

1 Which of the following is/are the key principles of 'Zero Budget Natural Farming'?

1. Seed Treatment using local cowdung and cow urine
2. Mulching to ensure favorable microclimate in the soil
3. No use of chemicals fertilizers or chemical pesticides in the soil
4. Soil aeration

◦ Select the correct answer using the codes below.

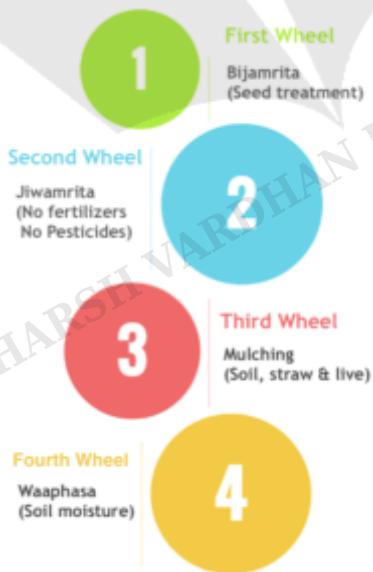
- A. 2, 3 and 4 only
- B. 1 and 3 only
- C. 1, 2, 3 and 4 
- D. 2 and 4 only

◦ Your Answer : C

◦ Correct Answer : C

◦ **Answer Justification :**

Justification: The father of ZBNF and Padma Shri Awardee, Sh. Subash Palekar has provided four important non-negotiable guidelines: Bijamrita (Seed Treatment using local cowdung and cow urine), Jiwamrita (applying inoculation made of local cowdung and cow urine without any fertilizers and pesticides), Mulching (activities to ensure favorable microclimate in the soil), and Waaphasa (soil aeration).



Zero Budget Natural Farming, as the name implies, is a method of farming where the cost of growing and harvesting plants is zero.

This means that farmers need not purchase fertilizers and pesticides in order to ensure the healthy growth of crops. It is, basically, a natural farming technique that uses biological pesticides instead of chemical-based fertilizers. Farmers use earthworms, cow dung, urine, plants, human excreta and such biological fertilizers for crop protection. It reduces farmers' investment. It also protects the soil from degradation.

Learning: Government initiatives to support ZBNF:

Government of India has been promoting organic farming in the country through the dedicated schemes of Paramparagat Krishi Vikas Yojana (PKVY) since 2015-16 and also through Rashtriya Krishi Vikas Yojana (RKVY).

In the revised guidelines of PKVY scheme during the year 2018, various organic farming models like Natural Farming, Rishi Farming, Vedic Farming, Cow Farming, Homa Farming, Zero Budget Natural Farming (ZBNF) etc. have been included wherein flexibility is given to states to adopt any model of Organic Farming including ZBNF depending on farmer's choice.

Under the RKVY scheme, organic farming/ natural farming project components are considered by the respective State Level Sanctioning Committee (SLSC) according to their priority/ choice.

Indian Council of Agricultural Research (ICAR) under Network Project on Organic Farming (NPOF) and All India Coordinated Research Projects (AICRP) on Integrated Farming Systems, has initiated an experiment on "Evaluation of zero budget farming practices in basmati rice-wheat system" at Modipuram (Uttar Pradesh), Ludhiana (Punjab), Pantnagar (Uttarakhand) and Kurukshetra (Haryana) from rabi 2017 to study the zero budget farming practices on productivity, economics and soil health including soil organic carbon and soil fertility.

Q Source:

<http://www.insightsonindia.com/2018/08/11/insights-daily-current-affairs-11-august-2018/>

2 With reference to the observations made in the recent International Labour Organization (ILO) publication - India Wage Report - consider the following statements.

1. Daily wages in urban areas also remain more than twice as high as those in rural areas.
 2. Minimum wages are presently set uniformly only by the Central government which is a hindrance in achieving purchasing power parity across different states.
 3. The gender wage gap has consistently increased post-1991.
- Select the correct answer using the codes below.
 - A. 1 only
 - B. 1 and 3 only
 - C. 3 only
 - D. 2 and 3 only
 - Your Answer : C
 - Correct Answer : A

○ **Answer Justification :**

Justification: Statement 1: Daily wages in urban areas (₹384) also remain more than twice as high as those in rural areas (₹175). Regional disparities in average wages have actually increased over time, with wages rising more rapidly in high-wage States than in low-wage ones.

Statement 2: The minimum wages are set by state governments for employees in 'selected, scheduled' employment and this has led to 1709 different rates across the country. As the coverage

is not complete these rates are applicable for an estimated of 66 % of wage workers.

A national minimum wage floor was introduced in the 1990s which has progressively increased to Rs 176 per day in 2017 but this wage floor is not legally binding, in spite of a recurrent discussion since the 1970s.

Real average daily wages in India almost doubled in the first two decades after economic reforms, but low pay and wage inequality remains a serious challenge to inclusive growth.

Overall, in 2009-10, a third of all of wage workers were paid less than the national minimum wage, which is merely indicative and not legally binding. That includes 41% of all casual workers and 15% of salaried workers.

Statement 3: The gender wage gap decreased from 48% in 1993-94 to 34% in 2011-12, but still remains high by international standards. And of all worker groups, the average wages of casual rural female workers was the lowest, at just ₹104 a day.

Q Source:

<http://www.insightsonindia.com/2018/08/22/insights-daily-current-affairs-22-august-2018/>

3 With reference to changes in atmospheric pressure, consider the following statements.

1. The weight of a column of air contained in a unit area from the mean sea level to the top of the atmosphere is called the atmospheric pressure.
2. Its cause can be explained by expansion of air when it is heated, and its compression when it is cold.
3. Changes in atmospheric pressure are responsible for the maintenance of a constant temperature around the globe.

○ Which of the above is/are correct?

- A. 1 and 2 only X
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3 ✓

○ Your Answer : A

○ Correct Answer : D

○ **Answer Justification :**

Justification: S1: This is the total weight as experienced at the sea level per unit of area.

S2: Air expands when heated and gets compressed when cooled. This results in variations in the atmospheric pressure.

The result is that it causes the movement of air from high pressure to low pressure, setting the air in motion. Air in horizontal motion is wind.

Atmospheric pressure also determines when the air will rise or sink. The wind redistributes the heat and moisture across the planet, thereby, maintaining a constant temperature for the planet as a

whole.

Q Source: Page 88: Chapter 10: Fundamentals of Physical Geography

4 Consider the following statements.

- Assertion (A): Tropical cyclones are not formed at the equator.
 Reason (R): Wind blows perpendicular to the isobars at the equator.

- In the context of the above, which of these is correct?
 - A. A is correct, and R is an appropriate explanation of A. ✓
 - B. A is correct, but R is not an appropriate explanation of A. ✗
 - C. A is correct, but R is incorrect.
 - D. Both A and R are incorrect.

- Your Answer : B
- Correct Answer : A

◦ **Answer Justification :**

Justification: Isobars are lines connecting places having equal pressure. Low-pressure system is enclosed by one or more isobars with the lowest pressure in the centre. High-pressure system is also enclosed by one or more isobars with the highest pressure in the centre.

The pressure gradient force (wind movement) is perpendicular to an isobar. The Coriolis force acts perpendicular to the pressure gradient force.

The higher the pressure gradient force, the more is the velocity of the wind and the larger is the deflection in the direction of wind. As a result of these two forces operating perpendicular to each other, in the low-pressure areas the wind blows around it.

At the equator, the Coriolis force is zero and the wind blows perpendicular to the isobars. **The low pressure gets filled instead of getting intensified (this is the key to the question).** That is the reason why tropical cyclones are not formed near the equator.

Q Source: Page 91: Chapter 10: Fundamentals of Physical Geography

5 Consider the following statements about United Nations Development Programme (UNDP).

1. The status of UNDP is that of an executive board within the United Nations General Assembly.
2. UNDP is funded entirely by voluntary contributions from member nations.
3. UNDP supports national democratic transitions by providing policy advice and technical support.

- Select the correct answer using the codes below.
 - A. 1 and 2 only
 - B. 2 only
 - C. 3 only
 - D. 1, 2 and 3 ✓

- Your Answer : D
- Correct Answer : D

◦ **Answer Justification :**

Learning: Statement 1: It also provides expert advice, training and grants support to developing countries, with increasing emphasis on assistance to the least developed countries.

Statement 2: The organization operates in around 177 countries, where it works with local governments to meet development challenges and develop local capacity. Additionally, the UNDP works internationally to help countries achieve the SDGs. It is funded entirely by member nations. See here <http://www.undp.org/content/undp/en/home/funding.html>

Statement 3: It works here by improving institutional and individual capacity within countries, educating populations about and advocating for democratic reforms, promoting negotiation and dialogue, and sharing successful experiences from other countries and locations.

Q Source: Additional Research: Chapter 6: 12th NCERT: Contemporary World Politics

6 The easterlies from either side of the equator converge in the

- A. Sub-tropical latitudes
- B. Inter-tropical convergence Zone (ITCZ) 
- C. Horse latitudes
- D. Doldrums formed beyond sub-tropics

- Your Answer : B
- Correct Answer : B

◦ **Answer Justification :**

Learning: Option D: doldrums and ITCZ are often used irreplaceably. They are usually formed within the tropics.

The air at the Inter Tropical Convergence Zone (ITCZ) rises because of convection caused by high insolation and a low pressure is created. The winds from the tropics converge at this low pressure zone. The converged air rises along with the convective cell. It reaches the top of the troposphere up to an altitude of 14 km. and moves towards the poles.

This causes accumulation of air at about 30 N and S. Part of the accumulated air sinks to the ground and forms a subtropical high. Another reason for sinking is the cooling of air when it reaches 30° N and S latitudes. Down below near the land surface the air flows towards the equator as the easterlies.

The easterlies from either side of the equator converge in the Inter Tropical Convergence Zone (ITCZ). Such circulations from the surface upwards and vice-versa are called cells.

Q Source: Page 92: Chapter 10: Fundamentals of Physical Geography

7 Why do policymakers stress on the need for a bearable small increase in population as crucial to a growing economy?

1. Population growth automatically leads to better redistribution of growth.
2. Human capital built through population can contribute to a productive labour force.

- Which of the above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. None

- Your Answer : B

- Correct Answer : B

- **Answer Justification :**

Justification: Statement 1: This is incorrect because only with redistributive expenditure, thoughtful fiscal policy decisions, and all round inclusive growth does redistribution actually occur with population growth.

Statement 2: A growing economy requires labour force, which must come either from the existing population or new population. Hence, 2 is correct. If trained well, the new population can contribute substantially to growth.

Q Source: Revision: Additional Research: 12th NCERT: Macroeconomics

8 Katabatic and Anabatic winds are generated by

- A. Contact and movement of air parcels close to a sloped terrain
- B. Movement of anti-cyclonic fronts in large open spaces
- C. Excess and deficit of moisture in air parcels as a result of seasonal change
- D. Orographic rainfall near coastal regions

- Your Answer : A

- Correct Answer : A

- **Answer Justification :**

Learning: When air over sloped terrain is cooled by conduction it becomes denser than near free air and drains to lower levels. **The winds generated are known as katabatic winds.** They depend on:

- the degree of cooling along the slope (the colder the surface, the greater the potential for the generation of very dense air and hence greater wind speed);
- the roughness of the slope (the smoother the slope the greater the potential for uninterrupted

and thus stronger flow);

the steepness of the slope (gentle slopes are more favorable for katabatic development because steep slopes cause the wind to become turbulent, resulting in mixing with surrounding air and the consequential breakdown of continual downward movement of cold air).

The reverse effect occurs on slopes on sunny days. Air in contact with a slope warms by conduction and ascends (not necessarily following the slope). **Such ascending winds are called anabatic winds.** The upward flow will be strongest in the early afternoon and over sun facing slopes.

Q Source: Additional Research: Page 93: Chapter 10: Fundamentals of Physical Geography

9 Consider the following statements about air fronts.

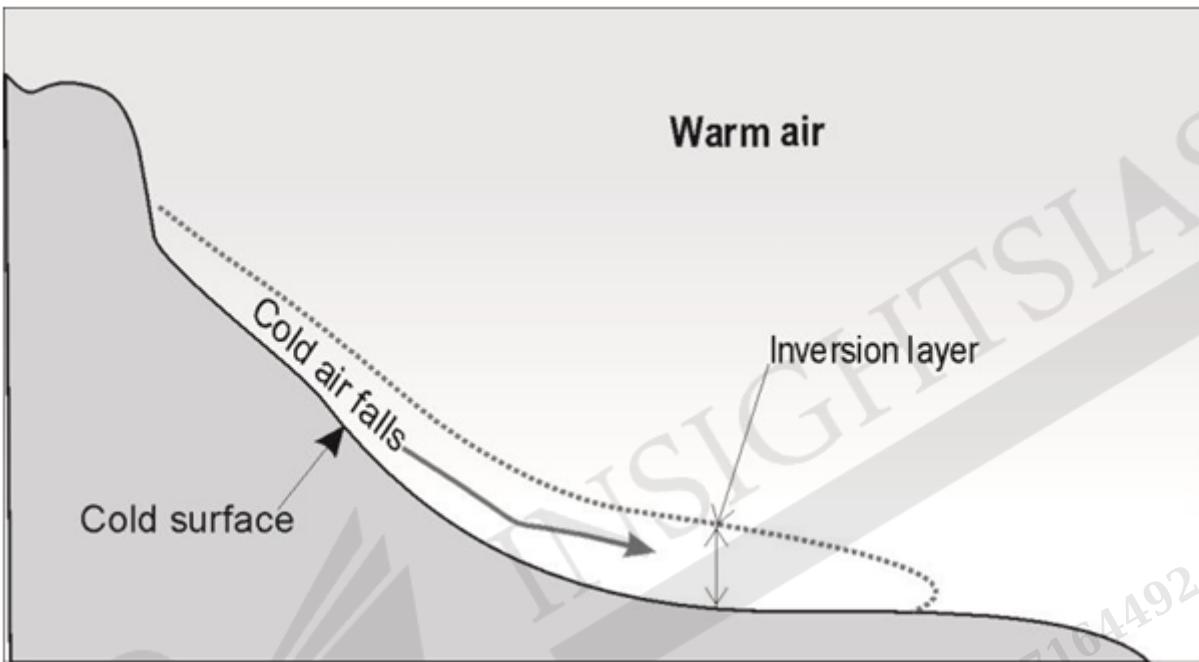
1. If a warm air mass moves towards the cold air mass, the contact zone turns into a cold front.
 2. Occluded front is formed by air mass sinking to the land surface.
 3. The air fronts bring abrupt changes in temperature and cause the air to rise to form clouds and cause precipitation.
- Select the correct answer using the codes below.
 - A. 1 and 2 only
 - B. 1 and 3 only
 - C. 2 only
 - D. 3 only
 - Your Answer : D
 - Correct Answer : D
- **Answer Justification :**

Justification: When two different air masses meet, the boundary zone between them is called a front.

The process of formation of the fronts is known as frontogenesis. There are four types of fronts: (a) Cold; (b) Warm; (c) Stationary; (d) Occluded. When the front remains stationary, it is called a stationary front.

When the cold air moves towards the warm air mass, its contact zone is called the cold front, whereas if the warm air mass moves towards the cold air mass, the contact zone is a warm front. If an air mass is fully lifted above the land surface, it is called the occluded front.

The fronts occur in middle latitudes and are characterised by steep gradient in temperature and pressure. They bring abrupt changes in temperature and cause the air to rise to form clouds and cause precipitation.



Q Source: Page 93: Chapter 10: Fundamentals of Physical Geography

10 The 'shock therapy' in post-communist regimes was related to a transition from

1. Authoritarian to a democratic political order
 2. Hardline Socialist ideology to a capitalist economic ideology
- Which of the above is/are correct?
 - A. 1 only
 - B. 2 only
 - C. Both 1 and 2 ✓
 - D. None
 - Your Answer : C
 - Correct Answer : C

◦ **Answer Justification :**

Justification: The collapse of communism was followed in most of these countries by a painful process of transition from an authoritarian socialist system to a democratic capitalist system. The model of transition in Russia, Central Asia and east Europe that was influenced by the World Bank and the IMF came to be known as 'shock therapy'.

Shock therapy varied in intensity and speed amongst the former second world countries, but its direction and features were quite similar.

Each of these countries was required to make a total shift to a capitalist economy, which meant rooting out completely any structures evolved during the Soviet period. Above all, it meant that private ownership was to be the dominant pattern of ownership of property.

Privatisation of state assets and corporate ownership patterns were to be immediately brought in.

Collective farms were to be replaced by private farming and capitalism in agriculture. This transition ruled out any alternate or 'third way', other than state-controlled socialism or capitalism.

Q Source: Page 24: Chapter 2: 12th NCERT: Contemporary World Politics

11 Consider the following major agricultural revolutions in India and the associated major personalities.

1. Green Revolution: M. S. Swaminathan
2. Blue Revolution: Norman Borlaug
3. White Revolution: Verghese Kurien
4. Golden Revolution: Hiralal Chaudhary

- Select the correct answer using the codes below.
 - A. 1, 2 and 3 only
 - B. 1, 2, 3 and 4
 - C. 2 and 4 only
 - D. 1 and 3 only 

- Your Answer : D
- Correct Answer : D

◦ **Answer Justification :**

Justification: Statement 1: Norman Ernest Borlaug was an American agronomist and humanitarian who led initiatives worldwide that contributed to the extensive increases in agricultural production termed the Green Revolution.

Swaminathan led and implemented the same in India.

Statement 3: Started by Kurien, Operation Flood – the world's largest agricultural dairy development programme, made dairy farming India's largest self-sustaining industry and the largest rural employment provider, being a third of all rural income, with benefits of raising incomes and credit, riddance of debt dependence, nutrition, education, health, gender parity and empowerment, breakdown of caste barriers and grassroots democracy and leadership.

Statement 2: Hiralal Chaudhary was known as the father of induced fish breeding in India.

Under the sponsorship of the United Nations Food and Agriculture Organization, his expertise in freshwater fish breeding and grow-out has been shared with extension workers and other government officials in many countries including India, Laos, Myanmar, the former Soviet Union, Malaysia and Fiji.

Q Source: Additional Research: Page 61: 12th NCERT: India Since Independence

12 Consider the following statements.

1. Most of the South Asian region is resting on the Indian Plate, the northerly portion of the Indo-Australian Plate, separated from the rest of the Eurasian Plate.
2. South Asia experiences a wide variety of climates ranging from subtropical continental climate to

Alpine climate.

- Select the correct answer using the codes below.

- A. 1 only
- B. 2 only X
- C. Both 1 and 2 ✓
- D. None

- Your Answer : B
- Correct Answer : C

◦ **Answer Justification :**

Justification: Statement 1: The Indian Plate includes most of South Asia, forming a land mass which extends from the Himalayas into a portion of the basin under the Indian Ocean, including parts of South China and Eastern Indonesia, as well as Kunlun and Karakoram ranges, and extending up to but not including Ladakh, Kohistan, the Hindu Kush range and Balochistan.

It may be noted that geophysically the Yarlung Tsangpo River in Tibet is situated at the outside of the border of the regional structure, while the Pamir Mountains in Tajikistan are situated inside that border.

Statement 2: South Asia is largely divided into four broad climate zones:

- The northern Indian edge and northern Pakistani uplands have a dry subtropical continental climate
- The far south of India and southwest Sri Lanka have an equatorial climate

Most of the peninsula have a tropical climate with variations:

- Hot subtropical climate in northwest India
- Cool winter hot tropical climate in Bangladesh
- Tropical semi-arid climate in the center
- The Himalayas have an Alpine climate

Q Source: Map based: South Asia

13 The wet season is shorter and the dry season is longer with the drought being more severe. Temperature is high throughout the year and diurnal ranges of temperature are the greatest in the dry season. Deciduous forest and tree-shredded grasslands occur in this climate. This type of climate can be most likely found in

- A. Mediterranean regions 
- B. North and south of Amazon forests in Brazil 
- C. South-western Australia
- D. West Coastal South America

- Your Answer : A
- Correct Answer : B

- **Answer Justification :**

Justification: Option A: This climate is characterised by hot, dry summer and mild, rainy winter. Monthly average temperature in summer is around 25° C and in winter below 10°C. The annual precipitation ranges between 35 - 90 cm.

Option B: The Q statement talks about tropical wet and dry climate occurs north and south of Af type climate regions. It borders with dry climate on the western part of the continent and Cf or Cw on the eastern part.

Extensive Aw climate is found to the north and south of the Amazon forest in Brazil and adjoining parts of Bolivia and Paraguay in South America, Sudan and south of Central Africa.

Option C: This region experiences Mediterranean Climate (Cs).

Option D: On the western margin of the continents, adjoining the cold current, particularly over the west coast of South America, dry climate regions are found.

Q Source: Page 105: Chapter 12: Fundamentals of Physical Geography

14 The United Nations Disarmament Commission (UNDC) has been housed under

- A. United Nations Security Council (UNSC) 
- B. United Nations Trusteeship Council
- C. United Nations Economic and Social Council (UNESOSOC)
- D. United Nations Peace Committee (UNPC) 

- Your Answer : D
- Correct Answer : A

- **Answer Justification :**

Learning: The United Nations Disarmament Commission was first established on 11 January 1952 by United Nations General Assembly Resolution 502 (VI). This commission was put under the jurisdiction of the United Nations Security Council and its mandate included: preparing proposals



for a treaty for the regulation, limitation and balanced reduction of all armed forces and all armaments, including the elimination of all weapons of mass destruction.

However, this commission only met a few times, and was followed by a succession of other disarmament-focused bodies: the Ten-Nation Disarmament Committee (1960), the Eighteen Nation Committee on Disarmament (1962), the Conference of the Committee on Disarmament (1969) and, finally, the Conference on Disarmament (1979), which still meets to this day.

Q Source: Additional Research: Chapter 6: 12th NCERT: Contemporary World Politics

15 Consider the following statements.

1. Right to Equality before law is not effective in India as citizens do not have a Fundamental Right to be defended by a lawyer.
 2. It is the constitutional duty of the state to provide a lawyer to any citizen who is unable to engage one due to poverty or other disability.
- Which of the above is/are correct?
 - A. 1 only
 - B. 2 only
 - C. Both 1 and 2
 - D. None
 - Your Answer : B
 - Correct Answer : B
 - **Answer Justification :**

Justification: Statement 1: According to Article 22 of the Constitution, every person has a Fundamental Right to be defended by a lawyer.

Statement 2: Article 39A of the Constitution places a duty upon the State to provide a lawyer to any citizen who is unable to engage one due to poverty or other disability.

National Legal Services Authority as established to provide legal help to such citizens.

Q Source: Revision: Chapter 7: Indian Polity: M Laxmikanth

16 The largest concentration of GHGs in the atmosphere is of

- A. Methane
 - B. Carbon dioxide
 - C. Nitrous oxide (N₂O)
 - D. Ozone
- Your Answer : B
 - Correct Answer : B

◦ **Answer Justification :**

Learning: Ppm means parts per million. Ppb means parts per billion.

Co₂ has the highest concentration and has shown nearly 45% rise since its pre-industrial revolution concentrations.

Natural and anthropogenic sources

Gas	Pre-1750 tropospheric concentration	Absolute increase since 1750
Carbon dioxide (CO ₂)	280 ppm	115.4 ppm
Methane (CH ₄)	700 ppb	1193 ppb / 1062 ppb
Nitrous oxide (N ₂ O)	270 ppb	56 ppb / 54 ppb
Tropospheric ozone (O ₃)	237 ppb	100 ppb

Q Source: Page 108: Chapter 12: Fundamentals of Physical Geography

17 The place that lies closest to the straight line joining Lhasa (Tibet) and Thimpu (Bhutan) is

- A. Cochin
- B. Vishakhapatnam
- C. Hyderabad
- D. Chennai

- Your Answer : C
- Correct Answer : B

◦ **Answer Justification :**

Learning: A rough line drawn will be closest to Vishakhapatnam.



Q Source: Map: South Asia

18 The Human Genome Project (HGP) is an international scientific research project with the goal(s) of

1. Determining the sequence of chemical base pairs which make up human DNA
2. Identifying and mapping all of the genes of the human genome

- Which of the above is/are correct?
 - A. 1 only
 - B. 2 only
 - C. Both 1 and 2
 - D. None

- Your Answer : C
- Correct Answer : C

- **Answer Justification :**

Justification: The project aims at identifying and mapping all of the genes of the human genome from both a physical and a functional standpoint.

The "genome" of any given individual is unique; mapping the "human genome" involves sequencing multiple variations of each gene.

In May 2016, scientists considered extending the HGP to include creating a synthetic human genome.



In June 2016, scientists formally announced HGP-Write, a plan to synthesize the human genome.

Q Source: Frequently in news

<https://phys.org/news/2018-08-sequencing-genomes-microbial-ecosystem.html>

19 Asian Highway - 1 (AH-1) starts and ends in which of the following countries?

- A. Japan and Turkey ✓
- B. Russia and Pakistan
- C. Indonesia and Iran
- D. China and Russia ✗

- Your Answer : D
- Correct Answer : A

◦ **Answer Justification :**

Learning: The Asian Highway Network (AH), also known as the Great Asian Highway, is a cooperative project among countries in Asia and Europe and the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), to improve the highway systems in Asia. It is one of the three pillars of the Asian Land Transport Infrastructure Development (ALTID) project, endorsed by the ESCAP commission at its 48th session in 1992, comprising Asian Highway, Trans-Asian Railway (TAR) and facilitation of land transport projects.

AH1 to AH8: Continent-Wide Routes [edit]

Route No. ♦	Distance ♦	Start ♦	End	[hide] ♦
AH1	20,557 km (12,848 miles)	Tokyo, Japan	Kapikule, Turkey (Bulgaria-Turkey border)	
AH2	13,177 km (8326 miles)	Denpasar, Bali, Indonesia	Khosravi, Iran	
AH3	7,331 km (4582 miles)	Ulan-Ude, Russia Shanghai, China	Tanggu, China Chiang Rai, Thailand and Kyaing Tong, Myanmar	
AH4	6,024 km (3765 miles)	Novosibirsk, Russia	Karachi, Pakistan	
AH5	10,380 km (6488 miles)	Shanghai, China	Kapikule, Turkey (Bulgaria-Turkey border)	
AH6	10,475 km (6547 miles)	Busan, South Korea	Krasnoye, Russia (Belarus-Russia border)	
AH7	5,868 km (3667.5 miles)	Yekaterinburg, Russia	Karachi, Pakistan	
AH8	4,718 km (2949 miles)	Torfyanovka, Russia (Russia-Finland border)	Bandar-e Emam Khomeyni, Iran	



The Asian Highway (or the Great Asian Highway) is a 141,000km network of roads spanning across 32 countries.

Q Source: Map based: South Asia

20 Consider the following statements.

1. The Earth's magnetic field is attributed to a dynamo effect of circulating electric current within earth.
 2. Interaction of the terrestrial magnetic field with particles from the solar wind sets up the conditions for the aurora phenomena near the poles.
- Which of the above is/are correct?
 - A. 1 only
 - B. 2 only
 - C. Both 1 and 2
 - D. None
 - Your Answer : C
 - Correct Answer : C

◦ **Answer Justification :**

Justification: The Earth's magnetic field is similar to that of a bar magnet tilted 11 degrees from the spin axis of the Earth. The problem with that picture is that the Curie temperature of iron is about 770 C . The Earth's core is hotter than that and therefore not magnetic.

Statement 1: The Earth's magnetic field is attributed to a dynamo effect of circulating electric current, but it is not constant in direction. Rock specimens of different age in similar locations have different directions of permanent magnetization.

Although the details of the dynamo effect are not known in detail, the rotation of the Earth plays a part in generating the currents which are presumed to be the source of the magnetic field.

Statement 2: The Aurora is an incredible light show caused by collisions between electrically



charged particles released from the sun that enter the earth's atmosphere and collide with gases such as oxygen and nitrogen.

The lights are seen around the magnetic poles of the northern and southern hemispheres.

Q Source: Revision: Previous test syllabus

21 Annual range of temperature is very low and annual rainfall is high in which of these climate zones as classified by Koeppen?

- A. Mid-latitude climate zones
- B. Tropical Humid Climate
- C. Warm temperate Climate
- D. Humid continental climate

- Your Answer : B
- Correct Answer : B

◦ **Answer Justification :**

Learning: Tropical humid climates exist between Tropic of Cancer and Tropic of Capricorn.

The sun being overhead throughout the year and the presence of Inter Tropical Convergence Zone (INTCZ) make the climate hot and humid.

Annual range of temperature is very low and annual rainfall is high. The tropical group is divided into three types, namely (i) Af- Tropical wet climate; (ii) Am - Tropical monsoon climate; (iii) Aw- Tropical wet and dry climate.

Q Source: Page 104: Chapter 12: Fundamentals of Physical Geography

22 Consider the following statements about the Bombay Plan that was published in 1944-1945.

- 1. It proposed state intervention in the economic development of the nation after independence.
- 2. It was accepted and approved by the interim government of India in 1946.

- Select the correct answer using the codes below.
 - A. 1 only
 - B. 2 only
 - C. Both 1 and 2
 - D. None

- Your Answer : A
- Correct Answer : A

◦ **Answer Justification :**

Justification: The Bombay Plan is the name commonly given to a World War II-era set of proposals

for the development of the post-independence economy of India. The plan, published in 1944/1945 by eight leading Indian industrialists, proposed state intervention in the economic development of the nation after independence from the United Kingdom (which took place in 1947).

Titled A Brief Memorandum Outlining a Plan of Economic Development for India, the signatories of the Plan were Jamshedji Ratanji Dadabhoy Tata, Ghanshyam Das Birla, Ardeshir Dalal, Sri Ram, Kasturbhai Lalbhai, Ardeshir Darabshaw Shroff, Sir Purshottamdas Thakurdas and John Mathai. The Plan went through two editions: the first was published in January 1944. This first edition became "Part I" of the second edition, published in 2 volumes in 1945 under the editorship of Purushottamdas Thakurdas.

Although Jawaharlal Nehru, the first Prime Minister of India, did not officially accept the plan, "the Nehruvian era witnessed [what was effectively] the implementation of the Bombay Plan; a substantially interventionist state and an economy with a sizeable public sector.

Q Source: Page 51: 12th NCERT: India Since Independence

23 Consider the following statements.

1. Indian National Congress (INC) passed a resolution in Avadi Session (1955) declaring 'socialist pattern of society' as its goal.
 2. The Second Five-year plan (FYP) stressed on heavy industries in the development of India.
 3. P. C. Mahalanobis emphasized the importance of shifting resources from the manufacturing to the agricultural sector.
- Select the correct answer using the codes below.
 - A. 1 only
 - B. 2 and 3 only
 - C. 1 and 3 only
 - D. 1 and 2 only 
 - Your Answer : D
 - Correct Answer : D

◦ **Answer Justification :**

Justification: The Second FYP stressed on heavy industries. It was drafted by a team of economists and planners under the leadership of P. C. Mahalanobis. If the first plan had preached patience, the second wanted to bring about quick structural transformation by making changes simultaneously in all possible directions.

S1: Before this plan was finalised, the Congress party at its session held at Avadi near the then Madras city, passed an important resolution. It declared that 'socialist pattern of society' was its goal.

This was reflected in the Second Plan. The government imposed substantial tariffs on imports in order to protect domestic industries. Such protected environment helped both public and private sector industries to grow.

Q Source: Page 53: 12th NCERT: India Since Independence

24 The United Nations Development Group (UNDG) was created by the Secretary-General of the UN to improve the effectiveness of UN development activities at the country level. It consists of which of these organizations?

1. World Health Organization
2. United Nations Children's Fund
3. International Labour Organization
4. United Nations Women

◦ Select the correct answer using the codes below.

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

◦ Your Answer : D

◦ Correct Answer : D

◦ **Answer Justification :**

Learning: Created in 1997, UNDG brings together 32 UN agencies and groups, plus five observers working on various development issues.

At the global level, the UNDG serves as a high-level forum for joint policy formation and decision-making.

The UNDG meets three to four times a year under the chairmanship of the UNDG Chair.

Member list can be found here

https://en.wikipedia.org/wiki/United_Nations_Development_Group#Members_of_the_UNDG

Q Source: Additional Research: Chapter 6: 12th NCERT: Contemporary World Politics

25 Consider the following statements.

1. The ITCZ propagates poleward more prominently over land than over water, and over the Northern Hemisphere than over the Southern Hemisphere.
2. Aircraft flying through an active ITCZ will encounter hazards such as air turbulence, lightning and wind shear with the least likelihood among all zones on earth.

◦ Which of the above is/are correct?

- A. 1 only 
- B. 2 only
- C. Both 1 and 2
- D. None

◦ Your Answer : A

- Correct Answer : A

- **Answer Justification :**

Justification: The Inter Tropical Convergence Zone, or ITCZ, is a belt of low pressure which circles the Earth generally near the equator where the trade winds of the Northern and Southern Hemispheres come together. It is characterised by convective activity which generates often vigorous thunderstorms over large areas. It is most active over continental land masses by day and relatively less active over the oceans.

Statement 1: The position of the ITCZ varies with the seasons, and lags behind the sun's relative position above the Earth's surface by about 1 to 2 months, and correlates generally to the thermal equator.

Since water has a higher heat capacity than land, the ITCZ propagates poleward more prominently over land than over water, and over the Northern Hemisphere than over the Southern Hemisphere. In July and August, over the Atlantic and Pacific, the ITCZ is between 5 and 15 degrees north of the Equator, but further north over the land masses of Africa and Asia. In eastern Asia, the ITCZ may propagate up to 30 degrees north of the Equator.

Statement 2: Aircraft flying through an active ITCZ (strong trade winds) will probably encounter some or all the hazards associated with Cb clouds such as icing, turbulence, lightning, and wind shear. However, it is in this zone that the most severe effects may often be encountered.

In particular, it is within the ITCZ that convective breakthroughs of the tropopause often occur, with the majority occurring over land, especially in the second half of each day. Convective penetration of the tropopause is less common over oceanic areas where the phenomenon is more likely to occur in the early hours of each day, generating more isolated cells.

Q Source: Additional Research: Page 92: Chapter 10: Fundamentals of Physical Geography

26 BSE-GREENEX measures

- A. Total market value of carbon-intensive products in the economy
- B. Performance of the companies in terms of Carbon Emissions
- C. Trade balance in green products
- D. Movement in sovereign debt of green economies

- Your Answer : B
- Correct Answer : B

- **Answer Justification :**

Learning: Bombay Stock Exchange had launched this index.

Greenex has 20 companies from the broader BSE 100 index that meet energy efficiency norms, allowing investors to derive benefit from the related cost savings.

The top-ranking companies from each sector like power, steel, cement have made it to the new

index called BSE-GREENEX

The BSE-GREENEX Index is a veritable first step in creating a credible market based response mechanism in India, whereby both businesses and investors can rely upon purely quantitative and objective performance based signals, to assess "carbon performance".

Q Source:

<https://www.livemint.com/Money/DiR07xxx6iZucroHNjhNDO/BSE-Carbonex-index-outperforms-Sensex-so-far-in-2017.html>

27 Consider the following statements about the Indo-China conflict in 1962.

1. After the conflict in 1962, full diplomatic relations were restored between both the nations only in 1984.
 2. An important cause of the war was a dispute over the sovereignty of the widely separated Aksai Chin and North-East Frontier Agency (NEFA) border regions.
- Select the correct answer using the codes below.
 - A. 1 only
 - B. 2 only
 - C. Both 1 and 2
 - D. None
 - Your Answer : B
 - Correct Answer : B
 - **Answer Justification :**

Justification: Statement 1: It took more than a decade for India and China to resume normal relations. It was in 1976 that full diplomatic relations were restored between the two countries.

Atal Behari Vajpayee was the first top level leader (he was then External Affairs Minister) to visit China in 1979. Later, Rajiv Gandhi became the first Prime Minister after Nehru to visit China. Since then, the emphasis is more on trade relations between the two countries.

Statement 2: The cause of the war was a dispute over the sovereignty of the widely separated Aksai Chin and Arunachal Pradesh border regions. Aksai Chin, claimed by India to belong to Kashmir and by China to be part of Xinjiang, contains an important road link that connects the Chinese regions of Tibet and Xinjiang. China's construction of this road was one of the triggers of the conflict. There were other related issues as well such as annexation of Tibet.

Q Source: Page 73: 12th NCERT: India Since Independence

28 What are the key features of Microcystallites, that were recently seen in news?

1. They exhibit a deformed cubic structure unlike normal Gold.
2. They readily dissolve in mercury and Aqua regia which is a mixture of nitric acid and hydrochloric acid.
3. Microcystallites are chemically more stable than normal gold.

- Select the correct answer using the codes below.

- A. 1 and 3 only ✓
- B. 1 only
- C. 1, 2 and 3
- D. 2 and 3 only

- Your Answer :

- Correct Answer : A

- **Answer Justification :**

Justification: These are a new type of gold in the form of very small crystals developed by researchers from Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bengaluru.

The microcystallites were synthesised by decomposing an organic complex containing gold and other ions under controlled conditions.

The newly formed microcystallites, about 3 micrometre in length were found to be of a different crystal structure.

Normal gold has a (face-centered) cubic structure, while the new ones exhibit deformed cubic structure — tetragonal and orthorhombic cells.

The microcrystal gold has been found to be nobler than gold — it do not dissolve in mercury and Aqua regia (a mixture of nitric acid and hydrochloric acid), and showed the least interaction with copper.

Microcystallites are also more stable than the normal gold.

Q Source:

<http://www.insightsonindia.com/2018/08/20/insights-daily-current-affairs-20-august-2018/>

29 Meteorites burn up in this layer on entering from the space:

- A. Troposphere
- B. Ionosphere ✗
- C. Stratosphere
- D. Mesosphere ✓

- Your Answer : B

- Correct Answer : D

- **Answer Justification :**

Learning: Mesosphere is the third layer of the atmosphere. It lies above the stratosphere. It extends up to the height of 80 km. Meteorites burn up in this layer on entering from the space.

The exact upper and lower boundaries of the mesosphere vary with latitude and with season (higher

in winter and at the tropics, lower in summer and at the poles), but the lower boundary is usually located at heights from 50 to 65 kilometres above the Earth's surface and the upper boundary (mesopause) is usually around 85 to 100 kilometres.

The term near space is also sometimes used. This term does not have a technical definition, but typically refers the region of the atmosphere up to 100 km, roughly between the Armstrong limit (above which humans need a pressure suit to survive).

Q Source: Chapter 4: 7th NCERT: Geography

30 Consider the following statements about the outermost layer of atmosphere, Exosphere.

1. In the exosphere, molecules and atoms of atmospheric gases constantly collide with each other.
2. International Space Station (ISS) orbits within the exosphere or below it.
3. This region displays a faint glow of ultraviolet radiation scattered by hydrogen atoms.

○ Select the correct answer using the codes below.

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

○ Your Answer : B

○ Correct Answer : B

○ **Answer Justification :**

Justification: Statement 1: Below the exosphere, molecules and atoms of atmospheric gases constantly collide with each other. However, air in the exosphere is so thin that such collisions are very rare.

Gas atoms and molecules in the exosphere move along "ballistic trajectories", reminiscent of the arcing flight of a thrown ball (or shot cannonball), as it gradually curves back towards Earth under the pull of gravity.

Most gas particles in the exosphere zoom along curved paths without ever hitting another atom or molecule, eventually arcing back down into the lower atmosphere due to the pull of gravity.

Statement 2: Although the exosphere is technically part of Earth's atmosphere, in many ways it is part of outer space. Many satellites, including the International Space Station (ISS), orbit within the exosphere or below. For example, the average altitude of the ISS is about 330 km (205 miles), placing it in the thermosphere below the exosphere!

Although the atmosphere is very, very thin in the thermosphere and exosphere, there is still enough air to cause a slight amount of drag force on satellites that orbit within these layers.

This drag force gradually slows the spacecraft in their orbits, so that they eventually would fall out of orbit and burn up as they re-entered the atmosphere unless something is done to boost them back upwards.

The ISS loses about 2 km (1.2 miles) in altitude each month to such "orbital decay", and must periodically be given an upward boost by rocket engines to keep it in orbit.

Statement 3: At this distance, radiation pressure from sunlight exerts more force on hydrogen atoms than does the pull of Earth's gravity. A faint glow of ultraviolet radiation scattered by hydrogen atoms in the uppermost atmosphere has been detected at heights of 100,000 km (62,000 miles) by satellites. This region of UV glow is called the geocorona.

Q Source: Chapter 4: 7th NCERT: Geography

31 Consider the following statements.

1. Extra tropical cyclones form along the polar front and can only originate over the land.
 2. Tropical cyclones originate only over the seas and on reaching the land they dissipate.
 3. Tropical cyclones cover a much larger area than extra-tropical cyclones and are much more destructive.
- Select the correct answer using the codes below.
 - A. 1 only
 - B. 2 and 3 only
 - C. 1 and 3 only
 - D. 2 only
 - Your Answer : D
 - Correct Answer : D
 - **Answer Justification :**

Justification: Statement 1: The extra tropical cyclone differs from the tropical cyclone in number of ways. The extra tropical cyclones have a clear frontal system.

Initially, the front is stationary. In the northern hemisphere, warm air blows from the south and cold air from the north of the front.

When the pressure drops along the front, the warm air moves northwards and the cold air move towards, south setting in motion an anticlockwise cyclonic circulation. The cyclonic circulation leads to a well developed extra tropical cyclone, with a warm front and a cold front.

Statement 2: Tropical cyclones are violent storms that originate over oceans in tropical areas and move over to the coastal areas bringing about large scale destruction caused by violent winds, very heavy rainfall and storm surges.

Statement 3: The extra tropical cyclone affects a much larger area as compared to the tropical cyclone. The wind velocity in a tropical cyclone is much higher and it is more destructive. The extra tropical cyclones move from west to east but tropical cyclones, move from east to west.

Q Source: Page 94: Chapter 10: Fundamentals of Physical Geography

32 Arrange the following in chronological order:

1. Soviet invasion of Afghanistan
2. Fall of the Berlin Wall
3. Disintegration of the Soviet Union
4. Russian Revolution

◦ Select the correct answer using the codes below.

- A. 4132
- B. 4123
- C. 4231
- D. 2341

- Your Answer : A
- Correct Answer : B

◦ **Answer Justification :**

Justification: Statement 1: The Soviet-Afghan War lasted over nine years, from December 1979 to February 1989. Insurgent groups known collectively as the mujahideen, as well as smaller Maoist groups, fought a guerrilla war against the Soviet Army and the Democratic Republic of Afghanistan government, mostly in the rural countryside.

Statement 2: After several weeks of civil unrest, the East German government announced on 9 November 1989 that all East Germany citizens could visit West Germany and West Berlin. Crowds of East Germans crossed and climbed onto the Wall, joined by West Germans on the other side in a celebratory atmosphere

Statement 3: The dissolution of the Soviet Union occurred on December 26, 1991, officially granting self-governing independence to the Republics of the Soviet Union.

Statement 4: The Russian Revolution was a pair of revolutions in Russia in 1917 which dismantled the Tsarist autocracy and led to the rise of the Soviet Union.

Q Source: Exercise at the end of Chapter 2: 12th NCERT: Contemporary World Politics

33 Consider the following with reference to the "veto power" exercised by the Permanent members of the United Nations Security Council (UNSC).

1. Veto power cannot be used on "substantive" resolutions raised within the UNSC.
2. Abstention from the vote by a permanent member also amounts to a veto.

- Which of the above is/are correct?
 - A. 1 only
 - B. 2 only
 - C. Both 1 and 2
 - D. None

- Your Answer : D
- Correct Answer : D

- **Answer Justification :**

Justification: Statement 1: "Power of veto" refers to the veto power wielded solely by the five permanent members of the United Nations Security Council (China, France, Russia, United Kingdom, and United States), enabling them to prevent the adoption of any "substantive" resolution, as well as decide which issues fall under "substantive" title.

Statement 2: The veto is exercised when any permanent member—the so-called "P5"—casts a "negative" vote on a "substantive" draft resolution. Abstention or absence from the vote by a permanent member does not prevent a draft resolution from being adopted.

Q Source: Chapter 6: 12th NCERT: Contemporary World Politics

34 The satellite TanSat launched by China is aimed at

- A. Monitoring greenhouse gas emissions ✓
- B. Surveying Air Defence Identification Zone (ADIZs)
- C. Strengthening China's quantum communication facilities
- D. Improving its border security

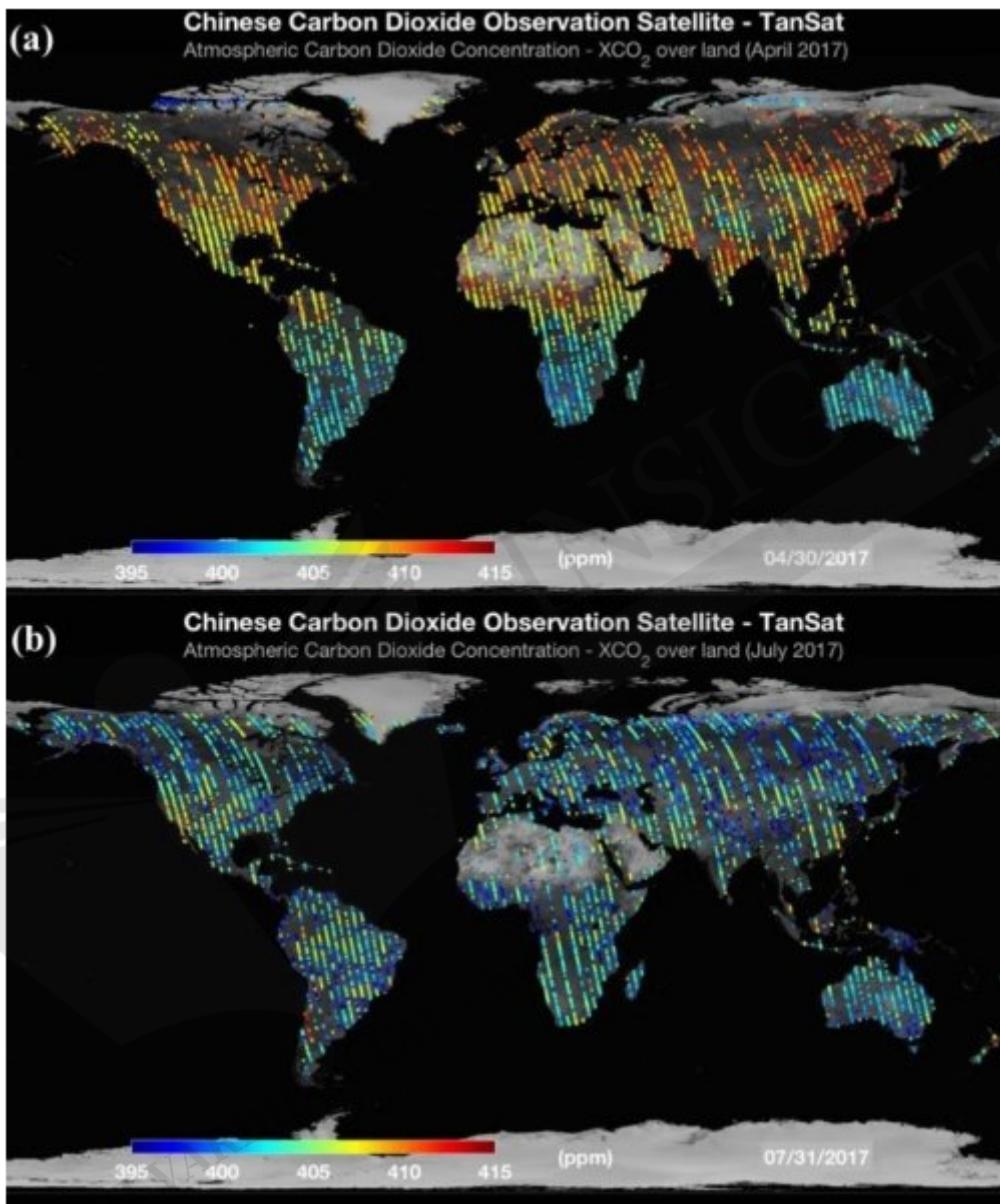
- Your Answer : A
- Correct Answer : A

- **Answer Justification :**

Learning: Few months ago, TanSat has produced its first global carbon dioxide maps.

It is a global carbon dioxide (CO₂) monitoring satellite to understand the effects of climate change.

- With this, China became third country after Japan and United States to have its own satellite to monitor greenhouse gases (GHGs).
- It will thoroughly monitor the concentration, distribution and flow of CO₂ levels every 16 days, accurate to at least 4 ppm (parts per million) in the atmosphere.
- The satellite will help understanding of climate change and provide China's policy makers with independent emissions data in first-hand and share it with researchers worldwide.



Q Source: <https://phys.org/news/2018-04-global-carbon-dioxide-chinese-satellite.html>

35 Consider the following statements.

1. The option of None of the Above (NOTA) in Rajya Sabha (RS) polls was introduced by the Election Commission (EC) in 2014, and India was the second such country to introduce NOTA in any polls.
 2. As per a recent order of the Supreme court, the NOTA option is meant only for universal adult suffrage and direct elections and not polls held by the system of proportional representation by means of the single transferable vote as done in the Rajya Sabha.
- o Which of the above is/are correct?
- A. 1 only
 - B. 2 only
 - C. Both 1 and 2
 - D. None

- Your Answer : B
- Correct Answer : B

- **Answer Justification :**

Justification: Statement 1: The option of NOTA for Lok Sabha and assembly elections was prescribed by the SC in 2013. The option of NOTA in RS polls was introduced by the EC in 2014. Thus, India became the 14th country to institute negative voting.

Statement 2: NOTA in indirect elections, such as in the Rajya Sabha, would lead to horse-trading, corruption and use of extra constitutional methods to defeat a party candidate.

NOTA also makes the system of proportional representation by means of single transferable vote nugatory and otiose.

The use of NOTA cannot be sanctioned by way of the impugned circulars which has the effect of overriding the provisions of Article 80(4), the provisions of Representation of People Act 1951 and the Conduct of Election Rules 1961.

Q Source:

<http://www.insightsonindia.com/2018/08/22/insights-daily-current-affairs-22-august-2018/>

36 Please estimate the 'Standard Temperature at around 10 Km above the sea level, if the same at sea level is 15.2 °C.

- A. 8.7 °C
- B. 0 °C
- C. -17.3 °C
- D. -49.7 °C

- Your Answer :
- Correct Answer : D

- **Answer Justification :**

Learning: The lapse rate is the rate at which temperature in Earth's atmosphere decreases with an increase in altitude, or increases with the decrease in altitude.

Although this concept is most often applied to Earth's troposphere, it can be extended to any gravitationally supported parcel of gas.

The temperature drop is 9.8°C per 1,000 meters. However, if you're in a cloud, or it is snowing/raining, the temperature decreases by about 6°C for every 1,000 meters.

Reason: The temperature profile of the atmosphere is a result of an interaction between radiation and convection. Sunlight hits the ground and heats it.

The ground then heats the air at the surface. If radiation were the only way to transfer heat from the ground to space, the greenhouse effect of gases in the atmosphere would keep the ground at

roughly 333 K (60°C ; 140°F), and the temperature would decay exponentially with height.

However, when air is hot, it tends to expand, which lowers its density. Thus, hot air tends to rise and transfer heat upward. This is the process of convection.

Q Source: Page 88: Chapter 10: Fundamentals of Physical Geography

37 Consider the following statements.

Assertion (A): During the month of July, the whole equator belt experiences the lowest pressure on earth and during the month of January highest on earth.

Reason (R): Inter-tropical convergence zone (ITCZ) moves with apparent movement of Sun with respect to the earth.

- In the context of the above, which of these is correct?
 - A. A is correct, and R is an appropriate explanation of A.
 - B. A is correct, but R is not an appropriate explanation of A.
 - C. A is incorrect, but R is correct.
 - D. Both A and R are incorrect.

- Your Answer : C
- Correct Answer : C

◦ **Answer Justification :**

Justification: These isobars represent the pressure in the month of January and July, and you can clearly see that the highest and lowest do not occur at the equator necessarily.

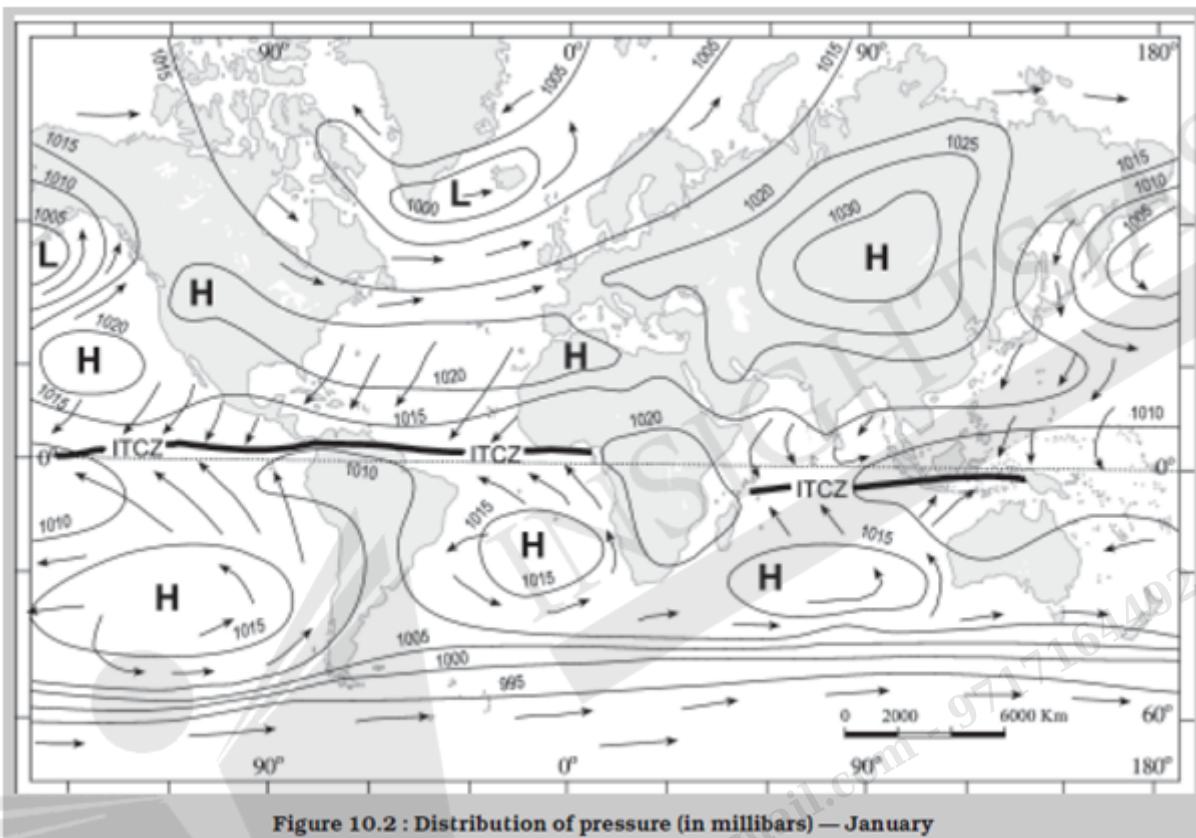


Figure 10.2 : Distribution of pressure (in millibars) — January

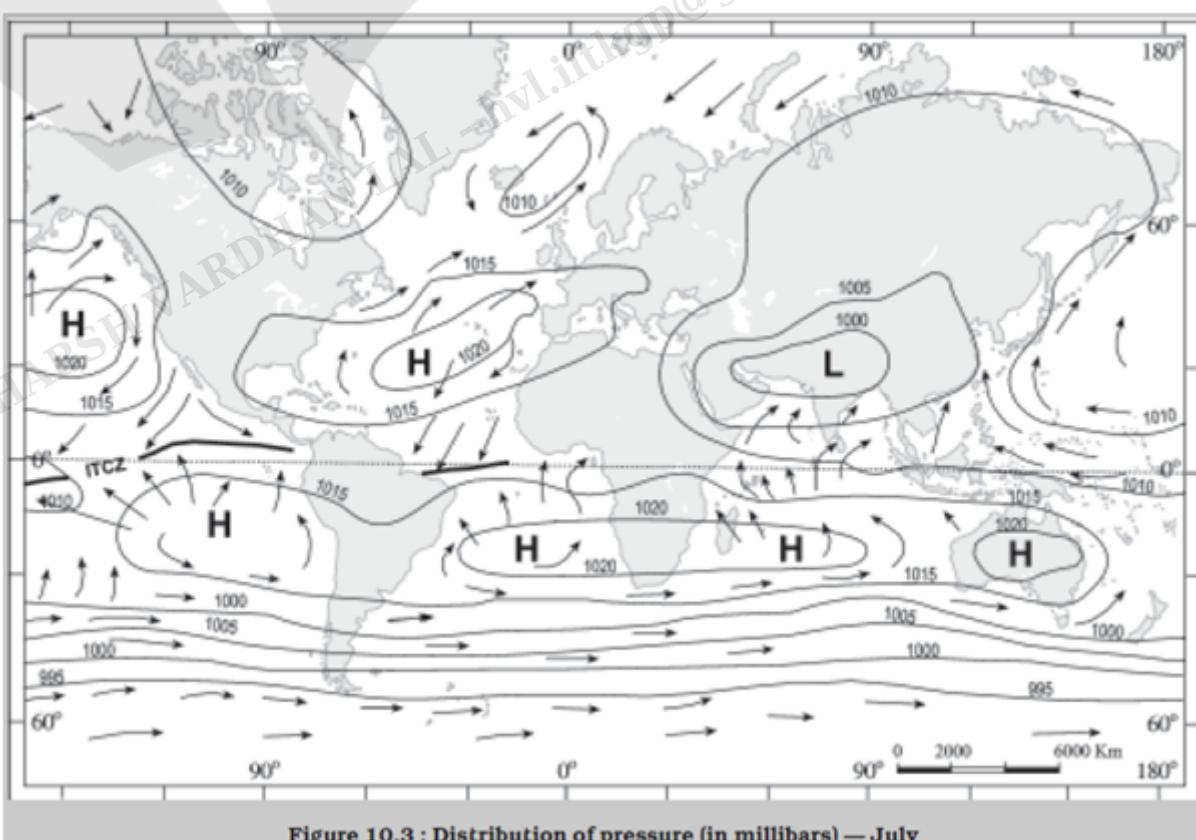


Figure 10.3 : Distribution of pressure (in millibars) — July

Near the equator the sea level pressure is low and the area is known as equatorial low. Along 30 N and 30 S are found the high-pressure areas known as the subtropical highs.

Further polewards along 60 N and 60 S, the low-pressure belts are termed as the sub polar lows. Near the poles the pressure is high and it is known as the polar high. These pressure belts are not permanent, however, and change with the movement of ITCZ.

Q Source: Page 90: Chapter 10: Fundamentals of Physical Geography

38 With reference to the World Trade Organisation (WTO), consider the following statements.

1. It sets the rules for global trade.
 2. It was set up in 1995 as the successor to the General Agreement on Trade and Tariffs (GATT) created after the Second World War.
 3. The voting rights and weightage of WTO members depend on their share of global trade.
- Select the correct answer using the codes below.
 - A. 1 and 2 only
 - B. 2 and 3 only
 - C. 1 and 3 only
 - D. 1, 2 and 3
 - Your Answer : A
 - Correct Answer : A

◦ **Answer Justification :**

Justification: Statement 3: All members have equal voting rights and all decisions are taken unanimously but the major economic powers such as the US, EU and Japan have managed to use the WTO to frame rules of trade to advance their own interests.

It has over 150 members. The developing countries often complain of non-transparent procedures and being pushed around by big powers.

We have covered several aspects of WTO in previous tests and so we will not elucidate here.

Q Source: Additional Research: Chapter 6: 12th NCERT: Contemporary World Politics

39 Consider the following statements.

Assertion (A): Surface inversions are stronger and more common during the winter months, compared to summers.

Reason (R): Nights in the wintertime are much longer than nights during the summertime.

- In the context of the above, which of these is correct?
 - A. A is correct, and R is an appropriate explanation of A.
 - B. A is correct, but R is not an appropriate explanation of A.
 - C. A is correct, but R is incorrect.
 - D. Both A and R are incorrect.
- Your Answer : A
- Correct Answer : A

- **Answer Justification :**

Concept: On most days, the temperature of air in the atmosphere is cooler the higher up in altitude you go.

- Sometimes, however, the temperature of air actually increases with height. The situation of having warm air on top of cooler air is referred to as a temperature inversion, because the temperature profile of the atmosphere is "inverted" from its usual state.

Justification: The most common manner in which surface inversions form is through the cooling of the air near the ground at night.

- Once the sun goes down, the ground loses heat very quickly, and this cools the air that is in contact with the ground. However, since air is a very poor conductor of heat, the air just above the surface remains warm.
- Conditions that favor the development of a strong surface inversion are calm winds, clear skies, and long nights.
- Calm winds prevent warmer air above the surface from mixing down to the ground, and clear skies increase the rate of cooling at the Earth's surface.
- Long nights allow for the cooling of the ground to continue over a longer period of time, resulting in a greater temperature decrease at the surface.
- Since the nights in the wintertime are much longer than nights during the summertime, surface inversions are stronger and more common during the winter months.

Q Source: Improvisation: Chapter 14: Goh Cheng Leong: Certificate Physical and Human Geography

40 The International Centre for Alternative Dispute Resolution (ICADR) is a/an

- A. Non-governmental organization giving legal assistance to the poor
- B. An autonomous organization working under the aegis of the Ministry of Law and Justice
- C. Organ of the International Court of Justice
- D. A pressure group of Bar Council of India

- Your Answer : B
- Correct Answer : B

- **Answer Justification :**

Learning: It was registered under the Societies Act, 1860 in 1995.

It is an autonomous organization working under the aegis of the Ministry of Law and Justice, Government of India with its headquarters in New Delhi and Regional Centres in Hyderabad and Bengaluru.

It has been established to promote, popularize and propagate alternative dispute resolution methods to facilitate earlier resolution of disputes and to reduce the burden of arrears in courts.

Q Source: Additional Research: Chapter 6: 12th NCERT: Contemporary World Politics

41 Which of these nations lie between Tropic of Capricorn and Equator?

- 1. Israel
 - 2. Venezuela
 - 3. Thailand
 - 4. Oman
- Select the correct answer using the codes below.
- A. 2 and 3 only
 - B. 1 and 4 only
 - C. 2 only
 - D. None of the above

- Your Answer : C
- Correct Answer : D

◦ **Answer Justification :**

Learning: All these nations lie between tropic of cancer and equator.

If you know the latitudinal position of the Middle-east, statement 1 and 4 are eliminated. Further, Venezuela is in the northernmost region of Latin America. So, 2 is eliminated. ASEAN nations largely lie above equator. So, 3 is also eliminated.



Q Source: Map based questions: World

42 Consider the following statements about the agricultural properties of limestone dominated soil.

1. Limestone neutralizes the natural acidity of the soil.
 2. Solubility of limestone in water makes it a poor choice to grow water-intensive crops.
- Which of the above is/are correct?
 - A. 1 only
 - B. 2 only
 - C. Both 1 and 2
 - D. None
 - Your Answer : C
 - Correct Answer : C

○ Answer Justification :

Justification: Statement 1: Depending on soil pH test results, agricultural lime may need to be applied to maintain pH, or to recover pH to an appropriate level. Liming is the most economical method of ameliorating soil acidity.

Statement 2: Its solubility makes it ineffective to grow major crops as limestone reacts with water at a rapid pace. Moreover, the landforms made by limestone make an area difficult as a habitat for humans. So, few agricultural communities can be found in such areas.

Q Source: Revision: Goh Cheng Leong - Certificate Physical and Human Geography

43 India's only live volcano can be found in

- A. Lakshadweep
- B. Sundarbans



- C. Andaman and Nicobar Islands
- D. Gulf of Kutch

- Your Answer : C
- Correct Answer : C

◦ **Answer Justification :**

Learning: According to scientists from Goa based National Institute of Oceanography (NIO), India's only live volcano at Barren Island in the Andaman and Nicobar has become active again.

After lying dormant for 150 years, Barren Island volcano had erupted in 1991 and since then it is showing sporadic activity.

It is claimed that volcanoes is erupting the rising magma formed deep in the mantle due to the melting of the subducted Indian Ocean crust.



Q Source: Revision: 6th NCERT Geography

44 Consider the following about the International Fund for Agricultural Development (IFAD).

1. It was set up as a specialized agency of the United Nations (UN).
2. It is dedicated to eradicating poverty and hunger in rural areas of developing countries.
3. It provides low interest loans and grants to finance innovative agricultural projects.
4. India, being an agricultural surplus nation, has not received any financial support from IFAD till

date.

- Select the correct answer using the codes below.

A. 1, 2 and 3 only 

B. 2 and 4 only

C. 1 and 3 only 

D. 1, 2, 3 and 4

◦ Your Answer : C

◦ Correct Answer : A

- **Answer Justification :**

Justification: Statement 2 and 3: IFAD provides low interest loans and grants to developing countries to finance innovative agricultural and rural development programmes and projects. So, 2 and 3 are correct.

Statement 4: 176 countries are members of the IFAD, and these are grouped into three lists: List - A: Developed Countries; List - B: Oil Producing Countries; and List - C: Developing Countries.

India is in List - C. Since 1979, IFAD has provided financial support to India through projects in the realm of agriculture, rural development, tribal development, etc. So, 4 is incorrect.

Learning: The Governing Council is the highest decision-making body of IFAD. The Governing Council meets annually.

The Executive Board of IFAD, headed by the President, is responsible for oversight of the several operations of IFAD. The members and alternate members are elected for three-year team.

Q Source: Additional Research: Chapter 6: 12th NCERT: Contemporary World Politics

45 Creation of Social Infrastructure includes

A. Spending on health and education of population

B. Investment on imparting skill development

C. Ensuring the rights of underprivileged sections of society

D. All of the above 

◦ Your Answer : D

◦ Correct Answer : D

- **Answer Justification :**

Learning: Social infrastructure like education and health are critical for improving the productivity of the population.

▪ Lack of access to affordable and quality health and educational facilities lead to economic

impoverishment and lowers potential human capabilities.

- Economic development needs to be inclusive by involving all sections of society, deprived and marginalized groups like women and children, scheduled tribes, scheduled castes, the differently abled and senior citizens.
- Thus, India has to address the challenges of not just providing employment but of increasing the employability of the labour force, which is correlated to knowledge and skills developed through quality education and training along with ensuring good quality of health.

All of this constitutes investment in social infrastructure. D is the most appropriate response.

Q Source: Chapter on Finance: India Yearbook 2017

46 Delta formation will be greatly hindered if

1. Bed and bank erosion is very low in the upper reaches of the river.
2. There are frequent tides on the coast.
3. The sea adjoining delta is shallow.

- Select the correct answer using the codes below.

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

- Your Answer : A

- Correct Answer : A

- **Answer Justification :**

Justification: The following conditions are favourable for the formation of delta:

Statement 1: Active erosion of the river in its upper course to provide extensive gravel, sand and silt to be eventually deposited as deltas. Low erosion will hinder deltas. So, 1 is correct.

Statement 2: The coast should be sheltered preferably tideless, else delta will be washed away. So, 2 is correct.

Statement 3: The sea should be shallow adjoining the delta as the sediments will disappear in the deep waters of the sea. So, 3 is incorrect as shallow sea favour delta formation.

Learning: Moreover, there should be no strong current running at right angle to the river mouth, as it can wash away the sediments. Any large lake in the way or river course can filter off the sediments, thus unfavourable for delta formation. So, 2 is incorrect.

Q Source: Revision: 11th Fundamentals of Physical Geography

47 Consider the following about Mekong-Ganga Cooperation (MCG).

1. No nation that a member of ASEAN Summit is a member of MCG.
 2. It not only deals with inland waterways transport cooperation across the rivers Mekong and Ganga but also covers cooperation in tourism and culture.
- Which of the above is/are correct?
 - A. 1 only
 - B. 2 only
 - C. Both 1 and 2
 - D. None
 - Your Answer : D
 - Correct Answer : B

◦ **Answer Justification :**

Justification: The Mekong-Ganga Cooperation (MGC) is an initiative by six countries - India and five ASEAN countries, namely, Cambodia, Lao PDR, Myanmar, Thailand and Vietnam for cooperation in tourism, culture, education, as well as transport and communications. So, both 1 and 2 are wrong.

Both the Ganga and the Mekong are civilizational rivers, and the MGC initiative aims to facilitate closer contacts among the people inhabiting these two major river basins.

India-Myanmar-Thailand Trilateral Highway project and Hanoi Programme of Action (HPA) are some of the key projects being monitored by MCG.

Q Source: Revision: The mention of Mekong in previous tests

48 In India, National Air Quality Monitoring Programme (NAMP) is being implemented by

- A. The Energy and Resources Institute (TERI)
 - B. Central Pollution Control Board (CPCB)
 - C. Centre for Science and Environment (CSE)
 - D. Environmental Information System (ENVIS)
- Your Answer : B
 - Correct Answer : B

◦ **Answer Justification :**

Learning: The mandate provided to the CPCB under the Air (Prevention and Control of Pollution) Act empowers it to set standards for the quality of air.

NAMP is undertaken in India:

- to determine status and trends of ambient air quality;

- to ascertain the compliance of NAAQS;
- to identify non-attainment cities;
- to understand the natural process of cleaning in the atmosphere; and
- to undertake preventive and corrective measures.

You can find the list of covered gases and their tolerable limits here

http://www.arthapedia.in/index.php?title=Ambient_Air_Quality_Standards_in_India

Q Source: Frequently in news

49 The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) is an international organisation involving a group of countries in South Asia and South East Asia. These are

1. Myanmar
2. Sri Lanka
3. Indonesia
4. Bhutan
5. Nepal

◦ Select the correct answer using the codes below.

- A. 1, 2, 4 and 5 only
- B. 3 and 4 only
- C. 1, 4 and 5 only
- D. 1, 2 and 3 only

◦ Your Answer : A

◦ Correct Answer : A

◦ **Answer Justification :**

Justification: BIMSTEC headquarters is situated in Dhaka, Bangladesh

A BIMSTEC Free Trade Area Framework Agreement has been signed by member nations.

Cooperation in BIMSTEC, starting with six sectors—including trade, technology, energy, transport, tourism and fisheries—for sectoral cooperation in the late 1997, it expanded to embrace nine more sectors—including agriculture, public health, poverty alleviation, counter-terrorism, environment, culture, people to people contact and climate change—in 2008.

Q Source: Map based questions: South Asia and South-east Asia

50 The International Court of Justice (ICJ) is the principal judicial organ of the United Nations (UN). Consider the following about it.

1. The ICJ judges are elected for terms of office of nine years by the United Nations General Assembly and the Security Council.
2. The Court can take suo moto cognizance of disputes between nation-states.
3. The seat of the Court is in the Hague.
4. ICJ gives advisory opinions on legal questions at the request of the organs of the United Nations.

◦ Select the correct answer using the codes below.

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

◦ Your Answer : B

◦ Correct Answer : B

◦ **Answer Justification :**

Justification: Statement 1: These organs vote simultaneously but separately. In order to be elected, a candidate must receive an absolute majority of the votes in both bodies. This sometimes makes it necessary for a number of rounds of voting to be carried out.

In order to ensure a measure of continuity, one third of the Court is elected every three years. Judges are eligible for re-election.

Statement 2: The Court is competent to entertain a dispute only if the States concerned have accepted its jurisdiction in one or more of the following ways:

- by entering into a special agreement to submit the dispute to the Court;
- by virtue of a jurisdictional clause,
- through the reciprocal effect of declarations made by them

Statement 4: The International Court of Justice acts as a world court. The Court has a dual jurisdiction : it decides, in accordance with international law, disputes of a legal nature that are submitted to it by States (jurisdiction in contentious cases); and it gives advisory opinions on legal questions at the request of the organs of the United Nations or specialized agencies authorized to make such a request (advisory jurisdiction).

Q Source: Additional Research: Chapter 6: 12th NCERT: Contemporary World Politics

51 Which of the following correctly assesses the impact of climate change on agriculture and food security?

1. Crop yield may be reduced in most tropical and sub-tropical regions due to decreased water availability.

2. Insect or pest incidence may increase leading to greater crop losses.

- Which of the above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2 
- D. None

- Your Answer : C

- Correct Answer : C

- **Answer Justification :**

Justification: A Report of the IPCC concluded that climate change would hit the poorest countries severely in terms of reducing the agricultural products.

- Crop yield would be reduced due to decreased water availability, and new or changed insect/pest incidence. This is because higher temperature is conducive for the growth of pests. So, both 1 and 2 are correct.
- Agriculture will be adversely affected not only by an increase or decrease in the overall amounts of rainfall but also by shifts in the timing of the rainfall.
- For e.g. Semi arid regions of western India are expected to receive higher than normal rainfall as temperatures soar, while central India will experience a decrease of between 10 and 20 per cent in winter rainfall by the 2050s as per IPCC.
- There would be a decline in the productivity of rabi as compared to kharif season crops.

Q Source: Revision: Concepts covered in tests earlier

52 Which of these regions lies closest to the Indo-China international border?

- A. Demchok 
- B. Itanagar
- C. Darjeeling 
- D. Dehradun

- Your Answer : C

- Correct Answer : A

- **Answer Justification :**

Learning: UPSC often picks up such questions directly from NCERT.



Q Source: Page 70: 12th NCERT: India Since Independence

53 Brent Crude is often used as a benchmark for the prices of other crude oils. It is found in parts of the North Sea off the coast of

- A. Finland and Sweden
- B. Biscay near France
- C. British Isles island in Ireland
- D. U.K. and Norway

- Your Answer : D
- Correct Answer : D

◦ **Answer Justification :**

Learning: Brent blend makes up more than half of the world's globally traded supply of crude oil, which is why it makes an obvious choice for the benchmark of crude oil.

Brent blend is a light and sweet crude oil.



Q Source: Map-based questions: Europe

54 Oceans distant from deserts or with limited accessibility to dust-carrying winds from deserts often have limited primary productivity. This is due to

- A. Lack of iron nutrient supplies ✓
- B. Presence of kelp forests (macroalgae) in such areas
- C. Absence of a Photic Zone
- D. Warm water temperature

- Your Answer : A
- Correct Answer : A

◦ **Answer Justification :**

Justification: Option B: Kelp forests are underwater areas with a high density of kelp. They are recognized as one of the most productive and dynamic ecosystems on Earth. They occur worldwide throughout temperate and polar coastal oceans. So, B is wrong.

Option C: Photic Zone is well lit zone of oceans and highly productive. This isn't necessarily a problem for oceans away from deserts, for e.g. Arabian Sea near Western ghats.

Option A: A recently discovered to play a significant role in oceanic primary production is the micronutrient iron.

- This is used as a cofactor in enzymes involved in processes such as nitrate reduction and nitrogen fixation.

- A major source of iron to the oceans is dust from the Earth's deserts, picked up and delivered by the wind as aeolian dust.
- In regions of the ocean that are distant from deserts or that are not reached by dust-carrying winds (for example, the Southern and North Pacific oceans), the lack of iron can severely limit the amount of primary production that can occur.

Learning: These areas are sometimes known as HNLC (High-Nutrient, Low-Chlorophyll) regions because the scarcity of iron both limits phytoplankton growth and leaves surplus of other nutrients.

Some scientists have suggested introducing iron to these areas as a means of increasing primary productivity and sequestering carbon dioxide from the atmosphere.

Q Source: Revision: Additional Research: 11th NCERT: Fundamentals of Physical Geography

55 The Regional coalition known as the 'Quad' includes which of these nations?

1. India
2. Indonesia
3. Australia
4. Russia

- Select the correct answer using the codes below.
 - A. 1 and 3 only ✓
 - B. 2, 3 and 4 only
 - C. 1, 2 and 3 only
 - D. 1 and 4 only
- Your Answer : A
- Correct Answer : A

◦ **Answer Justification :**

Justification: The quadrilateral formation includes Japan, India, United States and Australia.

All four nations find a common ground of being the democratic nations and common interests of unhindered maritime trade and security.

The idea was first mooted by Japanese Prime Minister Shinzo Abe in 2007. However, the idea couldn't move ahead with Australia pulling out of it.

China's concerns:

The coming together of India, the US, Japan and Australia is being seen as building a strategic partnership to deal with China's rise and its implications.

A report on the policy recommendations on Indian Ocean security by four think tanks from the Quad countries has been unveiled.

Important recommendations:

- Maintain the momentum of high-level consultations among the Quad countries with the aim of “free and open Indo-Pacific region” and progressively move it to a political level.
- Australia, Japan, India and the US should work with countries in the IOR to help maintain independent security and economic policies by supporting high-quality alternatives to unilateral Chinese investments and political alignment with Chinese regional objectives.
- The four countries should work to oppose the establishment of permanent Chinese military bases in the IOR. This should include demonstrating to China that its security needs can be met through cooperation and consultation with other nations and without the recourse to a “disruptive unilateral military presence.”
- Naval fleets should evolve increasingly long range operations. This may require consideration in Japan of new options such as nuclear propulsion for its submarines.

Q Source:

<http://www.insightsonindia.com/2018/08/23/insights-daily-current-affairs-23-august-2018/>

56 The Representation of the People (Amendment) Bill, 2017 was passed by the Lok Sabha to

1. Extend the facility of ‘proxy voting’ to overseas Indians
2. Enable out of station voting for armed personnel

◦ Which of the above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. None

◦ Your Answer : A

◦ Correct Answer : A

◦ **Answer Justification :**

Justification: The Bill seeks to amend Representation of People Act (RPA), 1950 and Representation of People Act (RPA), 1951 to allow for proxy voting and make certain provisions of these Acts gender-neutral.

The Bill proposes to allow non-resident Indians (NRIs) to emerge as a decisive force in the country’s electoral politics on their own terms.

The amendment paves the way to remove an “unreasonable restriction” posed by Section 20A of the Representation of the People Act, which requires overseas electors to be physically present in their

electoral constituencies to cast their votes.

What necessitated this move?

Section 20A of the Act provides for registration and inclusion of overseas electors in the electoral rolls. The Registration of Electors Rules, 1960 provide for overseas electors to register themselves in the electoral rolls of their respective constituencies on the basis of self-attested copies of their passport and valid visa, and exercise their franchise in person on production of the original passport at the time of voting at the specified polling booth.

Thus, the rules demand for the physical presence of overseas electors in their respective polling stations in India on the day of polling. This causes hardship to the overseas electors. This amendment proposes facilitating an external mode of voting, that is, voting by proxy, whereby such electors can exercise their franchise from their places of residence abroad.

Q Source:

<http://www.insightsonindia.com/2018/08/11/insights-daily-current-affairs-11-august-2018/>

57 PARIVESH is a single window hub for the clearance of projects related to

- A. National Highways
- B. Environmental and Wildlife clearances
- C. Public Private Partnerships (PPP)
- D. Smart cities

- Your Answer : D
- Correct Answer : B

◦ **Answer Justification :**

Learning: PARIVESH: Pro-Active and Responsive facilitation by Interactive, Virtuous and Environmental Single-window Hub.

“PARIVESH” is a workflow based application, based on the concept of web architecture. It has been rolled out for online submission, monitoring and management of proposals submitted by Project Proponents to the Ministry of Environment, Forest and Climate Change (MOEFCC), as well as to the State Level Environmental Impact Assessment Authorities (SEIAA).

- It provides single registration and single sign-in for all types of clearances (i.e. Environment, Forest, Wildlife and CRZ), unique-ID for all types of clearances required for a particular project and a single Window interface for the proponent to submit applications for getting all types of clearances (i.e. Environment, Forests, Wildlife and CRZ clearances).
- The system has been designed, developed and hosted by the Ministry of Environment, Forest and Climate Change, with technical support from National Informatics Centre, (NIC).

- PARIVESH offers a framework to generate economic growth and strengthens Sustainable Development through e-Governance. With automatic highlighting of non-compliance by the system, PARIVESH helps in improving the overall performance and efficiency of the whole appraisal process.

It also enables project proponents, citizens to view, track and interact with scrutiny officers, generates online clearance letters, online mailers and alerts to state functionaries in case of delays beyond stipulated time for processing of applications.

Q Source:

<http://www.insightsonindia.com/2018/08/11/insights-daily-current-affairs-11-august-2018/>

58 Consider the following statements about the United Nations High Commissioner for Refugees (UNHCR).

1. It was created in the aftermath of World War II.
 2. It strives to ensure that everyone can exercise the right to seek asylum and find safe refuge in another state.
 3. UNHCR maintains a database of refugee information.
- Select the correct answer using the codes below.
 - A. 1 only
 - B. 1 and 3 only
 - C. 2 and 3 only
 - D. 1, 2 and 3 
 - Your Answer : D
 - Correct Answer : D

◦ Answer Justification :

Justification: Statement 1 and 2: It is a United Nations programme with the mandate to protect refugees, forcibly displaced communities and stateless people, and assist in their voluntary repatriation, local integration or resettlement to a third country.

It was created in 1950, during the aftermath of World War II. Its headquarters are in Geneva, Switzerland and it is a member of the United Nations Development Group.

The UNHCR has won two Nobel Peace Prizes, once in 1954 and again in 1981

Statement 3: Called ProGres, this database was created during the Kosovo War in the 1990s. The database today contains data on over 11 million refugees, or about 11% of all displaced persons globally.

The database contains biometric data, including fingerprints and iris scans and is used to determine aid distribution for recipients. The results of using biometric verification has been successful. When introduced in Kenyan refugee camps of Kakuma and Dadaab in the year 2013, the UN World Food Programme was able to eliminate \$1.4m in waste and fraud

Q Source: Additional Research: Chapter 6: 12th NCERT: Contemporary World Politics

59 Consider the following about the International Atomic Energy Agency (IAEA).

1. It is known as the world's "Atoms for Peace" organization.
 2. It was setup alongwith the United Nations (UN) in 1945.
 3. It provides technical assistance where nuclear technology can offer significant advantages.
 4. It has established the International Nuclear Information System (INIS).
- Select the correct answer using the codes below.
 - A. 1 and 2 only
 - B. 3 and 4 only
 - C. 1, 3 and 4 only
 - D. 2, 3 and 4 only
 - Your Answer : C
 - Correct Answer : C

◦ **Answer Justification :**

Justification: Statement 1: The IAEA was created in 1957 in response to the deep fears and expectations generated by the discoveries and diverse uses of nuclear technology. The Agency's genesis was U.S. President Eisenhower's "Atoms for Peace" address to the General Assembly of the United Nations in 1953.

Statement 3: IAEA technical cooperation projects provide expertise in fields where nuclear techniques offer advantages over other approaches, or where nuclear techniques can usefully supplement conventional means. All Member States are eligible for support through technical cooperation projects, although in practice these tend to focus on the needs and priorities of less developed countries.

Statement 4: INIS hosts one of the world's largest collections of published information on the peaceful uses of nuclear science and technology.

The International Nuclear Information System (INIS) was established in 1969 by the IAEA, in collaboration with interested Member States and some international organizations. It is operated by the Agency in collaboration with over 150 members

Q Source: Additional Research: Page 85: Chapter 6: 12th NCERT: Contemporary World Politics

60 Consider the following statements.

1. The Election Symbols (Reservation and Allotment) Order of 1968 requires a party to swear to uphold the principles of socialism, secularism, democracy, sovereignty, unity and integrity of India.
 2. The Supreme Court may direct the Election Commission to insist that parties get new members to declare in an affidavit their criminal antecedents and publish them so that they can estimate the extent of criminalization in a political party.
- Select the correct answer using the codes below.

- A. 1 only
- B. 2 only X
- C. Both 1 and 2 ✓
- D. None

- Your Answer : B
- Correct Answer : C

◦ **Answer Justification :**

Justification: Statement 1: The power of the Election Commission to conduct an election and register/de-register political parties under Article 324 of the Constitution and Section 29A of the Representation of the People Act of 1951, respectively.

Section 8 of the Representation of the People (RP) Act, 1951 disqualifies a person convicted with a sentence of two years or more from contesting elections. But those under trial continued to be eligible to contest elections. The Lily Thomas case (2013), however, ended this unfair advantage.

The SC has repeatedly expressed concern about the purity of legislatures.

In 2002, it made it obligatory for all candidates to file an affidavit before the returning officer, disclosing criminal cases pending against them.

The famous order to introduce NOTA was intended to make political parties think before giving tickets to the tainted.

In its landmark judgment of March 2014, the SC accepted the urgent need for cleansing politics of criminalisation and directed all subordinate courts to decide on cases involving legislators within a year, or give reasons for not doing so to the chief justice of the high court.

Statement 2: The court said the EC could de-register a party or withdraw its symbol if it refused to comply.

The suggestion was made by the court in a bid to prevent criminals from entering politics or later contesting elections to become parliamentarians, legislators and Ministers.

However, the centre has opposed this move suggesting the following reasons:

A political party has a right to field its candidate. Mere charges of having committed a crime cannot be used to prevent a person from contesting elections. The suggestion made by the court amounts to prematurely disqualifying a candidate. Besides, the court is taking on itself a matter of the legislature.

Q Source:

<http://www.insightsonindia.com/2018/08/22/insights-daily-current-affairs-22-august-2018/>

61 Consider the following statements.

1. In Humid Sub-tropical climate zone, the air masses are generally unstable and cause rainfall throughout the year.

2. Marine west coast climate is located poleward from the Mediterranean climate on the west coast of the continents

- Select the correct answer using the codes below.

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. None

- Your Answer : B
- Correct Answer : C

- **Answer Justification :**

Justification: Statement 1: They occur in eastern United States of America, southern and eastern China, southern Japan, northeastern Argentina, coastal south Africa and eastern coast of Australia.

The annual averages of precipitation vary from 75-150 cm. Thunderstorms in summer and frontal precipitation in winter are common. Mean monthly temperature in summer is around 27°C, and in winter it varies from 5°-12° C. The daily range of temperature is small.

Statement 2: Marine west coast climate is located poleward from the Mediterranean climate on the west coast of the continents.

The main areas are: Northwestern Europe, west coast of North America, north of California, southern Chile, southeastern Australia and New Zealand.

Due to marine influence, the temperature is moderate and in winter, it is warmer than for its latitude. The mean temperature in summer months ranges from 15°-20°C and in winter 4°-10°C. The annual and daily ranges of temperature are small. Precipitation occurs throughout the year. Precipitation varies greatly from 50-250cm.

Q Source: Page 106: Chapter 12: Fundamentals of Physical Geography

62 Consider the following about OSIRIS-Rex spacecraft of NASA.

1. The mission will help scientists investigate how planets formed and how life began.
2. It will improve our understanding of asteroids that could impact Earth.

- Which of the above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. None

- Your Answer : A
- Correct Answer : C

- **Answer Justification :**

Justification: Statement 1: NASA is preparing to launch its first mission to return a sample of an asteroid to Earth. The mission will help scientists investigate how planets formed and how life began, as well as improve our understanding of asteroids that could impact Earth.

Statement 2: The Origins, Spectral Interpretation, Resource Identification, Security-Regolith Explorer (OSIRIS-REx) spacecraft will travel to the near-Earth asteroid Bennu and bring a sample back to Earth for intensive study.

Q Source:

<http://www.insightsonindia.com/2018/08/21/insights-daily-current-affairs-21-august-2018/>

63 NABARD has released its report on All India Rural Financial Inclusion Survey 2016-17. Consider the following about the findings of this report.

1. More than half the agricultural households in the country have outstanding debt, and their average outstanding debt is almost as high as the average annual income of all agricultural households.
 2. The average debt of an indebted agricultural household is higher than that of an indebted non-agricultural household.
 3. The highest incidence of indebtedness comes from those owning farms bigger than fifty hectares of land (large farmers).
- Select the correct answer using the codes below.
 - A. 1 and 2 only ✓
 - B. 2 and 3 only
 - C. 1 and 3 only
 - D. 1, 2 and 3 ✗
 - Your Answer : D
 - Correct Answer : A

◦ **Answer Justification :**

Justification: Statement 1 and 2: NABARD found that 52.5% of the agricultural households had an outstanding loan on the date of the survey, and thus were considered indebted. For non-agricultural households in rural India, that figure was 10 percentage points lower, at only 42.8%.

Agricultural households reporting any outstanding debt also had a higher debt liability compared with non-agricultural ones.

The average debt of an indebted agricultural household stood at ₹1,04,602 in comparison to ₹76,731 for indebted non-agricultural households.

Statement 3: No, these come from small farmers. Small and marginal farmer category owns less than 2 hectares of land.

While all classes of farmers had debt, the highest incidence of indebtedness came from those owning more than two hectares of land. In that category, 60% of households are in debt.

The biggest reason for taking loans among agricultural households was capital expenditure for

agricultural purposes, with a quarter of all loans taken for this purpose.

While 19% of loans were taken for meeting running expenses for agricultural purposes, another 19% were taken for sundry domestic needs. Loans for housing and medical expenses stood at 11% and 12%, respectively.

Q Source:

<http://www.insightsonindia.com/2018/08/20/insights-daily-current-affairs-20-august-2018/>

64 The layer of atmosphere that is almost free from clouds and associated weather phenomenon, making conditions most ideal for flying aeroplanes is

- A. Lower troposphere
- B. Upper Troposphere X
- C. Ionosphere
- D. Stratosphere ✓

- Your Answer : B
- Correct Answer : D

◦ **Answer Justification :**

Justification: Option A and B: Troposphere is the most important layer of the atmosphere. Its average height is 13 km. The air we breathe exists here. Almost all the weather phenomena like rainfall, fog and hailstorm occur in this layer.

Option C: Above the troposphere lies the stratosphere. It extends up to a height of 50 km. This layer is almost free from clouds and associated weather phenomenon, making conditions most ideal for flying aeroplanes. One important feature of stratosphere is that it contains a layer of ozone gas.

Q Source: Chapter 4: 7th NCERT: Geography

65 Which of the reason(s) can be responsible for the formation of fogs over oceans?

1. Tropical winds passing over cooler waters results in fog
2. Abundance of salt in air over the ocean

- Which of the above is/are correct?
 - A. 1 only
 - B. 2 only
 - C. Both 1 and 2 ✓
 - D. None

- Your Answer : C
- Correct Answer : C

◦ **Answer Justification :**

Justification: Statement 1: When wind blows moist air over a cool surface the air will cool and advection fog will form. Advection fog is very common at sea when tropical winds pass over cooler waters and on land when a warm front passes over heavy snow.

Statement 2: Salt is a unique condensation nuclei in that it will allow fog to form even when the humidity is low. Sea fog forms when the condensation nuclei are salt.

Q Source: Chapter 13: Goh Cheng Leong: Certificate Physical and Human Geography

66 Consider the following statements.

1. The World Bank was created immediately after the Second World War in 1945.
 2. The WB not only provides loans and grants to the member-countries but also assists countries in human and rural development.
 3. WB forms an agency of the United Nations.
- Select the correct answer using the codes below.
 - A. 1 and 2 only
 - B. 2 only
 - C. 1 and 3 only
 - D. 1, 2 and 3
 - Your Answer : A
 - Correct Answer : D

◦ **Answer Justification :**

Justification: Statement 1 and 2: Its activities are focused on the developing countries. It works for human development (education, health), agriculture and rural development (irrigation, rural services), environmental protection (pollution reduction, establishing and enforcing regulations), infrastructure (roads, urban regeneration, electricity) and governance (anti-corruption, development of legal institutions). It provides loans and grants to the member-countries. In this way, it exercises enormous influence on the economic policies of developing countries.

It is often criticised for setting the economic agenda of the poorer nations, attaching stringent conditions to its loans and forcing free market reforms.

Statement 3: Linked to the United Nations through special agreements, the separate, autonomous specialized agencies of the UN family set standards and guidelines, help formulate policies, provide technical assistance, and other forms of practical help in virtually all areas of economic and social endeavour such as World Bank, ILO, WHO etc.

Q Source: Additional Research: Chapter 6: 12th NCERT: Contemporary World Politics

67 Which of these is/are characteristic feature of Chinook winds?

1. They are highly moist and dense winds experienced on windward side of mountains.
2. They can cause significant temperature spikes in the area they flow through.

- Which of the above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. None

- Your Answer : B
- Correct Answer : B

- **Answer Justification :**

Justification & Learning: The chinook, a native word meaning "snow eater," belongs to a family of winds experienced in many parts of the world where long mountain chains lie more or less at right angles to the prevailing wind.

Statement 1: It is a warm and dry westerly wind that blows down the Rocky Mountains into the mountains' eastern slopes and the western prairies.

- The Chinook wind provides a welcome respite from the long winter chill. A strong Chinook can make large amounts of snow vanish in less than a day.
- Chinook winds have been observed to raise winter temperature, often from below -20 °C to as high as 10-20 °C for a few hours or days, then temperatures plummet to their base levels.

Q Source: Chapter 14: Goh Cheng Leong: Certificate Physical and Human Geography

68 Assume that two economies A and B have equal GDP at factor cost and equal population sizes for a particular year. Which of the following is then necessarily true for that particular year?

- A. Natural resource base is identical in both nations.
- B. Both nations have identical per capita incomes.
- C. Both nations have equal labour productivity.
- D. None of the above

- Your Answer : B
- Correct Answer : D

- **Answer Justification :**

Justification: Option A and C: Nations may have different natural resource base and different technology, and yet arrive at the same GDP due to various other factors such as demand, labour productivity etc.

Option B: Per capita income is calculated at NNP at factor cost at constant prices, not GDP at factor cost. NNP takes into account external flows as well as depreciation of capital, which GDP does not.

Q Source: Revision: 12th NCERT: Macroeconomics

69 Western coasts in tropical regions receive lesser rainfall in the eastern coasts of continents. Which of these can possibly explain the phenomenon?

1. Western coasts are typically associated with Mountains that block flow of moisture laden winds.
 2. Western coasts have year round lower temperature than eastern coasts at the same latitude.
- Which of the above is/are correct?
 - A. 1 only
 - B. 2 only
 - C. Both 1 and 2
 - D. None
 - Your Answer : D
 - Correct Answer : D

○ **Answer Justification :**

Justification: None of the above justifies it because:

Option A: Not every western coast is associated with Mountain, for e.g. Gujarat coastal belt.

Option B: Such generalization is wrong.

The actual reason is the direction of flow of trade winds.

The trade winds are moist, as they have passed over warm seas.

Since they are easterlies, they cause greater precipitation on the eastern coasts and run dry on the western coasts and interiors.

Q Source: Chapter 16: Goh Cheng Leong: Certificate Physical and Human Geography

70 Consider the following about Savanna type climate.

1. It is confined between the tropic lines and temperate regions.
 2. It is characterized by year round rainfall and high rainfall.
- Which of the above is/are correct?
 - A. 1 only
 - B. 2 only
 - C. Both 1 and 2
 - D. None
 - Your Answer : A
 - Correct Answer : D

○ **Answer Justification :**

Justification: Statement 1: It is a transitional type of climate between the equatorial forest and the trade wind hot deserts.

It is confined within the tropics. The belt includes West African Sudan, and then curves southward into east Africa and southern Africa north of the tropic of Capricorn.

Statement 2: It is best developed in the Sudan where the dry and wet seasons are most distinct, hence its name the Sudan climate.

Q Source: Chapter 17: Goh Cheng Leong: Certificate Physical and Human Geography

71 "Big Data", that is often heard in news concerns with

- A. Sensitive and strategic government data
- B. Data that cannot be recorded on present media devices
- C. Complex data which cannot be handled by traditional data processing Software
- D. Interstellar observational data

- Your Answer : C
- Correct Answer : C

◦ **Answer Justification :**

Learning: It is a term for data sets that are so large or complex that traditional data processing application softwares are inadequate to deal with them.

Challenges include capture, storage, analysis, data curation, search, sharing, transfer, visualization, querying, updating and information privacy.

The term "big data" often refers simply to the use of predictive analytics, user behavior analytics, or certain other advanced data analytics methods that extract value from data, and seldom to a particular size of data set.

For e.g. by someone's eating habits and online browsing history, you can recommend certain products for him (advertisements you see on websites tailored for you). Such a predictive analysis ordinarily cannot be done by normal software.

Q Source: Frequently in news

72 Crescent-shaped oxbow lakes form in river valleys mainly as a result of

- A. Tectonic movements
- B. Glacial deposition
- C. Meandering and river deposition
- D. Volcanic activity

- Your Answer : C
- Correct Answer : C

- **Answer Justification :**

Justification: Option A: A tectonic uplift of a mountain range can create depressions that accumulate water and form lakes. But, this is not the case with ox-bow lakes that are generally smaller and confined.

Option B: The advance and retreat of glaciers can scrape depressions in the surface where water accumulates; such lakes are common in Scandinavia, Patagonia, Siberia and Canada. The most notable examples are probably the Great Lakes of North America.

Option D: Crater lakes are formed in volcanic craters and calderas which fill up with precipitation more rapidly than they empty via evaporation.

Option C: The involved mechanism has been covered in previous tests.

Q Source: Chapter on Weathering: 11th NCERT: Fundamentals of Physical Geography

73 Consider the following about Fluorinated gases.

#5218

1. They are emitted through semiconductor manufacturing processes.
 2. They have the least global warming potential of all gases.
 3. These gases are a cause of concern as they can't be destroyed by any known natural processes.
- Select the correct answer using the codes below.
 - A. 1 only
 - B. 2 and 3 only
 - C. 1 and 3 only
 - D. 1, 2 and 3
 - Your Answer : C
 - Correct Answer : A

- **Answer Justification :**

Justification: These are some of the most potent and longest lasting type of greenhouse gases emitted by human activities.

Statement 1: They are emitted through a variety of industrial processes such as aluminum and semiconductor manufacturing and Substitution for Ozone-Depleting Substances.

Statement 2: They have very high global warming potentials (GWPs) relative to other greenhouse gases.

Statement 3: They are well-mixed in the atmosphere, spreading around the world after they're emitted.

Q Source: Additional Research: 7th NCERT: Geography

74 If there was no 'Right to constitutional remedies' in the Constitution, which of the following would follow?

- A. A citizen would not be able to move court at all.
- B. There would be no rule of law in the country.
- C. Separation of powers between legislature and executive would be completely diluted.
- D. A democratic government may turn authoritarian.

- Your Answer : D
- Correct Answer : D

◦ **Answer Justification :**

Provision: Dr. Ambedkar considered the right to constitutional remedies as 'heart and soul of the constitution'. It is so because this right gives a citizen the right to approach a High Court or the Supreme Court to get any of the fundamental rights restored in case of their violation.

The Supreme Court and the High Courts can issue orders and give directives to the government for the enforcement of rights.

The courts can issue various special orders known as writs.

Justification: Option A: A citizen will not be able to move court only for getting his constitutional rights enforced. He can move courts for other purposes such as resolving a legal dispute. So, A is wrong.

Option B: Rule of law emanates from Article 14 which essentially considers everyone equal before law. Even if the constitutional remedies cease to exist, rule of law would continue to operate. Citizens may still be able to enjoy fundamental rights, but they may not be able to complain against its infringement. Moreover, all other legal rights and civil, criminal laws will be operational. So, B is wrong.

Option C: It is an absurd statement.

Option D: If citizens cannot get their fundamental rights enforced, governments may very well breach these rights, such as censoring newspapers, imposing curfews and emergency like situations. So, D is correct.

Q Source: Revision: Page 42: Indian Constitution at Work: NCERT XIth

75 Consider the following about the North Atlantic Treaty Organization (NATO).

1. NATO membership is open to any country that is willing to accept the terms of the military alliance.
2. All decisions are taken by consensus in NATO.
3. The Membership Action Plan (MAP) of NATO is a military code that prohibits attack on member countries by any of the NATO members.

- Select the correct answer using the codes below.
 A. 1 only



- B. 2 and 3 only
- C. 2 only
- D. None of the above

- Your Answer : A
- Correct Answer : C

◦ **Answer Justification :**

Justification: Statement 1: NATO membership is open to “any other European state in a position to further the principles of this Treaty and to contribute to the security of the North Atlantic area.”

Statement 2: A “NATO decision” is the expression of the collective will of all 28 member countries since all decisions are taken by consensus.

NATO is committed to the peaceful resolution of disputes. If diplomatic efforts fail, it has the military capacity needed to undertake crisis-management operations. These are carried out under the Washington Treaty - NATO’s founding treaty - or under a UN mandate, alone or in cooperation with other countries and international organizations.

Statement 3: The Membership Action Plan (MAP) is a NATO programme of advice, assistance and practical support tailored to the individual needs of countries wishing to join the Alliance.

Q Source: Additional Research: Chapter 6: 12th NCERT: Contemporary World Politics

76 In South-East Asia, which among the following countries is land locked?

- A. Laos
- B. Vietnam
- C. Cambodia
- D. Thailand

- Your Answer : C
- Correct Answer : A

◦ **Answer Justification :**

Learning: Laos is traversed by the Mekong River and known for mountainous terrain, French colonial architecture, hill tribe settlements and Buddhist monasteries.



Q Source: Revision Past tests syllabus

77 Which among the following Indian States has the maximum total forest cover as a percentage of total area of the state?

- A. Mizoram ✓
- B. Chhattisgarh
- C. Madhya Pradesh
- D. Kerala

- Your Answer : A
- Correct Answer : A

◦ **Answer Justification :**

Learning: You can find an arranged list here

https://en.wikipedia.org/wiki/Forest_cover_by_state_in_India

Punjab has the least forest cover, whereas Mizoram has the highest. Other states/UTs with high forest cover are Arunachal Pradesh, Lakshadweep, A&N Islands, Nagaland and Meghalaya.

Arunachal Pradesh has the highest area of dense forests, whereas Madhya Pradesh has the highest area of open forests.

Q Source: Revision Past tests syllabus

78 Consider the following about the Global Seed Vault.

1. It is located on a remote island near South Pole.
 2. It is a fail-safe seed storage facility to preserve crop diversity in view of impending disasters and future of human race.
 3. Seeds are kept in a deep freezer powered by small nuclear power plants.
- Select the correct answer using the codes below.
- A. 1 and 2 only
 - B. 1 and 3 only
 - C. 2 only
 - D. 1, 2 and 3
- Your Answer : A
- Correct Answer : C

◦ **Answer Justification :**

Justification: Statement 1: It lies deep inside a mountain on a remote island in the Svalbard archipelago, halfway between mainland Norway and the North Pole.

Statement 2: Worldwide, more than 1,700 genebanks hold collections of food crops for safekeeping, yet many of these are vulnerable, exposed not only to natural catastrophes and war, but also to avoidable disasters, such as lack of funding or poor management.

Something as mundane as a poorly functioning freezer can ruin an entire collection. And the loss of a crop variety is as irreversible as the extinction of a dinosaur, animal or any form of life.

The purpose of the Vault is to store duplicates (backups) of seed samples from the world's crop collections.

Statement 3: Permafrost and thick rock ensure that the seed samples will remain frozen even without power. The Vault is the ultimate insurance policy for the world's food supply, offering options for future generations to overcome the challenges of climate change and population growth.



Q Source:

<https://www.thehindu.com/sci-tech/science/whats-inside-the-svalbard-global-seed-vault/article22858>

[978.ece](#)

79 Consider the following about the Indian National Congress (INC), a party that spearheaded and helped organize the freedom movement.

1. The first president of INC was Womesh Chandra Banerji.
 2. It was only after independence that Mahatma Gandhi presided over any INC session.
 3. The first Englishman to become the president of INC was A. O. Hume.
 4. The president of INC at the time of India's independence was Jawahar Lal Nehru.
- Select the correct answer using the codes below.
 - A. 1 and 4 only
 - B. 2 and 3 only
 - C. 1 only
 - D. 2, 3 and 4 only
 - Your Answer : C
 - Correct Answer : C
- **Answer Justification :**

Justification: The first president of Indian National Congress was Womesh Chandra Banerji.

- The first session of the INC was held in 1885 in Mumbai.
- Mahatma Gandhi presided over the Belgaum session of INC in 1924. So, 2 is wrong.
- The first woman president of INC was Mrs Annie Besant.
- The first Indian woman president of the INC was Mrs Sarojini Naidu
- The first Englishman to become the president of INC was George Yule. So, 3 is wrong.
- The first Muslim president of the INC was Badruddin Tayabji.
- The president of INC at the time of India's independence was Acharya JB Kriplani. So, 4 is wrong.

Q Source: Revision: Previous test syllabus

80 Consider the following matches of minerals with their deposits in India.

1. Mica: Jharkhand

2. Copper: Andhra Pradesh
3. Gold: Karnataka

◦ Select the correct answer using the codes below.

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

- Your Answer : C
- Correct Answer : D

◦ **Answer Justification :**

Justification: Statement 1: According to British Geological Survey, the world's largest deposit of mica is at Koderma district in the state of Jharkhand (India). About 95% of India's mica is distributed in just three states of Jharkhand, Andhra Pradesh and Rajasthan.

Statement 2: Copper resource has been identified and explored to varying degree in 14 states of the country such as Andhra Pradesh, Gujarat, Haryana, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Meghalaya, Orissa, Rajasthan, Sikkim, Tamil Nadu, Uttarakhand and West Bengal.

Mining production of India is just 0.2% of world's production, whereas refined copper production is about 4% of world's production.

Statement 3: Gold reserves, although scarce in India, have been reported from a number of scattered localities (apart from Karnataka and AP) in Gulbarga, Belgaum, Bellary, Mysore, Mandya, Chikmagalur and Shimoga districts.

Q Source: Revision: Previous test syllabus

81 The pattern of planetary winds largely depends on

1. The distribution of continents and oceans
2. Rotation of earth
3. Movement of currents in the ocean

◦ Select the correct answer using the codes below.

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

- Your Answer : C
- Correct Answer : C

◦ **Answer Justification :**

Justification: It depends on:



- Latitudinal variation of atmospheric heating
- emergence of pressure belts;
- the migration of belts following apparent path of the sun;
- the distribution of continents and oceans
- the rotation of earth

The pattern of the movement of the planetary winds is called the general circulation of the atmosphere. The general circulation of the atmosphere also sets in motion the ocean water circulation which influences the earth's climate. A schematic description of the general circulation is shown in Figure 10.6.

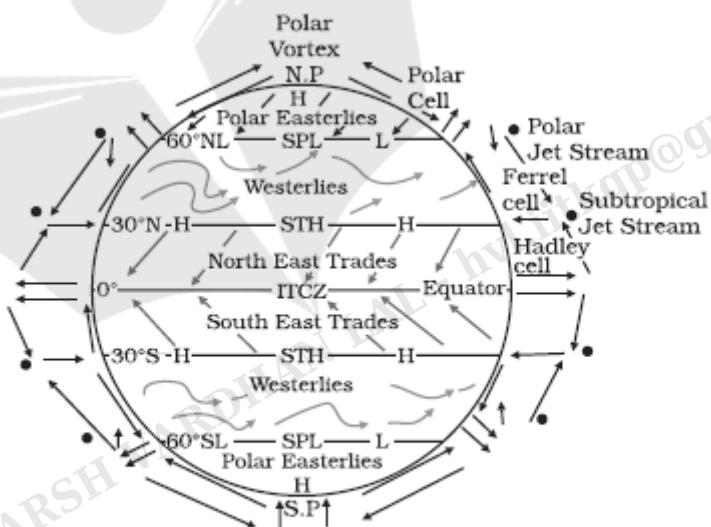


Figure 10.6 : Simplified general circulation of the atmosphere

Q Source: Page 92: Chapter 10: Fundamentals of Physical Geography

82 The salient features of Kerala model include

1. A set of moderate material quality-of-life indicators coinciding with high per-capita incomes, both distributed across nearly the entire population of Kerala.
 2. High levels of political participation and activism among ordinary people along with substantial numbers of dedicated leaders at all levels
 3. Considerable intervention of developed countries in the form of aid, technical support and policy direction
- Select the correct answer using the codes below.

- A. 1 only X
- B. 1 and 2 only
- C. 1, 2 and 3
- D. 2 only ✓

- Your Answer : A
- Correct Answer : D

◦ **Answer Justification :**

Justification: It includes:

- A set of high material quality-of-life indicators coinciding with low per-capita incomes, both distributed across nearly the entire population of Kerala.
- A set of wealth and resource redistribution programmes that have largely brought about the high material quality-of-life indicators.
- High levels of political participation and activism among ordinary people along with substantial numbers of dedicated leaders at all levels. Kerala's mass activism and committed cadre were able to function within a largely democratic structure, which their activism has served to reinforce

During the 1970s, the economists noted that despite low incomes, the state had high literacy rates, healthy citizens, and a politically active population. Researchers began to delve more deeply into what was going in the Kerala Model, since human development indexes seemed to show a standard of living which was comparable with life in developed nations, on a fraction of the income.

The development standard in Kerala is comparable to that of many first world nations, and is widely considered to be the highest in India at that time.

Q Source: Additional Research: Page 54: 12th NCERT: India Since Independence

83 "Westerlies come all the year round. There is a tendency towards an autumn or winter maximum of rainfall and light snow falls in winter. Ports are never frozen but frosts do occur on cold nights. The seasons are remarkably distinct." This defines which of these climatic types?

- A. North-West European Maritime Climate ✓
- B. Mediterranean climate
- C. Moist Mid-latitude Climates
- D. Tropical Wet Climate

- Your Answer : A
- Correct Answer : A

- **Answer Justification :**

Learning: It is also called as the British Climate type. The cool temperate western margins are under the influence of the Westerlies all-round the year.

They are the regions of frontal cyclonic activity, i.e. Temperate Cyclones.

- This type of climate is typical to Britain, hence the name 'British Type'.
- It is called as North-West European Maritime Climate due to greater oceanic influence.
- The mean annual temperatures are usually between 5° C and 15° C.
- Winters are abnormally mild. This is because of the warming effect brought by warm North Atlantic Drift.
- Sometimes, unusual cold spells are caused by the invasion of cold polar continental air (Polar Vortex) from the interiors.

Q Source: Chapter 22-23: Goh Cheng Leong: Certificate Physical and Human Geography

84 Which of these groups help member countries to identify those exports which need to be controlled so as not to contribute to the spread of chemical and biological weapons?

- A. Australia Group ✓
- B. Missile Technology Control Regime (MTCR)
- C. Wassenaar Arrangement
- D. Nuclear Suppliers Group (NSG)

- Your Answer : A
- Correct Answer : A

- **Answer Justification :**

Justification: Option A: The Australia Group, an informal group of countries (now joined by the European Commission) was established in 1985 after the use of chemical weapons by Iraq in 1984.

Its members are supposed to maintain export controls on a uniform list of several chemical compounds.

Option B: The Missile Technology Control Regime (MTCR) is a multilateral export control regime. It is an informal and voluntary partnership among countries to prevent the proliferation of certain category of missile and unmanned aerial vehicle technology.

Option C: The Wassenaar Arrangement was established to contribute to regional and international security and stability by promoting transparency and greater responsibility in transfers of conventional arms and dual-use goods and technologies

Option D: It deals with nuclear fuel and supplies.

Q Source: Additional Research: Chapter 6: 12th NCERT: Contemporary World Politics

85 Consider the following with reference to trends of atmospheric pressure.

1. Atmospheric pressure over oceans is always higher than that over continents.
2. Atmospheric pressure over equatorial regions is always higher than that over poles.

- Which of the above is/are correct?
 - A. 1 only
 - B. 2 only
 - C. Both 1 and 2
 - D. None

- Your Answer : D
- Correct Answer : D

◦ **Answer Justification :**

Justification: Statement 1: There is no such trend. For e.g. during an El-nino in, the atmospheric pressure over land is higher than that at ocean which results in poor rainfall.

Statement 2: The general trend is that poles have a higher atmospheric pressure than at the equator, with fluctuations in between as one moves from equator towards poles.

Some argue that the air pressure at the equator should be higher than at the poles because the extent of atmosphere at the equator is greater than that of the poles. So, the air column will have a greater weight and thus pressure. But, this does not happen as argued.

The extent of atmosphere over the equator is greater due to the expansion of the air column because of the higher solar insolation received at the equator. But, the catch is that this thicker air column has lower pressure - expanded and rarefied compared to the dense air column at poles. Also, as the air column at the equator expands (due to heat), it rises up in the atmosphere and this higher air column creates a kind of gradient with the adjoining air masses. Then this heated air flows down from this higher air column towards lower air columns at poles where it is much cooler and much denser giving these polar columns greater mass.

Q Source: Chapter 22-23: Goh Cheng Leong: Certificate Physical and Human Geography

86 The first Indian to join the Indian Civil Service (ICS) in the British Era was

- A. Satyendranath Tagore
- B. Rashbehari Bose



- C. G.V. Mavalankar
- D. Kashi Shivanath

- Your Answer : A
- Correct Answer : A

- **Answer Justification :**

Learning: He is known for his contribution towards the emancipation of women in Indian society during the British Raj.

He was the second son of Debendranath Tagore and the elder brother of Rabindranath Tagore.

The ICS were appointed under Government of India Act 1858. The ICS was headed by the Secretary of State for India, a member of the British cabinet.

Q Source: Revision: Additional Research: Chapter 1: Laxmikanth

87 Consider the following about Dadabhai Naoroji.

1. He shunned joining the legislative councils due to an appeal made by M.K. Gandhi.
2. He founded the Gyan Prasarak Mandali for the education of adults.
3. He wrote the book "The Economic History of India under Early British Rule".

- Select the correct answer using the codes below.
 - A. 1 and 2 only
 - B. 1 and 3 only
 - C. 2 only
 - D. 2 and 3 only

- Your Answer : D
- Correct Answer : C

- **Answer Justification :**

Justification: Statement 1: Dadabhai was a member of the Legislative Council of Bombay.

- In 1886, Naoroji was elected as President of the Indian National Congress.
- In England Dadabhai coined the Liberal Party and in 1892 he was elected to the Parliament.
- He was the first Indian to be elected in the British Parliament.

Statement 2: Dadabhai felt that the British misrule in India was mainly because of the illiteracy of the people. Thus, as a solution to this problem he started educating the masses regarding their rights and privileges. Dadabhai began free literacy classes for girls in Marathi and Gujarati. He set

up the Gyan Prasarak Mandali (Society for Promotion of Knowledge) for adult education.

Statement 3: It was written by Romesh Chunder Dutt. Naoroji wrote the Poverty and Unbritish Rule.

Q Source: Revision: Additional Research: 12th NCERT: Themes in India History

88 The Presidency of the Security Council of United Nations is

- A. Fixed by a vote of the General Assembly for a period of two years
- B. Decided by majority vote amongst the permanent members for a given period of the term
- C. Rotated every month among all the members and non-members of the UNSC
- D. None of the above

- Your Answer : D
- Correct Answer : D

◦ **Answer Justification :**

Justification & Learning: The president is the head of the delegation from the Security Council member state that holds the rotating presidency.

The rotation takes place in alphabetical order of the member states' official United Nations names in English.

Non-members are not entitled for the Presidency, so C is incorrect.

Q Source: Additional Research: Chapter 6: 12th NCERT: Contemporary World Politics

89 International Maritime Organization (IMO) is mandated to regulate

- A. Hydrocarbon extraction from disputed territories
- B. Resolving jurisdiction issues related to maritime claims
- C. Shipping in international waters
- D. Climate related parameters in ocean currents, tides and waves

- Your Answer : C
- Correct Answer : C

◦ **Answer Justification :**

Learning: It is a specialised agency of the United Nations responsible for regulating shipping.

The IMO's primary purpose is to develop and maintain a comprehensive regulatory framework for shipping and its remit today includes safety, environmental concerns, legal matters, technical co-operation, maritime security and the efficiency of shipping.

IMO is governed by an assembly of members and is financially administered by a council of members elected from the assembly.

Q Source: Additional Research: Chapter 6: 12th NCERT: Contemporary World Politics

90 Consider the following statements about the combined phenomenon of southern oscillation - ENSO.

1. The appearance of warm water off the coast of Peru is closely associated with the pressure changes in the Central Pacific and Australia during Southern Oscillation.
2. When the ENSO is strong, Australia and India receive heavy rainfall and China experiences drought.

- Select the correct answer using the codes below.

A. 1 only

B. 2 only

C. Both 1 and 2

D. None of the above

◦ Your Answer : A

◦ Correct Answer : A

◦ **Answer Justification :**

Justification: Warming and cooling of the Pacific Ocean is most important in terms of general atmospheric circulation. The warm water of the central Pacific Ocean slowly drifts towards South American coast and replaces the cool Peruvian current.

Such appearance of warm water off the coast of Peru is known as the El Nino. The El Nino event is closely associated with the pressure changes in the Central Pacific and Australia. This change in pressure condition over Pacific is known as the southern oscillation.

The combined phenomenon of southern oscillation and El Nino is known as ENSO. In the years when the ENSO is strong, large-scale variations in weather occur over the world. The arid west coast of South America receives heavy rainfall, drought occurs in Australia and sometimes in India and floods in China.

This phenomenon is closely monitored and is used for long range forecasting in major parts of the world.

Q Source: Page 92: Chapter 10: Fundamentals of Physical Geography

91 Cabinet had approved a policy framework for development of Underground Coal Gasification (UCG), some time ago, in coal and lignite bearing areas in the country. What is/are the benefits of UCG?

1. It significantly reduces the use of groundwater in coal related operations.
2. It reduces generation of harmful air pollutants associated with coal mining.

- Which of the above is/are correct?

A. 1 only

B. 2 only

C. Both 1 and 2

D. None

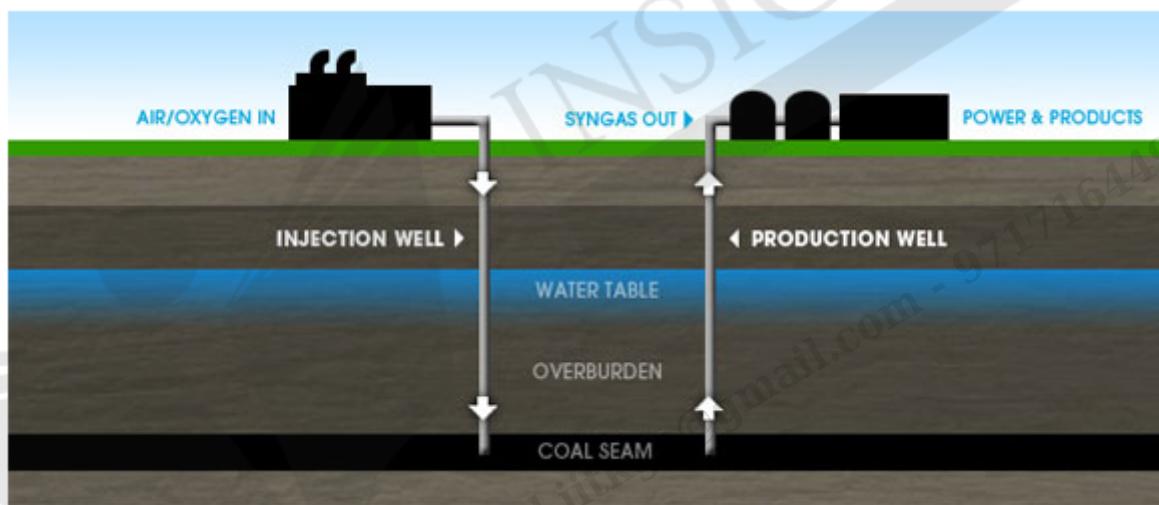


- Your Answer : C
- Correct Answer : C

◦ **Answer Justification :**

Concept: A significant amount of the world's coal resources are too deep to be mined by traditional methods. However, gasification that occurs underground can convert much of this "stranded" coal into syngas that can then be used to produce power and other useful products—without having to mine it.

The predominant product gases are methane, hydrogen, carbon monoxide and carbon dioxide.



Justification: Statement 1: There are a number of significant economic benefits associated with UCG that include no need for the coal to be mined or handled and a significantly lower capital cost for project development than that of above ground plants that mine coal.

Statement 2: It also reduces use of groundwater or freshwater as underground saline water is used.

Q Source:

<https://www.livemint.com/Industry/41emZiHuUaNBCP8MIqFCQK/Coal-India-to-invest-Rs15000-cr-or-e-this-fiscal-for-capex-o.html>

92 Consider the following statements about long-term climate change on earth.

1. The present inter-glacial period started about 250,000 years ago.
2. The sediment deposits in glacial lakes reveal the occurrence of warm and cold periods.
3. The rings in the trees provide clues about wet and dry periods on earth.

- Select the correct answer using the codes below.
 - A. 1 and 2 only X
 - B. 2 and 3 only ✓
 - C. 1 and 3 only
 - D. 3 only

- Your Answer : A

- Correct Answer : B

- **Answer Justification :**

Justification: Statement 1 and 2: Geological records show alteration of glacial and inter-glacial periods. The geomorphological features, especially in high altitudes and high latitudes, exhibit traces of advances and retreats of glaciers.

The sediment deposits in glacial lakes also reveal the occurrence of warm and cold periods. The rings in the trees provide clues about wet and dry periods. Historical records describe the vagaries in climate. All these evidences indicate that change in climate is a natural and continuous process.

Statement 3: In the geological past, the earth was warm some 500-300 million years ago, through the Cambrian, Ordovician and Silurian periods.

During the Pleistocene epoch, glacial and inter-glacial periods occurred, the last major peak glacial period was about 18,000 years ago. The present inter-glacial period started 10,000 years ago.

Q Source: Page 107: Chapter 12: Fundamentals of Physical Geography

93 A triangle formed by Udaipur, Kolkata and Cochin would encompass

- A. Jaipur
- B. Hyderabad
- C. Mumbai
- D. Lucknow

- Your Answer : B
- Correct Answer : B

- **Answer Justification :**

Learning:



Q Source: Map: South Asia

94 In India, Uranium reserves can be found in which of the following belts?

1. Orewadi Basin of Madhya Pradesh
 2. Singhbhum Thrust Belt
 3. Cuddapah basin of Andhra Pradesh
 4. Mahadek basin of Meghalaya
- Select the correct answer using the codes below.
 - A. 2 and 3 only
 - B. 2, 3 and 4 only
 - C. 1 and 4 only
 - D. 1, 2 and 3 only
 - Your Answer : B
 - Correct Answer : B

◦ **Answer Justification :**

Justification & Learning: As per official estimates, apart from discoveries in the Singhbhum Thrust Belt, several uranium occurrences have also been found in Cuddapah basin of Andhra Pradesh.

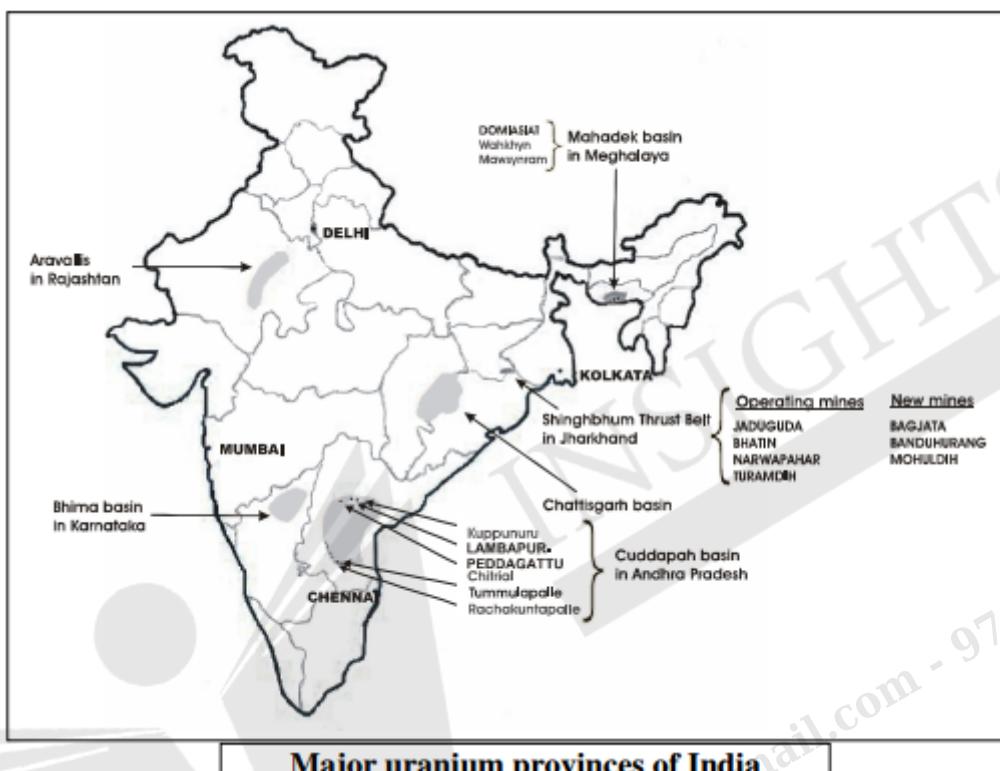
These include Lambapur-Peddagattu, Chitrial, Kuppunuru, Tumallapalle, Rachakuntapalle which have significantly contributed towards the uranium reserve base of India.

In the Mahadek basin of Meghalaya in NorthEastern part of the country, sandstone type uranium deposits like Domiasiat, Wahkhyn, Mawsynram provide near-surface flat orebodies amenable to commercial operations.

Other areas in Rajasthan, Karnataka and Chattishgarh hold promise for developing into some major



deposits.



Q Source: Revision: 8th NCERT: Resource and Development

95 "Bewar" is a term used for

- A. Water channel in uneven fields
- B. Tribal Hagiography
- C. Shifting cultivation
- D. Traders and travellers

- Your Answer : C
- Correct Answer : C

◦ **Answer Justification :**

Learning: It is the shifting cultivation of Madhya Pradesh.

In Magh month, shifts are made to new bewars (from old bewars) and tribals rely on hunting-gathering as the main subsistence activity.

The tribals lived in the bewar fields.

Only after a few years, when the land productivity declines, tribals supplement their diets with forest products.

Q Source: Surprise questions

96 Which of the following is/are the desirable characteristics of a secular society in India?

1. One religious community does not dominate another.
 2. Some members do not dominate other members of the same religious community.
 3. The State does not interfere at all in religious activities.
- Select the correct answer using the codes below.
- A. 1 and 2 only
 - B. 2 and 3 only
 - C. 1 and 3 only
 - D. 1, 2 and 3

- Your Answer : A
- Correct Answer : A

- **Answer Justification :**

Justification: Statement 1: If religion X is privileged, when compared to religion Y, in gaining access to public offices, paying taxes, enjoying public services etc, it cannot be called a secular society.

Moreover, if all the wealth and political power is amassed by religion X, it certainly is not a desirable characteristic of a secular society.

Statement 2: For e.g. if a particular section of Hindu society is ostracized, either due to their backward caste status or based on customs, it goes against the ideal of secularism.

Statement 3: India is a secular state, and the State interferes in religious activities for reasons of public welfare and reducing exploitation. For e.g. it may ban religious practices that promote superstition, black magic etc.

At the same time, the state maintains a “principled distance” from all the religions.

Q Source: Revision: Chapter 7: Indian Polity: M laxmikanth

97 Consider the following statements about the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, seen often in news.

1. This Act is meant to undo the historical injustices meted out to forest dwelling populations in not recognising their rights to land and resources.
2. This Act recognises tribal's right to homestead, cultivable and grazing land and to non-timber forest produce.
3. The Act prohibits diversion of forest land falling in the areas specified under the Act for any public utility facilities.
4. The forest right related to conversion of forest villages into revenue villages is to be adjudicated by the Gram Sabha and other sub-divisional and district committees.

- Select the correct answer using the codes below.
- A. 1 and 2 only
 - B. 1, 2 and 4 only

- C. 2, 3 and 4 only
 D. 1, 3 and 4 only

- Your Answer : B
- Correct Answer : B

◦ **Answer Justification :**

Justification: Statement 1: The adverse living condition of many tribal families living in forests was on account of non-recognition and vesting of pre-existing rights.

Thus, Forest Rights Act, 2006, was enacted to recognize and vest the forest rights and occupation of forest land in forest dwelling Scheduled Tribes and other traditional forest dwellers, who have been residing in such forests for generations, but whose rights could not be recorded.

Statement 2: This Act not only recognizes the rights to hold and live in the forest land under the individual or common occupation for habitation or for self-cultivation for livelihood, but also grants several other rights to ensure their control over forest resources.

This, inter-alia, includes right of ownership, access to collect, use and dispose of minor forest produce, community rights such as nistar; habitat rights for primitive tribal groups and pre-agricultural communities; right to protect, regenerate or conserve or manage any community forest resource which they have been traditionally protecting and conserving for sustainable use.

Statement 3: The Act also provides for diversion of forest land for public utility facilities managed by the Government, such as schools, dispensaries, fair price shops, electricity and telecommunication lines, water tanks, etc. with the recommendation of Gram Sabhas. So, 3 is incorrect.

Statement 4: The Ministry of Tribal Affairs has issued guidelines impressing upon all the State/ UT Governments to convert all such erstwhile forest villages, un-recorded settlements and old habitations into revenue villages with a sense of urgency in a time bound manner.

The conversion would include the actual land use of the village in its entirety, including land required for current or future community uses, like, schools, health facilities, public spaces etc.

Q Source:

<https://www.thehindu.com/news/cities/Hyderabad/state-yet-to-act-on-illegal-occupants-of-forest-land/article24732669.ece>

98 South Asia covers roughly what percentage of the total land area and population of Asia?

- A. One-sixth and one-third respectively
 B. One-fifteenth and one-half respectively
 C. One-ninth and one-fourth respectively ✓
 D. One-fifth and one-third respectively

- Your Answer :

- Correct Answer : C

- **Answer Justification :**

Justification: South Asia covers about 5.2 million km² (2 million mi²), which is 11.71% of the Asian continent or 3.5% of the world's land surface area.

The population of South Asia is about 1.891 billion or about one fourth of the world's population, making it both the most populous and the most densely populated geographical region in the world.

Overall, it accounts for about 39.49% of Asia's population, over 24% of the world's population, and is home to a vast array of people.

In 2010, South Asia had the world's largest population of Hindus, Jains and Sikhs. It also has the largest population of Muslims in the Asia-Pacific region, as well as over 35 million Christians and 25 million Buddhists.

Q Source: Map based: South Asia

99 If a group of minorities is denied permission for opening a minority-based educational institution in Kerala, it violates which of the following Fundamental Rights?

- A. Right to Life
- B. Rights given under Articles 29-30 ✓
- C. Right to Freedom of movement
- D. Right against exploitation

- Your Answer : B
- Correct Answer : B

- **Answer Justification :**

Learning: Option A is incorrect, because the violation is specific to Articles 29-30 that aim at safeguarding the cultural and educational rights of minorities.

For e.g. tribals can preserve their cultural heritage against the dominance of the majority mainstream culture.

Minorities are also given a right to establish and administer educational institutions and government interferes the least in such institutions. So, clearly B is correct.

Q Source: Revision: Chapter 7: Indian Polity: M laxmikanth

100 Mulching is a popular method of soil conservation. This practice helps in

1. Retaining soil moisture
2. Improving the organic matter of the soil
3. Cutting step-wise flats on hilly farms improving water retention

- Select the correct answer using the codes below.

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

- Your Answer : C
- Correct Answer : C

- **Answer Justification :**

Justification: Under the method the bare ground between plants is covered with a layer of organic matter like straw.

Statement 1: Mulches conserve moisture by reducing the amount of soil water lost through evaporation.

- Mulches help maintain a uniform soil temperature. They act as insulators, keeping the soil warmer during cool weather and cooler during the warm months of the year.
- Mulches minimize soil erosion and compaction from heavy rains and aid in water penetration.

Statement 2: Mulches alter the structure of the soil which usually increases root growth due to the increase of organic matter in soil.

Aeration is improved in clay soils, and the water-holding capacity is increased in sandy soils.

Statement 3: This is done in terrace farming where flat steps are cut into hilly farms to reduce soil erosion. So, 3 is incorrect.

Q Source: Revision of concepts covered in previous tests