Madras Native Association - Surendranath Banerjee

Explanation :

Ans : (D)

All the given pairs are matched correctly but the Madras Native Association was not entirely related to Surendranath Banerjee.

One of the first attempts to organise and vent the grievances against the British came through the formation of the **Madras Native Association (MNA) on 26 February 1852**. An association of landed and business classes of the Madras Presidency, they expressed their grievances against the Company's administration in the revenue, education and judicial spheres. **Gajula Lakshminarasu**, who inspired the foundation of MNA, was a prominent businessman in Madras city. The life of MNA was short. Lakshminarasu died in 1866 and by 1881, the association ceased to exist. Though the MNA did not achieve much in terms of reforms, it was the beginning of organised effort to articulate Indian opinion.

Sarvajanik Sabha started in Pune by M.G. Ranade was a socio-political organisation in British India on 2nd April 1870. The organisation was precursor of Indian National Congress. It was co-founded by S.H. Chiplunkar and Ganesh Vasudeo Joshi. It provided many leaders and

catapulted them into national mainstream politics and one among them was Bal Gangadhar Tilak. In 2019, Meera Pavagi was elected as the first woman president of the organisation.

London Indian Society was an Indian organisation founded in London in March 1865 under the leadership of Dadabhai Naoroji and W.C. Bannerji. The main aim of this society was to create awareness of the rising Indian social and political aspirations in England. This society was superseded by the East India Association founded by Dadabhai Naoroji in 1866..

316. Who was the First Women President of Indian National Congress ?

- A) Sarojini Naidu
- B) Annie Besant
- C) Vijayalakshmi Pandit
- D) Indira Gandhi

Explanation :

Ans : (B)

Annie Besant was the first women president of INC. She presided over the 1917 Calcutta session of the INC.

Sarojini Naidu was popularly known as "Nightingale of India", a sobriquet given by Gandhi. She was called 'Bharat Kokila' by Rabindranath Tagore. Born in a Bengali family at Hyderabad, she became the governor of the United Provinces in 1947 becoming the first woman to hold the office of governor in the Dominion of India. She participated in Gandhi's Dandi March. The other prominent woman was Matangini Hazra.

Vijayalakshmi Pandit was Jawaharlal Nehru's sister. She was elected as the first women president of UN General Assembly. Her diplomatic career offered insights into the wider context of changes in Indo-British relations. Her High Commissionership was a microcosm of intergovernmental relations.

317. Match the following and choose the correct answer from the codes given below :

List I	List II
a) Dandi March	1. 1931
b) Karachi Congress	2. 1932
c) Third Round Table Conference	3. 1930
d) Lahore Congress	4. 1929

Codes :

- | | | | |
|------|----|----|----|
| a) | b) | c) | d) |
| A) 2 | 1 | 4 | 3 |
| B) 1 | 3 | 2 | 4 |
| C) 3 | 1 | 2 | 4 |
| D) 4 | 2 | 3 | 1 |

Explanation :

Ans : (C)

On 12th March 1930, Gandhi began his famous March to Dandi with his chosen 79 followers to break the salt laws. He reached the coast of Dandi on 5 April 1930 after marching a distance of 200 miles and on 6 April formally launched the Civil Disobedience Movement by breaking the salt laws.

The Karachi Resolution was passed by the Indian National Congress at its 1931 Karachi session. The Resolution for

the first time put forward a list of socio-economic principles/ rights that the Indian state had to adhere to. These included: protections for industrial workers, abolishing of child labour, free primary education and protections for agricultural labour. The Resolution also, which seems to be a Gandhian influence, prohibited intoxicating drinks and drugs. The socio-economic provision in the Karachi Resolution went on to influence the Constituent Assembly in drawing up Part IV of the Indian Constitution – the Directive Principles of State Policy.

The third Round Table Conference was held in 1932. The Congress once again did not take part in it. Nonetheless, in March 1933, the British Government issued a White Paper, which became the basis for the enactment of the Government of India Act, 1935.

The 1929 Lahore congress adopted the **Poorna Swaraj resolution** and **26th January 1930** was fixed as the independence day. On that day, Jawaharlal Nehru hoisted the National Flag on the banks of river **Ravi** as the declaration of independence.

318. Who was the First Finance Minister of Independent India ?

- A) Sardar Vallabai Patel
- B) C. Rajagopalachari
- C) B.R. Ambedkar
- D) R.K. Shanmugam Chettiyar

Explanation :

Ans : (D)

R.K. Shanmugam Chettiyar was the first finance minister of Independent India from 15 August 1947 to 1949.

319. Arrange the following items according to the chronological order :

- I. Simon Commission
- II. Gandhi-Irwin Pact
- III. Third Round Table Conference
- IV. Dandi March

Select the correct answer :

- A) II, I, IV, III
- B) IV, III, II, I
- C) I, IV, II, III
- D) I, IV, III, II

Explanation :

Ans : (C)

Simon Commission : The Act of 1919 included a provision for its review after a lapse of ten years. However, the review commission was appointed by the British Government two years earlier of its schedule in 1927. It came to be known as **Simon Commission** after the name of its chairman, Sir John Simon. All its seven members were Englishmen. As there was no Indian member in it, the Commission faced a lot of criticism even before its landing in India. Almost all the political parties including the Congress decided to oppose the Commission.

Gandhi-Irwin Pact : The British government adopted the strategy of talking to different political parties by convening the Round Table Conferences. The first Round Table Conference was held in November 1930 at London and it was boycotted by the Congress. In January 1931 in order to create a conducive atmosphere for talks, the government lifted the ban on the Congress Party and released its leaders from prison. On 8 March 1931 the **Gandhi-Irwin Pact**

was signed. As per this pact, Mahatma Gandhi agreed to suspend the Civil-Disobedience Movement and participate in the Second- Round Table Conference. In September 1931, the Second Round Table Conference was held at London. Mahatma Gandhi participated in the Conference but returned to India disappointed as no agreement could be reached on the demand of complete independence and on the communal question.

320. Point out the correct statement in the following :

- A) Indus people Worshipped Lord Indra.
- B) Indus civilization was a rural civilization.
- C) Iron was unknown to the Indus people.
- D) The 'Great bath' was located at Harappa.

Explanation :

Ans : (C)

Iron was not known to the people of Indus, but they used Copper, Brass and Gold. They worshiped Pashupati but not Lord Indra.

Indus civilization was an urban civilization and the great bath was found in Mohenjo-daro.

321. Name the social reformer who supported Dr. Muthulakshmi Reddy for the abolition of Devadasi system

- A) E.V. Ramasamy Naicker
- B) T.M. Nair
- C) C.N. Anna Durai
- D) Natesa Mudaliar

Explanation :

Ans : (A)

In 1930, Muthulakshmi Ammaiyar introduced in the Madras Legislative Council a Bill on the "prevention of the dedication of women to Hindu temples in the Presidency of Madras". The Bill, which later became the **Devadasi Abolition Act**, declared the "pottukattu ceremony" in the precincts of Hindu temples or any other place of worship unlawful, gave legal sanction to devadasis to contract marriage, and prescribed a minimum punishment of five years' imprisonment for those found guilty of aiding and abetting the devadasi system. The Bill had to wait for over 15 years to become an Act.

E.V. Ramasamy, emerged as a great social reformer in 20th century in Tamilnadu. He occupied the socio-political stage in Tamilnadu for half a century. When C. Rajagopalachari, a Brahmin advocated Hindi as a compulsory language in Madras Presidency, Periyar E.V.R., saw a sinister design of destroying Tamil language and an underplay of subjugation of Tamils by Aryans. EVR was not much interested in electoral politics. Instead, he concentrated on social issues and campaigned for social reforms such as eradication of caste system, gender disparity and rejection of hereditary priesthood. EVR condemned superstitious beliefs and irrational traditions and inequalities. Those who joined self-respect movement must shed the caste name. He introduced self-respect marriages. **EVR got the name 'Periyar' in a women's conference held in Madras on 13.11.1938 under the Presidentship of Neelambigai Ammaiyar, daughter of Maraimalai Adigal. Dr. Dharmambal gave the title 'Periyar' to him, as he championed the cause of women who were not given equal respect.**

Periyar's journals, '**Kudiarasu**', '**Revolt**' and later '**Viduthalai**' served as vehicles for propagation of self-respect. The first Self-Respect conference was held in Chengalpattu in **1929**. **The Self Respect Movement he led, promoted weddings without rituals, and sanctioned property as well as divorce rights for women.** He appealed to people to give up the caste suffix in their names, and do not mention caste. He instituted inter-dining with food cooked by Dalits in public conferences in the 1930s.

In 1916, Pitti. Theagarayar, T. M. Nair and others started South Indian Liberal Federation for the welfare of the Non-Brahmin communities. A magazine "**Justice**" was also published by this Federation to express their thoughts and ideas. Later on, this Federation was popularly known as "**Justice Party**".

C.N. Annadurai : Dr. C.N. Annadurai, fondly called Anna by millions of Tamilians, was one of the most charismatic leaders of modern India. Born on 15 September 1909 into a weaving family in Kanchipuram, Annadurai rose to become a teacher and journalist before switching into hard-core politics. Anna was Chief Minister barely for two years (1967-69) but he is still remembered for his qualities – simplicity, statesmanship, political acumen and concern for the poor and willingness for reconciliation.

Non-Brahmin movement and the challenge to congress : The rapid growth of education and as a result the increase of non-brahmin educated youth raised the issue of dominance of Brahmins in elected representative bodies and in the congress. The non-brahmins, organised themselves into a political organisation to safeguard their interests. As a result, was born the Madras Dravidian Association in 1912. **The founder was C. Natesan.** In 1916, he established an hostel for non-brahmin students. **Later, T.M. Nair and P. Thiyagarayar joined him.** A meeting of non-brahmins was held in Victoria Hall on 20th November 1916. The social organisation metamorphosed into a political outfit in the name of the South Indian Liberal Federation which later transformed into Justice Party. The SILF launched three newspapers: **Justice** in English, **Dravidan** in Tamil and **Andhra Prakasika** in Telugu.

322. Which one of the following European war was associated with Third Carnatic War ?

- A) The Seven Year's War
- B) The War of Austrian Succession
- C) The War of Roses
- D) The Austro-Prussian War

Explanation :

Ans : (A)

Third Carnatic War (AD. 1756 – AD. 1763)

- ◆ In 1756, the seven year war broke out in Europe, and the same war echoed in India as the Third Carnatic war.
- ◆ When the French General Bussy lost Hyderabad to the British, Bussy and Count de Lally together attacked Madras.
- ◆ Finally they got defeated at Wandiwash by British General Sir Eyre Coote in 1760.
- ◆ The Treaty of Paris brought this war to an end in 1763.
- ◆ Even though the French got back their territories, they were not allowed to fortify their possessions.

- ◆ The French lost all their prestige and influence in India.
- ◆ The British became more powerful in India.

Battle of Wandiwash (1760)

- ◆ The Third Carnatic war was fought between combined forces of Bussy and Lally and the British forces. Though there was no decisive result, the French had to retreat to Pondicherry.
- ◆ When Lally retreated to Pondicherry, he had left a French contingent in Arcot.
- ◆ The British moved towards Wandiwash but suddenly fell upon Kanchipuram and captured it. A fresh despatch of troops came to Wandiwash under Sir Eyre Coote. The last ditch battle was fought between Eyre Coote and Lally, at Wandiwash.
- ◆ General Bussy was taken as a prisoner and Lally retreated to Pondicherry.
- ◆ Meanwhile the British captured Senji and laid siege of Pondicherry. After a prolonged siege Pondicherry fell into the hands the British on 4th Feb 1761.
- ◆ Mahe on the Malabar coast also fell into the hands of the British. Thus the French had no place in India.
- ◆ Finally all the hostilities came to an end after signing the Treaty of Paris (1763) at the end of seven year war.
- ◆ Pondicherry, Chandranagore, Mahe, Yanam, Karaikal were given to the French.
- ◆ Thus the British emerged as the undisputed colonial power in India.

323. Which of the following is incorrectly paired ?

- | | |
|------------------|---------------------------|
| A) Mir Bakhshi | - Military advisor |
| B) Muhtasib | - Censor of public morals |
| C) Kotwal | - Revenue collector |
| D) Qazi-ul-Quzat | - Judicial officer |

Explanation :

Ans : (C)

Kotwal was a title used in medieval India for the leader of a kot or fort. Kotwals often controlled the fort of a major town or an area of smaller towns on behalf of another ruler. Mir Bakshi was in charge of intelligence gathering, and also made recommendations to the emperor for military appointments and promotions.

Muhtasib was a supervisor of bazaars and trade in the medieval Islamic countries. His duty was to ensure that public business was conducted in accordance with law of 'Sharia'.

Qazi-ul-Quzat was the Supreme authority in justice. He has to act according to Islamic laws. The chief justice of the Sultanate was known as Qazi-i-Mamalik also known as Qazi-ul-Quzat.

324. Match List I with List II and select the correct answer using the code given below the lists :

- | List I | List II |
|---------------|-------------------|
| a) Kalibangan | 1. Gulf of Cambay |
| b) Surkotada | 2. Madurai |
| c) Lothal | 3. Rajasthan |
| d) Khizhadi | 4. Gujarat |

Codes :

- | | | | | |
|----|----|----|----|----|
| | a) | b) | c) | d) |
| A) | 4 | 3 | 1 | 2 |
| B) | 3 | 4 | 1 | 2 |
| C) | 1 | 3 | 2 | 4 |
| D) | 2 | 1 | 3 | 4 |

Explanation :

Ans : (B)

- ◆ **Kalibangan** is a town located in Hanumangarh District of Rajasthan. Kalibangan is distinguished by its unique fire altars and "world's earliest attested ploughed field".
- ◆ **Surakotada** is an archaeological site located in Kutch district, Gujarat. It is a fortified Indus Valley civilization site. In this site, besides house walls some important findings were heavy copper celt, chisel and the usual Harappa beads, Chert blades, etc.
- ◆ The archaeological remains of the Harappa port-town of **Lothal** is located along the **Bhogava river**, a tributary of Sabarmati, in the Gulf of Khambat. It is said that Lothal is a combination of two words; Loth and thal, which means 'the mound of the dead' in Gujarat.
- ◆ **Keezhadi – Sivagangai District** : The Archaeological Survey of India (ASI) excavated an ancient town dating to Sangam Age in Keezhadi village at Tirupathur taluk. Excavations have produced evidence for brick buildings, and well laid-out drainage system. Tamil – Brahmi inscription on pottery, beads of glass, carnelian and quartz, pearl, gold ornaments and iron objects, shell bangles, ivory dice have been unearthed. In 2017, ASI sent two samples of these for Radio carbon dating to Beta Analytic, Florida, USA. They dated samples as 200 BC (BCE). The Roman artefacts found at the site add to the evidence of ancient Indo-Roman trade relations.

325. "Indian Home Rule Society" was set up by

- A) Hardayal
- B) Shyamji Krishnavarma
- C) Madan Lal Dhingra
- D) V.D. Savarkar

Explanation :

Ans : (B)

The Indian Home Rule Society was an Indian organisation founded in London in 1905. It sought to promote the cause of self-rule in British India. The organisation was founded by Shyamji Krishnavarma.

Lala Hardayal Singh Mathur (1884-1939) was an Indian revolutionary and freedom fighter. He inspired many expatriate Indians living in Canada and USA to fight against British imperialism during the I world war.

Madan Lal Dhingra was an Indian revolutionary and pro-independent activist. While studying in England, he assassinated William Hutt Curzon Wyllie, a British official who had joined the Indian Political Department in 1879. Dhingra was hanged on 17th August 1909 in England.

Vinayak Damodar Savarkar was an Indian revolutionary who formulated the philosophy of 'Hindutva'. He was a leading figure in 'Hindu Mahasabha'. He published a book 'The Indian war of Independence'. It deals with the Indian rebellion of 1857. V.D. Savarkar was charged as a co-conspirator in the assassination of Gandhi. However, he was acquitted for lack of evidence.

Article No.	Subject Matter
50.	Separation of judiciary from executive
51.	Promotion of international peace and security

37. Which of the following statements is true about Article 21?

- i) This article reminds us of one of the famous clauses in Magna Carta.
- ii) The constitution does not confer right to die.
- iii) Custodial death is perhaps one of the worst crimes in a civilized society governed by Administrative Law.

Select the correct answer :

- A) (i) only B) (i) and (ii) only
- C) (i) and (iii) only D) (ii) and (iii) only

Explanation: **Ans : (C)**

i) TRUE:

Article 21 states that **"No person shall be deprived of his life or personal liberty except according to procedure established by law."** It resembles the principle in the Magna Carta (1215), particularly the famous protection that no person shall be deprived of life or liberty except according to law. The Supreme Court has greatly expanded Article 21 to include various aspects of a dignified life.

ii) FALSE:

The statement is too absolute. Although Article 21 protects the **right to life**, the Supreme Court has distinguished between a general "right to die" and specific situations such as **passive euthanasia and living wills**, which are subject to legal safeguards. Therefore, saying that the Constitution simply "does not confer right to die" is incomplete.

iii) TRUE:

The Supreme Court has repeatedly treated **custodial death** as a grave violation of Article 21. A person in State custody remains entitled to protection of life and dignity. Custodial violence and death therefore attract serious constitutional and legal accountability.

Final Answer: C) (i) and (iii) only

38. Read the following Assertion [A] and Reason [R] and find the correct answer:

Assertion [A] : Considering apart from, citizenship among in India, there are two types of Aliens, Friendly Aliens and Enemy Aliens.

Reason [R] : The citizens of enemy Aliens also enjoys protection against arrest and detention under Article 22.

Select the correct answer :

- A) [A] and [R] are correct; [R] is the correct explanation of [A]
- B) [A] and [R] are correct; [R] is not correct explanation of [A]
- C) [A] is correct; [R] is false
- D) [R] is correct; [A] is false

Explanation:

Ans : (C)

Assertion [A]:

True. Indian law classifies aliens into two categories:

- ◆ Friendly Aliens (citizens of countries with friendly relations with India)
- ◆ Enemy Aliens (citizens of countries at war with India, per Section 2 of Foreigners Act, 1946)

Reason [R]:

False. While Article 22 provides safeguards against arrest and detention, these protections are NOT available to enemy aliens during wartime. Article 22(3)(a) explicitly states these protections don't apply to "enemy aliens".

Key Constitutional Provisions:

- ◆ Article 22(3)(a): "Nothing in clauses (1) and (2) shall apply... to any person who is arrested or detained under any law providing for preventive detention"
- ◆ Enemy aliens can be detained under special wartime provisions without normal safeguards

39. Match the following parts of the Indian Constitution with their corresponding subject-matter.

- a) Part XIV 1. Elections
- b) Part XV 2. Amendment of the Constitution
- c) Part XVIII 3. Services under the Union and States
- d) Part XX 4. Emergency provisions

Codes:

- a) b) c) d)
- A) 3 1 4 2
- B) 2 4 1 3
- C) 4 2 1 3
- D) 1 4 3 2

Explanation:

Ans : (A)

The Constitution of India

Parts	Subject Matter	Articles Covered
I	The Union and its territory	1 to 4
II	Citizenship	5 to 11
III	Fundamental Rights	12 to 35
IV	Directive Principles of State Policy	36 to 51
IV-A	Fundamental Duties	51-A
V	The Union Government	52 to 151
	Chapter I - The Executive	52 to 78
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	Chapter III - Legislative Powers of President	123
	Chapter IV - The Union Judiciary	124 to 147
	Chapter V - Comptroller and Auditor-General of India	148 to 151
VI	The State Governments	152 to 237
	Chapter I - General	152

Parts	Subject Matter	Articles Covered
	Chapter II - The Executive	153 to 167
	Chapter III - The State Legislature	168 to 212
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	Chapter V - The High Courts	214 to 232
	Chapter VI - Subordinate Courts	233 to 237
VII	The States in Part B of the First Schedule (deleted)	238 (deleted)
VIII	The Union Territories	239 to 242
IX	The Panchayats	243 to 243-O
IX-A	The Municipalities	243-P to 243-ZG
IX-B	The Co-operative Societies	243-ZH to 243-ZT
X	The Scheduled and Tribal Areas	244 to 244-A
XI	Relations between the Union and the States	245 to 263
	Chapter I - Legislative Relations	245 to 255
	Chapter II - Administrative Relations	256 to 263
XII	Finance, Property, Contracts and Suits	264 to 300-A
	Chapter I - Finance	264 to 291
	Chapter II - Borrowing	292 to 293
	Chapter III - Property, Contracts, Rights, Liabilities, Obligations and Suits	294 to 300
	Chapter IV - Right to Property	300-A
XIII	Trade, Commerce and Intercourse within the Territory of India	301 to 307
XIV	Services under the Union and the States	308 to 323
	Chapter I - Services	308 to 314
	Chapter II - Public Service Commissions	315 to 323
XIV-A	Tribunals	323-A to 323-B
XV	Elections	324 to 329-A
XVI	Special Provisions relating to Certain Classes	330 to 342-A
XVII	Official Language	343 to 351-A

Parts	Subject Matter	Articles Covered
	Chapter I - Language of the Union	343 to 344
	Chapter II - Regional Languages	345 to 347
	Chapter III - Language of the Supreme Court, High Courts, and so on	348 to 349
	Chapter IV - Special Directives	350 to 351
XVIII	Emergency Provisions	352 to 360
XIX	Miscellaneous	361 to 367
XX	Amendment of the Constitution	368
XXI	Temporary, Transitional and Special Provisions	369 to 392
XXII	Short title, Commencement, Authoritative Text in Hindi and Repeals	393 to 395

40. "Co-operative Societies" gave a constitutional status under

- A) Article 243 - ZH to 243 - ZT
- B) Article 243 - PH to 243 - ZA
- C) Article 243 - NH to 243 - ZH
- D) Article 243 - HZ to 243 - ZH

Explanation:

Ans : (A)

The 97th Constitutional Amendment Act, 2011 granted constitutional status and protection to co-operative societies in India.

- ◆ It inserted Part IXB into the Constitution, titled "The Co-operative Societies".
- ◆ This part comprises Articles 243-ZH to 243-ZT.
- ◆ These articles lay down the framework for the formation, functioning, and regulation of cooperative societies, emphasizing democratic and autonomous operation.

Thus, Article 243-ZH to 243-ZT is the correct range for constitutional provisions related to co-operative societies.

GROUP II - IIA - 2025

41. Incorporation of Fundamental Duties to the Constitution of India was done by _

- A) 42nd Constitutional Amendment Act 1976
- B) 43rd Constitutional Amendment Act.1977
- C) 44th Constitutional Amendment Act 1978
- D) 45th Constitutional Amendment Act 1980

Explanation :

Ans. (A)

(A) 42nd Constitutional Amendment Act, 1976

- ◆ The Fundamental Duties were added to the Constitution of India by the 42nd Constitutional

Amendment Act of 1976. This amendment was passed during the Emergency period under the leadership of Prime Minister Indira Gandhi. Acting on the recommendations of the Swaran Singh Committee, the government introduced Part IV-A in the Constitution, which included Article 51A. This article originally contained ten Fundamental Duties, emphasizing respect for the Constitution, promotion of harmony, protection of the environment, and safeguarding public property. These duties were intended to remind citizens of their moral and civic responsibilities toward the nation. Later, in 2002, the 86th Amendment added the eleventh duty, making it obligatory for parents to provide education to their children aged between six and fourteen years. Hence, the 42nd Amendment Act, 1976, is correctly credited with incorporating Fundamental Duties into the Indian Constitution.

(B) 43rd Constitutional Amendment Act, 1977

- ◆ The 43rd Constitutional Amendment Act of 1977 was enacted after the end of the Emergency by the Janata Government. Its main purpose was to restore democratic principles and judicial powers that had been curtailed by the 42nd Amendment. It reinstated the jurisdiction and authority of the Supreme Court and High Courts and reaffirmed the importance of judicial review. However, this amendment did not deal with the inclusion of Fundamental Duties, as its focus was on strengthening democracy and protecting individual rights rather than imposing responsibilities on citizens.

(C) 44th Constitutional Amendment Act, 1978

- ◆ The 44th Constitutional Amendment Act of 1978 was also introduced by the Janata Party government to further safeguard democracy and individual freedoms. This amendment aimed to prevent the misuse of Emergency powers and to restore citizens' Fundamental Rights that had been restricted earlier. It made the Right to Property a legal right instead of a Fundamental Right and provided additional protections for life and liberty under Article 21. Despite being a crucial step in restoring civil liberties, this amendment did not introduce Fundamental Duties to the Constitution.

(D) 45th Constitutional Amendment Act, 1980

- ◆ The 45th Constitutional Amendment Act of 1980 extended the reservation of seats for Scheduled Castes, Scheduled Tribes, and Anglo-Indians in the Lok Sabha and State Legislative Assemblies for another ten years, from 1980 to 1990. Its primary objective was to continue political representation for marginalized groups and uphold social justice. This amendment had no relation to the addition of Fundamental Duties, as it dealt exclusively with political and social representation. Therefore, the

correct answer is option (A), the 42nd Constitutional Amendment Act, 1976.

42. Identify the statement that is not correct with regard to President of India.

- A) President can resign from his office at any time
- B) President cannot hold office beyond his term of five years
- C) President can be removed from his office by an impeachment process
- D) No President of India has so far been impeached

Explanation : **Ans. (B)**

(A) President can resign from his office at any time

Correct statement. According to Article 56(1)(a) of the Indian Constitution, the President of India may resign from his office at any time by addressing his resignation letter to the Vice-President of India.

(B) President cannot hold office beyond his term of five years

Incorrect statement. Under Article 56(1)(c), the President holds office for a term of five years from the date he enters office. However, the same Article clearly states that the President shall continue to hold office until his successor enters upon the office, even if the five-year term has expired. Example: Dr. Rajendra Prasad, India's first President, continued to hold office for some time after his five-year term until his successor was ready to take over. Hence, the statement "President cannot hold office beyond his term of five years" is incorrect.

(C) President can be removed from his office by an impeachment process

Correct statement. According to Article 61, the President of India can be removed from office by impeachment for violation of the Constitution. This process requires a two-thirds majority in both Houses of Parliament and is a very serious and detailed constitutional procedure.

(D) No President of India has so far been impeached

Correct statement. Till date, no President of India has been impeached.

While impeachment is provided for in the Constitution, it has never been used in Indian history.

Hence, this statement is also true.

43. Which of the following are true about Tamil Nadu Panchayats Act, 1994?

- i) Chapter II of this Act deals with Gram Sabha.
- ii) Chapter VII deals with Taxation and Finance.
- iii) Chapter XII deals with Penalties.

Choose the correct answer :

- A) (i) only B) (i) and (iii) only
- C) (i) and (ii) only D) (ii) and (iii) only

Explanation : **Ans. (B)**

- * The Tamil Nadu Panchayats Act, 1994 was enacted by the Government of Tamil Nadu to give effect to the 73rd Constitutional Amendment Act, 1992, which introduced the concept of Panchayati Raj Institutions (PRIs) in all states of India.

- * This Act came into force on 22 April 1994 and provides a comprehensive framework for rural local self-government in Tamil Nadu.

- * The Act consists of 15 chapters, each dealing with a specific aspect of Panchayat administration.
- * **Chapter I:** Preliminary - Defines the short title, extent, and commencement of the Act, and provides definitions.
- * **Chapter II:** Grama Sabha - Deals with the constitution and functions of the Grama Sabha.
- * **Chapter III:** Formation and constitution of village panchayats, panchayat union councils and district panchayats - Covers the formation and structure of the three tiers of panchayats.
- * **Chapter IV:** Powers, functions and duties of village panchayats - Outlines the responsibilities of Village Panchayats.
- * **Chapter V:** Finance and Taxation - Addresses the financial aspects of panchayats, including the creation and management of funds.
- * **Chapter VI:** Procedure - Specifies the procedures to be followed, such as those for meetings and records.
- * **Chapter VII:** Powers, functions and duties of panchayat union councils - Details the powers and duties of the Panchayat Union Councils.
- * **Chapter VIII:** Finance and Taxation of panchayat union councils - Covers the financial powers and taxation rights of the Panchayat Union Councils.
- * **Chapter IX:** Powers, functions and duties of district panchayats - Describes the responsibilities and functions of District Panchayats.
- * **Chapter X:** Finance and Taxation of district panchayats - Details the financial powers and taxation rights of District Panchayats.
- * **Chapter XI:** General and Miscellaneous Licences and Permissions - Deals with licenses and permissions granted by the panchayats.
- * **Chapter XII:** Penalties - Outlines the penalties for offenses under the Act.
- * **Chapter XIII:** Miscellaneous - Includes general provisions and miscellaneous matters.
- * **Chapter XIV:** Superannuation of employees - Covers the superannuation of employees.
- * **Chapter XV:** Elections - Deals with the conduct of elections to the panchayat bodies.

44. Match List I with List II and select the correct answer by using the codes given below the list:

Articles	Councils
a) Art 280	1. Inter-State Council
b) Art 263	2. Inter-State Water Dispute Tribunal
c) Art 262	3. Goods and Services Tax Council
d) Art 279a	4. Finance Commission

Codes :

a)	b)	c)	d)
A) 4	3	2	1
B) 4	1	2	3
C) 3	4	1	2
D) 1	4	3	2

Explanation :

Ans. (B)

Article	Council	Explanation
Article 280	Finance Commission	Article 280 of the Indian Constitution provides for the Finance Commission, which recommends the distribution of financial resources between the Union and the States. The Commission is appointed by the President every five years.
Article 263	Inter-State Council	Article 263 deals with the establishment of an Inter-State Council to promote coordination between states and between the Centre and the states on matters of common interest. It acts as an advisory body.
Article 262	Inter-State Water Dispute Tribunal	Article 262 gives Parliament the power to adjudicate disputes relating to the waters of inter-State rivers. Under this article, the Inter-State Water Disputes Act, 1956 was enacted, allowing for tribunals to settle river water disputes.
Article 279A	Goods and Services Tax (GST) Council	Article 279A was inserted by the 101st Constitutional Amendment Act, 2016, which established the GST Council to make recommendations on indirect taxation policies under the GST regime.

45. Find out Incorrectly paired:

Commission	Year of Establishment
1) NHRC	1993
2) Central Information Commission	2005
3) Central Vigilance Commission	1963
4) Central Bureau of Investigation	1969

Choose the correct answer :

- A) (2) and (3) only
- B) (1) and (2) only
- C) (3) and (4) only
- D) (2) and (4) only

Explanation :

Ans. (C)

(1) National Human Rights Commission (NHRC) — 1993

This pair is correct. The National Human Rights Commission (NHRC) was established in 1993 under the provisions of the Protection of Human Rights Act, 1993. The NHRC

TNPSC Previous Years' Original Questions & Answers - Other Exams

CTSE - 2026

1. Arrange the following constitutional amendments suitably:

- | | |
|---|------------------------|
| a) Control over property rights | 1. 13 th Amendment Act |
| b) Creation of Nagaland state | 2. 11th Amendment Act |
| c) Change in the election | 3. 14th Amendment Act |
| d) Declaration of Poridicherry as Union Territory | 4. 4th Amendment Act |

Codes :

- (a) (b) (c) (d)
 A) (4), (2), (1), (3)
 B) (2), (1), (4), (3)
 C) (4), (1), (2), (3)
 D) (3), (2), (1), (4)

Explanation :

Ans : (C)

The Constitution (Fourth Amendment) Act, 1955

Article 31 (2) of the Constitution was amended to re-state more precisely the State's power of compulsory acquisition and requisitioning of private property and distinguish it from cases where the operation of regulatory or prohibitory laws of the States results in "deprivation of property". Article 31A of the Constitution was also amended to extend its scope to cover categories of essential welfare legislation like abolition of zamindaris, proper planning of urban and rural areas and for effecting a full control over the mineral and oil resources of the country, etc. Six Acts were included in the Ninth Schedule. Article 305 was also amended to save certain laws providing of State Monopolies.

The Constitution (Eleventh Amendment) Act, 1961

The purpose of this amendment was to amend Articles 66 and 71 of the Constitution to provide that the election of President or Vice President could not be challenged on the ground of any vacancy in the appropriate electoral college.

The Constitution (Thirteenth Amendment) Act, 1962

By this amendment, a new Article 371A was added to make special provisions with respect to state of Nagaland in pursuance of an agreement between Government of India and Naga People's Convention

The Constitution (Fourteenth Amendment) Act, 1962

By this Act, Pondicherry was included in the First Schedule as a Union Territory, and this Act also enabled the creation of Legislature by Parliamentary law for Himachal Pradesh, Manipur, Tripura, Goa, Daman and Diu and Pondicherry.

2. The Doctrine of Judicial review was propounded by

- A) Arthur Schlesinger Jr.
 B) John Marshall
 C) Sir Ivor Jennings
 D) None of the above

Explanation :

Ans : (B)

The Doctrine of Judicial Review was established by John Marshall, the Chief Justice of the Supreme Court of the United States, in the landmark case Marbury v. Madison.

- In 1803, John Marshall held that any law inconsistent with the Constitution is void.
- This decision gave courts the power to review and strike down unconstitutional laws and executive actions.
- The Indian Constitution also adopts the principle of judicial review through provisions such as Articles 13, 32, 131-136, 143, and 226.

3. In India judicial review is carried out on the basis of

- i) fundamental rights
 ii) basic structures of constitution
 iii) survey of opinion
 iv) referendum

- A) (i) only B) (ii) only
 C) (i) and (ii) only D) (iii) and (iv) only

Explanation :

Ans : (C)

In India, Judicial Review is exercised primarily on two constitutional grounds:

(i) Fundamental Rights – Under Article 13, any law that violates the Fundamental Rights can be declared unconstitutional by the courts.

(ii) Basic Structure of the Constitution – Established by the landmark Kesavananda Bharati vs. State of Kerala, Parliament cannot amend the Constitution in a way that destroys its basic structure.

The following are not bases for judicial review:

(iii) Survey of opinion – Public opinion surveys have no constitutional role in judicial review.

(iv) Referendum – The Indian Constitution does not provide for constitutional review through referendums.

4. Which one of the following is not a feature of federalism?

- A) Two or more levels of Government
 B) Different tiers of government govern the same citizen
 C) Court have the power to interpret the constitution
 D) The Centre can order the State Government

Explanation :

Ans : (D)

Federalism is a system of government in which powers are constitutionally divided between the Central (Union) Government and the State Governments. Both levels derive their authority from the Constitution and function independently within their respective jurisdictions.

5. Which of the following Committee recommended that "A post of District Development Commissioner should be created" to act as the

- A) Balwant Rai Mehta Committee
 B) Ashok Mehta Committee
 C) GVK Rae's Committee
 D) L.M. Singhvi Committee

Explanation :

Ans : (C)

The GVK Rao Committee (1985) was appointed to review rural development administration and strengthen the Panchayati Raj system. It recommended that the district should become the basic unit of planning and

development. To improve coordination of development programmes, the Committee proposed the creation of the post of District Development Commissioner (DDC), who would act as the chief executive officer of the Zila Parishad and coordinate the work of various development departments at the district level. These recommendations aimed to decentralize governance and make local self-government more effective.

Other options :

- A) Balwant Rai Mehta Committee Recommended the three-tier Panchayati Raj system (1957).
- B) Ashok Mehta Committee Recommended a two-tier Panchayati Raj system with the district as the first level.
- D) L.M. Singhvi Committee Recommended giving constitutional status to Panchayati Raj institutions and strengthening Gram Sabhas.

6. What is the maximum interval between two session of the Parliament?

- A) 3 months B) 4 months
- C) 6 months D) 9 months

Explanation :

Ans : (C)

Under Article 85 of the Constitution of India, the President summons each House of Parliament from time to time. The Constitution mandates that not more than six months shall elapse between the last sitting of one session and the first sitting of the next session. This ensures that Parliament meets at least twice a year to perform its legislative, financial, and oversight functions. In practice, Parliament usually holds three sessions annually—Budget, Monsoon, and Winter.

7. Which Constitutional Article deals with Parliament's power to create All India services?

- A) Article 310 B) Article 315
- C) Article 322 D) Article 312

Explanation :

Ans : (D)

Article 312 - All India Services – Empowers Parliament to create All India Services (such as IAS, IPS, and IFoS) if the Rajya Sabha passes a resolution by a two-thirds majority.

Other options :

- A) Article 310 - Doctrine of Pleasure – Civil servants hold office during the pleasure of the President or Governor, subject to constitutional safeguards.
- B) Article 315 - Public Service Commissions – Provides for the establishment of the UPSC and State Public Service Commissions (SPSC).
- C) Article 322 - Expenses of PSCs – Salaries and expenses of the UPSC and SPSC are charged to the Consolidated Fund, ensuring their independence.

8. The category of overseas citizen of India was incorporated in the Citizenship (Amendment) Act of India in the year _____.

- A) 1996 B) 2005
- C) 1992 D) 1986

Explanation :

Ans : (B)

The Overseas Citizen of India (OCI) category was introduced through the Citizenship (Amendment) Act,

2005. It provides certain benefits to eligible Persons of Indian Origin (PIOs) who are citizens of specified foreign countries. OCI is not dual citizenship; it is a form of lifelong visa and offers benefits such as multiple-entry, multi-purpose lifelong visas and exemption from registering with the Foreigners Regional Registration Office (FRRO) for any length of stay in India. However, OCI cardholders cannot vote, contest elections, or hold constitutional offices.

9. Which one of the following Act said a bout "Federal Structure"?

- A) Government of India Act, 1919
- B) Government of India Act, 1935
- C) Indian Councils Act, 1893
- D) Indian Constitution - Article 248

Explanation :

Ans : (B)

The Government of India Act, 1935 was the first British law to provide a federal structure for India. It proposed an All-India Federation consisting of the British Indian provinces and princely states. Although the federation was never fully implemented because the princely states did not join, the Act introduced several federal features. It divided powers between the Centre and the Provinces through Federal, Provincial, and Concurrent Lists. Many provisions of this Act later became the foundation of the Indian Constitution.

Other options are incorrect

- A) Government of India Act, 1919 - Introduced Dyarchy in the provinces, not a federal structure.
- C) Indian Councils Act, 1893 - Expanded legislative councils but did not introduce federalism.
- D) Article 248 of the Constitution - Deals with the residuary legislative powers of Parliament, not the establishment of the federal structure.

10. Which of the following statements are true about commission on centre-state relations, 1988?

- i) The commission favoured major modifications in the basic scheme of constitution dividing the fields of taxation
- ii) Accepted to shift taxation powers of centre to states
- iii) Recommended setting up of an expert committee to examine taxation reforms and resource mobilisation.

- A) (i) only B) (i) and (ii)
- C) (iii) only D) (ii) and (iii)

Explanation :

Ans : (C)

The Sarkaria Commission on Centre-State Relations (1983–1988) recommended retaining the existing constitutional distribution of taxation powers between the Centre and the States and did not favour major modifications or the transfer of taxation powers from the Centre to the States. Instead, it suggested setting up an expert committee to examine taxation reforms and resource mobilisation to strengthen Centre-State financial relations. Therefore, statements (i) and (ii) are incorrect, while statement (iii) is correct.

ASSISTANT PUBLIC PROSECUTOR - 2026

1. Match List I and List II and select the correct answer using the codes given below the lists :

List I		List II	
a)	Constitution 86 th Amendment	1.	31 C
b)	Constitution 44 th Amendment	2.	31 A, 31 B
c)	Constitution 1 st Amendment	3.	300 A
d)	Constitution 25 th Amendment	4.	21 A

Codes :

	a)	b)	c)	d)
A)	3	4	2	1
B)	4	2	1	3
C)	1	3	4	2
D)	4	3	2	1

Explanation :

Ans. (D)

- Constitution 86th Amendment - 21 A: The 86th Constitutional Amendment Act of 2002 inserted Article 21 A, making free and compulsory education for children between the ages of 6-14 a Fundamental Right.
- Constitution 44th Amendment - 300 A: The 44th Constitutional Amendment Act of 1978 removed the Right to Property from the list of Fundamental Rights and made it a legal right under
- Constitution 1st Amendment - 31 A, 31 B: The 1st Constitutional Amendment Act of 1951 introduced Articles 31 A and 31 B to protect land reform laws from judicial review by adding the Ninth Schedule.
- Constitution 25th Amendment - 31 C: The 25th Constitutional Amendment Act of 1971 added Article 31 C to give precedence to certain Directive Principles of State Policy over Fundamental Rights.

2. Identify the provisions not dealing with "Money Bill"

- The Imposition, abolition or regulation of any tax.
- The regulation of the borrowing of money by the Government
- The custody of the consolidated fund or contingency fund of India
- Imposition of fines or other pecuniary penalties or fees for service rendered by any local authority.

A) (2) only	B) (3) only
C) (4) only	D) (1) only

Explanation :

Ans. (C)

Under Article 110 of the Indian Constitution, a Money Bill deals with matters such as:

- Imposition, abolition, remission, alteration or regulation of any tax
- Borrowing of money by the Government of India
- Custody and operation of the Consolidated Fund or Contingency Fund of India

However, Article 110(2) clearly states that a Bill is not a Money Bill merely because it provides for the imposition of fines or other pecuniary penalties, or fees for licences

or services rendered, including those by a local authority. Therefore, Statement 4 is not a provision dealing with a Money Bill.

3. Match the following

Article		Subject	
a)	Article 155	1.	Term of office of the Governor
b)	Article 176	2.	Appointment of Governor
c)	Article 156	3.	Appointment of District Judges
d)	Article 233	4.	Special address by the Governor

Codes :

	a)	b)	c)	d)
A)	2	4	1	3
B)	1	4	3	2
C)	3	2	1	4
D)	4	3	1	2

Explanation :

Ans. (A)

Article 155 – Appointment of Governor: The Governor of a State is appointed by the President of India by warrant under his hand and seal.

Article 176 – Special Address by the Governor: The Governor addresses the State Legislature at the first session after each general election and at the first session of every year, outlining the government's policies and legislative agenda.

Article 156 – Term of Office of the Governor: The Governor holds office during the pleasure of the President and normally has a five-year term, though the President may remove the Governor earlier.

Article 233 – Appointment of District Judges: District Judges are appointed by the Governor of the State in consultation with the High Court exercising jurisdiction over the State.

4. Which of the following statements are true about the National Commission for Women Act 1990?

- Review the constitutional and legal safe guards for women
- Recommended remedial legislative measures
- Facilitate redressal of grievances

Select the correct answer :

A) (i) only	B) (i) and (ii) only
C) (i) and (iii) only	D) All of the above

Explanation :

Ans. (D)

The National Commission for Women (NCW) was established under the National Commission for Women Act, 1990 and became operational in 1992. Its primary objective is to protect and promote the rights and interests of women.

- (i) Review the constitutional and legal safeguards for women

The Commission examines the safeguards provided under the Constitution and other laws to ensure effective protection of women's rights.

- (ii) Recommend remedial legislative measures

It recommends amendments to existing laws and suggests new legislation to remove discrimination and improve the status of women.

(iii) Facilitate redressal of grievances

The Commission receives complaints, investigates issues relating to the deprivation of women's rights, and facilitates the redressal of grievances.

Therefore all three statements are correct

5. Match the following political parties with the year of their formation:

- | | |
|---------------------------------|---------|
| a) Biju Janata Dal | 1. 1998 |
| b) All India Trinamool Congress | 2. 2000 |
| c) Nationalist Congress Party | 3. 1997 |
| d) Lok Janashakthi Party | 4. 1999 |

Codes :

- | | | | | |
|----|----|----|----|----|
| | a) | b) | c) | d) |
| A) | 3 | 4 | 1 | 2 |
| B) | 3 | 1 | 4 | 2 |
| C) | 2 | 4 | 1 | 3 |
| D) | 1 | 4 | 3 | 2 |

Explanation :

Ans. (B)

- a) Biju Janata Dal (BJD) - 1997
 b) All India Trinamool Congress (AITC/TMC) - 1998
 c) Nationalist Congress Party (NCP) - 1999
 d) Lok Janshakti Party (LJP) - 2000

6. In the Indian constitution, which article / articles has / have the provisions of the national commission for scheduled caste and National Commission for scheduled tribes?

- i) 338
 ii) 338 and 338A
 iii) 336 and 336B

Select the correct answer :

- A) (i) only B) (ii) only
 C) (i) and (iii) only D) (iii) only.

Explanation :

Ans. (B)

The Constitution provides separate constitutional bodies for the protection and welfare of Scheduled Castes and Scheduled Tribes. Article 338 establishes the National Commission for Scheduled Castes (NCSC), while Article 338A, inserted by the 89th Constitutional Amendment Act, 2003, establishes the National Commission for Scheduled Tribes (NCST). Earlier, both communities were covered under a single commission, but the amendment created separate commissions to address their distinct concerns more effectively. Hence, the provisions relating to these commissions are found in Articles 338 and 338A.

7. Consider the following statements about the Directive Principles of State Policy. Which among the following statements is correct?

- A) Part IV of the Constitution [Arts. 30-51] contains the DPSP.
 B) Directives are enforceable rights before the court of law.
 C) Its a Charter for the 'Police State'
 D) Directive principles are in the nature of instruments of instruction to the Government

Explanation :

Ans. (D)

The Directive Principles of State Policy (DPSPs) are contained in Part IV (Articles 36-51) of the Indian Constitution. They are non-justiciable, meaning they cannot be enforced by courts, but they are fundamental in the governance of the country. Their purpose is to guide the State in making laws and policies that promote social, economic, and political justice and establish a welfare state. Hence, the Directive Principles are regarded as "instruments of instruction" to the Government.

8. Which Constitutional Amendment inserted Fundamental Duties into the Indian Constitution?

- A) 37th Constitutional Amendment Act, 1970
 B) 49th Constitutional Amendment Act, 1978
 C) 42nd Constitutional Amendment Act, 1976
 D) 52nd Constitutional Amendment Act, 1979

Explanation :

Ans. (C)

The 42nd Constitutional Amendment Act, 1976, enacted during the Emergency, inserted Part IVA into the Indian Constitution, introducing Fundamental Duties under Article 51A. Based on the recommendations of the Swaran Singh Committee, it originally added 10 Fundamental Duties for Indian citizens. Later, the 86th Constitutional Amendment Act, 2002 added the 11th Fundamental Duty, requiring parents or guardians to provide educational opportunities to children between the ages of 6 and 14 years.

9. Assertion [A] : Article 355 empowers the Union Government to protect every State against external aggression and internal disturbance.

Reason [R] : It ensures that the Government of every State is carried on according to the Constitution.

- A) [A] is correct; [R] is wrong
 B) [A] and [R] are correct; [R] is the correct explanation of [A]
 C) [A] is wrong; [R] is correct
 D) [A] and [R] are correct ; [R] is not the correct explanation of [A]

Explanation :

Ans. (D)

Article 355 of the Indian Constitution states that it is the duty of the Union to protect every State against external aggression and internal disturbance and to ensure that the government of every State is carried on in accordance with the provisions of the Constitution. These are two separate constitutional obligations contained in the same Article. The first relates to safeguarding the security and integrity of States, while the second relates to maintaining constitutional governance within the States. Since the Reason describes an independent duty rather than explaining why the Union protects States against external aggression and internal disturbance, it does not correctly explain the Assertion. Therefore, both statements are true, but the Reason is not the correct explanation of the Assertion.

- ♦ The major objectives of the Scheme are: (i) Support States and UTs in implementing the recommendations of the National Education Policy 2020 (NEP 2020); (ii) Support States in implementation of Right of Children to Free and Compulsory Education (RTE) Act, 2009; (iii) Focus on Early Childhood Care and Education; (iv) Emphasis on Foundational Literacy and Numeracy; (v) Thrust on Holistic, Integrated, Inclusive and activity based Curriculum and Pedagogy to impart 21st century skills among the students; (vi) Provision of quality education and enhancing learning outcomes of students; (vii) Bridging Social and Gender Gaps in School Education; (viii) Ensuring equity and inclusion at all levels of school education; (ix) Strengthening and up-gradation of State Councils for Educational Research and Training (SCERTs)/ State Institutes of Education and District Institutes for Education and Training (DIET) as nodal agency for teacher training; (x) Ensuring safe, secure and conducive learning environment and maintenance of standards in schooling provisions and (xi) Promoting vocational education.

164. Consider the following statement (Reason and Assertion type) :

Assertion [A] : Make in India program was launched in 2014.

Reason [R] : Intended to boost the domestic manufacturing sector and also augment investment into the country.

- A) [A] is true, but [R] is false
 B) Both [A] and [R] are true, and [R] is the correct explanation of [A]
 C) [A] is false, [R] is true
 D) Both [A] and [R] are true, but [R] is not the correct explanation of [A]

Explanation

Ans : (B)

- ♦ 'Make in India' is an initiative which was launched on 25th September, 2014 to facilitate investment, foster innovation, build best in class infrastructure, and make India a hub for manufacturing, design, and innovation. It is one of the unique 'Vocal for Local' initiatives that promoted India's manufacturing domain to the world. Since the launch of this landmark initiative, the Government of India has taken several reform initiatives to create an enabling environment for providing an impetus to manufacturing, design, innovation and startups.
- ♦ The Make in India initiative aims to make India an integral part of the global supply chain. It is about making Indian companies excel in a globalized workspace. India has vigorously opened up its economy – Defence, Railways, Construction, Insurance, Pension Funds, Medical Devices have all been rapidly opened up for Foreign Direct Investment.

165. The Industrial Policy of India, which abolished the MRTP Act in 1969 was

- A) 1991 Industrial Policy
 B) 1977 Industrial Policy
 C) 1980 Industrial Policy
 D) 1990 Industrial Policy

Explanation

Ans : (A)

- ♦ In 1969, The Monopolistic and Restrictive Trade Practices (MRTP) Act was passed. The Act intended to regulate the trading and commercial practices of the firms and checking monopoly and concentration of economic power. **New Industrial Policy of 1991** has abolished the Monopoly and Restrictive Trade Practices Act 1969. In 2010, the Competition Commission has emerged as the watchdog in monitoring competitive practices in the economy.

- ♦ The policy caused big changes including emergence of a strong and competitive private sector and a sizable number of foreign companies in India.

166. Kisan Credit Card (KCC) was launched in 1998 by

- A) Reserve Bank of India
 B) NABARD Bank
 C) Govt. of India
 D) Reserve Bank of India and NABARD Bank

Explanation

Ans : (D)

A Kisan Credit Card (KCC) is a credit delivery mechanism that is aimed at enabling farmers to have quick and timely access to affordable credit. It was launched in 1998 by the Reserve Bank of India and NABARD. The scheme aims to reduce farmer dependence on the informal credit.

167. Consider the following statement (Reason and Assertion type) :

Assertion[A] : The Ministry of Education (Formerly Human Resource Development-MHRD) in India formulates education Policy in India and also undertakes Education Programs.

Reason [R] : The centre is represented by the Ministry of Education decides the India's Education budget.

Select the correct answer:

- A) Both [A] and [R] are true and [R] explains [A]
 B) Both[A] and [R] are true and [R] does not explains [A]
 C) [A] is correct and [R] is false
 D) [A] is false and [R] is true

Explanation

Ans : (A)

Education plays a significant and remedial role in balancing the socio-economic fabric of the Country. Since citizens of India are its most valuable resource, our billion-strong nation needs the nurture and care in the form of basic education to achieve a better quality of life. This warrants an all-round development of our citizens, which can be achieved by building strong foundations in education. In pursuance of this mission, the Ministry

of Education (MoE) was created on September 26, 1985. Currently, the MoE works through two departments:

- ◆ Department of School Education & Literacy
- ◆ Department of Higher Education

The main objectives of the Ministry is:

- ◆ Formulating the National Policy on Education and to ensure that it is implemented in letter and spirit.
- ◆ Planned development, including expanding access and improving quality of the educational institutions throughout the country, including in the regions where people do not have easy access to education.
- ◆ Budgetary allocation for education.
- ◆ Paying special attention to disadvantaged groups like the poor, females and the minorities
- ◆ Provide financial help in the form of scholarships, loan subsidy, etc to deserving students from deprived sections of the society.

168. India observed 2018 as the national year of which crop?

- | | |
|---------------------|---------------------|
| A) Millets | B) Oil seeds |
| C) Sugarcane | D) Cotton |

Explanation

Ans : (A)

- ◆ 'Millets' were among the first crops to be domesticated in India with several evidence of its consumption during the Indus valley civilization. Being grown in more than 130 countries at present, Millets are considered traditional food for more than half a billion people across Asia and Africa. In India, millets are primarily a kharif crop, requiring less water and agricultural inputs than other similar staples. Millets are important by the virtue of its mammoth potential to generate livelihoods, increase farmers' income and ensure food & nutritional security all over the world.
- ◆ Recognising the enormous potential of Millets, which also aligns with several UN Sustainable Development Goals (SDGs), the Government of India (GoI) has prioritized Millets. In April 2018, Millets were rebranded as "Nutri Cereals", followed by the year 2018 being declared as the National Year of Millets, aiming at larger promotion and demand generation. The global millets market is projected to register a CAGR of 4.5% during the forecast period between 2021-2026.
- ◆ On 6th December 2022, the Food and Agriculture Organization (FAO) of the United Nations, organized an opening ceremony for the International Year of Millets – 2023 at Rome, Italy.

169. In which country the 49th G7 summit (2023) was held?

- | | |
|------------------|------------------------|
| A) USA | B) South Africa |
| C) Brazil | D) Japan |

Explanation

Ans : (D)

- ◆ The G7 originated from a 1973 meeting of finance ministers and central bank governors in Paris, France. This meeting was convened in response to major economic challenges of at time – an oil crisis, rising

inflation and collapse of the Bretton Woods system. Under this, the value of the US dollar was fixed against gold. In turn, other global currencies pegged their values to the dollar. But over time, the dollar was seen to have been overvalued against the fixed rate. Therefore, a new mechanism had to be devised for exchange rates and this required global cooperation. Thus, the idea of a forum was born, where major industrialised democracies could coordinate economic policies to address common challenges. The first G7 summit was held in 1975 in Rambouillet, France, bringing together the leaders of France, Germany, the United Kingdom, the United States, Italy and Japan. Canada joined the next year.

- ◆ The 49th G7 Summit, bringing together the leaders of the United States (US), Canada, Japan, France, Germany, Italy, the United Kingdom (UK) and the European Union (EU), took place from 19 to 21 May 2023 under the Japanese Presidency in Hiroshima, a city with worldwide symbolic importance for war, nuclear devastation and peace.

170. The first modernised Jute Industrial Unit was established at in West Bengal in 1855.

- | | |
|--------------------|--------------------|
| A) Burnpur | B) Serampur |
| C) Cloaster | D) Rishra |

Explanation

Ans : (D)

The Jute industry occupies an important place in the national economy of India. It is one of the major industries in the eastern region, particularly in West Bengal. The first jute mill in India was established in Rishra, Bengal Presidency (present-day West Bengal) in 1855 by British entrepreneur George Acland and Bengali financier Babu Bysumber Sen. The mill was located on the Hoogly riverbank.

171. Arrange the chronological order. Following countries got highest point in the human development index in descending order (As on 2016)

- | | |
|------------------|-----------------------|
| 1. Norway | 2. Switzerland |
| 3. India | 4. Australia |

Select the correct answer :

- | | |
|----------------------|----------------------|
| A) 1, 4, 2, 3 | B) 4, 2, 1, 3 |
| C) 2, 1, 4, 3 | D) 2, 1, 3, 4 |

Explanation

Ans : (A)

- ◆ The HDI is a summary measure for assessing long-term progress in three basic dimensions of human development: a long and healthy life, access to knowledge and a decent standard of living.
- ◆ In 2016, India's HDI value of 0.624 put it at 131 rank. Norway, Switzerland, Australia, Ireland and Germany led the ranking, while Niger, the Central African Republic, South Sudan, Chad and Burundi have the lowest scores in the HDI's measurement of national achievements in health, education and income.

172. Which of the following is incorrectly paired?

- i) Taxes on Agricultural income – State
- ii) Taxes on land and buildings – State

iii) Taxes on the consumption or – Centre sale of Electricity

iv) Land Revenue – Centre

Select the correct answer :

A) (i) and (ii) B) (ii) and (iii)

C) (iii) and (iv) D) (i) and (iv)

Explanation

Ans : (C)

- ◆ Electricity Tax is levied on consumption or sale of electricity in the state of Tamil Nadu under The Tamil Nadu Tax on Consumption or Sale of Electricity Act, 2003 and the Rules made there under. So, this is not a Central Tax.
- ◆ Land revenue tax is a form of tax imposed by the government on landholdings. It is primarily a state-level tax and serves as a significant revenue source for the state government. The tax is based on the assessed value of the land and is levied annually or periodically, depending on the state's regulations. This is also a state tax.
- ◆ Agricultural income is exempted from tax under the Income-tax Act, 1961. It is important to note that income from allied agricultural activities like poultry farming, wool rearing, etc. are not considered as agricultural income. Hence, tax may be levied on incomes from such activities. However, many states levy a tax on agricultural income as per their respective State's policy.

173. The functional head of NITI Aayog

A) Chairman B) Ex-officio members

C) Vice-Chairman D) President of India

Explanation

Ans : (C)

Planning Commission was replaced by a new institution – NITI Aayog on January 1, 2015 with emphasis on 'Bottom –Up' approach to envisage the vision of Maximum Governance, Minimum Government, echoing the spirit of 'Cooperative Federalism'.

Composition of NITI Aayog:

- ◆ Chairperson: Prime Minister
- ◆ Vice-Chairperson: To be appointed by Prime-Minister (Functional Head)
- ◆ Governing Council: Chief Ministers of all states and Lt. Governors of Union Territories.
- ◆ Regional Council: To address specific regional issues, Comprising Chief Ministers and Lt. Governors Chaired by Prime Minister or his nominee.
- ◆ Adhoc Membership: 2 member in ex-officio capacity from leading Research institutions on rotational basis.
- ◆ Ex-Officio membership: Maximum four from Union council of ministers to be nominated by Prime minister.
- ◆ Chief Executive Officer: Appointed by Prime-minister for a fixed tenure, in rank of Secretary to Government of India.
- ◆ Special Invitees: Experts, Specialists with domain knowledge nominated by Prime-minister.

174. Assertion [A] : Cement production and consumption continue to grow despite the general recession in the economy.

Reason [R] : India is one of the largest cement producers and ranked first in the world.

A) [A] is true but [R] is false

B) Both [A] and [R] are true; and [R] is the correct explanation of [A]

C) [A] is false, [R] is true

D) Both [A] and [R] are true, but [R] is not the correct explanation of [A]

Explanation

Ans : (A)

Indian cement industry is second largest in the world with installed cement capacity of 600 million tonnes and production of 391 million tonnes of cement in 2022-23. According to the report, India's cement production and consumption both grew by 11 per cent in FY23 on a yoy basis, driven by the government's push for infrastructure development and increased real estate activity.

175. Anemia Mukh Bharat was implemented in Tamil Nadu in the year

A) 2010

B) 2015

C) 2018

D) 2020

Explanation

Ans : (C)

The Anemia Mukh Bharat strategy is being implemented in all villages in blocks of the districts through existing delivery platforms as envisaged in the National Iron Plus Initiative (NIPI) and Weekly Iron Folic Acid Supplementation (WIFS) programme Since 2018. Anaemia Mukh Bharat Scheme is implemented in TamilNadu in order to reduce the prevalence of anemia by 3 percentage points per year.

176. Implementation of the Tamil Nadu Urban Healthcare project funded by the Japan International Corporation agency for years.

A) 5

B) 6

C) 7

D) 8

Explanation

Ans : (C)

The Health and Family Welfare Department of the Government of Tamil Nadu is implementing Tamil Nadu Urban Health Care Project in the health sector with the funding support from Japan International Cooperation Agency (JICA). ₹ 1,634 crores to be spent over a period of 7 years and the project activities include the following: a) construction of Hospital buildings through Public Works Department (PWD) and b) procurement of Equipment through Tamil Nadu Medical Services Corporation Ltd (TNMSC).

177. Assertion [A] : "Thirunari Thaervu Thittam" was launched in the year 2023.

Reason [R] : To encourage the government school students to pursue higher education in premier institution.

A) [A] is true, but [R] is false

B) Both [A] and [R] are true, [R] is the correct explanation of [A]

- C) [A] is false, [R] is true
D) Both [A] and [R] are true, but [R] is not the correct explanation of [A]

Explanation

Ans : (B)

- ◆ Tamil Nadu government has launched a new talent support scheme, Thirunari Thervu Thittam, for state-run school students that carries a Rs 1,000 monthly stipend. Thirunari Thervu Thittam means a scheme to spot and nurture talent.
- ◆ As many as 1,000 students (500 boys and 500 girls) studying in Class 10 would be chosen for this scheme. Guidance would be provided to students by connecting them to higher education institutions such as IIT Madras. A stipend of Rs 1,000 would be provided every month until the students complete Class 12. They would also get Rs 12,000 as stipend annually during their under-graduation and post-graduation.

178. Various welfare schemes to enhance the overall development of Adi Dravidar and Scheduled Tribe people, a sum of crores has been allocated in the Budget Estimate for the year 2023-2024.

- A) ₹ 3012.85 B) ₹ 3212.85
C) ₹ 3512.85 D) ₹ 3552.85

Explanation

Ans : (C)

In order to implement various welfare schemes to enhance the overall development of Adi Dravidar and Scheduled Tribe people, a sum of ₹ 3512.85 crore has been allocated in the Budget Estimate for the year 2023-2024. Out of ₹ 3512.85 crore allocated for this department for the year 2023-2024, ₹ 2,206.70 crore (62.81%) has been earmarked for educational schemes only.

179. Tamil Nadu Government declares as Education Development Day.

- A) 15th February B) 15th June
C) 15th July D) 15th November

Explanation

Ans : (C)

- ◆ The birthday of late Chief Minister K. Kamaraj on July 15 is celebrated as 'Educational Development Day' since 2007. In 2006, the Tamil Nadu Government passed an Act in this regard. Schools have been further directed to conduct motivational speeches along with other activities like competitions among students in essay writing, painting, and poetry. Prizes will also be given away to encourage the spirit of education put forward by Kamaraj.
- ◆ K. Kamaraj popularly known as Kamarajar was the Chief Minister of Tamil Nadu from 13 April 1954 to October 2, 1963. He was popularly known as the 'King Maker' in Indian politics. He was also the president of the Indian National Congress for four years from 1964-67 and was instrumental in making Lal Bahadur Shastri the Prime Minister after the passing away of Jawaharlal Nehru.

180. Tamil Nadu Gross State Domestic Product (GSDP) has grown at the rate of % for the year 2022-2023 as against India's GDP growth rate of 7.24% during the same period.

- A) 8.10 B) 8.12
C) 8.15 D) 8.19

Explanation

Ans : (D)

Tamil Nadu's gross state domestic product (GSDP) grew at 8.19% for the year 2022-23 as against India's GDP growth rate of 7.24% during the same period. The proportion of GSDP of Tamil Nadu to GDP of India in 2021-22 and 2022-23 are 8.82% and 8.68% at current prices and 9.00% and 9.08% at constant prices. Tamil Nadu ranked 2nd in terms of GSDP at current prices and 3rd in terms of GSDP at constant prices in 2021-22.

181. Assertion [A] : "Mangala Malai" scheme was "introduced during 2012-2013.

Reason [R] : To facilitate the orphan girls to get a suitable bridegroom.

- A) [A] is true, [R] is false
B) Both [A] and [R] are true, [R] is the correct explanation of [A]
C) [A] is false, [R] is true
D) Both [A] and [R] are true, [R] is not the correct explanation of [A]

Explanation

Ans : (B)

Mangala Mala Scheme was implemented by the Social Welfare Department of Tamil Nadu Government to help orphaned women to get married. The scheme was launched during 2012-13.

Group I – 2022

182. Which of the following are correctly paired :

- i. KVK – Kisan Vigyan Kendra
- ii. SMAE – Sub Mission on Agriculture Extension
- iii. NSDA – National Skill Development Agency
- iv. ATMA – Agricultural Technology Management Agency

- A) i, ii and iii B) ii, iii and iv
C) i, iii and iv D) i, ii, iii and iv

Explanation:

Ans : (B)

Kisan Vigyan Kendra

KVK, is an integral part of the National Agricultural Research System (NARS), aims at assessment of location specific technology modules in agriculture and allied enterprises, through technology assessment, refinement and demonstrations. KVKs have been functioning as Knowledge and Resource Centres of agriculture technology supporting initiatives of public, private and voluntary sector for improving the agricultural economy of the district and are linking the NARS with extension system and farmers.

Sub-Mission on Agricultural Extension (SMAE)

The objective of this Sub-Mission is to appropriately strengthen, expand and upscale existing Extension & Information Technology (IT) Schemes. The ongoing Extension Schemes include the Central Sector and Centrally Sponsored Schemes being implemented by the Extension Division/Directorate of Extension. Even in the

Explanation :

Wells constitute the principal source of irrigation in Tamil Nadu. The State has extensive groundwater use for agriculture because rainfall is seasonal and unevenly distributed. Both open wells and bore wells are used to irrigate agricultural land, particularly in areas where surface-water sources are insufficient. Tanks and canals are also important traditional irrigation sources, but well irrigation accounts for a major share of the irrigated area in Tamil Nadu.

45. One of the following is NOT provided for third Genders in Tamil Nadu.

- A) Marriage Assistance
- B) Educational Assistance
- C) Financial Assistance
- D) Training Assistance

Explanation :

Tamil Nadu has introduced various welfare measures for transgender persons, including assistance for education, skill development, livelihood and financial support. These measures are intended to improve social inclusion and economic independence. Educational assistance helps transgender students continue their studies, while training and financial assistance support employment and livelihood opportunities. Marriage assistance is not included among the standard welfare provisions referred to in this question. Therefore, A) Marriage Assistance is the answer.

JUNIOR ANALYST IN THE DRUGS TESTING LABORATORY - 2023

1. Choose the correct statements pertaining to 'Sanjeevani' project:

- i) It was implemented in Himachal Pradesh.
 - ii) The project uses telemedicine and technology to provide convenient and high quality livestock care services to farmers at their doorsteps.
 - iii) It was also provided herbal based medicines to the cattle farmers.
- A) Only (i) B) Only (ii) and (iii)
C) Only (i) and (ii) D) Only (i) and (iii)

Explanation :

The Sanjeevani project was implemented in Himachal Pradesh to improve veterinary healthcare for livestock owners. It uses telemedicine and digital technology to connect farmers with veterinary services and provide convenient livestock healthcare closer to their homes. The project is particularly significant for farmers in remote and mountainous areas where access to veterinary facilities can be difficult. The statement regarding the provision of herbal-based medicines is not part of the project's stated objectives.

2. Which of the following is correct with respect to inflation?

- A) rise in budget deficit
- B) rise in demand for money
- C) rise in general price index
- D) rise in prices of consumer

Ans. (C)

Explanation :

Inflation refers to a sustained increase in the general price level of goods and services in an economy over time. It is commonly measured through changes in price indices such as the Consumer Price Index (CPI). A rise in the general price index indicates that the overall price level has increased, reducing the purchasing power of money. A rise in the budget deficit or money demand may influence inflation but does not itself define inflation.

3. Consider the following statements about 'vibrant villages programme' and choose the right option:

- A) Providing funds for Flood prone villages
- B) Providing relief for famine affected village
- C) Providing infrastructure for earthquake prone regions
- D) Developing infrastructure along northern land border of the country

Explanation :

The Vibrant Villages Programme (VVP) is a Central Government initiative aimed at developing strategically important villages along India's northern land border. It focuses on improving infrastructure, connectivity, livelihood opportunities, and essential services in these border villages. The programme also seeks to encourage people to remain in these areas and strengthen their connection with border regions. It is therefore different from programmes specifically designed for flood, famine, or earthquake relief.

4. _____ intends to reach out to the masses and spread awareness about substance abuse through various activities.

- A) Drug Awareness Movements
- B) Nasha Mukta Bharat Abhiyaan
- C) Narcotic Awareness
- D) Alcohol Awareness

Explanation :

The Nasha Mukta Bharat Abhiyaan is a Government of India initiative aimed at creating awareness about the harmful effects of substance abuse and promoting a healthier, substance-free society. It uses awareness campaigns, educational activities, community participation, and outreach programmes to reach different sections of society. The initiative particularly emphasizes prevention, awareness, and community involvement in addressing substance abuse. Its approach extends beyond individual awareness to involve families, educational institutions, communities, and other stakeholders.

5. Which type of unemployment that largely exist in the agricultural sector is?

- A) Voluntary unemployment
- B) Involuntary unemployment
- C) Structural unemployment
- D) Disguised unemployment

Explanation :

Disguised unemployment occurs when more people are engaged in an activity than are actually required for the level of output produced. It is commonly associated with

Ans. (C)

Ans. (D)

Ans. (B)

Ans. (D)

Indian agriculture, particularly small and subsistence farms. If some workers are withdrawn from such employment, total agricultural output may remain almost unchanged because their marginal productivity is very low or nearly zero. Thus, agricultural employment can conceal a surplus labour force.

6. Which Act empowers the Central Government to take promotional and regulatory measures for the orderly development of industrial sector?

- A) Industries Promotion and Establishment Act
- B) Sick Industrial Companies Act
- C) Small Industries Services Act
- D) Industries Development and Regulation Act

Explanation : **Ans. (D)**

The Industries (Development and Regulation) Act, 1951 (IDRA) provides the Central Government with powers to regulate and promote the development of specified industries. It was enacted to ensure the planned and orderly development of the industrial sector. The Act provides mechanisms concerning industrial licensing, regulation and investigation of certain industrial undertakings. It formed an important part of India's industrial policy framework during the period of planned economic development.

7. The functions of Finance Commission in India are

- A) The distribution of net proceeds of taxes to be shared between the Union and the States and the allocation of shares of such proceeds among the States.
- B) The Principles which should govern the payment by the Union of grants in aid to the revenue of the states.
- A) (A) is correct (B) is false
- B) A is false (B) is correct
- C) (A) and B) are correct
- D) (A) and B) are false

Explanation : **Ans. (C)**

Under Article 280, the Finance Commission recommends the distribution of the net proceeds of taxes between the Union and States and the allocation of the States' share among themselves. It also recommends the principles governing grants-in-aid to the revenues of States from the Consolidated Fund of India. These are among its core constitutional functions.

8. What is meant by Repo rate?

- A) The rate of interest charged by the RBI to commercial banks
- B) Bank rate
- C) Discounting rate
- D) Rationing of Credit

Explanation : **Ans. (A)**

The Repo Rate is the rate at which the Reserve Bank of India lends short-term funds to eligible commercial banks against securities under the repo mechanism. It is an important monetary-policy tool used to influence liquidity, borrowing costs and inflation in the economy. When the repo rate is increased, borrowing generally

becomes more expensive, which can reduce demand and inflationary pressure. When reduced, credit conditions generally become easier.

9. Consider the following statement

Blue Economy deals with

- 1. Raising of fish production
- 2. Youth to be involved in Fishery extension activities
- 3. Raising of honey production
- 4. Fishery exports to be raised

Which one of the answer is/are incorrect?

- A) 3 Only
- B) 1 and 2
- C) 1 and 4
- D) 3 and 2

Explanation : **Ans. (A)**

The Blue Economy concerns the sustainable use of ocean and marine resources for economic development, livelihoods and environmental protection. Fish production, fisheries-related extension activities and fishery exports are directly associated with the blue economy. Honey production, however, is a land-based agricultural activity and does not fall within the core scope of the Blue Economy. Therefore, statement 3 is the incorrect one.

10. Which of the following is not a Maharatna Industry in India?

- A) GAIL
- B) BHEL
- C) Coal India Limited
- D) Airport Authority of India

Explanation : **Ans. (D)**

GAIL, BHEL and Coal India Limited are Central Public Sector Enterprises that have been granted Maharatna status. The Airports Authority of India (AAI) is a public-sector organisation responsible for managing and developing civil aviation infrastructure, but it is not classified as a Maharatna CPSE. Maharatna status provides eligible CPSEs with greater financial and administrative autonomy for investment and business decisions.

11. Who is the Chairperson of Niti Aayog?

- A) Finance Minister
- B) President of India
- C) Prime Minister
- D) RBI Governor

Explanation : **Ans. (C)**

The Prime Minister of India is the ex-officio Chairperson of NITI Aayog. NITI Aayog was established in 2015, replacing the Planning Commission. Its Governing Council includes the Chief Ministers of States and heads of Union Territories, providing a platform for cooperative federalism. The Chairperson provides overall direction to the institution, while the Vice-Chairperson is appointed by the Prime Minister.

12. The first committee report submitted for an integrated approach to health services is ____

- A) Mukerji Committee
- B) Sir C.V. Raman Committee
- C) Sir John Marshall Committee
- D) Sir Joseph Bhore Committee

Explanation :

The Health Survey and Development Committee, popularly known as the Bhore Committee, was appointed in 1943 under the chairmanship of Sir Joseph Bhore. Its report was submitted in 1946 and proposed a comprehensive and integrated system of health services for India. It emphasised preventive and curative healthcare, universal access, primary healthcare and integration of health services. The recommendations became an important foundation for the development of India's post-Independence public-health system.

13. According to NSDP, 2019-20, Tamilnadu occupied _____ rank in per capita income.

- A) Third B) Fourth
C) Fifth D) Sixth

Explanation :

According to the Net State Domestic Product (NSDP) data referred to in the question for 2019-20, Tamil Nadu stood sixth in per capita income among the States considered. Per capita income is calculated by dividing the state's income by its population and is commonly used to compare the average economic income level across states. Tamil Nadu has a relatively high per capita income because of its diversified economy, strong industrial base, services sector and developed infrastructure.

14. The Central Leather Research Institute is located in

- A) Dindigul B) Vellore
C) Erode D) Chennai

Explanation :

The Central Leather Research Institute (CLRI) is located in Adyar, Chennai. It was established in 1948 under the Council of Scientific and Industrial Research (CSIR). CLRI is a major research institution concerned with leather technology, leather processing, footwear, tanning, environmental technologies and related industrial research. Chennai is an important centre for India's leather industry, and CLRI provides scientific and technological support for its development.

15. The main objective of Krishi Shramik Samajik Suraksha Yojana is _____ .

- A) To give social security benefit to agricultural labourers on hire in the age group of 18 to 60
B) To ensure availability of appropriate quality of food grains.
C) To give educational allowance of Rs.100 per month to each child of parents living below poverty line.
D) To give advance loans to the poor at very low rate of interest .

Explanation :

The Krishi Shramik Samajik Suraksha Yojana was designed to provide social-security protection to agricultural labourers. Agricultural workers often have irregular employment and limited access to formal social-security arrangements. The scheme sought to cover agricultural labourers in the 18-60 years age group and provide benefits intended to offer financial protection against

Ans. (D)

risks associated with their livelihood. Thus, its central objective was social security for agricultural labourers.

16. Choose the wrong statement:

Services of Integrated Child Development Scheme (ICDS) includes:

- i) To improve the nutritional and health status of children in the age group 0-6 years.
ii) To improve the health, nutrition and education of the target community.
iii) Prevention of gender biased sex selective elimination.

- A) (i) and (ii) only B) (ii) and (iii) only
C) (i) only D) (iii) only

Explanation :

ICDS was launched in 1975 to improve the health and nutritional status of children below six years and support the health and nutrition of pregnant and lactating women. Its major services include supplementary nutrition, immunisation, health check-ups, referral services, preschool non-formal education and nutrition and health education. Prevention of gender-biased sex-selective elimination is not a core ICDS service; it is addressed through other government initiatives. Therefore, statement (iii) is the incorrect one.

Ans. (D)

17. Assertion [A] : The Information and Communication Technology Academy of Tamilnadu (ICTACT) launched.

Reason [R] : Helps to conduct training programme for only industries.

- A) [A] is true but [R] is false
B) [R] is the exact explanation for [A]
C) Both [A] and [R] are true
D) Both [A] and [R] are false

Explanation :

ICT Academy of Tamil Nadu (ICTACT) was established to strengthen the ICT skills and employability of students, teachers and professionals. It works with educational institutions and industry to bridge the gap between academic learning and industry requirements through faculty development, skill development, training and employability programmes. Therefore, the Assertion is true. The Reason is incorrect because ICTACT does not conduct training only for industries; its activities extend significantly to students and academic institutions.

Ans. (A)

18. Which district has highest well irrigation in Tamil Nadu?

- A) Thanjavur B) Villupuram
C) Coimbatore D) Thiruvannamalai

Explanation :

Villupuram district has traditionally had a significant dependence on well irrigation because of its agricultural conditions and groundwater resources. Wells provide irrigation water for various crops, particularly where surface-water irrigation is less extensive. Tamil Nadu's irrigation system includes canals, tanks, wells, and other groundwater sources, with their relative importance

Ans. (B)

varying among districts. Among the options given, Villupuram is identified as having the highest extent of well irrigation in the referenced statistical classification.

19. Who took measures to discontinue the teaching of Hindi in Government schools in Tamil Nadu?

- A) C.N. Annadurai B) Ms. J. Jayalalithaa
C) M. Karunanidhi D) M.G. Ramachandran

Explanation : **Ans. (A)**

C. N. Annadurai, after becoming Chief Minister of Madras State in 1967, implemented the two-language formula in the State, with Tamil and English as the two languages of education in place of the earlier three-language approach. His government opposed the compulsory imposition of Hindi and strengthened the position of Tamil and English in the educational system. This policy became an important part of the Dravidian movement's language policy.

20. Who introduced cradle baby scheme?

- A) Arignar Anna B) M.G. Ramachandran
C) M. Karunanidhi D) J. Jayalalithaa

Explanation : **Ans. (D)**

The Cradle Baby Scheme was introduced in Tamil Nadu by J. Jayalalithaa in 1992. The scheme was designed to prevent female infanticide by providing a safe alternative for parents who were unable or unwilling to raise a newborn child. Babies could be placed in designated cradles at government facilities, after which the authorities arranged for their care and rehabilitation. The scheme was particularly associated with efforts to improve the female child sex ratio in vulnerable districts.

ASSISTANT MANAGER IN TAMIL NADU CO-OPERATIVE - 2023

1. OSCC will facilitate access to following services:

- i) Emergency Response and Rescue Service.
ii) Psycho-social support/counselling.
iii) Focus on education of girl children.
iv) Differently abled women

Select the correct answer :

- A) (i) Only
B) (i) and (iii) only
C) (ii) and (iv) only
D) (i) and (ii) only

Explanation : **Ans. (D)**

OSCC (One Stop Centre) provides integrated support to women affected by violence. Its services include emergency response and rescue services and psycho-social support and counselling, along with medical, legal and other assistance. The primary purpose of an OSCC is to provide immediate and coordinated support to women facing violence, rather than focusing specifically on the education of girl children or services exclusively for differently abled women. Therefore, statements (i) and (ii) correctly describe OSCC services.

2. The following states have achieved the sustainable development goal target in maternal mortality rate during 2019-20 are

- i) Kerala ii) Punjab
iii) Himachal Pradesh iv) Tamil Nadu
A) (i) Only B) (ii) and (iv)
C) (i) and (iv) D) (i), (iii) and (iv)

Explanation : **Ans. (C)**

The Sustainable Development Goal relating to maternal health seeks a substantial reduction in the Maternal Mortality Ratio (MMR). For the period referred to in the question, Kerala and Tamil Nadu had achieved the specified SDG target for maternal mortality. Official health data show Kerala's MMR at 43 and Tamil Nadu's at 60 for the relevant 2019-20 assessment. The figures demonstrate their strong performance in maternal healthcare compared with many other States.

3. In 2020-21 the overall performance of Tamil Nadu in the sustainable development was _____

- A) 1 rank B) 2 rank
C) 3 rank D) 4 rank

Explanation : **Ans. (B)**

In the NITI Aayog's SDG India Index 2020-21, the overall performance of Tamil Nadu secured the 2 rank (sharing the second spot with Himachal Pradesh with a composite score of 74).

4. Recently, researchers at the Indian Institute of Technology (IIT), Guwahati have developed an ultrasound-assisted fermentation method to produce a safe sugar substitute from baggare is called _____

- A) Glucitol B) Xylol
C) Xylitol D) Mannitol

Explanation : **Ans. (C)**

Xylitol is a low-calorie sugar alcohol used as a sugar substitute and is particularly useful in food products and oral-care applications. Agricultural residues such as sugarcane bagasse contain cellulose and hemicellulose that can serve as sources for producing valuable compounds. The ultrasound-assisted fermentation approach developed by researchers at IIT Guwahati was aimed at improving the conversion process for producing xylitol from such biomass.

5. _____ was the first state in India to achieve 100% rural electrification in 1970.

- A) Assam B) Haryana
C) Uttar Pradesh D) Karnataka

Explanation : **Ans. (B)**

Haryana achieved 100% rural electrification in 1970, becoming the first state in India to accomplish this milestone. Rural electrification was undertaken to extend electricity access to villages and support agricultural activities, irrigation, rural industries and household needs. Haryana's achievement reflected the state's early expansion of electricity infrastructure and its emphasis on providing power connections throughout its rural areas.

6. Name the type of genome found in Covid 19 virus.

- A) ds DNA B) ss DNA
C) ss RNA D) ds RNA

3. The soil derived from the Deccan trap with high moisture holding is, called

- A) Alluvial soil B) Regur soil
C) Red soil D) Laterite soil

Explanation :

Ans. (B)

Regur soil, also known as black cotton soil, is formed from the weathering of Deccan Trap basaltic rocks. It has a high clay content, excellent moisture-holding capacity, and is rich in lime, iron, magnesium, and alumina. These properties make it ideal for cultivating cotton, as well as crops such as sugarcane, soybean, wheat, and groundnut. It is mainly found in Maharashtra, Madhya Pradesh, Gujarat, Telangana, and Karnataka.

4. Match the followings :

Bird Sanctuaries		State	
a) Ghana		1. Karnataka	
b) Ranganthittoo		2. Rajasthan	
c) Vedanthangal		3. Andhra Pradesh	
d) Malapatti		4. Tamil Nadu	
	a) b) c) d)		
A) 2	1	4	3
B) 3	2	4	1
C) 4	3	1	2
D) 1	4	2	3

Explanation :

Ans. (A)

Ghana Bird Sanctuary (Keoladeo National Park) is located in Rajasthan and is a UNESCO World Heritage Site. Ranganathittu Bird Sanctuary in Karnataka is famous for migratory birds. Vedanthangal Bird Sanctuary in Tamil Nadu is India's oldest bird sanctuary and attracts thousands of migratory birds annually. Malapati Bird Sanctuary is situated in Andhra Pradesh. These sanctuaries play an important role in conserving bird diversity and wetland ecosystems.

5. The onset of the monsoon towards the end of may is in _____ and _____ Islands.

- A) Over Western ghats and Srilanka
B) Eastern ghats and Malaysia
C) Srilanka and over Andaman and Nicobar Islands
D) Lakshadeep Islands

Explanation :

Ans. (C)

The South-West Monsoon begins its advance towards the end of May over the Andaman and Nicobar Islands after crossing Sri Lanka. It then reaches Kerala around 1 June, marking the official onset of the monsoon in India. The monsoon gradually spreads northward and westward, bringing rainfall to most parts of the country. This seasonal wind system is crucial for India's agriculture, water resources, and overall economy.

6. In which state the 'Krishi Mahotsav' is being organized every year?

- A) Gujarat B) Madhya Pradesh
C) Uttar Pradesh D) Jharkhand

Explanation :

Ans. (A)

Krishi Mahotsav is an annual agricultural campaign organized by the Government of Gujarat to improve farm productivity and farmers' income. During the

programme, agricultural scientists and officials visit villages to provide guidance on modern farming practices, soil health, irrigation, crop management, and the use of improved seeds and fertilizers. The initiative helps transfer scientific knowledge directly to farmers and promotes sustainable agricultural development.

7. Karnataka is the leading producer of _____ for about one-fourth of the total production of the country in 2006

- A) Coal B) Iron ore
C) Copper D) Manganese

Explanation :

Ans. (B)

Karnataka has been one of India's leading producers of iron ore, contributing about one-fourth of the country's production during the period referred to in the question. Major iron ore mining areas include Bellary, Chitradurga, Chikkamagaluru, and Tumakuru districts. The availability of rich hematite and magnetite deposits has supported the growth of iron and steel industries and contributed significantly to the state's industrial and economic development.

8. In the upper Ganges valley and Indo Gangatic plain, Iron is first found in 800 BC and its culture is associated with

- A) Painted Gray ware B) Black polished ware
C) Black and Red ware D) Ochre colored ware

Explanation :

Ans. (A)

The Painted Grey Ware (PGW) Culture, dating from about 1200–600 BCE, is associated with the early use of iron in the Upper Ganga Valley and the Indo-Gangetic Plain. Iron tools and weapons helped expand agriculture, clear forests, and establish permanent settlements. The PGW culture is often linked with the later Vedic period and played an important role in the rise of early kingdoms known as the Mahajanapadas.

9. Researchers belonging to which country discovered the evidence of water in 17 asteroids

- A) China B) Japan
C) USA D) France

Explanation :

Ans. (B)

Researchers from Japan discovered evidence of water-bearing minerals on 17 asteroids, indicating that water once existed or still exists in hydrated form on these celestial bodies. The discovery was made by analysing reflected light from the asteroids using advanced astronomical observations. It provides important clues about the origin of water in the Solar System and supports the theory that asteroids may have contributed to delivering water and organic materials to the early Earth.

10. Which one of the following tiger reserves was recently Chosen NTCA for tiger augmentation programme ?

- A) Kanha Tiger Reserve
B) Panna Tiger Reserve
C) Buxa Tiger Reserve
D) Rathambore Tiger Reserve

Explanation :

Ans. (C)

The National Tiger Conservation Authority (NTCA) selected the Buxa Tiger Reserve in West Bengal for the Tiger Augmentation Programme to increase its declining tiger population. The programme involves habitat improvement, strengthening protection measures, and, where necessary, introducing tigers from healthy source populations. It aims to restore ecological balance, enhance genetic diversity, and ensure the long-term conservation of tigers in the reserve.

11. Nagoya protocol is related with which of the following statements

- A) Utilization of genetic resources
- B) Utilization of forest resources
- C) Utilization of marine resources
- D) Utilization of mangroves resources

Explanation :

Ans. (A)

The Nagoya Protocol is an international agreement adopted under the Convention on Biological Diversity (CBD) in 2010. It establishes rules for access to genetic resources and the fair and equitable sharing of benefits arising from their utilization. The protocol aims to conserve biodiversity, promote sustainable use of biological resources, and ensure that countries and indigenous communities receive appropriate benefits when their genetic resources and traditional knowledge are used.

12. Which country is having the largest border line with India ?

- A) Pakistan
- B) Bangladesh
- C) China
- D) Nepal

Explanation :

Ans. (B)

Bangladesh shares the longest international border with India, measuring about 4,096 km. The border passes through the Indian states of West Bengal, Assam, Meghalaya, Tripura, and Mizoram. It is the fifth-longest land border in the world and plays an important role in trade, cultural exchange, and regional cooperation. India shares borders with six other countries, but Bangladesh has the longest boundary among them.

13. Which of the following objects does not belong to the solar system ?

- A) Comets
- B) Nebulae
- C) Asteroids
- D) Planets

Explanation :

Ans. (B)

A nebula is a vast cloud of gas and dust found in interstellar space, outside the Solar System. It is often the birthplace of new stars or the remnant of dead stars. In contrast, planets, asteroids, and comets are all members of the Solar System, revolving around the Sun. Therefore, nebulae do not belong to the Solar System and are part of the larger Milky Way Galaxy.

14. Which of the following is not associated with river capture?

- A) beheaded stream
- B) oxbow lake
- C) wind gap
- D) water gap

Explanation :

Ans. (B)

River capture (stream piracy) occurs when one river diverts the flow of another through headward erosion. Landforms associated with river capture include beheaded streams, wind gaps, and water gaps. An oxbow lake, however, is formed when a meander loop is cut off from the main river due to lateral erosion and deposition. Therefore, it is not related to river capture.

15. Swampy forests are found in

- A) River Estuaries
- B) Coastlines
- C) Inlands
- D) Rivers

Explanation :

Ans. (A)

Swampy forests, commonly known as mangrove forests, are found mainly in river estuaries, where freshwater mixes with seawater. These forests grow in saline, waterlogged conditions and are adapted to tidal influences. Mangroves protect coastlines from erosion, support rich biodiversity, and serve as breeding grounds for many fish and aquatic species. Major mangrove forests in India occur in the Sundarbans, Mahanadi, Godavari, Krishna, and Cauvery deltas.

16. Match the following :

Natural Vegetation	Tree
a) Tropical evergreen forest	1. Teak
b) Tropical deciduous forest	2. Acacia
c) Desert vegetation	3. Sundri
d) Tidal vegetation	4. Rosewood
a) b) c) d)	
A) 4 1 2 3	
B) 2 3 4 1	
C) 3 2 4 1	
D) 3 4 1 2	

Explanation :

Ans. (A)

Different natural vegetation types are identified by their characteristic tree species. Rosewood is commonly found in tropical evergreen forests due to high rainfall. Teak is the dominant tree of tropical deciduous forests, which experience seasonal rainfall. Acacia is well adapted to the dry conditions of desert vegetation. Sundari is the characteristic tree of tidal (mangrove) forests, especially in the Sundarbans, where it thrives in saline, waterlogged conditions.

17. Match the following :

a) Winter season	1. Mid September November
b) Summer season	2. June - September
c) The South-West monsoon season	3. November-March
d) The North-East monsoon season	4. March - June
a) b) c) d)	
A) 3 1 4 2	
B) 2 3 4 1	
C) 4 3 2 1	
D) 3 4 2 1	

Explanation :

India experiences four major climatic seasons. The winter season extends from November to March with cool and dry weather. The summer season lasts from March to June, characterized by high temperatures. The South-West Monsoon brings most of India's annual rainfall between June and September. The North-East Monsoon, occurring from mid-September to November (mainly October–December in Tamil Nadu), provides significant rainfall to the southeastern coast of India.

18. The average annual variability of rainfall in Mawsynram and Cherrapunji is

- A) 100 cm B) 150 cm
C) 200 cm D) 50 cm

Explanation :

Mawsynram and Cherrapunji in Meghalaya receive the highest annual rainfall in the world due to the moisture-laden Bay of Bengal branch of the South-West Monsoon. Although these places receive extremely heavy rainfall, the amount varies considerably from year to year. The average annual variability of rainfall is about 200 cm, reflecting significant fluctuations caused by changes in monsoon intensity and atmospheric conditions.

19. Which one of the following are inner planets of the solar system ?

- A) Planets between the sun and the earth
B) Planets between the sun and the Jupiter
C) Planets in gaseous state
D) Planets without satellite

Explanation :

The inner planets are Mercury, Venus, Earth, and Mars, which lie between the Sun and Jupiter. They are also known as terrestrial planets because they have rocky surfaces, relatively high densities, and solid crusts. These planets are smaller than the outer planets and have few or no natural satellites. The asteroid belt separates the inner planets from the outer gas giant planets beginning with Jupiter.

20. Ever green forests formed in _____ regions.

- A) Semi-Humid Region B) Humid Region
C) Dry Region D) Desert Region

Explanation :

Evergreen forests develop in humid regions receiving heavy rainfall (generally above 200 cm annually) and experiencing high temperatures throughout the year. Trees in these forests do not shed all their leaves at the same time, so they remain green year-round. In India, tropical evergreen forests are mainly found in the Western Ghats, Andaman and Nicobar Islands, and the northeastern states. These forests are rich in biodiversity and valuable timber species such as rosewood, ebony, and mahogany.

21. Which of the following space craft is launched to mercury in the year 2018 ?

- A) Chang'e 4 B) Bepi Colombo
C) G SAT-7A D) Hongyun

Ans. (D)

Explanation :

BepiColombo is a joint mission of the European Space Agency (ESA) and the Japan Aerospace Exploration Agency (JAXA) launched on 20 October 2018 to study Mercury. The mission carries two scientific orbiters to investigate Mercury's surface, interior, magnetic field, and exosphere. It aims to improve our understanding of the formation and evolution of the innermost planet and the early Solar System.

22. Which of the following Islands are of Coral Origin ?

1. Marshall Islands 2. Reunion Islands
3. Maldives Islands 4. Mauritius Islands

Select the correct answer from the code given below :

- A) 1 and 2 B) 2 and 3
C) 1 and 4 D) 1 and 3

Explanation :

Marshall Islands and the Maldives are predominantly coral islands, formed from coral reefs built by marine organisms over thousands of years. They mainly consist of coral atolls, surrounding shallow lagoons. In contrast, Reunion and Mauritius are primarily volcanic islands, created by volcanic activity in the Indian Ocean. Coral islands are generally low-lying, biologically rich, and highly vulnerable to sea-level rise and climate change.

23. Consider the following Pairs

1. Chambal – Narmada
2. Sone – Yamuna
3. Manas – Brahmaputra

Which one of the pairs given above is/are correctly matched

- A) 1, 2 and 3 B) 1 and 2
C) 2 and 3 D) only 3

Explanation :

Manas is a major left-bank tributary of the Brahmaputra, originating in the Himalayas of Bhutan, making Pair 3 correct. Chambal is not a tributary of the Narmada; it is a right-bank tributary of the Yamuna, making Pair 1 incorrect. Similarly, the Sone River is not a tributary of the Yamuna but a right-bank tributary of the Ganga, joining it near Patna. Hence, only Pair 3 is correctly matched.

24. Nathula pass connects between the countries of

- A) India and Pakistan
B) India and Bangladesh
C) India and China
D) India and Srilanka

Explanation :

Nathu La Pass is a high-altitude mountain pass located in the Eastern Himalayas, connecting Sikkim (India) with the Tibet Autonomous Region of China. Situated at an elevation of about 4,310 metres, it was an important branch of the historic Silk Route. The pass was reopened for border trade in 2006, strengthening economic and cultural ties between India and China while also holding significant strategic importance.

Ans. (C)

STATISTICAL INSPECTOR - 2018

1. The first person to enter into space was?

- A) Alan Shepard B) Yuri Gagarin
C) Edward H. White D) Valentina Tershkova

Explanation : **Ans. (B)**
Yuri Gagarin, a Soviet cosmonaut, became the first human to travel into outer space on 12 April 1961. He was launched aboard Vostok 1 and completed one orbit around Earth in approximately 108 minutes. His historic mission marked a major milestone in human space exploration and made him an international symbol of the beginning of human spaceflight. Alan Shepard subsequently became the first American in space in May 1961.

2. Coniferous trees are found mostly in?

- A) Deccan Plateau B) Eastern Coast
C) Western Coast D) Middle Himalaya

Explanation : **Ans. (D)**
Coniferous forests are mainly found in the higher elevations of the Himalayas, particularly between about 1,500 and 3,500 metres, depending on local conditions. Important coniferous trees include pine, deodar, fir, spruce, and cedar. These trees are adapted to cool climates and often have needle-like leaves and cone-bearing structures. The Middle and higher Himalayan regions provide suitable temperature and precipitation conditions for their growth. The Deccan and coastal regions mainly support tropical vegetation rather than coniferous forests.

3. Match the following :

Vegetation type	Average Annual rainfall (cm)
a) Evergreen forest	1. 50 – 100
b) Monsoon forest	2. Below 50
c) Dry forest	3. Above 200
d) Desert forest	4. 100 – 200
a) b) c) d)	
A) 1 3 4 2	
B) 2 3 1 4	
C) 3 4 2 1	
D) 3 4 1 2	

Explanation : **Ans. (D)**
Evergreen forests → Above 200 cm: Heavy rainfall throughout the year supports dense, evergreen vegetation. Trees remain green because there is no prolonged dry season.

Monsoon forests → 100–200 cm: These forests receive seasonal rainfall and experience a dry period. Trees often shed their leaves during the dry season.

Dry forests → 50–100 cm: Lower rainfall results in relatively open vegetation, with trees adapted to prolonged dry conditions.

Desert forests → Below 50 cm: Very low rainfall supports thorny bushes, shrubs and drought-resistant plants.

4. Vansda National Park is located in?

- A) Assam B) Uttar Pradesh
C) Gujarat D) Bihar

Explanation :

Ans. (C)

Vansda National Park is located in Navsari district of Gujarat, in the southern part of the state. It was established as a national park in 1979 and covers an area of about 24 sq. km. The park is characterized by dense forests and rich biodiversity. It forms part of the Western Ghats biodiversity region and contains species such as leopards, four-horned antelopes, wild boars, and several varieties of birds and reptiles.

5. In the Indian peninsular what type of forest are found

- A) Coniferous forest B) Tropical forest
C) Monsoon forest D) Sub-tropical forest

Explanation : **Ans. (C)**

The Indian Peninsula predominantly experiences tropical monsoon climatic conditions, supporting tropical deciduous or monsoon forests over large areas. These forests receive seasonal rainfall and experience a distinct dry period, during which many trees shed their leaves to conserve water. Important species include teak, sal, sandalwood, bamboo, and various deciduous trees, depending on the region. Areas with higher rainfall may contain evergreen vegetation, while drier parts have thorn and scrub vegetation.

6. Which one of the following is not a tiger reserve?

- A) Bhagwan Mahavir B) Gir
C) Indravathi D) Ranthambore

Explanation : **Ans. (*)**

Bhagwan Mahavir Wildlife Sanctuary is located in Goa and is not designated as a tiger reserve. Indravati Tiger Reserve is located in Chhattisgarh, while Ranthambore Tiger Reserve is in Rajasthan. Gir National Park and Wildlife Sanctuary in Gujarat is famous primarily for the conservation of the Asiatic lion, not as a tiger reserve. Therefore, among the given options, Bhagwan Mahavir is not a tiger reserve. It forms an important protected area of Goa.

7. Which one of the following National parks is not correctly matched?

- A) Balpakhran – Meghalaya
B) Panna – Bihar
C) Molem – Goa
D) Van Vihar – Madhya Pradesh

Explanation : **Ans. (B)**

Panna National Park is located in Madhya Pradesh, not Bihar. It is also part of the Panna Tiger Reserve and is well known for tiger conservation. Balpakram National Park is situated in Meghalaya, while Mollem National Park is in Goa. Van Vihar National Park is located in Bhopal, Madhya Pradesh. Hence, the incorrect geographical pairing is Panna – Bihar; the correct pairing is Panna – Madhya Pradesh.

8. Match the following :

National parks	States
a) Anshi	1. Rajasthan
b) Bandipur	2. Karnataka
c) Desert park	3. Tamilnadu
d) Guindy	4. Karnataka