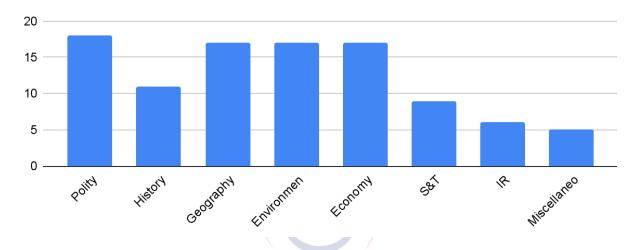


Detailed Analysis-2024 to 2013 Prelims

2024-Prelims Set A

Subject	Polity	History	Geography	Environment	Economy	S&T	IR	Miscellaneous	
Q's No	66,68,70-77,80,81,83-85,93-95	54-58,60-65	1-15,79,89	16-30,90,96	40-53,98-100	31-39	82,87,88,91,92,97	59,67,69,78,86	
Total	18	11	17	17	17	9	6	5	100



1.Consider the following statements :

Statement-I:The atmosphere is heated more by incoming solar radiation than by terrestrial radiation. Statement-II:Carbon dioxide and other greenhouse gases in the atmosphere are good absorbers of long wave radiation.

Which one of the following is correct in respect of the above statements?

(a) Both Statement-I and Statement-II are correct and Statement-II explains Statement-I

- (b) Both Stat ement-I and Statement-II are correct, but Statement-II does not explain Statement-I
- (c) Statement-I is correct, but Statement-II is incorrect

(d) Statement-I is incorrect, but Statement-II is correct.

Ans-D

Exp-

Statement 1 is incorrect: The Earth's atmosphere absorbs a significant amount of solar radiation, which is primarily shortwave radiation from the sun. Terrestrial radiation, which is longwave radiation emitted by the Earth. Incoming solar radiation, referred to as insolation, is significantly less at the Earth's surface than the total radiation emitted by the earth. This disparity is due to the Earth's relatively small size and its distance from the sun. Additionally, water vapor, dust particles, ozone, and other gases in the atmosphere absorb a portion of this insolation. warms the atmosphere but to a more extent compared to incoming solar energy.

Statement 2 is correct: Greenhouse gases like carbon dioxide (CO_2) and methane (CH_4) are effective at absorbing longwave radiation emitted by the Earth's surface, which contributes to the greenhouse effect and helps to warm the atmosphere.

Reference-NCERT 11th class -9th chapter

2.Consider the following statements:

Statement-I:



Thickness of the troposphere at the equator is much greater as compared to poles. Statement-II:

At the equator, heat is transported to great heights by strong convectional currents.

Which one of the following is correct in respect of the above statements?

(a) Both Statement-I and Statement-II are correct and Statement-II explains Statement-I

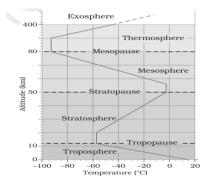
(b) Both Statement-I and Statement-II are correct, but Statement-II does not explain Statement-I

- (c) Statement-I is correct, but Statement-II is incorrect
- (d) Statement-I is incorrect, but Statement-II is correct

Ans:A

Exp:

Statement 1 is correct: The thickness of the troposphere is greater at the equator compared to the poles. This is because warmer air can expand and rise higher, resulting in a thicker troposphere in warmer regions. Statement 2 is correct: At the equator, strong convection currents caused by intense solar heating transport heat to greater heights, which contributes to greater thickness of the troposphere in equatorial regions. Therefore Statement 2 explains statement 1.



Reference-NCERT Class 11-Chapter 7 NCERT Class 12 Geography-Chapter 5.

3.Consider the following :

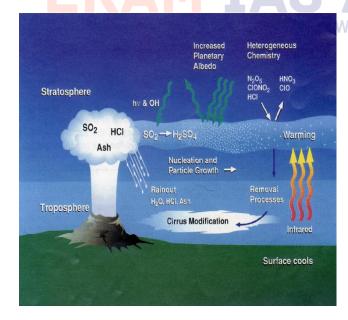
1. Pyroclastic debris 2. Ash and dust 3. Nitrogen compounds 4. Sulphur compounds How many of the above are products of volcanic eruptions? (a) Only one

(c) Only three

(b) Only two







Reference: NCERT Class 11 Geography: Chapter 6

Exp:

 Pyroclastic debris: This is a product of volcanic eruptions, consisting of volcanic ash, pumice, and other volcanic materials expelled during an explosive eruption.

2.Ash and dust: These are also products of volcanic eruptions. Volcanic ash is made up of small particles of rock, minerals, and volcanic glass created during eruptions.

3.Nitrogen compounds: Volcanoes do not release usable nitrogen directly. However, the intense activity during eruptions can trigger lightning strikes, which break apart nitrogen molecules (N_2) in the air. This process allows nitrogen atoms to combine with other elements, forming usable nitrogen compounds.

4.Sulphur compounds: Sulfur dioxide (SO₂) and other sulfur compounds are released during volcanic eruptions and are significant volcanic gases.



G.C. Leong's -Chapter 8

4. Which of the following is/are correct inference/inferences from isothermal maps in the month of January?

1. The isotherms deviate to the north over the ocean and to the south over the continent.

2. The presence of cold ocean currents, Gulf Stream and North Atlantic Drift make the North Atlantic Ocean colder and the isotherms bend towards the north.

Select the answer using the code given below :

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

Ans:A

Exp:

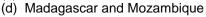
Statement 1 is correct: Warmer ocean waters cause isotherms to shift northward, while colder continental areas result in a southward bend, influencing climate patterns and temperature distribution across different regions

Statement 2 is incorrect: While the Gulf Stream warms the North Atlantic, the North Atlantic Drift (a continuation of the Gulf Stream) keeps the region relatively warm. Cold currents can affect local temperatures, but the Gulf Stream itself warms the area.

Reference:NCERT 11th class -9th chapter

5. Which of the following countries are well known as the two largest cocoa producers in the world?

- (a) Algeria and Morocco
- (b) Botswana and Namibia
- (c) Code d'Ivoire and Ghana



Ans:C

Exp: According to the United Nations Development Programme(UNDP)'s global Food and Agricultural Commodity System, Côte d'Ivoire (Ivory Coast)-2.2M and Ghana-1.1M are the two largest cocoa producers in the world, contributing a significant portion of global cocoa supply. Reference: (visualcapitalist.com/worlds-top-cocoa-producing-countries/)

(undp.org/facs/ghana-sustainable-Together, We Hard, You Smart

cocoa#:~:text=Ghana%20is%20the%20second%20largest,of%20the%20world's%20cocoa %20supply).

6.With reference to the Himalayan rivers Joining the Ganga downstream of Prayagraj from West to East, which one of the following sequences is correct?

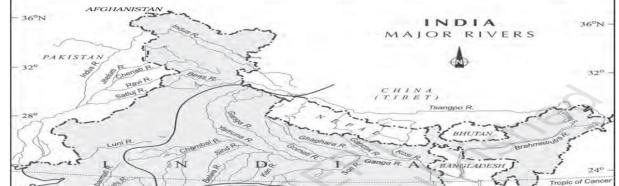
- (a) Ghaghara Gomati Gandak Kosi
 (b) Gomati Ghaghara Gandak Kosi
- (c) Ghaghara Gomati Kosi Gandak
- (d) Gomati Ghaghara Kosi Gandak

Ans:B

Exp: The Ganga river system, India's largest, includes perennial rivers from the Himalayas and nonperennial rivers from the Peninsula. Major left bank tributaries are Ramganga, Gomati, Ghaghara,



Gandak, Kosi, and Mahananda, discharging into the Bay of Bengal near Sagar Island.



Reference:NCERT-11th class- 3rd chapter.

7.Consider the following statements :

Statement-I: Rainfall is one of the reasons for weathering of rocks.

Statement-II: Rain water contains carbon dioxide in solution.

Statement-III: Rain water contains atmospheric oxygen.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-II and Statement-III are correct and both of them explain Statement-I
- (b) Both Statement-II and Statement-III are correct, but only one of them explains Statement-I
- (c) Only one of the Statements II and III is correct and that explains Statement-I
- (d) Neither Statement-II nor Statement-III is correct

Ans:A

Exp:

Statement 1 is correct:Weathering is the process of breaking down rocks into smaller particles through physical, chemical, and biological processes. Rainfall plays a significant role, particularly in chemical weathering. The water from rainfall can infiltrate rock crevices and dissolve minerals, leading to the breakdown of the rock structure.

Statement 2 is correct: When rainwater falls through the atmosphere, it absorbs carbon dioxide (CO_2). This dissolved CO_2 forms carbonic acid ($H_2 CO_3$) when combined with water. Carbonic acid is weak but plays a crucial role in weathering, especially in limestone and other carbonate rocks. This process is known as carbonation, which significantly enhances the chemical weathering of rocks.

Statement 3 is correct:Rainwater also contains dissolved atmospheric oxygen (O_2). This oxygen can participate in oxidation reactions, particularly in the weathering of ferrous minerals (like iron). When rocks containing iron minerals are exposed to rainwater, the dissolved oxygen can oxidize the iron, leading to the formation of rust and further degradation of the rock.

Relationship Between Statements How II and III Explain I:

Statement-II (carbon dioxide): Enhances chemical weathering through the formation of carbonic acid, which dissolves certain minerals, thus directly supporting the weathering process.

Statement-III (oxygen): Facilitates oxidation reactions that contribute to the breakdown of certain minerals, also directly supporting weathering. Therefore, Both Statement-II and Statement-III are not only correct but also complement each other in explaining how rainfall contributes to the weathering of rocks. Therefore, the correct option is (a) Both Statement-II and Statement-III are correct and both of them explain Statement-I.

Reference:NCERT Class 11 Geography:Chapter 6

8.Consider the following countries :

1. Finland2. Germany3. Norway4. RussiaHow many of the above countries have a border with the North Sea?
(a) Only one(b) Only two



(c) Only three

(d) All four

Ans:B

Exp:The North Sea, part of the North-East Atlantic Region, is the Atlantic's 13th largest sea, covering around 570,000 square kilometers. It stretches approximately 970 km long and 580 km wide. Bordered by Great Britain to the west and countries like Germany, Belgium, Denmark, the Netherlands, and Norway to the east and west, it does not border Finland or Russia.



Reference: Atlas

9. Consider the following information :

	Waterfall	Region	River	CADEMY
1.	Dhuandhar	Malwas Work 1	o Narmada We Ha	rd, You Smart
2.	Hundru	Chota Nagpur	Subarnarekha	
3.	Gersoppa	Western Ghats	Netravati	

In how many of the above rows is the given information correctly matched?

(a) Only one (c) All three

- (b) Only two
- е
- (d) None

Ans:A Exp:

Region: Bhedaghat and the roaring falls of Dhuandhar in the Jabalpur District of Madhya Pradesh.



	River: Narmada Dhuandhar Falls is located in Madhya Pradesh, but it is specifically near the city of Jabalpur, which is part of the Narmada Valley, not the Malwa region. While the Narmada River flows through the Malwa plateau, Dhuandhar Falls itself is not classified as being in the Malwa region.
2nd match is correct:	Region: Chota Nagpur River: Subarnarekha Hundru Falls is situated near Ranchi in Jharkhand, within the Chota Nagpur Plateau region. It is formed by the Subarnarekha River, which tumbles down from a height of about 98 meters. This waterfall is popular for its picturesque surroundings and is a well-known tourist spot.
3rd match is incorrect:	Region: Western Ghats River: Netravati Gersoppa Falls, also known as Jog Falls, is located in Karnataka. However, it is formed by the Sharavathi River, not the Netravati River. The Netravati River flows in a different region and does not create this waterfall. Jog Falls is one of the tallest waterfalls in India, but its association with the Sharavathi River makes this entry incorrect.

MY

E

Reference:

jabalpur.nic.in/en/tourist-place/dhuadhar-water-fall/ ranchi.nic.in/tourist-place/hundru-waterfall/ puratattva.in/gersoppa-the-legend-of-the-pepper-queen/

10.Consider the following information :

	Region	Name of the CTC mountain range	gType of mountainl, You Smart
1	Central Asia	Vosges	Fold mountain
2	Europe	Alps	Block mountain
3	North America	Appalachians	Fold mountain



4	South America	Andes	Fold mountain
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In how many of the above rows is the given information correctly matched?

- (a) Only one (b) Only two
- (c) Only three

(d) All four

Ans:B Exp:

1st match is Incorrect:	The Vosges Mountains are located in northeastern France and are classified as fault-block mountains, not fold mountains. They are not in Central Asia.
2nd match is incorrect:	The Alps are actually classified as fold mountains, not block mountains. They extend across several countries in Europe.
3rd match is correct:	The Appalachian Mountains are classified as fold mountains and are located in the eastern United States and Canada.
4th match is correct:	The Andes Mountains are classified as fold mountains and run along the western edge of South America.

Reference:NCERT 6th class -6th chapter

11.Consider the following airports :

- 1. Donyi Polo Airport
- 2. Kushinagar International Airport
- 3. Vijavawada International Airport

In the recent past, which of the above have been constructed as Greenfield Projects?

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

Ans:A

Exp:

A Greenfield airport project in India refers to the development of a new airport from the ground up on a previously undeveloped site, rather than expanding or upgrading an existing airport. These projects typically involve:

- 1. **Site Selection:** Identifying a suitable location that meets various criteria, such as accessibility, environmental impact, and regional air traffic demand.
- 2. **Design and Construction:** Planning and constructing all necessary infrastructure, including runways, terminals, taxiways, and support facilities, ensuring they meet modern standards.
- 3. Environmental Considerations: Conducting environmental assessments to address potential impacts on local ecosystems and communities.
- 4. **Connectivity Improvement:** Aiming to enhance regional connectivity, support economic growth, and promote tourism.

Airports-21 Greenfield Airports are to be set up in the country, 11 are operationalized



1.Donyi Polo Airport: Located in Arunachal Pradesh, this airport was constructed as a Greenfield project to enhance connectivity in the region.

2.Kushinagar International Airport: This airport in Uttar Pradesh was also developed as a Greenfield project, aimed at promoting tourism, particularly for Buddhist pilgrims.

3.Vijayawada International Airport: This airport in Andhra Pradesh is not classified as a Greenfield project yet, developed to improve air travel facilities in the region.

Reference: pib.gov.in/PressReleasePage.aspx?PRID=1906346

12.With reference to "water vapour", which of the following statements is/are correct?

1. It is a gas, the amount of which decreases with altitude.

2. Its percentage is maximum at the poles

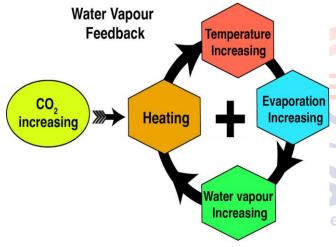
Select the answer using the code given below :

(a) 1 only (b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

Ans:A Exp:



Statement 1 is correct: Water vapour is a gas. Its concentration generally decreases with altitude in the atmosphere. This is because warmer air, temperature decreases with altitude near the Earth's surface: which can hold more moisture, is found closer to the Earth's surface, while cooler air at higher altitudes contains less water vapour. Thus, the amount of water vapour tends to decrease as you go higher in the atmosphere.

Statement 2 is incorrect: The percentage of water vapour is not maximum at the poles; it is typically higher in tropical regions. At the poles, cold air holds less moisture than warm air, leading to lower

concentrations of water vapour. The tropics experience higher temperatures and evaporation rates, resulting in more water vapour in the atmosphere.

Reference: NCERT 11th class 5th chapter.

13.Consider the following description :

- 1. Annual and daily range of temperatures is low.
- 2. Precipitation occurs throughout the year.
- 3. Precipitation varies between 50 cm 250 cm.

What is this type of climate?

- (a) Equatorial climate
- (b) China type climate
- (c) Humid subtropical climate
- (d) Marine West coast climate

Ans:D

Exp:

1. Annual and Daily Range of Temperatures is Low: Marine West Coast climates typically experience mild temperatures with minimal fluctuations, influenced by nearby oceans.



- 2. Precipitation Occurs Throughout the Year: This climate is characterized by consistent rainfall spread throughout the year, rather than concentrated in a particular season.
- 3. Precipitation Varies Between 50 cm 250 cm: Marine West Coast climates generally receive significant annual precipitation, which aligns with this range.

Other Options:

Equatorial Climate: Generally has high temperatures and high humidity with heavy rainfall.

China Type Climate: Typically experiences a more continental climate with distinct seasons and dry winters.

Humid Subtropical Climate: Features hot summers and mild winters with seasonal precipitation, but the rainfall pattern is not as consistent year-round.

Thus, the description matches the Marine West Coast climate best.

Reference: NCERT Class 11 Geography-Chapter 4

14.With reference to "Coriolis force", which of the following statements is/are correct?

1. It increases with increase in wind velocity:

2. It is maximum at the poles and is absent at the equator.

Select the answer using the code given below :

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

Ans:C

Exp:

Statement 1 is correct:The Coriolis force is proportional to the velocity of the moving object (in this case, wind). As wind velocity increases, the Coriolis force acting on it also increases. This is because the Coriolis effect is a result of the Earth's rotation, causing moving air (or water) to be deflected to the right in the Northern Hemisphere and to the left in the Southern Hemisphere. Thus, faster winds experience a stronger Coriolis force.

Statement 2 is correct: The Coriolis force is maximum at the poles and zero at the equator. This is because the Coriolis effect depends on the sine of the latitude: it increases as you move away from the equator towards the poles (where latitude is 90 degrees) and is zero at the equator (0 degrees latitude).

Reference:NCERT 11th class-9th chapter

15. On June 21 every year, which of the following latitude(s) experience(s) a sunlight of more than 12 hours?

- 1. Equator 2. Tropic of Cancer
- 3. Tropic of Capricorn 4. Arctic Circle

Select the correct answer using the code given below :

- (a) 1 only (b) 2 only
- (c) 3 and 4 (d) 2 and 4

Ans:D Exp:

1.Equator: Yes, the equator receives approximately 12 hours of sunlight throughout the year, but on June 21, it also experiences a bit more due to the sun's position.

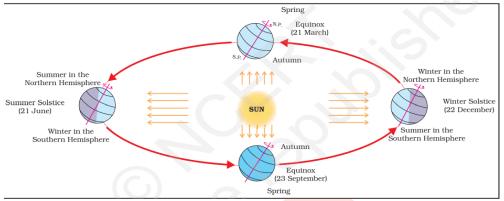


2.Tropic of Cancer: Yes, this latitude (23.5° N) experiences continuous sunlight for more than 12 hours on June 21, as the sun is directly overhead at this tropic.

3.Tropic of Capricorn: No, this latitude (23.5° S) is not experiencing more than 12 hours of sunlight on June 21. It is actually in darkness for part of the day as the sun is directly overhead at the Tropic of Cancer.

4.Arctic Circle: Yes, the Arctic Circle (66.5° N) experiences 24 hours of sunlight on June 21, known as the "midnight sun."

Revolution of the earth and sun-



Reference:NCERT 6th class-3rd chapter.

16. Which one of the following statements is correct as per the Constitution of India ?

- (a) Inter-State trade and commerce is a State subject under the State List.
- (b) Inter-State migration is a State subject under the State List.
- (c) Inter-State quarantine is a Union subject under the Union List.
- (d) Corporation tax is a State subject under the State List.

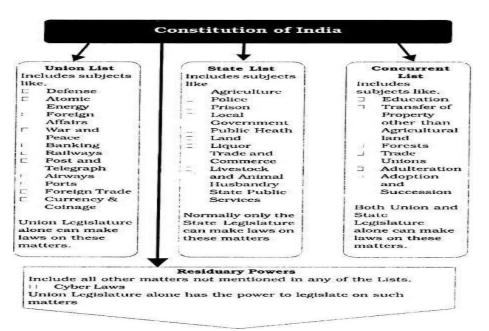
Ans:C

Exp:

Seventh Schedule and Article 246 of Indian constitution divides subjects into three lists: They are

- Union List: Subjects on which only the Parliament can legislate. It consist of 98 subjects.
- State List: Subjects on which only the state legislatures can legislate. It consist of 59 subjects.
- Concurrent List: Subjects on which both Parliament and State legislatures can legislate. It consist of 52 subjects.





- (a) is incorrect: Inter-State trade and commerce is regulated under Article 301 of the Constitution, and states can legislate on this subject, making it primarily a union subject.
- (b) is Incorrect: While states can have policies regarding migration, inter-state migration is not specifically classified as a State subject; it falls under the rights guaranteed by Article 19(1)(d).
- (c) is correct: Public health, including quarantine measures, is generally a State subject under the a Union subject.
- (d) is Incorrect: Corporation tax is listed under the Union List, meaning only the Parliament can legislate on this matter.

Reference: mea.gov.in/Images/pdf1/S7.pdf

Lakxmi Kanth -14th chapter.

17. With reference to perfluoroalkyl and Polyfluoroalkyl substances (PFAS) that are used in making many consumer products, consider the following statements :

- 1. PFAS are found to be widespread in drinking water, food and food packaging material.
- 2. PFAS are not easily degraded in the environment.

3. Persistent exposure to PFAS can leag to bioaccumulation in animal bodies.

Which of the statements given above are correct?

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

Ans:D

Exp:

Per- and polyfluoroalkyl substances (PFAS) are a diverse group of synthetic chemicals that have been utilized in consumer products globally since the 1950s. These substances are found in many everyday items, such as non-stick cookware and food packaging, where they prevent sticking. Additionally, PFAS enhance the stain resistance of fabrics and carpets and are used in effective firefighting foams.



Statement 1 is correct:PFAS are commonly found in various environments and have been detected in drinking water sources, certain foods, and food packaging materials. Their widespread use in consumer products contributes to their prevalence.

PFAS are not easily degraded in the environment.

Statement 2 is correct:PFAS are known as "forever chemicals" because they resist degradation processes. They persist in the environment for long periods, making them a concern for environmental and human health.

Statement 3 is correct:Due to their persistence and resistance to degradation, PFAS can accumulate in the tissues of living organisms. This bioaccumulation can lead to higher concentrations in the food chain, raising health concerns.

Reference: niehs.nih.gov/health/topics/agents/pfc

18.Consider the following :

- 1. Carabid beetles 2. Centipedes
- 3. Flies

4. Termites

5. Wasps

Parasitoid species are found in how many of the above kind of organisms?

- (a) Only two
- (b) Only three

(d) All five

- (c) Only four

Ans:B Exp:

Parasitoid species are primarily found in organisms that have a relationship with their hosts, often leading to the host's death.

Among the organisms listed:

- 1. Carabid beetles: Generally not associated with parasitoids.
- 2. Centipedes: Not typically hosts for parasitoids. Je Hard, You Smar
- 3. Flies: Certain fly species, especially in the family Tachinidae, are parasitoids that lay eggs in or on other insects.
- 4. Termites: Some parasitoid wasps can target termites.
- 5. Wasps: Many wasps, particularly in the family Ichneumonidae, are known for their parasitoid behavior, laying eggs in hosts like caterpillars or other insects.

Reference: britannica.com/science/parasitoid

19.Consider the following plants:

1. Groundnut 2. Horse-gram

3. Soybean

How many of the above belong to the pea family?

- (a) Only one (b) Only two
 - (c) All three (d) None

Ans:C

Exp:The pea plant typically refers to Pisum sativum, which is a member of the Fabaceae (pea) family. **1.Groundnut (Arachis hypogaea)**:Belongs to the **Fabaceae** family (the pea family).

2.Horse-gram (Macrotyloma uniflorum): Also belongs to the Fabaceae family (the pea family).

3.Soybean (Glycine max): Belongs to the Fabaceae family (the pea family).



Therefore all]three belong to Pea plant family.

Reference: britannica.com/topic/list-of-plants-in-the-family-Fabaceae-2021803

20.Consider the following statements :

Statement-I : The Indian Flying Fox is placed under the "vermin" category in the Wild Life (Protection) Act, 1972.

Statement-II : The Indian Flying Fox feeds on the blood of other animals.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-II explains Statement-I
- (b) Both Statement-I and Statement-II are correct, but Statement-II does not explain Statement-I
- (c) Statement-I is correct, but Statement-II is incorrect
- (d) Statement-I is incorrect, but Statement-II is correct

Ans:C Exp:

Statement 1 is correct: In 2017, the Indian Flying Fox (Pteropus giganteus) was declared as vermin in the state of Himachal Pradesh under the Wildlife (Protection) Act, 1972. This classification allowed for the culling of the species due to its alleged damage to crops and fruit trees in the region. However, this classification as "vermin" applies only in certain areas, and it does not mean that the species is considered vermin nationwide. The classification allowed local authorities to control the population of the species.



Statement 2 is incorrect: The Indian Flying Fox is a fruit bat, and it feeds on fruits, nectar, and flowers. It does not feed on blood.

Reference: thehindu.com/sci-tech/science/flying-fox-bats-for-vigilance-whileroosting/article67184575.ece

britannica.com/animal/Indian-flying-fox

Lets Work Together, We Hard, You Smart

21. The Organisms "Cicada, Froghopper and Pond Skater" are :

(a) Birds (c) Insects (b) Fish (d) Reptiles

Ans:C



Exp:

1.Cicadas are known for their distinctive sound produced by males. They belong to the order Hemiptera and are recognized for their life cycle, which can include years of nymph stage underground.



2.Froghoppers, also known as spittlebugs, belong to the family Cercopidae within the order Hemiptera. They are known for their jumping ability and the spittle mass created by their nymphs.





3.Pond skaters are part of the family Gerridae, also within the order Hemiptera. They are known for their ability to skate on the surface of the water.

Reference: britannica.com/animal/water-strider

22.Consider the following statements :

Statement-I: Many chewing gums found in the market are considered a source of environmental pollution. Statement-II: Many chewing gums contain plastic as gum base.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-II explains Statement-I
- (b) Both Statement-I and Statement-II are correct, but Statement-II does not explain Statement-I
- (c) Statement-I is correct, but Statement-II is incorrect
- (d) Statement-I is incorrect, but Statement-II is correct

Ans:A

Exp:

Statement 1 is correct: Chewing gum can contribute to litter and environmental pollution, particularly because discarded gum can take a long time to decompose and often sticks to surfaces, making it difficult to remove.

Statement 2 is correct:Many modern chewing gums use synthetic gum bases that can contain plasticlike substances, which are not biodegradable and contribute to environmental issues.

Statement 2 is correct explanation for the statement 1.

Reference: thebetterindia.com/314893/bengaluru-startup-biodegradable-gud-chewing-gum-helps-cut-plastic-pollution/

Reference: pmc.ncbi.nlm.nih.gov/articles/PMC7545173/

23.Consider the following pairs :

	Country	Animal found in its natural habitat
1.	Brazil	Indri
2.	Indonesia	Elk



3.	Madagascar	Bonobo

How many of the pairs given above are correctly matched?

(a) Only one	(b) Only two
(c) All three	(d) None

Ans:D Exp:

1.Brazil - Indri	Incorrect: The Indri (Indri indri) is actually found in Madagascar, not Brazil.
2.Indonesia - Elk	Incorrect: Elk (Cervus canadensis) are native to North America and parts of Asia, but they are not found in Indonesia.
3.Madagascar - Bonobo	Incorrect: The Bonobo (Pan paniscus) is native to the Democratic Republic of the Congo, not Madagascar. Madagascar is known for its unique fauna, including lemurs

Reference: worldwildlife.org/species/bonobo

24.Consider the following statements regarding World Toilet Organization :

- 1. It is one of the agencies of the United Nations.
- 2. World Toilet Summit, World Toilet Day and World Toilet College are the initiatives of this organization, to inspire action to tackle the global sanitation crisis.
- 3. The main focus of its function is to grant funds to the least developed countries and developing countries to achieve the end of open defecation.

Which of the statements given above is/are correct?

i or the statements given	
(a) 2 only	(b) 3 only
(c) 1 and 2	(d) 2 and 3

Ans:A

Exp:

Statement 1 is incorrect: The World Toilet Organization is not a UN agency. It is a non-governmental organization (NGO) /Non profitable organisation founded in 2001 in Singapore. While it collaborates with various UN agencies and other organizations to address sanitation issues, it is not a part of the United Nations system.

Statement 2 is correct: The World Toilet Organization organizes initiatives such as the World Toilet Summit and World Toilet Day (celebrated on November 19) to raise awareness about global sanitation issues. The organization also runs the World Toilet College to provide training and education on sanitation.

Statement 3 is incorrect: While the WTO aims to improve sanitation and eliminate open defecation, it primarily focuses on advocacy, awareness, and education rather than directly granting funds. It works to inspire action and mobilize resources but does not primarily function as a funding agency. Reference: worldtoilet.org/



25.Consider the following statements :

- 1. Lions do not have a particular breeding season.
- 2. Unlike most other big cats, cheetahs do not roar.

3. Unlike male lions, male leopards do not proclaim their territory by scent marking.

Which of the statements given above are correct ?

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

Ans:A

Exp:

Statement 1 is correct:Lions can breed throughout the year, although there may be peaks in breeding activity based on environmental conditions and prey availability. Unlike most other big cats, cheetahs don't roar.

Statement 2 is correct:Cheetahs are unique among big cats in that they do not have the ability to roar. Instead, they communicate using a variety of other vocalizations, such as chirps, purs, and growls.

Statement 3 is incorrect: Male leopards do scent mark their territory, similar to male lions. They use urine, faeces, and scent from their glands to communicate their presence and mark their territory.

Reference: .britannica.com/animal/lion/Reproduction-and-life-cycle

Reference: cheetah.org/learn/about-

cheetahs/#:~:text=Vocalizations,when%20communicating%20with%20each%20other.

Reference: wildlifeact.com/blog/how-do-leopards-mark-their-range

26. Which one of the following is the correct description of "100 Million Farmers"?

(a) It is a platform for accelerating the transition towards food and water Systems that are net-zero (carbon), nature-positive and that aims to increase farmer resilience.

(b) It is an international alliance and a network of individuals and farming organisations interested in supporting and Strengthening the development of the organic animal husbandry.

(c) It is a digital platform fully integrated with service providers and built on blockchain that lets buyers, sellers and third parties trade fertilizers quickly and securely.

(d) It is a platform with the mission of encouraging the farmers to form Farmer Product Organisations or Agribusiness Consortiums, thus facilitating the access to global open markets to sell their products. **Ans:A**

Exp:The "100 Million Farmers" initiative focuses on sustainable agricultural practices and aims to support farmers in transitioning towards more environmentally friendly and resilient farming methods. This involves promoting practices that contribute to climate goals and enhance the sustainability of food systems.

Reference: https://initiatives.weforum.org/100-million-farmers/home

27.Consider the following :

- 1. Battery storage
- 2. Biomass generators
- 3. Fuel cells
- 4. Rooftop solar photovoltaic units

How many of the above are considered "Distributed Energy Resources"?

(a) Only one

- (b) Only two(d) All four
- (c) Only three



Ans:D

Exp:Distributed energy resources (DERs) are small-scale energy generation and storage technologies that can be used to provide energy where it's needed. DERs are often located near where electricity is used, such as on rooftops or in buildings. Examples of DERs include:

- Solar panels
- Wind turbines
- Fuel cells
- Microgrids
- Energy storage systems
- Reciprocating engines
- Biomass generators
- Batteries in electric vehicles

Therefore all four are correct.

Reference: aemc.gov.au/energy-system/electricity/electricity-system/distributed-energyresources#:~:text=Distributed%20energy%20resources%20(DER)%20refers,battery%20storage

28.Which one of the following shows a unique relationship with an insect that has coevolved with it and that is the only insect that can pollinate this tree?

- (a) Fig(c) Sandalwood
- (b) Mahua (d) Silk cotton

Ans:A



Exp: The fig tree has a unique relationship with specific species of fig wasps (family Agaonidae). These wasps are the only insects that can pollinate fig trees. The relationship is highly specialized: female wasps enter the fig (which is actually a syconium, or an inverted flower) to lay their eggs and, in the process, pollinate the flowers inside. This coevolutionary relationship is critical for the reproductive success of both the fig tree and the wasps.

Reference: open.edu/openlearn/nature-environment/natural-history/the-unique-relationship-between-the-fig-and-the-fig-wasp

29.Consider the following : 1. Butterflies 2. Fish

3. Frogs

How many of the above have poisonous species among them?

- (a) Only one(c) All three
 - (b) Only two (d) None

Ans:C Exp:

1.Butterfly:There are poisonous species of butterflies, such as the Monarch butterfly, which is toxic due to the milkweed they consume in their larval stage.

2.Fish:Many species of fish are poisonous. For example, the pufferfish contains toxins that can be harmful or fatal to predators and humans.

3.Frogs:There are numerous poisonous frog species, particularly among the dart frogs (family Dendrobatidae), which are known for their bright colors and potent toxins.

Reference: thehindu.com/news/cities/Visakhapatnam/venomous-jellyfish-blooms-spotted-along-visakhapatnam-coast-in-andhra-pradesh/article68023846.ece



30. Consider the following :

1. Cashew 2. Papaya

3. Red sanders

How many of the above trees are actually native to India?

- (a) Only one (b) Only two (c) All three
 - (d) None

Ans:A

Exp:

1.Cashew (Anacardium occidentale): Native to Brazil, but it is widely cultivated in India. It is not originally native to India.

2.Papaya (Carica papaya): Native to Central America and northern South America, but like the cashew, it is extensively cultivated in India. It is not native to India.

3.Red Sanders (Pterocarpus santalinus):Native to India, specifically found in the southern regions and parts of the Western Ghats. Specifically to the southern part of the Eastern Ghats in Andhra Pradesh

Reference: thehindu.com/news/national/andhra-pradesh/geographical-indication-tagsought-for-andhra-pradesh-red-sanders/article67024326.ece"

31.With reference to radioisotope thermoelectric generators (RTGs), consider the following statements :

- 1. RTGs are miniature fission reactors.
- RTGs are used for powering the onboard systems of spacecrafts.
- 3. RTGs can use Plutonium-238, which is a by-product of weapons development.

Which of the statements given above are correct?

(a) 1 and 2 only	(b) 2 and 3 only

(c) 1 and 3 only	(d) 1, 2 and 3
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Ans:B Exp:

Statement 1 is incorrect: Radioisotope Thermoelectric Generators (RTGs) do not operate as fission reactors. Instead, they generate electricity through the process of radioactive decay. In RTGs, the heat produced by the decay of radioactive isotopes is converted into electrical energy using thermoelectric materials. Unlike fission reactors, which split atomic nuclei to release energy, RTGs rely on the natural decay of radioisotopes.

Statement 2 is correct:RTGs are widely used in space missions to power spacecraft, particularly those that travel to distant or shadowed regions where solar energy is insufficient. They provide a reliable source of electrical power for instruments and systems onboard, ensuring continuous operation over long durations. Notable examples include the Voyager spacecraft and the Mars rovers.

Statement 3 is correct: Plutonium-238 is used in RTGs, and it is a by-product of nuclear weapons development, although it is primarily produced in specialized reactors for use in space applications. Plutonium-238 has favorable properties for use in RTGs due to its relatively short half-life and high heat output from its decay, making it suitable for long-term power generation in space.

Reference:

Reference: science.nasa.gov/mission/cassini/radioisotope-thermoelectric-generator/

32.Consider the following statements :

Statement-I: Giant stars live much longer than dwarf stars.

Statement-II : Compared to dwarf stars, giant stars have a greater rate of nuclear reactions.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-II explains Statement-I
- (b) Both Statement-I and Statement-II are correct, but Statement-II does not explain Statement-I



- (c) Statement-I is correct, but Statement-II is incorrect
- (d) Statement-I is incorrect, but Statement II is correct

Ans:D Exp:

Statement 1 is incorrect: A star's lifespan depends on its mass. Giant stars have a higher rate of nuclear reactions than dwarf stars, and they use up their hydrogen fuel faster. This means that they have shorter lives, sometimes only lasting a few million years. Dwarf stars, on the other hand, can live for tens of billions of years. For example A star with a mass similar to the Sun can fuse hydrogen for about 10 billion years. A red dwarf, which is a very small star, can fuse hydrogen for up to a trillion years.

Statement 2 is correct:Giant stars have hotter and denser cores than dwarf stars, which allows for nuclear reactions to occur more quickly. The higher temperatures are due to the star's gravitational force, which squeezes and heats the core

Reference: science.nasa.gov/universe/stars/types/

file:///C:/Users/NSPIRA/Downloads/Giantstars%20(1).pdf

33.Which one of the following is synthesised in human body that dilate blood vessels and increases blood flow?

- (a) Nitric oxide
- (b) Nitrous oxide
- (c) Nitrogen dioxide
- (d) Nitrogen Pentoxide

Ans:A

Exp:

1.Nitric Oxide (NO): This is a signaling molecule synthesized in the human body that plays a crucial role in various physiological processes. It is produced by endothelial cells lining blood vessels and acts as a vasodilator, which means it relaxes the smooth muscles in blood vessel walls, leading to the dilation of blood vessels and an increase in blood flow. This process is essential for regulating blood pressure and ensuring adequate blood supply to various tissues.

2.Nitrous Oxide (N₂ O): Commonly known as laughing gas, it is not produced in significant amounts in the body and is primarily used as an anesthetic.

3 & 4.Nitrogen Dioxide (NO₂) and Nitrogen Pentoxide (N₂ O₅): These are nitrogen oxides that do not have physiological roles in the human body related to blood flow or vasodilation. They are more associated with environmental pollution and industrial processes.

Reference: ncbi.nlm.nih.gov/books/NBK557562/

34.Consider the following Activities:

- 1. Identification of narcotics on passengers at airports or in aircraft
- 2. Monitoring of Precipitation

(c) All three

3. Tracking the migration of animals

In how many of the above activities can the radars be used?

- (a) Only one (b) Only two
 - (d) None

Ans:C

Exp:

Radar, short for radio detection and ranging, is a system that uses radio waves to detect and track objects:



How it works: A radar system sends out radio signals from a transmitter, and a receiver picks up any reflected energy. The radar calculates the distance to a target by measuring how long it takes for the signal to be transmitted, hit the target, and return to the radar. It can also determine the velocity of a target by tracking the phase and amplitude of the pulse.

Activity 1 is correct: While traditional radar is used for this purpose, there are advanced radar technologies (like millimeter-wave radar) that can help identify concealed items, including narcotics. Activity 2 is correct: Radars, specifically weather radars, are widely used to monitor and track precipitation, including rainfall and snow.

Activity 3 is correct: Radar can be used to monitor the movement and migration patterns of animals, especially birds.

Reference: eol.ucar.edu/content/how-do-radars-work

35.Consider the following aircraft : 2. MiG-29

1. Rafael

3. Tejas MK-1

How many of the above are considered fifth generation fighter aircraft?

- (a) Only one
- (b) Only two (d) None
- (c) All three

Ans:D Exp:

.1.Rafale: The Rafale is a fourth-generation multirole fighter aircraft. It features advanced avionics and capabilities but is not classified as fifth generation

2.MiG-29: The MiG-29 is also a fourth-generation fighter aircraft. While it has undergone upgrades and improvements, it does not meet the criteria for fifth generation.

3.Tejas MK-1: The Tejas MK-1 is classified as a **lightweight**, fourth-generation multirole fighter aircraft. Like the other two, it is not a fifth-generation fighter.

Reference: indianexpress.com/article/explained/india-indigenous-fifth-gen-fighter-jet-amca-9204814/#:~:text=Only%20a%20few%20countries%20have,the%20Russian%20Sukhoi%20Su-57. Lets Work Together, We Hard, You Smart

36.In which of the following are hydrogels used?

- 1. Controlled drug delivery in patients
- 2. Mobile air-conditioning systems
- 3. Preparation of industrial lubricants

Select the correct answer using the code given below:

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

Ans:B/D

Exp:A hydrogel is a soft material created by crosslinking hydrophilic polymers, allowing it to expand in aqueous solvents and retain water. This versatile material can be molded into different shapes, and its properties can be modified in response to external stimuli. As a result, hydrogels are valuable in a variety of applications, including drug delivery and tissue engineering, Statement 1 is correct.

Statement 2 is correct: Some modern air-conditioning systems use hydrogels for humidity control and moisture absorption. They can help enhance efficiency by managing moisture levels.

Statement 3 may correct: While some hydrogels may have lubricating properties, they are not commonly used as the primary components in industrial lubricants, which are usually based on oils and synthetic materials.

Reference: sciencedirect.com/topics/chemistry/hydrogel

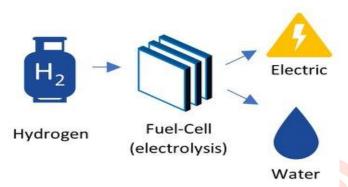


Reference:sciencedirect.com/science/article/abs/pii/S0360544221011944#:~:text=Hydrogel%2C%2 0a%20network%20of%20crosslinked,was%20still%20in%20its%20infancy.

37. Which one of the following is the exhaust pipe emission from Fuel Cell Electric Vehicles, powered by hydrogen?

- (a) Hydrogen peroxide (c) Oxygen
- (b) Hydronium (d) Water vapour

Ans:D Exp:



Fuel Cell Electric Vehicles (FCEVs) powered by hydrogen utilize hydrogen gas as fuel, which reacts with oxygen from the air in a fuel cell to produce electricity. The only exhaust emission from this process is water vapour, making FCEVs a clean alternative to conventional gasoline or diesel vehicle

Reference: afdc.energy.gov/vehicles/fuel-

cell#:~:text=Fuel%20cell%20electric%20vehicles%20

38.Recently, the term "pumped-storage hydropower" is actually and appropriately discussed in the context of which one of the following?

- (a) Irrigation of terraced crop fields
- (b) Lift irrigation of cereal crops
- (c) Long duration energy storage
- (d) Rainwater harvesting system

Ans:C

Exp:Pumped-storage hydropower is a type of hydroelectric power generation that allows for the storage of energy by using two water reservoirs at different elevations. During periods of low energy demand. excess electricity is used to pump water from the lower reservoir to the upper reservoir. During peak demand, the stored water is released back to the lower reservoir, passing through turbines to generate electricity.

This process makes pumped-storage hydropower an effective solution for long duration energy storage, balancing supply and demand in the energy grid. It helps integrate renewable energy sources like wind and solar by storing excess energy generated during low demand periods for use during high demand periods.

Reference: energy.gov/eere/water/pumped-storage-hydropower

39. "Membrane Bioreactors" are often discussed in the context of :

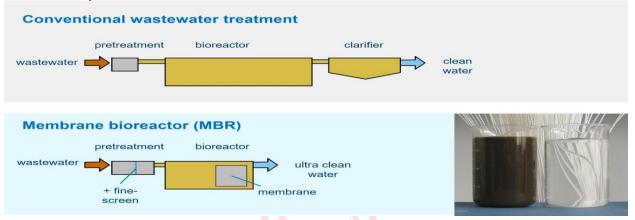
- (a) Assisted reproductive technologies
- (b) Drug delivery nanotechnologies
- (c) Vaccine production technologies
- (d) Wastewater treatment technologies

Ans:D



Exp:

Membrane bioreactors (MBRs) are advanced wastewater treatment systems that combine biological treatment processes with membrane filtration. They use biological processes to degrade organic pollutants while simultaneously using membranes to separate the treated water from solids and other contaminants. This technology is effective in producing high-quality effluent suitable for various uses, including reuse and recycling.MBRs are increasingly popular in wastewater treatment because they offer several advantages, such as smaller footprint, improved effluent quality, and the ability to handle varying loads efficiently.



Reference: pcimembranes.com/articles/membrane-bioreactors-mbr-for-wastewatertreatment/#:~:text=What%20is%20a%20membrane%20bioreactor,WasteWater%20Treatm ent%20Plants%20(WWTPs).

40.With reference to the Indian economy, "Collateral Borrowing and lending Obligations" are the instruments of :

- (a) Bond market
- (b) Forex market
- (c) Money market ets Work (d) Stock market Hard, You Smart

Ans:C

Exp:"Collateral Borrowing and Lending Obligations" (CBLO) are instruments used in the money market. CBLOs are a type of short-term borrowing and lending arrangement, where participants can borrow or lend funds against collateral. This system allows for better liquidity management among financial institutions, enabling them to meet their short-term funding needs.CBLOs are particularly significant in the context of Indian financial markets, as they facilitate borrowing and lending among banks and other financial entities while ensuring the security of the transactions through collateral.

Reference: thehindu.com/business/Economy/rbis-guidelines-on-state-guarantees-on-borrowings-explained/article67755518.ece

41. The total fertility rate in an economy is defined as :

- (a) the number of children born per 1000 People in the Population in a year.
- (b) the number of children born to couple in their lifetime in a given population.
- (c) the birth rate minus death rate.
- (d) the average number of live births a woman would have by the end of her child-bearing age.

Ans:D

Exp:The total number of children that a hypothetical group of women would be expected to have by the end of their reproductive years, assuming they experience the fertility rates of a specific period throughout



their lives and are unaffected by mortality. This is typically measured as the average number of children per woman.

Reference: who.int/data/gho/indicator-metadata-registry/imr-details/123

Reference: hindustantimes.com/opinion/fertility-cross-is-not-for-women-to-carry-101729868733901.html

Read the above article about fertility rate and its recent trends.

42. Consider the following statements :

- 1. In India, Non-Banking Financial Companies can access the Liquidity Adjustment Facility window of the Reserve Bank of India.
- 2. In India, Foreign Institutional Investors can hold the Government Securities (G-Secs).

3. In India, Stock Exchanges can offer separate trading platforms for debts.

Which of the statements given above is/are correct?

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

Ans:D

Exp: Statement 1 is incorrect: Non-Banking Financial Companies (NBFCs) do not have direct access to the Liquidity Adjustment Facility (LAF) of the Reserve Bank of India. LAF is primarily available to scheduled commercial banks and certain financial institutions.

Statement 2 is correct: Foreign Institutional Investors (FIIs) are allowed to invest in Government Securities (G-Secs) in India, subject to certain limits and regulations set by the Reserve Bank of India and the Securities and Exchange Board of India (SEBI).

The Government has raised the current limit for Foreign Institutional Investors (FIIs) in Government Securities by an additional US \$5 billion, increasing the cap to US \$10 billion. This incremental limit can be invested in securities with a residual maturity of over five years. Additionally, the limit for FIIs in corporate bonds has also been increased by US \$5 billion, raising the cap to US \$20 billion. This new increment can be invested in corporate bonds with a residual maturity of over five years, specifically those issued by companies in the infrastructure sector.

Statement 3 is correct:Indian stock exchanges can and do provide separate trading platforms for debt instruments, including bonds and debentures. The BSE(Bombay Stock Exchange) and NSE(National Stock Exchange) have dedicated segments for the trading of debt securities.

Reference: rbi.org.in/upload/publications/pdfs/58850.pdf

Reference: business-standard.com/article/markets/nse-launches-separate-debt-trading-platform-113051300554_1.html

Reference:

pib.gov.in/newsite/PrintRelease.aspx?relid=65937#:~:text=The%20Government%20has%20increased%2 0the,securities%20and%20corporate%20bonds%20respectively.

43.In India, which of the following can trade in Corporate Bonds and Government Securities?

1. Insurance Companies 2. Pension Funds

3. Retail Investors

Select the correct answer using the code given below :

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

Ans:D



Exp:

Government Security (G-Sec) is a tradeable instrument issued by the Central Government or the State Governments. The Indian government bond market has also seen substantial growth, with the total outstanding government securities exceeding ₹70 lakh crore (around \$930 billion). These bonds provide a safe investment option and are backed by the government's creditworthiness.

Corporate bonds are financial instruments issued by companies to raise funds from investors. Similarly, government bonds are issued by the government to secure financing from investors. In India, the corporate bond market has grown significantly, with the outstanding corporate bonds reaching approximately<u>₹34 lakh crore (around \$460 billion)</u> as of recent reports.

1.Insurance companies can invest in both corporate bonds and government securities as part of their investment portfolios.

2.Pension funds are also allowed to invest in corporate bonds and government securities to manage their long-term liabilities and generate returns for their beneficiaries.

3.Retail investors can invest in government securities through platforms like the Retail Direct Scheme and can also invest in corporate bonds, primarily through mutual funds or direct purchase in the primary or secondary market.

Reference:

rbi.org.in/commonperson/English/Scripts/FAQs.aspx?Id=711#:~:text=With%20the%20various%20 measures%20for,G-Secs%20through%20respective%20regulations

44.Consider the following :

- 1. Exchange-Traded Funds (ETF)
- 2. Motor vehicles
- 3. Currency swap

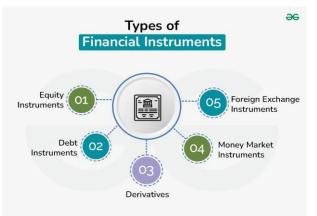
Which of the above is/are considered financial instruments?

- (a) 1 only
- (c) 1, 2 and 3

(b) 2 and 3 only(d) 1 and 3 only

Ans:D

Exp:A financial instrument refers to any asset that can be traded by investors, encompassing both tangible entities, such as property, and debt contracts. Additionally, financial instruments can include collections of capital utilized in investments, rather than being limited to a single asset.



 ETFs are investment funds that hold a collection of assets, such as stocks, bonds, or commodities. They are traded on stock exchanges, similar to individual stocks.So it is considered as financial instruments.
 Incorrect. Motor vehicles are tangible assets and do not qualify as financial instruments.
 A currency swap is a financial derivative contract in which two parties exchange principal and interest payments in different currencies. It is considered a financial instrument.



Reference: https://www.mca.gov.in/Ministry/pdf/INDAS32.pdf

45.With reference to the sectors of the Indian economy, consider the following pairs:

	Economic activity	Sector	
1.	Storage of agricultural produce	Secondary	
2.	Dairy farm	Primary	
3.	Mineral exploration	Tertiary	
4.	Weaving cloth	Secondary	

How many of the pairs given above is/are correctly matched?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) A<mark>ll fou</mark>r

Ans:B Exp:

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Economic activities refer to the actions that individuals, businesses, and governments engage in to produce, distribute, and consume goods and services. These activities are generally categorized into three main sectors, they are

1. Primary Sector: This sector involves the extraction and harvesting of natural resources.	Agriculture: Farming, fishing, forestry, and livestock. Mining: Extracting minerals, metals, and fossil fuels. Forestry: Harvesting timber and non-timber products.
2.Secondary Sector: This sector focuses on manufacturing and industrial activities.	 Manufacturing: Converting raw materials into finished goods (e.g., automobiles, textiles). Construction: Building infrastructure, residential, and commercial properties. Processing: Refining raw materials (e.g., oil refining, food processing).
3.TertiarySector :This sector involves services rather than goods.	Retail and Wholesale Trade: Selling goods to consumers and businesses. Finance and Banking: Managing money, investments, and financial



services. Healthcare: Providing medical services and products. Education: Delivering knowledge and skills through schools and universities. Hospitality and Tourism: Offering services related to travel, accommodation, and entertainment.	
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Pair 1 and 3 are incorrect, pair 2 and 4 are correct.

Reference: ncert.nic.in/textbook/pdf/fees114.pdf

46.Consider the following materials :

1. Agricultural residues

(a) 1 and 2 only

- 2. Corn grain
- 3. Wastewater treatment sludge
- 4. Wood mill waste

Which of the above can be used as feedstock for producing Sustainable Aviation Fuel?

- (b) 3 and 4 only
- (c) 1, 2, 3 and 4 (d) 1, 3 and 4 only

Ans:C

Exp:Sustainable Aviation Fuel (SAF) is an alternative fuel produced from non-petroleum feedstocks, designed to lower emissions in air travel. It can be blended with conventional jet fuel at ratios between 10% and 50%, depending on the feedstock and production techniques. The International Civil Aviation Organization (ICAO) reports that over 360,000 commercial flights have used SAF at 46 airports, mainly in the United States and Europe.

1.Agricultural Residues: Residues such as straw, husks, and stalks can be processed into biofuels, including SAF, through various conversion technologies.

2.Corn Grain: Corn grain can be fermented to produce ethanol, which can be further processed into SAF. It is a common feedstock for biofuel production.

3.Wastewater Treatment Sludge:Organic matter from wastewater sludge can be converted into biofuels, including SAF, through anaerobic digestion and other advanced technologies.

4.Wood Mill Waste:Wood chips, sawdust, and other wood mill by-products can be converted into biofuels, making them suitable feedstock for SAF production.

Reference: energy.gov/eere/bioenergy/sustainable-aviation-fuels

47.With reference to physical capital in Indian economy, consider the following pairs :

	Items	Category
1.	Farmer's plough	Working capital
2.	Computer	Fixed capital



3		Yarn used by the weaver	Fixed capital
4	·-	Petrol	Working capital

How many of the above pairs are correctly matched?

(a) Only one	(b) Only two
	<i>.</i>

(c) Only three (d) All four

Ans:D Exp:

Physical capital plays a crucial role in the production of a nation's goods and services and is a significant contributor to a country's GDP. In the Indian economy, capital expenditure (capex) has been on the rise over the past four years, aimed at enhancing physical capital for improved connectivity and asset development.

Fixed Capital: Refers to long-term assets used in the production process, such as equipment and machinery. Both the farmer's plough and the computer are considered fixed capital as they are used over a longer period for production.

Working Capital: Refers to short-term assets used in the production process, typically consumed or used up in the production cycle. Yarn (as a raw material) and petrol (as fuel) fall under this category.

1.Fixed capital-Farmer's plough and Computer 1.Work Petrol	ing capital-Yarn used by the weaver and

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Reference: ncert.nic.in/textbook/pdf/keec104.pdf

48.Which one of the following words/phrases is most appropriately used to denote "an interoperable network of 3D virtual worlds that can be accessed simultaneously by millions of users, who can exert property rights over virtual items"?

- (a) Big data analytics
- (b) Cryptography
- (c) Metaverse
- (d) Virtual matrix

Ans:C

Exp:

Metaverse refers to a collective virtual space created by the convergence of virtually enhanced physical reality and physically persistent virtual reality, where users can interact with each other and the environment, often with ownership of virtual items.



Big data analytics involves analyzing large datasets to uncover patterns and insights, but it doesn't relate specifically to virtual worlds.

Cryptography deals with securing information through encoding, unrelated to virtual environments. **Virtual matrix** is not a widely recognized term and lacks the specific connotation associated with the concept of a metaverse.

Reference: techtarget.com/searchcio/tip/Metaverse-interoperability-challenges-andimpact#:~:text=The%20metaverse%20implies%20a%20shared,multitude%20of%203D%20virtual% 20worlds

49. With the reference to the rule/rules imposed by the Reserve Bank of India while treating foreign banks, consider the following statements:

- 1. There is no minimum capital requirement for wholly owned banking subsidiaries in India.
- 2. For wholly Owned banking subsidiaries in India, at least 50% of the board members should be Indian nationals.

Which of the statements given above is/are correct?

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

Ans:B Exp:

The Reserve Bank of India (RBI) was established on April 1, 1935, under the provisions of the Reserve Bank of India Act, 1934. Initially located in Kolkata, the Central Office was permanently moved to Mumbai in 1937, where the Governor resides and policies are developed. Originally a privately owned institution, the RBI has been fully owned by the Government of India since its nationalization in 1949.

Statement 1 is incorrect: The RBI mandates a minimum capital requirement for wholly owned banking subsidiaries in India. As per the guidelines, foreign banks must maintain a certain minimum capital to ensure financial stability and compliance with regulations.

Statement 2 is correct: The RBI requires that at least 50% of the board of directors of wholly owned subsidiaries be resident Indian nationals to ensure local representation and governance. Reference: rbi.org.in/upload/content/images/Annexure.html

50.With reference to Corporate Social Responsibility (CSR) rules in India, consider the following statements :

- 1. CSR rules specify that expenditures that benefit the company directly or its employees will not be considered as CSR activities.
- 2. CSR rules do not specify minimum spending on CSR activities.

Which of the statements given above is/are correct?

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

Ans:A

Exp:

Corporate Social Responsibility (CSR) is a business model that incorporates a company's social and environmental effects alongside its economic performance. Often referred to as corporate citizenship, corporate accountability, or sustainability, CSR is a voluntary initiative.





Statement 1 is correct:According to the CSR rules in India, activities that primarily benefit the company or its employees are not classified as CSR activities. The focus is on broader societal benefits rather than direct advantages to the company.

Statement 2 is incorrect: The CSR rules in India do specify a minimum spending requirement. Companies meeting certain thresholds in net worth, revenue, or profit are mandated to spend at least 2% of their average net profits from the preceding three years on CSR activities.

Reference: hec.edu/en/facultyresearch/centers/sustainability-organizationsinstitute/think/so-institute-executivefactsheets/what-corporate-socialresponsability-csr

51.Consider the following statements:

Statement-I: If the United States of America (USA) were to default on its debt, holders of US Treasury Bonds will not be able to exercise their claims to receive payment.

Statement-II: The USA Government debt is not backed by any hard assets, but only by the faith of the Government.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-1 and Statement-II are correct and Statement-II explains Statement-I
- (b) Both Statement-I and Statement-II are correct, but Statement-II does not explain Statement-I
- (c) Statement-I is correct, but Statement-II is incorrect
- (d) Statement-I is incorrect, but Statement-II is correct

Ans:D Exp:

Statement 1 is incorrect: If the U.S. were to default on its debt, bondholders would still have claims for payment. However, a default means the government would fail to meet its payment obligations, which could lead to significant financial and economic consequences. While bondholders have legal claims to payment, a default would severely impact the creditworthiness of the U.S. and could disrupt the financial markets.

Statement 2 is correct:U.S. government debt, including Treasury Bonds, is not backed by physical assets like gold or silver. Instead, it is backed by the full faith and credit of the U.S. government, meaning that the government's ability to levy taxes and generate revenue is what underpins the value of its debt. This reliance on faith and credibility is a key aspect of modern fiat currencies and government bonds. **Reference: gao.gov/americas-fiscal-future/federal-**

debt#:~:text=The%20federal%20government%20borrows%20money%20from%20the%20public%2 0by%20issuing,a%20wide%20range%20of%20maturities

52.Consider the following statements:

Statement-I: Syndicated lending spreads the risk of borrower default across multiple lenders. Statement-II: The syndicated loan can be fixed amount/lump sum of funds, but cannot be a credit line. Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-I Statement-II explains
- (b) Both Statement-I and Statement-II are correct, but Statement-II does not explain Statement-I
- (c) Statement-I is correct, but Statement-II is incorrect



(d) Statement-I is incorrect, but Statement-II is correct

Ans:C

Exp:Syndicated lending is a process where multiple lenders work together to fund a single loan for a borrower, A borrower negotiates terms with a select group of banks known as mandated lead arrangers.

These arrangers then invite additional lenders to participate in the loan. Each lender signs the same loan agreement but retains a distinct claim on the specific portion of the loan they have contributed.

Statement 1 is correct: Syndicated lending involves a group of lenders coming together to provide a loan to a single borrower, thereby distributing the risk associated with borrower default among multiple institutions. This arrangement allows longers to share the financial burden and reduces the impact on any

institutions. This arrangement allows lenders to share the financial burden and reduces the impact on any single lender

Statement 2 is incorrect: Syndicated loans can be structured as both fixed amount loans (lump sum) and as credit lines. A credit line allows borrowers to draw down funds as needed up to a certain limit, which is a common feature in syndicated lending arrangements.

Reference: imarticus.org/blog/debt-capital-markets-and-syndicated-

lending/#:~:text=Syndicated%20lending%20primarily%20aims%20to,to%20support%20significant %20business%20deals

Reference : thehindu.com/business/Industry/sbi-garners-1-billion-from-overseas-to-cater-to-esg-financing-market/article67701770.ece

53. Consider the following statementsin respect of the digital rupee:

- 1. It is a sovereign currency issued by the Reserve Bank of India (RBI) alignment with its monetary policy.
- It appears as a liability on the RBI's balance sheet.
- 3. It is insured against inflation by its very design.
- 4. It is freely convertible against commercial bank money and cash.
- Which of the statements given above are correct?
 - (a) 1 and 2 only (b) 1 and 3 only
 - (c) 2 and 4 only (d) 1, 2 and 4

Ans:D

Exp:The "Digital Rupee" or "e₹" is a legal tender issued in digital form by the Reserve Bank of India, similar to sovereign paper currency. The e₹ combines the characteristics of physical cash, such as trust, safety, and final settlement, with the advantage of atomicity, allowing for immediate transaction settlements in a digital format.



- RBI to introduce Digital Rupee using Blockchain and other technologies starting 2022-23
- ₹ This will lead to more efficient and cheaper currency management system
- ₹ It will also give boost to digital economy

Statement 1 is correct: The digital rupee is a sovereign currency issued by the RBI, aligning with its monetary policy objectives. Statement 2 is correct: Like physical currency, the digital rupee is considered a liability on the Reserve Bank's balance sheet. Statement 3 is incorrect: While the digital rupee's value is backed by the government, it is not specifically designed to be "insured" against inflation. The value can still be affected by inflationary pressures. Statement 4 is correct: The digital rupee can

be converted freely into commercial bank money and cash, allowing for seamless transactions.

Reference:

pib.gov.in/PressReleasePage.aspx?PRID=1896721#:~:text=Central%20Bank%20Digital%20Curren



cy%20(CBDC,token%20that%20represents%20legal%20tender&text=The%20Reserve%20Bank%20 of%20India,)%20on%20December%2001%2C%202022

54.With reference to ancient India, Gautama Buddha was generally known by which of the following epithets?

- 1. Nayaputta
- 2. Shakyamuni
- 3. Tathagata

Select the correct answer using the code given below:

- (a) 1 only (b) 2 and 3 only
- (c) 1, 2 and 3
- (d) None of the above are epithets of Gautama Buddha

Ans:B

Exp:Gautama Buddha, born Siddhartha Gautama in the 5th century BCE, founded Buddhism. He attained enlightenment under the Bodhi tree and taught the Four Noble Truths and the Eightfold Path. 1.Nayaputta: This term refers to a "new ascetic" or "new seeker" and is often associated with followers of different sects but is not a commonly recognized epithet for Buddha himself.

2.Shakyamuni: This is a widely recognized epithet for Gautama Buddha, meaning "Sage of the Shakyas," referring to his clan.

3.Tathagata: This term is often used by Buddha to refer to himself, meaning "one who has thus gone" or "one who has thus come."

Ref	Reference: speakingtree.in/blog/mahavira			
55.	55. Consider the following information:			
	Archaeological Site	State	Description	
1	Chandraketugarh	Odisha	Trading Port town	EMY
	Let	ts Work Togethe	, We Hard, You Smart	
2	Inamgaon	Maharashtra	Chalcolithic site	
3.	Mangadu	Kerala	Megalithic site	
4	Salihundam	Andhra Pradesh	Rock-cut shrines	

In which of the above rows is the given information correctly matched ?

(a) 1 and 2 (c) 3 and 4

(b) 2 and 3 (d) 1 and 4

Ans:A

Exp:



1.Chandraketugarh -West Bengal	Incorrect: Chandraketugarh, an archaeological site located on the Vidyadhari River formerly a significant tributary of the Bhagirathi is found 35 kilometers northeast of Kolkata in the 24 Parganas district of West Bengal.
2.Inamgaon-Maharashtra	Correct: Inamgaon is located in Maharashtra and is recognized as a Chalcolithic site. This site dates back to around 3500-2000 BCE and was inhabited by a prehistoric agricultural community. Archaeological findings at Inamgaon include evidence of domestic architecture, pottery, and tools, showcasing the lifestyle and culture of its inhabitants during the Chalcolithic period.
3.Mangadu-Kerala	Correct: Mangadu is associated with megalithic culture and is located in Kerala. It is known for its megalithic burial sites, which feature large stone structures used for burial purposes. The site reflects the burial practices of ancient societies in the region and provides insights into their rituals and social structures.
4.Salihundam-AndhraPradesh	Incorrect: Salihundam, in Srikakulam district, Andhra Pradesh, is located on the south bank of the Vamsadhara River, 5 kilometers from Kalingapatnam. Known historically as Salivatika, it features Buddhist stupas and a monastic complex amidst scenic surroundings.

Reference: timesofindia.indiatimes.com/travel/destinations/chandraketugarh-a-lesser-knownarchaeological-site-in-west-bengal/articleshow/70645871.cms

Reference: en.banglapedia.org/index.php/Chandraketugarh

https://www.newindianexpress.com/cities/chennai/2024/Apr/23/a-small-siva-temples-connectionwith-mangadu-and-

kanchipuram#:~:text=In%20Mangadu%2C%20Parvati%20(Kamakshi),a%20Siva%20Linga%20in%2 0Padappai.

Lets Work Together, We Hard, You Smart

56.Who of the following rulers of medieval India gave permission to the Portuguese to build a fort at Bhatkal?

- (a) Krishnadevaraya
- (b) Narasimha Saluva
- (c) Muhammad Shah III
- (d) Yusuf Adil Shah

Ans:A

Exp:Krishnadevaraya was a prominent ruler of the Vijayanagara Empire, reigning from 1509 to 1529. He is known for his military conquests, administrative reforms, and patronage of arts and culture. During his reign, the Vijayanagara Empire was one of the most powerful and prosperous states in South India.Krishnadevaraya's rule coincided with the arrival of the Portuguese in India. He recognized the strategic importance of engaging with European powers, including the Portuguese. In this context, he granted the Portuguese permission to establish a fort at Bhatkal, which was crucial for trade and maritime activities.This decision was beneficial for both parties: it allowed the Portuguese to secure their trade routes and provided Krishnadevaraya with valuable trade connections.

Reference: https://puratattva.in/bhatkal-a-port-of-contention-2/

57.With reference to revenue collection by Cornwallis, consider the following statements:



- 1. Under the Ryotwari Settlement of revenue collection, the peasants were exempted from revenue payment in case of bad harvests or natural calamities.
- 2. Under the Permanent Settlement in Bengal, if the Zamindar failed to pay his revenues to the state, on or before the fixed date, he would be removed from his Zamindari.
- Which of the statements given above is/are correct?
 - (a) 1 only (b) 2 only
 - (c) Both 1 and 2 (d) Neither 1 nor 2

Ans:B

Exp:

Statement 1 is incorrect: Under the Ryotwari Settlement, the British government directly assessed land revenue from individual peasants. While there were provisions for revenue relief in cases of extreme hardship, such as natural calamities or crop failures, exemptions were not universally guaranteed, and the relief often depended on the discretion of the revenue officers.

Statement 2 is correct: The Permanent Settlement, introduced by Cornwallis in 1793, established a system where Zamindars were made the owners of the land but were responsible for paying fixed revenues to the British government. If they failed to meet their revenue obligations by the due date, they risked losing their rights over the land and could be removed from their position as Zamindars. **Reference:**Modern History -Spectrum-British revenue system.

58.Consider the following statements:

1. There are no parables in Upanishads.

2. Upanishads were composed earlier than the Puranas.

Which of the statements given above is/are correct?

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

Ans:B

Exp:The Upanishads are ancient philosophical texts exploring the nature of reality and the self, while the Puranas are mythological narratives that detail cosmology, deities, and traditions in Hinduism. **Statement 1 is incorrect:** While the Upanishads primarily focus on philosophical concepts and discussions about the nature of reality, they do contain metaphorical narratives and examples that can be interpreted as parables to convey deeper meanings.

Statement 2 is correct: The Upanishads, which are philosophical texts, were composed around 800 to 200 BCE, whereas the Puranas were written later, approximately between 300 CE and 1500 CE. Reference: <u>https://www.thehindu.com/features/friday-review/religion/Analogy-of-two-birds/article14633384.ece#:~:text=The%20analogy%20of%20the%20two%20birds%20mentioned%</u> 20in%20the%20Katopanishad

59. Consider the following statements:

- 1. India is a member of the International Grains Council.
- 2. A country needs to be a member of the International Grains Council for exporting or importing rice and wheat.

Which of the statements given above is/are correct?

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

Ans:A



Exp:

The International Grains Council (IGC) is an intergovernmental organization established in 1995 to promote international



cooperation in grain trade. It focuses on improving market transparency and enhancing the grain trade's stability. Other member countries are Algeria, Argentina, Japan, Pakistran and more.

Statement 1 is correct: India is a member of the International Grains Council (IGC), which promotes international cooperation in grain trade.

Statement 2 is incorrect: Membership in the IGC is not a requirement for exporting or importing rice and wheat. Countries can engage in trade without being members of the IGC. Reference: https://www.igc.int/en/default.aspx

60.Which one of the following was the latest inclusion in the Intangible Cultural Heritage List of UNESCO?

- (a) Chhau dance(c) Garba dance
- (b) Durga puja(d) Kumbh mela

Ans: C

Exp:The Intangible Cultural Heritage List of United Nations Educational, Scientific and Cultural Organization (UNESCO) recognizes cultural practices, traditions, and expressions that reflect the diversity of human creativity. It aims to preserve and promote cultural heritage worldwide for future generations.

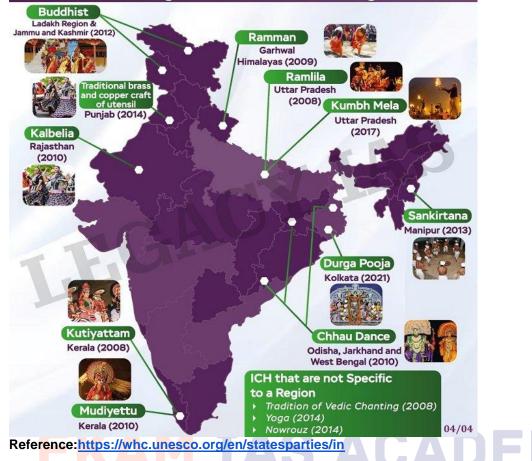
ADEM

a.Chhau dance:2010 b.Durga puja:2021 c.Garba dance:2023 d.Kumbh mela:2017 Therefore the latest one is the Garba dance.

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UNESCO Intangible Cultural Heritage of India



61.Who was the Provisional President of the Constituent Assembly before Dr. Rajendra Prasad took over?

- (a) C. Rajagopalachari
- (b) Dr. B.R. Ambedkar
- (c) T.T. Krishnamachari
- (d) Dr. Sachchidananda Sinha

Ans:D

Exp:The Constituent Assembly of India was a body that drafted the Constitution of India and served as the country's first Parliament.

Dr. Sachchidananda Sinha, He served as the Provisional President of the Constituent Assembly of India before Dr. Rajendra Prasad was elected as its permanent president. Dr. Sinha played a significant role in the assembly during its initial sessions.

Reference:Laxmikant -2nd chapter :Making of the Constitution

62.With reference to the Government of India Act, 1935, consider the following statements:

- 1. It provided for the establishment of an All India Federation based on the union of the British Indian Provinces and Princely States.
- 2. Defence and Foreign Affairs were kept under the control of the federal legislature.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only



- (c) Both 1 and 2
- (d) Neither 1 nor 2

Ans: A

Exp:

Statement 1 is correct: The Government of India Act, 1935 aimed to create an All-India Federation that included both British Indian Provinces and princely states. However, it was never fully implemented as the princely states did not join the federation.

Statement 2 is incorrect:Under the Act, Defence and Foreign Affairs were not included in the federal list (59 items) but were retained under the control of the British government. They were managed by the British authorities, with limited powers delegated to the federal structure.

Reference:Laxmikant -1st Chapter:Historical Background.

63.Which one of the following is a work attributed to playwright Bhasa?

- (a) Kavyalankara
- (b) Natyashastra
- (c) Madhyama-vyayoga
- (d) Mahabhashya

Ans:C

Exp:

Bhasa is one of the earliest and most celebrated playwrights in ancient Indian literature. His works are significant in the field of Sanskrit drama and are known for their complexity and depth. Bhasa's plays often revolve around themes from Hindu epics and mythology.

"Madhyama-vyayoga" is one of the prominent plays attributed to Bhasa. It is a classic Sanskrit drama that focuses on the emotional conflicts and dilemmas faced by its characters. The play showcases Bhasa's talent in character development and poetic expression.

(a) Kavyalankara: This is a work on poetics attributed to other scholars and is not a play by Bhasa.
 (b) Natyashastra: This is a comprehensive treatise on the performing arts written by Bharata Muni, not Bhasa.

(d) Mahabhashya: This is a significant commentary on Panini's grammar, authored by Patanjali, and is unrelated to Bhasa's works.

Bhasa, another important playwright, was author of works such as the *Madhyamavyayoga*, *Duta-Ghatotkacha*, *Dutavakya*, *Balacharita* and *Charudatta*. Shudraka's *Mrichchhakatika* and Bharavi's *Kiratarjuniya* are among the other prominent literary works of the period. Bhatti's *Ravanavadha* (7th century) illustrates the rules of grammar while telling the story of Rama's life. Other great dramatists of the time such as Mentha, author of a work called *Hayagrivavadha*, are known through references and quotations in the writings of later writers and literary critics.

Reference:A History of Ancient and Early Medieval India-Upendra Singh-Chapter 9:Aesthetics and Empire, c. 300–600 CE

64.Sanghabhuti, an Indian Buddhist monk, who travelled to China at the end of the fourth century AD, was the author of a commentary on:

- (a) Prajnaparamita Sutra
- (b) Visuddhimagga
- (c) Sarvastivada Vinaya Sain
- (d) Lalitavistara

Ans:C

Exp:Sanghabhuti was an Indian Buddhist monk who traveled to China in the late fourth century AD. His contributions were significant in the spread of Buddhist teachings in China.



Sanghabhuti is known for his commentary on the **Sarvastivada Vinaya Sutta**, which is a collection of rules and regulations for the monastic community (Sangha) within the Sarvastivada school of Buddhism. This commentary helped in explaining and codifying the monastic rules for practitioners.

Many Indian monks who travelled to China during these centuries belonged to Kashmir (Dutt [1962], 1988: 294–310). They included Sanghabhuti, author of a commentary on the *Sarvastivada Vinaya*, who was in China in 381–84 CE. The monk Punyatrata travelled to central Asia along with his student Dharmayashas and translated several Sarvastivadin texts between 397 and 401 CE. From

Reference:A History of Ancient and Early Medieval India-Upendra Singh-Chapter 1:Understanding Literary and Archaeological Sources

65.Consider the following properties included in the World Heritage List released by UNESCO:

- 1. Shantiniketan
- 2. Rani-ki-Vav
- 3. Sacred Ensembles of the Hoysalas
- 4. Mahabodhi Temple Complex at Bodhgaya

How many of the above properties were included in 2023?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

Ans:B Exp:



1.Shantiniketan is correct:Shantiniketan, founded by Rabindranath Tagore, is an educational hub in West Bengal, India. It emphasizes a holistic approach to learning, blending nature, culture, and spirituality in its curriculum.Santiniketan has been recognized by UNESCO as India's <u>41st World</u> <u>Heritage Site in the year 2023.</u>

2.Rani-ki-Vav is incorrect: Rani ki Vav, in Patan, Gujarat, is a stunning stepwell built in 11th century during the reign of the Solanki dynasty. Recognized as a UNESCO World Heritage Site in 2014, it exemplifies the rich architectural heritage of India. The name "Rani translates to "Queen's Stepwell," and it was constructed in memory of King Bhimdev I by wife, Udayamati.



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3.Sacred Ensembles of the Hoysalas is correct: The Sacred Ensembles of the Hoysalas, located in Karnataka, India, are renowned for their exceptional temple architecture and intricate carvings. Recognized as a UNESCO World Heritage Site in 2023, these ensembles primarily include the temples at Belur and Halebidu, which were built during the Hoysala dynasty between the 11th and 12th centuries. These temples are distinguished by their star-shaped bases, elaborate sculptures, and detailed friezes depicting various deities, celestial beings, and scenes from Hindu epics. The craftsmanship reflects the artistic excellence of the

Hoysala period, showcasing intricate designs that convey spiritual narratives and local culture.



4.Mahabodhi temple complex at Bodhagaya: The Mahabodhi Temple Complex at Bodh Gaya, Bihar, India, is a UNESCO World Heritage Site and a significant pilgrimage destination for Buddhists worldwide. It marks the spot where Siddhartha Gautama attained enlightenment under the Bodhi tree, becoming the Buddha.

CADEM

Reference:https://whc.unesco.org/en/statesparties/in https://www.forbesindia.com/article/explainers/unesco-world-heritage-sites-india/88599/1

66. As per Article 368 of the Constitution of India, the Parliament may amend any provision of the Constitution by way of:

- 1. Addition
- 2. Variation
- 3. Repeal

Select the correct answer using the code given below:

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

Ans:D

Exp:

Article 368 of the Constitution of India provides the procedure for amending the Constitution. According to this article, the Parliament has the power to amend any provision of the Constitution by way of:

- **1.** Addition: This allows for new provisions to be added to the Constitution.
- 2. Variation: This refers to changing existing provisions of the Constitution.



3. Repeal: This allows for the removal of existing provisions.

Thus, all three methods—addition, variation, and repeal—are permissible under Article 368, making option (d) the correct choice.

Reference:https://www.mea.gov.in/Images/pdf1/Part20.pdf

67.Consider the following countries:

- 1. Italy
- 2. Japan
- 3. Nigeria
- 4. South Korea
- 5. South Africa

Which of the above countries are frequently mentioned in the media for their low birth rates, or ageing population or declining population?

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

Ans:A

Exp:Birth rate is a demographic measure that indicates the number of live births in a given population over a specific period, usually expressed per 1,000 people per year.

		1.Italy: Known for its low birth rate and an ageing
COUNTRY	FERTILITY RATE ^	population, Italy faces demographic challenges that impact
Taiwan	1.09	its economy and social systems. In 2023, Italy's fertility rate was 1.2 children per woman, which is below the 2.1 rate needed to
South Korea	1.11	maintain a stable population
Singapore	1.17	2.Japan : Often highlighted for its significantly low birth rates and a rapidly ageing population, Japan is dealing with severe
Ukraine	1.22	demographic issues, including a shrinking workforce. Japan's total fertility rate hit a new low of 1.20 in 2023, with the rate for Tokyo falling to 0.99 for the first time.
Hong Kong	1.23	3.South Korea: South Korea has one of the lowest birth
Macau	1.23	rates in the world and is facing challenges related to an ageing population and declining fertility rates. South Korea's
Italy	1.24	fertility rate hit its lowest-ever point of 0.72 births per person
Puerto Rico	1.25	in 2023. 4.South Africa: While it does have demographic
Moldova	1.25	challenges, it is not as frequently highlighted for low birth
Spain	1.29	rates or ageing issues compared to the above countries.South Africa's birth rate in 2024 is estimated to be 17.7–18.8 births per 1,000 people.

5.Nigeria: Known for its high birth rate, Nigeria is not typically mentioned in the context of low birth rates or ageing populations.Nigeria's birth rate in 2024 is estimated to be 35.683 births per 1,000 people, a 0.95% decline from 2023. The birth rate in 2023 was 36.026 births per 1,000 people.

Reference: https://worldpopulationreview.com/country-rankings/total-fertility-rate



68. Which of the following statements are correct in respect of a Money Bill in the Parliament?

- 1. Article 109 mentions special procedure in respect of Money Bills.
- 2. A Money Bill shall not be introduced in the Council of States.
- 3. The Rajya Sabha can either approve the Bill or suggest changes but cannot reject it.
- 4. Amendments to a Money Bill suggested by the Rajya Sabha have to be accepted by the Lok Sabha.

Select the answer using the code given below:

(a) 1 and 2 only	(b) 2 and 3 only

(c) 1, 2 and 3 (d) 1,3 and 4

Ans:C

Exp:There are two types of bills that can be introduced in Parliament: 1. Money Bill and 2. Ordinary Bill.The question is about Money bill,

Statement 1 is correct:Article 109 of the Constitution of India details a special procedure for Money Bills. It specifies that if a Money Bill is not passed by the Lok Sabha, the Rajya Sabha cannot introduce amendments to it. This provision ensures that the Lok Sabha, which represents the directly elected representatives of the people, has primacy in financial matters. The article delineates the role of both houses concerning Money Bills, emphasizing the Lok Sabha's authority in fiscal legislation.

Statement 2 is correct:According to Article 110 of the Constitution, a Money Bill can only be introduced in the Lok Sabha, not in the Rajya Sabha (Council of States). This restriction is significant because it reinforces the financial powers of the Lok Sabha, making it the primary body responsible for fiscal matters in the Indian parliamentary system. The Rajya Sabha can only consider Money Bills once they have been passed by the Lok Sabha.

Statement 3 is correct: The Rajya Sabha's powers regarding Money Bills are limited. After a Money Bill is passed by the Lok Sabha, it is sent to the Rajya Sabha for consideration. The Rajya Sabha can suggest amendments, but it cannot reject the Bill. If the Rajya Sabha suggests amendments, these must be considered by the Lok Sabha, which can choose to accept or reject them. This limitation underscores the Lok Sabha's dominance in matters of public finance.

Statement 4 is incorrect: While the Lok Sabha must consider any amendments suggested by the Rajya Sabha, it is not obligated to accept them. The Lok Sabha has the final say on Money Bills, and it can reject any or all of the amendments proposed by the Rajya Sabha. This means that the Rajya Sabha's role is more of an advisory nature concerning Money Bills, reinforcing the supremacy of the Lok Sabha in financial legislation.

Reference: https://www.thehindu.com/news/national/how-and-when-can-a-bill-be-defined-as-a-money-

bill/article68434154.ece#:~:text=What%20is%20procedure%20for%20a,accepted%20by%20the%20 Lok%20Sabha.

69. Which of the following is/are correctly matched in terms of equivalent rank in the three services of Indian Defence forces?

	Army	Airforce	Navy
1.	Brigadier	Air Commodore	Commander
2.	Major General	Air Vice Marshal	Vice Admiral



3.	Major	Squadron Leader	Lieutenant Commander
4.	Lieutenant Colonel	Group Captain	Captain

Select the correct answer using the code given below:

(a) 1 and 4	(b) 1 and 3

(c) 2, 3 and 4 (d) 3 only

Ans:D

Exp:The Indian Defense Services comprise the Army, Navy, and Air Force, which are among the most well-organized, structured, equipped, and disciplined forces, capable of responding to various threats and disasters, both natural and man-made. Commissioned officers and personnel below officer rank within these armed forces hold ranks that are equivalent to one another.

Indian Army	Indian Navy	Indian Air Force
*Field Marshal	*Admiral of the fleet	*Marshal of the Air Force
General	Admiral	Air Chief Marshal
Lt. General	Vice Admiral	Air Marshal
Major General	Rear Admiral	Air Vice Marshal
Brigadier	Commodore	Air Commodore
Colonel	Captain	Group Captain
Lt. Colonel	Commander	Wing Commander
Lt. Colonel	Commander	Wing Commander
Major	Lt. Commander	Squadron Leader
Captain	Lieutenant	Flight Lieutenant
Lieutenant	Sub Lieutenant	Flying Officer

Therefore the answer is Only 3.

Reference: https://vishwabharatigurukul.com/equivalent-ranks-indian-armed-forces/

70.The North Eastern Council (NEC) was established by the North Eastern Council Act, 1971. Subsequent to the amendment of NEC Act in 2002, the Council comprises which of the following members?

- 1. Governor of the Constituent State
- 2. Chief Minister of the Constituent State
- 3. Three Members to be nominated by the President of India
- 4. The Home Minister of India

Select the correct answer using the code given below:

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



Ans:D

Exp:

The North Eastern Council serves as the primary agency for the economic and social development of the North Eastern Region, encompassing the eight states: Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, and Tripura. Established in 1971 through an Act of Parliament, the Council signifies the start of a focused and coordinated effort for the region's rapid development.

Members:

Governor of the Constituent States

Chief Ministers of the Constituent States

Three Members Nominated by the President ofIndia

The Home Minister of India is a chairman of the council.

Reference: https://necouncil.gov.in/about-us/nec-amendment-act-2002-0

71. How many Delimitation Commissions have been constituted by the Government of India till December 2023?

(a) One

- (b) Two
- (c) Three
- (d) Four

Ans: D

Exp: The first Delimitation Commission was established in 1952, followed by others in 1963, 1972, and the latest one in 2002, which concluded its work in 2021. **Reference:** https://www.eci.gov.in/delimitation

72. The Constitution (71st Amendment) Act, 1992 amends the Eighth Schedule to the Constitution to include which of the following languages?

- 1. Konkani
- 2. Manipuri
- 3<mark>. N</mark>epali
- 4. Maithilis

Select the correct answer using the code given below: We Hard, You Smart

- (a) 1, 2 and 3
- (b) 1, 2 and 4
- (c) 1,3 and 4
- (d) 2.3 and 4

Ans: A

Exp:The Constitution (71st Amendment) Act, 1992, amends the Eighth Schedule to include the following languages:

1.Konkani

2.Manipuri

3.Nepali

Maithili was later added through the 92nd Amendment in 2003. Therefore, the languages added by the 71st Amendment are Konkani, Manipuri, and Nepali.

Reference: https://www.mha.gov.in/sites/default/files/EighthSchedule_19052017.pdf

73.Consider the following pairs:



	Party	Its Leader
1.	Bharatiya Jana Sangh	Dr. Shyama Prasad Mukherjee
2.	Socialist Party	C. Rajagopalachari
3.	Congress for Democracy	Jagjivan Ram
4.	Swatantra Party	Acharya Narendra Dev

How many of the above are correctly matched?

2	
(a) Only one	(b) Only two
(c) Only three	(d) All four

(c) Only three	(d) All f
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Ans:B Exp:

1.Bharatiya Jana Sangh - Dr. Shyama Prasad Mukherjee: Correct. Dr. Mukherjee was the founder of the Bharatiya Jana Sangh in 1951.

2.Socialist Party - C. Rajagopalachari: Incorrect. The Socialist Party was founded by Jayaprakash 3.Narayan and others, not C. Rajagopalachari.

4.Congress for Democracy - Jagjivan Ram: Correct. Jagjivan Ram was a prominent leader of the 5.Congress for Democracy, which was formed in 1977.

6.Swatantra Party - Acharya Narendra Dev: Incorrect. The Swatantra Party was founded by C. Rajagopalachari.

Reference:Google

74. Which of the following statements are correct about the Constitution of India?

- 1. Powers of the Municipalities are given in Part IX A of the Constitution.
- 2. Emergency provisions are given in Part XVIII of the Constitution.

3. Provisions related to the amendment of the Constitution are given in Part XX of the Constitution. Select the answer using the code given below:

(a) 1 and 2 only	(a) 2 and 3 only
(c) 1 and 3 only	(d) 1, 2 and 3

Ans:D

Exp:

Statement 1 is correct: Part IX A does deal with municipalities.

Statement 2 is correct: Part XVIII of the Constitution deals with emergency provisions. It outlines the circumstances under which the President can proclaim a national emergency (Article 352), a state emergency (Article 356), and a financial emergency (Article 360). These provisions allow the government to take necessary actions during times of national crisis, affecting the normal distribution of powers between the center and the states

Statement 3 is correct: Part XX contains the provisions for amending the Constitution. Articles 368 to 371 detail the procedure for amendments, which can be initiated by either house of Parliament. The Constitution can be amended in different ways depending on whether the amendment affects the federal



structure, fundamental rights, or other provisions. This part is crucial for maintaining the Constitution's relevance in changing socio-political contexts.

Reference:Laxmikant -Chapter:3 Salient features of the constitution.

75. Which one of the following statements is correct as per the Constitution of India ?

- (a) Inter-State trade and commerce is a State subject under the State List.
- (b) Inter-State migration is a State subject under the State List.
- (c) Inter-State quarantine is a Union subject under the Union List.
- (d) Corporation tax is a State subject under the State List.

Ans:C

Exp:Under the Constitution of India, different subjects are allocated to the Union List, State List, and Concurrent List, specifying which government (Union or State) has legislative authority over each.

- 1. Union List (where the Union Government has exclusive power): Inter-State quarantine falls under the Union List, as outlined in Entry 81. This grants the central government authority to regulate quarantine laws across state borders to manage and control the spread of diseases.
- 2. State List (where State Governments have exclusive power):
 - Inter-State trade and commerce is not a State subject; it is regulated by the Union to ensure seamless trade across states (Union List Entry 42).
 - Inter-State migration is also not within the State List but is managed at the Union level, as it involves movement between states.
 - Corporation tax is a Union subject (Entry 85 of the Union List), meaning it is exclusively managed by the central government.

Thus, option (c) is correct as per the Constitution of India.

Reference: https://www.mea.gov.in/Images/pdf1/S7.pdf

76. Under which of the following Articles of the Constitution of India, has the Supreme Court of India placed the Right to Privacy? IN Together, We Hard, You Smart

(a)	Article 15	5

- (b) Article 16
- (c) Article 19 (d) Article 21

Ans:D

Exp:The Supreme Court of India has placed the Right to Privacy under Article 21 of the Constitution. Article 21 guarantees the right to life and personal liberty, and the Supreme Court has interpreted this to include the right to privacy as an essential component of personal liberty. **Reference:Laxmikant -Fundamental Rights.**

77. What are the duties of the Chief of Defence Staff (CDS) as Head of the Department of Military

- Affairs?
 - 1. Permanent Chairman of Chiefs of Staff Committee
 - 2. Exercise military command over the three Service Chiefs
- 3. Principal Military Advisor to Defence Minister on all tri-service matters

Select the correct answer using the code given below:

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

Ans: D

Exp:

The Chief of Defence Staff (CDS) has several key duties as the Head of the Department of Military Affairs:



Statement 1 is correct: The CDS serves as the Permanent Chairman of the Chiefs of Staff Committee (COSC). This committee is the apex body that consists of the Chiefs of the three armed forces (Army, Navy, and Air Force), and the CDS is responsible for coordinating and ensuring effective communication and decision-making across the services.

Statement 2 is incorrect: While the CDS holds a senior position, the three Service Chiefs (Army, Navy, and Air Force) retain operational command over their respective forces. The CDS does not have direct operational control or command over the individual services but acts as an advisor and coordinator, with the goal of fostering greater integration and joint operations among the armed forces.

Statement 3 is correct: The CDS is the Principal Military Advisor to the Defence Minister on all triservice matters. This includes advising the Minister on military issues that involve all three services (Army, Navy, and Air Force), particularly in terms of defense strategy, operations, and procurement. **Reference:**<u>https://pib.gov.in/newsite/PrintRelease.aspx?relid=198899</u>

78.Operations undertaken by the Army towards upliftment of the local population in remote areas to include addressing of their basic needs is called:

- (a) Operation Sankalp
- (b) Operation Maitri
- (c) Operation Sadbhavana
- (d) Operation Madad

Ans:C

Exp:Operation Sadbhavana is an initiative by the Indian Army aimed at fostering goodwill and addressing the basic needs of the local population in remote areas, particularly in Jammu and Kashmir. It focuses on various developmental activities to uplift communities and promote peace and stability in the region. Reference:<u>https://pib.gov.in/PressReleaselframePage.aspx?PRID=1895974#:~:text=As%20part%20</u>of%20'Operation%20SADBHAVANA,Territory%20(UT)%20of%20Ladakh

79. The longest border between any two countries in the world is between:

- (a) Canada and the United States of America
- (b) Chile and Argentina
- (c) China and India
- (d) Kazakhstan and Russian Federation

Ans:A



The border between Canada and the United States is the longest international border in the world, stretching over 8,891 kilometers (5,525 miles). This border includes both land and water boundaries.

Reference: Atlas

80.Which of the following statements about the Ethics Committee in the Lok Sabha are correct?

- 1. Initially it was an ad-hoc Committee.
- 2. Only a Member of the Lok Sabha can make a complaint relating to unethical conduct of a member of the Lok Sabha.

3. This Committee cannot take up any matter which is sub-judice.

- Select the answer using the code given below:
 - (a) 1 and 2 only (b) 2 and 3 only y
 - (c) 1 and 3 only (d) 1, 2 and 3



Ans:C

Exp:

Statement 1 is correct:The Ethics Committee was initially formed as an ad-hoc committee in 2000 to address issues related to unethical behavior among members of the Lok Sabha. Its purpose was to provide a mechanism to uphold the dignity and integrity of the House.

Statement 2 is correct:Complaints regarding unethical conduct must be filed by a member of the Lok Sabha. The committee operates primarily within the purview of its members, ensuring that internal ethical standards are maintained.

Statement 3 is correct: The Ethics Committee does not have the authority to investigate matters that are currently sub-judice (i.e., under judicial consideration). This restriction is in place to avoid interfering with the judicial process and to maintain the separation of powers.

Reference: https://www.business-standard.com/india-news/ethics-committee-in-parliament-history-constitution-role-explained-123110300483_1.html

81.Consider the following statements regarding 'Nari Shakti Vandan Adhiniyam':

- 1. Provisions will come into effect from the 18th Lok Sabha.
- 2. This will be in force for 15 years after becoming an Act.
- 3. There are provisions for the reservation of seats for Scheduled Castes Women within the quota reserved for the Scheduled Castes.

Which of the statements given above are correct?

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

Ans:C

Exp:

Statement 1 is incorrect: The provisions of the Nari Shakti Vandan Adhiniyam are designed to come into effect after the next general elections, which is not explicitly tied to the current Lok Sabha's duration.

Statement 2 is correct: The Act stipulates that the provisions will remain in effect for a duration of 15 years, ensuring a temporary but significant enhancement in women's representation.

Statement 3 is correct: The Act includes specific provisions for the reservation of seats for women belonging to Scheduled Castes within the reserved quota for Scheduled Castes, promoting representation among marginalized communities.

Reference:<u>https://prsindia.org/billtrack/the-constitution-one-hundred-twenty-eighth-amendment-bill-2023</u>

82. Which of the following statements about 'Exercise Mitra Shakti-2023' are correct?

- 1. This was a joint military exercise between India and Bangladesh
- 2. It commenced in Aundh (Pune).
- 3. Joint response during counter-terrorism operations was a goal of this operation.
- 4. Indian Air Force was a part of this exercise.

Select the answer using the code given below:

(c) 1, 3 and 4 (d) 2, 3 and 4

Ans:D

Exp:Statement 1 is correct:The ninth edition of the joint military exercise "Exercise MITRA SHAKTI-2023" was held between India and Sri Lanka.



Statement 2 is correct:The exercise took place in Aundh, Pune, Maharashtra, where troops from both countries participated.

Statement 2 is correct; One of the main objectives of Exercise Mitra Shakti-2023 was to enhance interoperability and cooperation between the two countries in counter-terrorism operations.

Statement 4 is correct:The exercise primarily involved ground forces and did not include the Indian Air Force.

Reference: https://pib.gov.in/PressReleaselframePage.aspx?PRID=1977339

83. A Writ of Prohibition is an order issued by the Supreme Court or High Courts to:

- (a) a government officer prohibiting him from taking a particular action.
- (b) the Parliament/Legislative Assembly to pass a law on Prohibition.
- (c) the lower court prohibiting continuation of proceedings in a case.
- (d) the Government prohibiting it from following an unconstitutional policy.

Ans:C

Exp:

Writs in India-

The Supreme Court, under Article 32, and the High Courts, under Article 226, can issue five types of writs: habeas corpus, mandamus, prohibition, certiorari, and quo warranto. Additionally, Parliament can empower other courts to issue these writs.

Writ of Prohibition-

The writ of prohibition literally means "to forbid." It is issued by a higher court to a lower court or tribunal to prevent the latter from exceeding its jurisdiction or taking on authority it does not possess. Unlike the writ of mandamus, which directs action, the writ of prohibition commands inactivity.

This writ can only be issued against judicial and quasi-judicial authorities, and it is not applicable to administrative bodies, legislative bodies, or private individuals. Therefore, option (c) is correct. The Writ of Prohibition serves as a legal mechanism to "prohibit, prevent, or restrain," and is also referred to as a "Stay Order."

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Reference:Laxmikant-Fundamental Rights

84. Consider the following statements:

- 1. It is the Governor of the State who recognizes and declares any community of that State as a Scheduled Tribe.
- 2. A community declared as a Scheduled Tribe in a State need not be so in another State.

Which of the statements given above is/are correct?

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

Ans:B

Exp:Article 366(25) of the Constitution of India defines Scheduled Tribes as those tribes or tribal communities recognized as such under Article 342 of the Constitution.

Statement 1 is incorrect: Article 342(1) states that the President, after consulting the Governor of a State, may designate specific tribes, tribal communities, or groups within them as Scheduled Tribes for that State or Union Territory.



Statement 2 is correct: The list of Scheduled Tribes is specific to each State or Union Territory, meaning a community recognized as a Scheduled Tribe in one state may not have the same status in another state or UT.

Reference: https://dopt.gov.in/sites/default/files/ch-11.pdf

85.With reference to Union Budget, consider the following statements:

- 1. The Union Finance Minister on behalf of the Prime Minister lays the Annual Financial Statement before both the Houses of Parliament
- 2. At the Union level, no demand for a grant can be on the recommendation of the President of India.

Which of the statements given above is/are correct?

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

Ans:B

Exp:Budget is the annual financial statement.

Statement 1 is incorrect: The Union Finance Minister presents the Annual Financial Statement to both Houses of Parliament on behalf of the President.

Statement 2 is correct:According to Article 112 of the Indian Constitution, the President must present an "Annual Financial Statement" to both Houses of Parliament, detailing the estimated receipts and expenditures for the upcoming financial year. Under Article 113, no demand for a grant at the Union level can be made without the President's recommendation.

Reference:<u>https://www.constitutionofindia.net/articles/article-113-procedure-in-parliament-with-respect-to-estimates/</u>

https://www.constitutionofindia.net/articles/article-112-annual-financial-statement/

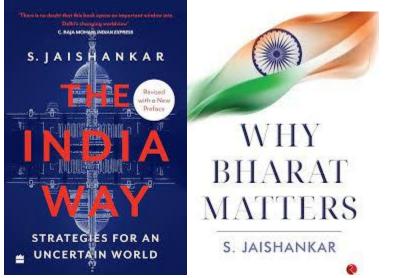
86. Who of the following is the author of the books "The India Way" and "Why Bharat Matters"?

- (a) Bhupender Yadav
- (b) Nalin Mehta
- (c) Shashi Tharoor
- (d) Subrahmanyam Jaishankar

Ans:D Exp:

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S. Jaishankar ,External Affairs Minister is the Author of the books "The India Way" and "Why Bharat Matters.





Reference: https://www.mea.gov.in/eam.htm

87. Consider the following pairs:

	Country	Reason for being in the news
1.	Argentina	Worst economic crisis
2.	Sudan	War between the country's regular army and paramilitary forces
3.	Turkey	Rescinded its membership of NATO

How many of the pairs given above are correctly matched?

- (a) Only one pair (c) All three pairs (d) None of the pairs Ans:B
- Exp:

1.Correct	Argentina has been experiencing significant economic challenges, including high inflation and debt issues, making headlines for its economic crisis.
2.Correct	Sudan has been facing intense conflict, particularly between the regular army and the Rapid Support Forces (RSF), leading to widespread violence and instability.
3.Incorrect	Turkey has not rescinded its membership in NATO. While there have been tensions and criticisms regarding Turkey's actions and policies, it remains a member of NATO.

Reference: https://www.nato.int/nato-welcome/index.html

https://reliefweb.int/report/argentina/argentina-economic-crisis-2024-emergency-appealmdrar022#:~:text=Argentina%20has%20been%20facing%20one,sustaining%20livelihoods%2C%20amon g%20other%20issues.

88.Consider the following statement:

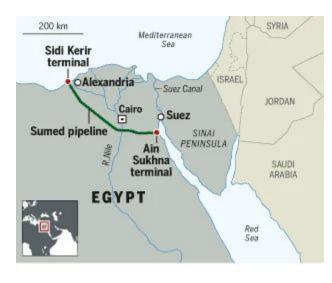
Statement I: Sumed pipeline is a strategic route for Persian Gulf oil and natural gas shipments to Europe. Statement-II: Sumed pipeline connects the Red Sea with the Mediterranean Sea.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-II explains. Statement-I
- (b) Both Statement-I and Statement-II are correct, but Statement-II does not explain Statement-I
- (c) Statement-I is correct, but Statement-II is incorrect
- (d) Statement-I is incorrect, but Statement-II is correct

Ans:A





Exp:

Statement 1 is correct: The Sumed pipeline (Suez-Mediterranean Pipeline) serves as a crucial transport route for oil and gas from the Persian Gulf to Europe, allowing tankers to avoid the lengthy journey around Africa. Statement 2 is correct: The Sumed pipeline

connects the Red Sea at Suez with the Mediterranean Sea at Ain Sukhna, facilitating the transport of oil.

Therefore A is the correct answer.

Reference:https://www.eia.gov/todayinenergy/d etail.php?id=40152

89.Consider the following statements:

1. The Red Sea receives very little

precipitation in any form.

2. No water enters the Red Sea from rivers.

Which of the statements given above is/are correct?

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

(d) Neither 1 nor 2

Ans:C



Exp:

Statement 1 is correct: The Red Sea is located in a region characterized by arid and semi-arid climates, leading to minimal rainfall. Most areas surrounding the Red Sea experience low annual precipitation, making it one of the more arid regions.

Statement 2 is correct: Unlike many other seas, the Red Sea does not receive significant contributions from rivers. The only major water source is from the surrounding land and limited freshwater inflow from small wadis or streams, but these do not compare to riverine inflows typical of other bodies of water.

Reference:https://www.britannica.com/place/Red-Sea

90. According to the Environmental Protection Agency (EPA), which one of the following is the largest source of sulphur dioxide emissions?

(a) Locomotives using fossil fuels

- (b) Ships using fossil fuels
- (c) Extraction of metals from ores
- (d) Power plants using fossil fuels

Ans:D

Exp: The Environmental Protection Agency (EPA) protects people and the environment from significant health risks, sponsors and conducts research, and develops and enforces environmental regulations.

Power plants, particularly those that burn coal, oil, or natural gas, are the largest sources of sulfur dioxide (SO₂) emissions. When fossil fuels are burned, sulfur contained in the fuel is released as sulfur dioxide, contributing significantly to air pollution and related environmental issues such as acid rain. Other sources, like locomotives, ships, and metal extraction, do contribute to sulfur dioxide emissions, but power plants



account for a larger share overall. According to the Environmental Protection Agency (EPA), the energy sector is a key contributor to SO₂ emissions, primarily due to the combustion of fossil fuels for electricity generation.

Reference: https://www.epa.gov/so2-pollution/sulfur-dioxide-basics

91.Consider the following statements:

Statement-I: There is instability and worsening security situation in the Sahel region.

Statement-II: There have been military takeovers/coups d'état in several countries of the Sahel region in the recent past.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-II explains Statement-I
- (b) Both Statement-I and Statement-II are correct, but Statement-II does not explain Statement-I
 - (c) Statement-I is correct, but Statement-II is incorrect
 - (d) Statement-I is incorrect, but Statement-II is correct

Ans:A

Exp:

Statement 1 is correct: The Sahel region, which stretches across Africa from the Atlantic Ocean to the Red Sea, has been experiencing significant instability. Factors contributing to this instability include rising violence from extremist groups, ethnic conflicts, and challenges related to governance and poverty. The security situation has worsened in recent years.

Statement 2 is correct: The Sahel region has seen a series of military coups in countries like Mali, Burkina Faso, and Chad in recent years. These coups are often linked to dissatisfaction with the government's handling of security issues and the fight against terrorism. Reference:https://press.un.org/en/2024/sc15562.doc.htm

92.Consider the following statements:

Statement-I: India does not import apples from the United States of America.

Statement-II: In India, the law prohibits the import of Genetically Modified food without the approval of the competent authority.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-II explains Statement-I
- (b) Both Statement-I and Statement-II are correct, but Statement-II does not explain Statement-I
- (c) Statement-I is correct, but Statement-II is incorrect
- (d) Statement-I is incorrect, but Statement-II is correct

Ans:D

Exp:

Statement 1 is incorrect: India does import apples from the USA, particularly from regions like Washington State, which is known for its apple production. While the volume of imports may not be very high compared to domestic production or imports from other countries (like China), the trade does exist. Therefore, stating that India does not import apples from the USA is misleading.

Statement 2 is correct: In India, the import and cultivation of genetically modified organisms (GMOs) are regulated. The Environment Protection Act, along with guidelines from the Genetic Engineering Appraisal Committee (GEAC), requires that any GM food or crop must receive approval from relevant authorities before it can be imported. This regulation is in place to ensure safety and assess potential risks associated with GM foods.

Reference: https://pib.gov.in/PressReleaselframePage.aspx?PRID=1935460

93.With reference to the Speaker of the Lok Sabha, consider the following statements:

While any resolution for the removal of the Speaker of the Lok Sabha is under consideration

1. He/She shall not preside.



2. He/She shall not have the right to speak

3. He/She shall not be entitled to vote on the resolution in the first instance.

- Which of the statements given above is/are correct?
 - (a) 1 only
- (b) 1 and 2 only
- (c) 2 and 3 only (d) 1, 2 and 3

Ans:A

Exp:

Statement 1 is correct:When a resolution for the removal of the Speaker is introduced, the Speaker must abstain from presiding over the proceedings related to that resolution(Article 96). This is grounded in the principle of fairness and impartiality. If the Speaker were to preside over their own removal, it would create a conflict of interest and undermine the integrity of the process. Instead, the Deputy Speaker or another member takes over the role of presiding over the session to ensure that discussions proceed impartially.

Statement 2 is incorrect: While it is conventional for the Speaker to allow others to voice their opinions without bias, they retain the right to speak during the proceedings. The Speaker may choose to clarify points, respond to allegations, or defend their actions as necessary. This ability to speak is crucial, as it allows the Speaker to provide context or explanations that may inform the members' votes. The Speaker's right to speak does not diminish their impartial role; rather, it reflects their position as the presiding officer of the House.

Statement 3 is incorrect: The Speaker's voting rights are nuanced. The Speaker can participate in votes but traditionally does not vote in the first instance except in the case of a tie. This means that if the votes for and against the resolution are equal, the Speaker can cast the deciding vote. This practice reinforces the Speaker's role as a neutral arbitrator while still maintaining the option to exercise their vote when necessary. The rationale behind this is to ensure that the Speaker has the opportunity to influence the outcome if the situation warrants it, particularly on significant issues affecting the House. **Reference:**Constitution of India.

94. With reference to the Indian Parliament, consider the following statements:

- 1. A bill pending in the Lok Sabha lapses on its dissolution.
- 2. A bill passed by the Lok Sabha and pending in the Rajya Sabha lapses on the dissolution of the Lok Sabha.
- 3. A bill in regard to which the President of India notified his/her intention to summon the Houses to a joint sitting lapses on the dissolution of the Lok Sabha.

Which of the statements given above is/are correct?

(a) 1 only	(b) 1 and 2
(a) 2 and 2	

(c) 2 and 3	(d) 3 only
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Ans: B

Exp:

Statement 1 is correct: According to Article 107 of the Indian Constitution, a bill that is pending in the Lok Sabha lapses when the Lok Sabha is dissolved. This is because the dissolution terminates all pending business in the House, including bills that have not been passed.

Statement 2 is correct: If the Lok Sabha is dissolved, the bill passed by it does not lapse while pending in the Rajya Sabha.

Statement 3 is incorrect: A bill in respect of which the President has notified the intention to summon a joint sitting does not lapse on the dissolution of the Lok Sabha. The dissolution of the Lok Sabha only affects pending bills in the Lok Sabha or bills passed by the Lok Sabha but pending in the Rajya Sabha. If a joint sitting is required, it can still occur after the new Lok Sabha is constituted.

Reference: https://www.india.gov.in/my-government/indian-parliament

95.With reference to the Parliament of India, consider the following statements:

1. Prorogation of a House by the President of India does not require the advice of the Council of Ministers.



- 2. Prorogation of a House is generally done after the House is adjourned sine die but there is no bar to the President of India prorogating the House which is in session.
- 3. Dissolution of the Lok Sabha is done by the President of India who, save in exceptional circumstances, does so on the advice of the Council of Ministers.

Which of the statements given above is/are correct?

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

Ans:C

Exp:The Parliament of India is the supreme legislative body of the country, consisting of two houses: the Lok Sabha (House of the People) and the Rajya Sabha (Council of States). It is responsible for making laws, discussing national issues, and overseeing the government.

Statement 1 is correct:According to Article 107, a bill that starts in the Lok Sabha and is still pending when the House is dissolved is deemed to have lapsed.

Statement 2 is correct: Prorogation typically follows an adjournment sine die, signaling the end of a session. However, the President can prorogue the House even while it is actively conducting business. **Statement 3 is incorrect:** While the President does dissolve the Lok Sabha, this action typically occurs at the request of the Prime Minister and the Council of Ministers, but it can also be done in certain situations without their advice (e.g., if the Lok Sabha is unable to function) **Reference:** Constitution of India.

Reference:Constitution of India.

96.Consider the following statements:

Statement-I: The European Parliament approved The Net-Zero Industry Act recently.

Statement-II: The European Union intends to achieve carbon neutrality by 2040 and therefore aims to develop all of its own clean technology by that time.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-I explains Statement-II
- (b) Both Statement-I and Statement-II are correct, but Statement-II does not explain Statement-I
- (c) Statement-1 is correct, but Statement-II is incorrect
- (d) Statement-I is incorrect, but Statement-II is correct

Ans:C Exp:

Statement 1 is correct: The Net-Zero Industry Act is an initiative aimed at boosting the EU's capacity for clean technologies, which are essential for meeting the EU's climate goals. The act supports the transition to a sustainable economy by promoting investment and innovation in green technologies.

Statement 2 is incorrect: The European Union has set a target for achieving carbon neutrality by 2050, not 2040. While the EU aims to significantly ramp up the development and deployment of clean technologies, the specific target year mentioned in the statement is inaccurate.

Reference:https://www.bbc.com/news/science-environment-46360212

97. Consider the following statements:

Statement-I: Recently, Venezuela has achieved a rapid recovery from its economic crisis and succeeded in preventing its people from fleeing/emigrating to other countries.

Statement-II: Venezuela has the world's largest oil reserves

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-1 and Statement-II are correct and Statement-II explains Statement-I
- (b) Both Statement-I and Statement-II are correct, but Statement-II does not explain Statement-I
- (c) Statement-I is correct, but Statement-II is incorrect
- (d) Statement-I is incorrect, but Statement-II is correct

Ans:D

Exp:Statement 1 is incorrect:Venezuela has faced one of the worst economic crises in its history, characterized by hyperinflation, shortages of basic goods, and a significant outflow of its population



seeking better opportunities abroad. While there may be some signs of stabilization, the overall situation remains dire, and many people continue to emigrate.

Statement 2 is correct:Venezuela holds the largest proven oil reserves in the world, surpassing other oil-rich countries. Despite this, mismanagement, corruption, and economic sanctions have severely impacted the country's oil production and revenue.

Reference:

https://www.bbc.com/news/world-latin-america-48121148

98.With reference to the Digital India Land Records Modernisation Programme, consider the following statements:

- 1. To implement the scheme, the Central Government provides 100% funding.
- 2. Under the Scheme, Cadastral Maps are digitised.
- 3. An initiative has been undertaken to transliterate the Records of Rights from local language to any of the languages recognized by the Constitution of India.

Which of the statements given above are correct?

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

Ans:D

Exp:

Statement 1 is correct:The earlier National Land Records Modernization Programme (NILRMP), which was approved in 2008 as a centrally sponsored scheme, has been revamped into the Digital India Land Records Modernization Programme (DILRMP). This new initiative is classified as a Central Sector Scheme and is fully funded(100%) by the Central Government, effective from April 1, 2016.

Statement 2 is correct: The DILRMP aims to digitise Cadastral Maps, which are essential for land record management. This process involves the conversion of paper-based maps into digital formats, thereby enhancing accuracy, accessibility, and the efficiency of land administration. Digitisation facilitates better planning, dispute resolution, and overall management of land resources.

Statement 3 is correct: The programme includes efforts to transliterate the Records of Rights from local languages into any of the languages recognized by the Constitution of India. This initiative aims to make land records more accessible and understandable to a broader population, thereby promoting transparency and reducing disputes over land ownership.

Reference :(undp.org/facs/ghana-sustainable-

cocoa#:~:text=Ghana%20is%20the%20second%20largest,of%20the%20world's%20cocoa%20supp Iy) (pib.gov.in/PressReleasePage.aspx?PRID=1989671)

99.With reference to the 'Pradhan Mantri Surakshit Matritva Abhiyan', consider the following statements:

- 1. This scheme guarantees a minimum package of antenatal care services to women in their second and third trimesters of pregnancy and six months post-delivery health care service in any government health facility.
- 2. Under this scheme, private sector health care providers of certain specialities can volunteer to provide services at nearby government health facilities.

Which of the statements given above is/are correct?

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

Ans: B

Exp:The Pradhan Mantri Surakshit Matritva Abhiyan has been initiated by the Ministry of Health and Family Welfare (MoHFW), Government of India. This program aims to deliver assured, comprehensive, and high-quality antenatal care to all pregnant women, free of charge, on the 9th of every month.



Statement 1 is incorrect: The Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA) is aimed at providing quality antenatal care to pregnant women in the second and third trimesters of pregnancy. However, the six months post-delivery healthcare service is not part of this scheme. The scheme specifically focuses on providing antenatal care and does not extend to post-delivery healthcare services for six months. **Statement 2 is correct:** The PMSMA allows private sector healthcare providers of specific specialties to volunteer and provide their services at nearby government health facilities. This helps improve access to quality care for pregnant women.

Reference : (pmsma.mohfw.gov.in/about-

scheme/#:~:text=What%20is%20the%20program%3F,the%209th%20of%20every%20month.)

100.With reference to the Pradhan Mantri Shram Yogi Maan-dhan (PM-SYM) Yojana, consider the following statements:

- 1. The entry age group for enrolment in the scheme is 21 to 40 years.
- 2. Age specific contribution shall be made by the beneficiary.
- 3. Each subscriber under the scheme shall receive a minimum pension of 3,000 per month after attaining the age of 60 years.

4. Family pension is applicable to the spouse and unmarried daughters.

Which of the statements given above is/are correct?

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

Ans:B

Exp:

Pradhan Mantri Shram Yogi Maandhan is a government scheme meant for old age protection and social security of Unorganized Workers (UW).

Statement 1 is incorrect: The entry age for the Pradhan Mantri Shram Yogi Maan-dhan (PM-SYM) scheme is 18 to 40 years, not 21 to 40 years. This scheme aims to provide social security to unorganized sector workers, and the inclusion of individuals starting at 18 encourages young workers to plan for their future retirement.

Statement 2 is correct: The scheme mandates age-specific contributions from the beneficiaries. The amount to be contributed varies depending on the age at which an individual joins the scheme. For example, younger individuals are required to contribute lower amounts compared to those who join the scheme at an older age. This structure is designed to ensure that older individuals can still participate while adjusting the financial commitment based on age.

Statement 3 is correct: Each subscriber to the PM-SYM scheme is guaranteed a minimum pension of ₹3,000 per month once they reach the age of 60. This pension acts as a financial safety net for individuals in the unorganized sector, who may not have regular savings or pension plans.

Statement 4 is incorrect:The family pension to unmarried/widowed/divorced daughters above the age of 25 years shall be payable only after the other children below the age of 25 years have ceased to be eligible to receive family pension.

Reference:https://www.epfindia.gov.in/site_docs/PDFs/MiscPDFs/Scheme_PM-SYM.pdf