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Q.No.	QUESTIONS	ANS	EXPLANATION
1.	<p>With reference to the Constitution of India, prohibitions or limitations or provisions contained in ordinary laws cannot act as prohibitions or limitations on the constitutional powers under Article 142. It could mean which one of the following?</p> <p>(a) The decisions taken by the Election Commission of India while discharging its duties cannot be challenged in any court of law.</p> <p>(b) The Supreme Court of India is not constrained in the exercise of its powers by laws made by the Parliament.</p> <p>(c) In the event of grave financial crisis in the country, the President of India can declare Financial Emergency without the counsel from the Cabinet.</p> <p>(d) State Legislatures cannot make laws on certain matters without the concurrence of Union Legislature.</p>	B	
2.	<p>In which of the following cases supreme court had exercised its powers under Article 142</p> <p>1. The Cleansing of Taj Mahal</p>	D	<p>1. The ban on the sale of alcohol along national and state highways: While the notification by the central government prohibited liquor stores along National Highways only, the Supreme Court put in</p>

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2. The ban on the sale of alcohol along national and state highways
3. Bhopal Gas Tragedy Case
4. M. Siddiq v. Mahant Suresh Das

Select the correct answer using the code given below:

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

place a ban on a distance of 500 metres by invoking Article 142.

2. The Cleansing of Taj Mahal and justice to many undertrials is a result of the **invocation of Article 142**
3. The Union Carbide case was one of the chief instances where the Supreme Court had exercised Article 142. In Union Carbide Corporation v. Union of India[21], a gas leak took place in Bhopal at the Union Carbide India due to poor maintenance of gas chambers, leading to death of nearly thousands of people.
4. In **M. Siddiq v. Mahant Suresh Das**[23], popularly known as the Ayodhya dispute, the Supreme Court had exercised the powers mentioned under Article 142 of the Constitution in order to achieve complete justice and had passed various orders which had not been originally prayed by the parties.

Article 142

- Article 142 provides **discretionary power to the Supreme Court** as it states that the SC in the exercise of its jurisdiction **may pass such decree or make such order as is necessary for doing complete justice** in any cause or matter pending before it.
- In the early years of the evolution of **Article 142**, the general public and the lawyers both lauded the SC for its efforts to **bring**

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			complete justice to various deprived sections of society or to protect the environment.
3.	<p>Consider the following statements regarding The Insurance Regulatory and Development Authority of India (IRDAI)</p> <ol style="list-style-type: none"> 1. It is an autonomous and statutory body 2. IRDAI is a 10-member body a Chairman + nine full-time members <p>Select the correct answer using the code given below:</p> <p>(a) 1 only. (b) 2 only. (c) Both 1 and 2. (d) Neither 1 nor 2.</p>	C	<p><i>IRDAI:</i></p> <ul style="list-style-type: none"> ▪ It is an autonomous and statutory body established under the IRDA Act 1999. ▪ It is the apex body that supervises and regulates the insurance sector in India. ▪ Objective: To protect the interests of policyholders, to regulate, promote and ensure orderly growth of the insurance industry in India. ▪ Nodal Ministry: Ministry of Finance ▪ Head Office: Hyderabad. ▪ Composition: IRDAI is a 10-member body a Chairman, five full-time members, and four part-time members appointed by the Government of India. ▪ Functions: <ul style="list-style-type: none"> ▪ To have a fair regulation of the insurance industry while ensuring financial soundness of the applicable laws and regulations. ▪ Frame regulations periodically so that there is no ambiguity in the insurance industry. ▪ Registering and regulating insurance companies; ▪ Protecting policyholders' interests; ▪ Licensing and establishing norms fo

			<p>r insurance intermediaries;</p> <ul style="list-style-type: none"> ▪ Promoting professional organizations in insurance; ▪ Regulating and overseeing premium rates and terms of non-life insurance covers; ▪ Specifying financial reporting norms of insurance companies; ▪ Regulating investment of policyholders' funds by insurance companies; ▪ Ensuring the maintenance of solvency margin by insurance companies; ▪ Ensuring insurance coverage in rural areas and of vulnerable sections of society.
4.	<p>Hydrogen sulfide occurs naturally in</p> <ol style="list-style-type: none"> 1. Human body. 2. Crude oil. 3. Natural gas. 4. Hot springs. 5. Volcanic gases. <p>(a) 2, 3, 4, 5 (b) 1, 2 and 3 (c) 4 and 5</p>	D	<p>Production</p> <ul style="list-style-type: none"> ▪ Hydrogen sulfide is often produced from the microbial breakdown of organic matter in the absence of oxygen gas, such as in swamps and sewers. This process is commonly known as anaerobic digestion. ▪ It occurs naturally in crude oil, natural gas, and hot springs. ▪ H₂S also occurs in ****volcanic gases, natural gas and in some sources of well water.

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	(d) 1, 2, 3, 4 and 5		<ul style="list-style-type: none"> ▪ The human body ****also produces small amounts of H₂S and uses it as a signalling molecule.
5.	<p>The Security Council of the UN consists of 5 permanent members, and the remaining 10 members are elected by the General Assembly for a term of</p> <p>(a) 1 year (b) 2 years (c) 3 years (d) 5 years</p>	B	
6.	<p>Consider the following statements:</p> <ol style="list-style-type: none"> 1. Aadhaar card can be used as a proof of citizenship or domicile. 2. Once issued, Aadhaar number cannot be deactivated or omitted by the Issuing Authority. <p>Which of the statements given above is/are correct?</p> <p>(a) 1 only (b) 2 only (c) Both 1 and 2 (d) Neither 1 nor 2</p>	D	

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7.	<p>In the South Atlantic and South-Eastern Pacific regions in tropical latitudes, cyclone does not originate. What is the reason?</p> <p>(a) Sea surface temperatures are low (b) Inter-Tropical Convergence Zone seldom occurs (c) Coriolis force is too weak (d) Absence of land in those regions</p>	B	<ul style="list-style-type: none"> ▪ The most proximate reasons for the lack of cyclones in the South Atlantic and South Eastern Pacific ocean is the rare occurrence of the Inter-Tropical Convergence Zone (ITCZ) over the region. ▪ It becomes very difficult or nearly impossible to have genesis of tropical cyclones, unless synoptic vorticity (it is a clockwise or counterclockwise spin in the troposphere) and convergence (i.e., large scale spin and thunderstorm activity) are provided by ITCZ.
8.	<p>The 'Common Carbon Metric', supported by UNEP, has been developed for:</p> <p>(a) assessing the carbon footprint of building operations around the world (b) enabling commercial fanning entities around the world to enter carbon emission trading (c) enabling governments to assess the overall carbon footprint caused by their countries (d) assessing the overall carbon footprint caused by the use of fossil fuels by the world in a unit time</p>	A	
9.	<p>The Palghat Gap is located between</p>	A	

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	<p>(a) Nilgiris and Anamalai hills (b) Mumbai and Nashik (c) Mumbai and Pune (d) None of the above</p>		
10.	<p>In which one of the following groups are all the four countries members of G20?</p> <p>(a) Argentina, Mexico, South Africa and Turkey (b) Australia, Canada, Malaysia and New Zealand (c) Brazil, Iran, Saudi Arabia and Vietnam (d) Indonesia, Japan, Singapore and South Korea</p>	A	
11.	<p>. Consider the following:</p> <ol style="list-style-type: none"> 1. Carbon monoxide 2. Methane 3. Ozone 4. Sulphur dioxide <p>Which of the above are released into atmosphere due to the burning of crop/biomass residue?</p> <p>(a) 1 and 2 only (b) 2, 3 and 4 only (c) 1 and 4 only (d) 1, 2, 3 and 4</p>	D	

12.	<p>Consider the following provisions under the Directive Principles of State Policy as enshrined in the Constitution of India :</p> <ol style="list-style-type: none"> 1. Securing for citizens of India a uniform civil code 2. Organizing village Panchayats 3. Promoting cottage industries in rural areas 4. Securing for all the workers reasonable leisure and cultural opportunities <p>Which of the above are the Gandhian Principles that are reflected in the Directive Principles of State Policy?</p> <p>(a) 1, 2 and 4 only (b) 2 and 3 only (c) 1, 3 and 4 only (d) 1, 2, 3 and 4</p>	B	
13.	<p>. The Government enacted the Panchayat Extension to Scheduled Areas (PESA) Act in 1996. Which one of the following is not identified as its objective?</p> <p>(a) To provide self-governance (b) To recognize traditional rights</p>	C	

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	<p>(c) To create autonomous regions in tribal areas</p> <p>(d) To free tribal people from exploitation</p>		
14.	<p>Consider the following international agreements:</p> <ol style="list-style-type: none"> 1. The International Treaty on Plant Genetic Resources for Food and Agriculture 2. The United Nations Convention to Combat Desertification 3. The World Heritage Convention <p>Which of the above has / have a bearing on the biodiversity?</p> <p>(a) 1 and 2 only</p> <p>(b) only</p> <p>(c) 1 and 3 only</p> <p>(d) 1, 2. and 3</p>	D	
15.	<p>With reference to a conservation organization called Wetlands International', which of the following statements is/are correct?</p> <ol style="list-style-type: none"> 1. It is an intergovernmental organization formed by the 	B	

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	<p>countries which are signatories to Ramsar Convention.</p> <p>2. It works at the field level to develop and mobilize knowledge, and use the practical experience to advocate for better policies.</p> <p>Select the correct answer using the code given below.</p> <p>(a) 1 only (b) 2 only (c) Both 1 and 2 (d) Neither 1 nor 2</p>		
<p>16.</p>	<p>‘Yanomami’ which is recently seen in news, is a place located in</p> <p>(a) Brazil (b) Japan (c) Russia (d) Sudan</p>	<p>A</p>	<p>President Luiz Inácio Lula da Silva-led Brazilian government has promised to speed up the expulsion of illegal miners in the country’s largest indigenous territory, Yanomami, after five people were reportedly killed in two separate violent attacks in the region</p> <p>https://indianexpress.com/article/explained/explained-global/why-is-brazil-pushing-out-illegal-miners-from-its-yanomami-territory-8589973/</p>
<p>17.</p>	<p>Consider the following statements regarding Indian Ocean Dipole (IOD)</p> <p>1. IOD phenomenon is characterised by a difference</p>	<p>B</p>	<ul style="list-style-type: none"> ▪ The positive IOD refers to the warmer western basin of the Indian Ocean as compared to the Eastern basin. ▪ This year (2019), over the past month, strong easterly trade winds

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	<p>in sea surface temperature between tropical Western Indian Ocean and tropical Eastern Pacific Ocean.</p> <p>2. An IOD phenomenon can influence an El Nino's impact on the monsoon.</p> <p>Select the correct answer using the code given below:</p> <p>(a) 1 only (b) 2 only (c) Both 1 and 2 (d) Neither 1 nor 2</p>		<p>across the tropical Indian Ocean have aided the upwelling of cooler water in the eastern Indian Ocean (closer to Australia).</p> <ul style="list-style-type: none"> ▪ At the same time, warm waters off the Horn of Africa (West Indian Ocean) have caused an even greater temperature across the basin.
<p>18.</p>	<p>Consider the following statements</p> <p>1. All the states in India have already authorised the use of Hindi in proceedings in the High Court.</p> <p>2. State government has the power to declare any regional language as an alternative for the proceedings of the court. However, judgments, orders, and decree may be passed by the magistrate in English.</p> <p>Select the correct answer using the code given below:</p> <p>(a) 1 only.</p>	<p>B</p>	<ul style="list-style-type: none"> ▪ The language used in Courts in India has seen a transition over centuries with the shift from Urdu to Persian and Farsi scripts during the Mughal period which continued in subordinate courts even during the British Rule. The British introduced a codified system of law in India with English as the official language. Post-independence, Article 343 **of the Constitution of India provides that the official language of the Union shall be Hindi in the Devanagari script.** **However, it mandated that the English language will continue to be used for all official purposes of the Union for 15 years from the commencement of the Constitution of

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<p>(b) 2 only. (c) Both 1 and 2. (d) Neither 1 nor 2.</p>	<p>India. It further provides that the President may, during the said period, by order to authorise the use of the Hindi language for any official purpose of the Union, other than the English language.</p> <ul style="list-style-type: none">▪ About:<ul style="list-style-type: none">▪ Article 348(1)(a) states that unless Parliament by law provides otherwise, all proceedings before the Supreme Court and in every High Court shall be conducted in English.▪ Article 348(2) provides further that notwithstanding the provisions of Article 348(1), the Governor of a state may, with the previous consent of the President, authorise the use of Hindi or any other language used for any official purpose, in proceedings in the High Court.<ul style="list-style-type: none">▪ States of Uttar Pradesh, Bihar, Rajasthan and Madhya Pradesh have already authorised the use of Hindi in proceedings before their respective high courts and taking a cue, Tamil Nadu is also working in that direction – to authorise the use of Tamil before its high court.▪ A further provision states that nothing in this clause would apply to
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		<p>any judgement, decree, or order made by the High Court.</p> <ul style="list-style-type: none">▪ Therefore, the Constitution recognizes English as the primary language of the Supreme Court and the High Courts, with the caveat that when some other language is used in the proceedings of High Courts, judgments of the High Courts must be delivered in English.▪ Official Languages Act 1963:<ul style="list-style-type: none">▪ It empowers the Governor of a state to, with previous consent of the President, authorise the use of Hindi/the official language of the state, in addition to English, for the purpose of any judgement, decree or order passed by the High Court of that state.▪ It further provides that where any judgement/decreed/order is passed in any such language it shall be accompanied by a translation of the same in English.<ul style="list-style-type: none">▪ Read with the constitutional provisions, it is clear that primacy is given to English even by this Act.▪ The Official Languages Act makes no mention of the Supreme Court, where English is the only language in which proceedings are
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conducted.

Note:

- The litigant has the **fundamental right** to understand and participate in the courtroom proceedings as it arguably confers a bundle of rights under **Article 19 and Article 21**.
- The **litigant has the right to speak in the language he/she understands before the magistrate**. Similarly “right to justice” is also recognised under Article 21 of the Constitution.
- So, **the constitution has conferred the right to justice on the litigant** which further encompasses that he shall have the right to understand the whole proceedings and the judgement delivered.
- **Language of Subordinate Courts:**
 - The language of all courts subordinate to High Courts generally **remains the same as the language on the commencement of the Civil Procedure Code 1908**, till the state government determines.
 - There are two provisions regarding the use of language in subordinate courts. **Under Section 137 of the Code of Civil Procedure, the language of the district courts shall be similar to the language of the act.**
 - The **state government has the**

			<p>power to declare any regional language as an alternative for the proceedings of the court.</p> <ul style="list-style-type: none"> ▪ However, judgments, orders, and decree may be passed by the magistrate in English. ▪ The recording of the evidence shall be done in the prevailing language of the state. ▪ In case of a pleader being unacquainted with English, a translation into the language of the court shall be supplied to him on his request and the court shall bear such costs. ▪ Section 272 of the Code of Criminal Procedure 1973, states that the State government shall determine the language of all courts other than the High Courts. So, broadly it means that the language used in the district courts shall be in the regional language as the state government directs.
19.	<p>Consider the following</p> <ol style="list-style-type: none"> 1. Emamectin 2. Benzoate 3. Fenpyroximate 	B	<p>Both international and domestic buyers have rejected a series of tea consignments due to the presence of pesticides and chemicals beyond permissible limits.</p> <p>https://indianexpress.com/article/business/world</p>

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	<p>4. Hexaconazole</p> <p>5. Propiconazole</p> <p>6. Quinalphos.</p> <p>The above mentioned, which is recently seen in news refers to</p> <p>(a) Active Pharmaceutical Ingredient (API)</p> <p>(b) Pesticides</p> <p>(c) Fungicides</p> <p>(d) Weedicides</p>		<p>-market/high-pesticides-indian-tea-7951300/</p>
20.	<p>Consider the following statements:</p> <p>1. Union Territories are not represented in the Rajya Sabha.</p> <p>2. It is within the purview of the Chief Election Commissioner to adjudicate the election disputes.</p> <p>3. According to the Constitution of India, the Parliament consists of the Lok Sabha and the Rajya Sabha only.</p> <p>Which of the statements given above is/are correct?</p> <p>(a) 1 only</p> <p>(b) 2 and 3</p> <p>(c) 1 and 3</p>	D	

	(d) None		
21	<p>How many of these have Coal reserves in India?</p> <p>Consider the following river valleys.</p> <ol style="list-style-type: none"> 1. Damodar 2. Godavari 3. Mahanadi 4. Sone <p>Only one Only two Only three All the four</p>	D	<p>Over 97 per cent of coal reserves occur in the valleys of Damodar, Sone, Mahanadi and Godavari. They lie in the Jharkhand-Bengal coal belt and the important coal fields in this region are Raniganj, Jharia, Bokaro, Giridih, and Karanpura.</p> <ul style="list-style-type: none"> · Jharkhand has the first rank in coal reserves and its production. · Most of the coalfields in the state of Jharkhand are located in a narrow belt running in the east-west direction almost along 24 degrees north latitude from the Gondwana period. · The main coal mining centres of the state are Auranga, Bokaro, Dhanbad, Jharia, Giridh, Karanpur, Ramgarh and Hutar. · Jharia coalfield is one of the oldest and richest coal fields of India. · It lies south of Dhanbad and stores the best of metallurgical coal (bituminous) in the country.
22	<p>With reference to the Gross Domestic Product (GDP) of an economy, consider the following statements:</p> <ol style="list-style-type: none"> 1. Since 2015, India has been calculating the GDP at the basic prices, rather than at the market prices. 2. The GDP at the basic prices is derived by deducting the GDP at 	A	<p>https://iasgoogle.com/n/explain-the-difference-between-computing-methodology-of-indias-gross-domestic-product-gdp-before-the-year-2015-and-after-the-year-2015</p>

	<p>the market prices with net of product taxes and subsidies.</p> <p>Which of the statements given above is/are incorrect?</p> <p>(a) Only one (b) 2 only (c) Both 1 and 2 (d) Neither 1 nor 2</p>	
<p>23</p>	<p>The following activities could be possibly used to reduce global warming.</p> <p>1. Using giant mirrors in space</p> <p>2. Use of bio-char</p> <p>3. Increasing the amount of iron in the ocean.</p> <p>1 and 2 only 1, 2 and 3 1 only 1 and 3 only</p>	<p>B</p> <p>All the options given above are included under Climate engineering, also referred to as geo-engineering It is the deliberate and large-scale intervention in the Earth's climatic system with the aim of reducing global warming: -</p> <ul style="list-style-type: none"> ü Use of giant mirrors in space to reflect the sunlight so as to reduce the warming of earth. ü Aerosols in space also reflect the incoming sunlight and thus reduce the warming of earth. ü Biochar is essentially charcoal made through pyrolysis of biomass and then burying it mixed with the soil. With regard to long-term carbon storage potential, biochar can work on a large scale with, in most cases, no negative soil side effects, but increase its fertility. Some estimates show biochar having the potential to sequester one billion tons of CO₂ each year. ü Fertilizing the oceans with iron to stimulate phytoplankton blooms to absorb carbon dioxide from the atmosphere and export carbon to the deep sea is another possible option. <p>However, all these steps are still contested and yet</p>

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			remain a possible option to be taken up on a large scale.
24	<p>"Dirty Dozen" to refer to Persistent Organic Pollutants was coined by</p> <p>IUCN WWF UNEP GEF</p>	A	<p>These 12 chemicals include 8 pesticides (Aldrin, Chlordane, DDT, Dieldrin, Endrin, Heptachlor, Mirex and Toxaphene), two industrial chemicals (Polychlorinated biphenyls and hexachlorobenzene) and 2 unintended by products- dioxins and furans.</p> <p>https://www.unep.org/cep/persistent-organic-pollutants-pops-and-pesticides</p>
25	<p>Which one of the following statements does not apply to the system of Subsidiary Alliance introduced by Lord Wellesley?</p> <p>a) To maintain a large standing army at other's expense b) To keep India safe from Napoleonic danger c) To secure a fixed income for the Company d) To establish British paramountcy over the Indian States</p>	c	<p>The Company forced the states into a “subsidiary alliance”. According to the terms of this alliance, Indian rulers were not allowed to have their independent armed forces. They were to be protected by the Company, but had to pay for the “subsidiary forces” that the Company was supposed to maintain for the purpose of this protection. If the Indian rulers failed to make the payment, then part of their territory was taken away as penalty.</p> <p>· Napoleonic invasion of Egypt in the summer of 1798 offered Wellesly a useful tool to soften London's resistance to expansion, although he never believed for a moment that there was any danger of a French invasion of British India either over land from Egypt or a naval attack round the Cape of Good Hope. However, to assuage London's concerns he evolved the policy of "Subsidiary Alliance", which would only establish</p>

		<p>control over the internal affairs of an Indian state, without incurring any direct imperial liability.</p> <ul style="list-style-type: none">· There was no component of fixed income under this system. <p>Subsidiary Alliance</p> <p>Under the Subsidiary Alliance system, the Indian ruler who is in question would be protected against any external attacks. In response to it, the rulers should:</p> <ul style="list-style-type: none">· Post the company army in the capital of their state.· Provide capital or territory for the company for maintenance of the troops.· Expulsion of other Europeans from the state, whether they were employed in the army or civil service.· A European official is to be kept as a “resident” of the capital of the state. This meant, no direct correspondence is possible with other states, without the resident’s approval. <p>Chronology of States under Subsidiary Alliance</p> <p>States</p> <p>Hyderabad</p> <p>Mysore</p> <p>Tanjore</p> <p>Awadh</p> <p>Peshwa (Marathas)</p> <p>Scindia (Marathas)</p>
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		<p>Gaekwad (Marathas)</p> <p>Features of the Subsidiary Alliance Treaty</p> <ul style="list-style-type: none">· The initiation of the subsidiary alliance system was done by Lord Wellesley but introduced by the French Governor-General Duplex.· While entering into a subsidiary alliance with the British, the Indian rulers had to do away with their armed forces and accept the British forces in their territory.· He also had to pay for the maintenance of the British army and if failed to make the payments, a portion of his territory would be taken away and given to the British state.· In favor, the British would protect the Indian state against any form of foreign attack or any internal revolt.· The British promised non-interference in the internal affairs of Indian states, but this was hardly kept.· Indian states were not allowed to enter alliances with any other foreign power. He would also not employ any other foreign nationals other than Englishmen at his service.· Indian states were not allowed to enter any political connection with any other Indian state without the permission of the British.· The control and power of Indian rulers were hence lost concerning foreign affairs and the military. The Indian ruler became the British “protectorate”. <p>Effects of Subsidiary Alliance System</p>
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Due to the imposition of the subsidiary alliances, the Indian rulers were disbanded and many people were rendered unemployed. Many of the Indian states have lost independence and most parts of the Indian subcontinent were coming under the British sway. The first one to accept the subsidiary alliance was the Nizam of Hyderabad in 1798. Lord Clive introduced the subsidiary alliance in Oudh and the subsequent Treaty of Allahabad was signed; where the British promised Oudh territory from enemies like the Marathas.

Impact of Subsidiary Alliance System

- In case of failure of the ruler to make the payment, a portion of his territory was taken and ceded to the British, in the name of maintaining the troops.
- Subsidiary alliances acted as “Trojan horse tactics” in case of building the empire; which disarmed the Indian rulers and placed them under the protection of the British.
- The Governor-General placed a proxy in every Indian state which accepted a subsidiary alliance.
- It helped the company to maintain a large standing army at the expense of Indian princes.
- It gave the control of strategic and key positions in India and Britishers wielded considerable influence on the internal affairs of the Indian state. It also reduced the threat from the French army.

Various stages of the Subsidiary Alliance System

- In the foremost stage of the subsidiary alliance, the English asked for a fixed army from the native rulers in exchange for a fixed sum of money.
- Next stage, the English keep a permanent military force in the states of natives to assist the allies in exchange for an annual sum of money.
- In the third stage, the English asked not only to maintain a fixed subsidiary force but also to keep the force within the boundaries of the allies.
- In the final stage, a fixed and permanent force was kept within the territories of their allies, which was started by Lord Wellesley.

Subsidiary Alliance System Impacts

Nizam of Hyderabad

The Nizam of Hyderabad ties were broken with the French in 1798 and allying with the Marathas was made illegal if permission from the British was not sought. The Nizam was the first one to sign the contract of a Subsidiary Alliance.

Nawab of Awadh

Mysore became the second state under a subsidiary alliance in the year 1799 and in 1801, Nawab of Awadh was forced to join the Subsidiary Alliance policy.

Peshwa Baji Rao II

Peshwa Baji Rao II used the subsidiary alliances system to subdue his realm and by 1803 many Maratha states agreed to the policy like that of Scindia and Bhosle. Even the last of the confederation, the Holkars, also agreed on the requirements of the policy.

Treaty of Allahabad

Treaty was adopted by Lord Clive in Oudh and the Treaty of Allahabad was formed, in which the British committed to protecting the Oudh area from adversaries. Gorakhpur, Rohilkand, and Doab were also forcibly given the maintenance of troops by the company.

Advantages of the Subsidiary Alliance System on the Britishers

1. There were many advantages of the subsidiary alliance with the Britishers. Some of the benefits are mentioned below:
2. The French would no longer be employed in the courts of the native rulers, which was a complete advantage for the Britishers; as their influence was wiped out.
3. There was a bridge created between the native states, as most of the things were controlled by the Britishers under the subsidiary alliance policy.
4. The area of influence of the Britishers was expanded and the natives became entirely dependent on the Britishers due to the presence of British forces in their states. They were reduced to being the British “protectorate” under the policy of subsidiary alliances.
5. Britishers had the plus point of maintaining a large military force at the expense of native rulers and the territories of the native rulers would be utilized in an optimum way by the Britishers.
6. Maintenance of the subsidiary alliance policy was expensive and hence heavy financial pressure was felt by the natives; because of this natives had

			<p>to surrender most of their territories; which helped to expand their hold in the country.</p> <p>Disadvantages of Subsidiary Alliance System on the Native Rulers</p> <ul style="list-style-type: none"> · The subsidiary alliance came to be a big disadvantage for the native rulers. This can be pointed out from the following: · They slowly lost most of the fertile lands and important locations to that the British. · Financial pressure was huge from the subsidiary alliance which pushed people to live in poverty, for maintaining the army felt directly on the people. · According to the policy, Britishers couldn't interfere in the policies of the native rulers; however in reality they often interfered in every state matter. · The position and prestige of the rulers gradually felt in the eyes of the masses whom they governed and this resulted in the loss of their capacity and also personality to rule these states. · Subjects of the state were also no longer in control of the matters and couldn't dethrone incompetent rulers because the British protected the allied rulers against internal and external forces.
26	<p>Which of the above is/are incorrect w.r.t. Demographic Transition Theory?</p> <p>1. It studies the relationship between economic development</p>	C	<p>https://www.thehindu.com/opinion/lead/charting-a-path-for-the-population-committee/article67825927.ece#:~:text=With%20the%20TFR%20projected%20to,of%20the%20working%20Dage%20population</p>

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<p>and population growth.</p> <p>2. It can be used to describe and predict the future population of an area.</p> <p>a) 1 Only b) 2 only c) Both 1 and 2 d) Neither 1 nor 2</p>	<p>Demographic transition theory can be used to describe and predict the future population of any area. The theory tells us that population of any region changes from high births and high deaths to low births and low deaths as society progresses from rural agrarian and illiterate to urban industrial and literate society. These changes occur in stages which are collectively known as the demographic cycle.</p> <ul style="list-style-type: none"> ▪ Demographic transition is a term, first used by Warren S. Thompson (1929), and later on by Frank W. Notestein (1945), referring to a historical process of change that accounts for the trends in births, deaths, and population growth that occurred in today's industrialized societies, especially European societies. This process of demographic change began for the most part in the later 18th century. ▪ The demographic transition should not be regarded as a 'law of population growth but as a generalized description of the evolutionary process. In simple terms, it is a theory that attempts to specify general laws by which human populations change in size and structure during industrialization. It is frequently accepted as a useful tool in describing the demographic history of a country. ▪ The theory postulates a particular pattern of demographic change from high fertility and
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high mortality to low fertility and low mortality when society progresses from a largely rural agrarian and illiterate society to a dominant urban, industrial, literate and modern society.

- The model has four stages:
 - **pre-industrial,**
 - **urbanizing/industrializing,**
 - **mature industrial, and**
 - **post-industrial.**
- The theory of demographic transition deals with the transition from high to low birth rates and death rates.
- These stages of demographic transition can be explained with the help of diagram 3 given below:
- **Stage I is characterised by a high birth rate, death rate, and low rate of population growth.**
 - The first stage of demographic transition is characterized by high birth rates and high death rates.
 - The first stage of demographic transition was experienced in India, during the period of 1891-1921.
- **Stage II is characterised by a high and stationary birth rate, rapidly declining death rate, and very rapid increase in population.**

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			<ul style="list-style-type: none"> ▪ India entered Stage II after 1921. ▪ Stage III is characterised by a falling birth rate, low and stationary death rate, and a rapidly rising population. ▪ Stage IV is characterised by a low birth rate and low death rate with a stationary population at a low level.
27.	<p>Which one of the following statements is not true?</p> <p>a) Ghaggar is a tributary of river Saraswati, which ends in the Thar desert.</p> <p>b) Damodar river has a rift valley due to down warping.</p> <p>c) Nizam Sagar is situated on the Manjra River.</p> <p>d) Manjra River is a tributary of the Krishna.</p>	d	<p>Indira Gandhi Canal originated from Harike barrage at Sultanpur on Sutlej but Ghaggar is a tributary of river Saraswati, which ends in the Thar desert.</p> <p>Damodar is an east-flowing river with a rift valley due to down warping. A down warp denotes a segment of the earth's crust that is broadly bent downward.</p> <p>The Narmada, the biggest west streaming waterway of the Peninsula, ascends close to the Amarkantak scope of mountains in Madhya Pradesh.</p> <p>Nizam Sagar is the oldest dam in the state of Telangana, situated on the Manjra River. Manjira River is a tributary of the Godavari River, between Achampet and BanjePally villages of the Kamareddy district in Telangana, India. It is located at about 144 km (89 mi) north-west of Hyderabad.</p> <p>The Painganga River is the central stream of the Buldhana area, Hingoli region, Nanded locale, Yavatmal region, Chandrapur region, and Washim region in the Maharashtra state in India.</p>

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<p>28</p>	<p>Consider the following statements:</p> <p>1. Almost all the weather phenomena like rainfall, fog and hailstorm occur in Troposphere.</p> <p>2. Meteorites burn up in Mesosphere on entering from the space.</p> <p>Which of these statements are correct?</p> <p>a) 1 and 2 are correct b) Only 1 is correct c) Only 2 is correct d) None is correct</p>	<p>a</p> <p>Mesosphere: This is the third layer of the atmosphere. It lies above the stratosphere. It extends up to a height of 80 km. Meteorites burn up in this layer on entering from the space.</p> <p>Weather Phenomena in the Troposphere</p> <p>The troposphere is the lowest layer of the Earth's atmosphere, extending from the Earth's surface up to an average height of about 7-20 kilometers (4-12 miles). It is the layer in which weather phenomena occur. Here is a detailed explanation of the weather phenomena that occur in the troposphere:</p> <p>1. Rainfall</p> <p>Rainfall is a common weather phenomenon that occurs in the troposphere. It is the result of the condensation of water vapor in the air, which forms clouds. When the water droplets in the clouds become too large to be suspended in the air, they fall to the ground as precipitation, which can be in the form of rain, snow, sleet, or hail.</p> <p>2. Fog</p> <p>Fog is another weather phenomenon that occurs in the troposphere. It is a cloud that forms near the ground when the air is cooled to its dew point, causing the water vapor in the air to condense into water droplets. Fog reduces visibility and can be formed by various processes such as radiation fog, advection fog, and upslope fog.</p>
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			<p>3. Hailstorm</p> <p>Hailstorms are severe weather events that can occur in the troposphere. They are characterized by the formation of large hailstones, which are balls of ice that can range in size from small pebbles to golf balls or even larger. Hailstones are formed when updrafts in thunderstorms carry raindrops upward into extremely cold areas of the atmosphere, where they freeze and accumulate layers of ice.</p> <p>Eventually, the hailstones become too heavy for the updrafts to support and fall to the ground during a hailstorm.</p>
29	<p>Which of the following is correct definition of Biosphere reserves?.</p> <p>a) Biosphere Reserves are areas of terrestrial and coastal ecosystems some of which are internationally recognized within the framework of the Man and the Biosphere Programme of UNESCO.</p> <p>b) Biosphere Reserves are areas of terrestrial and coastal ecosystems some of which are internationally recognized within the framework of the Man and the Biosphere Programme of UNEP.</p> <p>c) Biosphere Reserves are areas of terrestrial and coastal ecosystems some of which are internationally recognized within the framework of</p>	a	A is an explanation

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	<p>the Man and the Biosphere Programme of UNDP.</p> <p>d) Biosphere Reserves are areas of terrestrial and coastal ecosystems some of which are internationally recognized within the framework of the Man and the Biosphere Programme of FAO.</p>		
30	<p>Consider the following statements w.r.t. Swadeshi movement:</p> <p>1. It was initiated by the moderates, but was taken over by the revolutionary nationalists at a later stage.</p> <p>2. It was marked by the mass mobilization through labour strikes.</p> <p>3. It promoted Atma Shakti.</p> <p>Which of the statements given above are correct?</p> <p>a) 1, 2 and 3 b) 1 only c) 1 and 2 only d) 3 only</p>	a	<p>The formal proclamation of the Swadeshi movement was made on August 7, 1905 at a meeting held at the Calcutta Town Hall. Leaders like Surendranath Banerjee, Ananda Mohan Bose, K. K. Mitra. Prithwischadra Ray attempted to bring the people of Bengal through addressing a huge gathering. Soon the movement spread to other parts of the country; in Pune and Bombay under Tilak, in Punjab under Lala Lajpat Rai and Ajit Singh, in Delhi under Syed Haider Raza and in Madras under Chaidamabaram Pillai.</p> <p>The Swadeshi Movement introduced the concept of boycotting foreign goods, which aimed to hit the british economically. it became a means for indians to assert their economic independence and protest against british policies. the movement also emphasized the importance of national education and enterprises, promoting self-rule (swaraj) and self-assurance (atma</p>
31	<p>What is/are true about “F-gases” that are seen in news</p>	a	<p>Fluorinated greenhouse gases (F-gases) highly contribute to global warming. Their warming</p>

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	<p>sometimes?.</p> <p>a) They are powerful greenhouse gases.</p> <p>b) They are not included in the basket of gases controlled by the Kyoto Protocol, as they occur naturally in the atmosphere</p> <p>c) Both (a) & (b)</p> <p>(d) Neither (a) nor (b)</p>		<p>impact is often thousands of times higher than that of carbon dioxide (CO₂). Initially introduced to replace ozone-depleting substances (ODS), F-gases were found to trap heat from the sun and thus make the planet warm up faster.</p> <p>Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs) and Sulphur Hexafluoride (SF₆) are collectively known as fluorinated greenhouse gases.</p>
32	<p>With reference to the President's rule, consider the following statements:</p> <p>1. It is imposed under Article 365 of the Indian Constitution.</p> <p>2. A proclamation imposing President's Rule must be approved by both the Houses of Parliament within 30 days from the date of its issue.</p> <p>Which of the statements given above is/are correct?</p> <p>A) 1 only</p> <p>B) 2 only</p> <p>c) Both 1 and 2</p> <p>d) Neither 1 nor 2</p>	A	<p>▪ President's Rule :</p> <p>Grounds of Imposition :</p> <p>Article 356 empowers the President to issue a proclamation if he is satisfied that a situation has arisen in which the government of a state cannot be carried on in accordance with the provisions of the Constitution. Notably, the president can act either on a report of the governor of the state or otherwise too (i.e., even without the governor's report).</p> <p>Article 365 says that whenever a state fails to comply with or to give effect to any direction from the Centre, it will be lawful for the president to hold that a situation has arisen in which the government of the state cannot be carried on in accordance with the provisions of the Constitution.</p> <p>Parliamentary Approval and Duration :</p> <p>A proclamation imposing President's Rule must be approved by both the Houses of Parliament within two months from the date of</p>

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its issue. Hence, Statement 2 is not correct.

However, if the proclamation of President's Rule is issued at a time when the Lok Sabha has been dissolved or the dissolution of the Lok Sabha takes place during the period of two months without approving the proclamation, then the proclamation survives until 30 days from the first sitting of the Lok Sabha after its reconstitution, provided the Rajya Sabha approves it in the meantime.

If approved by both the Houses of Parliament, **the President's Rule continues for six months.**

It can be **extended for a maximum period of three years** with the **approval of the Parliament, every six months.**

Consequences of President's Rule :

He/She can **take up the functions of the state government** and powers vested in the governor or any other executive authority in the state.

S/He can declare that the **powers of the state legislature are to be exercised by the Parliament.**

She/He can take all other necessary steps including the suspension of the constitutional provisions relating to anybody or authority in the state.

The President either suspends or dissolves the state legislative assembly. In case of dissolution, fresh elections are held for constituting a new legislative assembly in the state.

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33	<p>For the first time the draft of the Indian Constitution was framed by</p> <p>a) Dr. BR Ambedkar b) Jawaharlal Nehru c) KM Munshi d) BN Rau</p>	D	<p>First draft of the Indian constitution was prepared by B N Rau.</p> <ul style="list-style-type: none"> · Constituent Assembly had appointed 22 committees and assigned different issues to deal with. · These committees submitted their reports between April and August 1947. · Then based on these reports BN Rau, the constitutional advisor to the constituent assembly drafted the initial draft of the Indian constitution in October 1947. · That draft contained 240 clauses and 13 schedules. · Then this draft was forwarded to the Drafting Committee for further procedure.
34	<p>Which of the following is/are true ?.</p> <p>1. The Buguns are a major tribe living near Eaglenest Wildlife Sanctuary.</p> <p>2. Eaglenest Wildlife Sanctuary is in Arunachal Pradesh.</p> <p>(a) Only one (b) Only two (c) Both 1 and 2 (d) Neither 1 nor 2</p>	C	<p>https://www.deccanherald.com/india/arunachal-pradesh/arunachal-tribe-donates-land-for-critically-endangered-songbird-bugun-liocichla-2940635</p>
35	<p>Which of the following is characterized by a beehive shaped</p>	A	<p>Seljuk architecture is characterized by its use of stone and brick, its elaborate geometric and vegetal</p>

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curvilinear tower made up of layer upon layer of architectural elements and a cruciform ground plan?

- a) Nagara style of temple architecture
- b) Dravidian style of temple architecture
- c) Vesara style of temple architecture
- d) Seljuq style of temple architecture

decoration, and its towering minarets. Khilji Bas ruled from 1290 AD to 1320 AD and established the Saljuk style of architecture. The specialty of the construction of this period is the use of red sandstone. Along with this, the arched style gained prominence in this period. Seljuq architectural tradition is noticed in

1. The Alai Darwaza in the Qutub complex
2. Jamat Khana Masjid at Nizamuddin.

Aspect	Nagara	Dravidian
Region	Northern India	Southern India
Vimana (Tower) Shape	Curvilinear (Shikhara)	Rectangular (Gopuram)
Entrance	Generally single entrance on the east side	Multiple entrances, often elaborate and decorated
Mandapa (Pillared Hall)	Typically two types: Ardha Mandapa (front) and Maha Mandapa (main hall)	Typically larger and more elaborate with multiple halls
Material	Often built with sandstone or brick	Usually constructed with granite or other local

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			stone
	Garbhagriha (Inner Sanctum)	Smaller, usually square or circular	Generally larger and rectangular
	Decoration	Complex carvings and sculptures on outer walls	Elaborate sculptures and carvings showing deities and mythological scenes
	Influence	Influenced by Vedic and Indo-Aryan architecture	Influenced by Dravidian and Tamil architecture
	Examples	Kandariya Mahadeva Temple in Khajuraho, Somnath Temple in Gujarat	Brihadeeswarar Temple in Thanjavur, Meenakshi Temple in Madurai
	<p>Vesara is a combination of Nagara and Dravidian style of temple architecture styles. The term Vesara is believed to have been derived from the Sanskrit word vishra meaning an area to take a long walk. Many historian agree that the Vesara style originated in the what is today Karnataka. The trend was started by the Chalukyas of Badami (500-753AD) who built temples in a style that was essentially a mixture of the Nagara and</p>		

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		<p>the Dravida styles, further refined by the Rashtrakutas of Manyakheta (750- 983AD) in Ellora, Chalukyas of Kalyani (983-1195 AD) in Lakkundi, Dambal, Gadag etc. and epitomized by the Hoysalas (1000-1330 AD) The Hoysalas temples at Belur, Halebidu and Somnathpura are prime examples of this style.</p> <p><u>Unique features of Vesara style of temple architecture</u></p> <ul style="list-style-type: none">▪ Ornamentation: In case of ornamentation of temple walls and pillars, Chalukyan temple shows indigenous quality.▪ Transformation of Dravida tower: The Chalukyan builders modified the Dravida towers by minimizing the height of each storey and arranging them in descending order of height from base to top with much ornamentation in each storey.▪ Transformation of Nagara tower: Instead of inclined storey here modification is seen in the vertical shape of the tower▪ Two special features of Chalukya temples – Mantapa and Pillars:<ol style="list-style-type: none">1. Mantapa: The mantapa has two types of roof – domical ceilings (the dome like ceilings standing on four pillars are very attractive) or Square ceilings (these are vigorously ornamented with mythological pictures).2. Pillars: the miniature decorative pillars of Chalukya temples stands
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with its own artistic value.

- **Famous temples built with this style include:** Kallesvara temple, Kukkanur; Ramalingesvara temple, Gudur; Mahadeva temple, Ittagi; Kasivisvesvara temple, Lakkundi (and several other temples at Lakkundi); Brahmadeva temple, Savadi – notable for being fully stellate; Mallikarjuna temple, Sudi (and Joda-kalasha temple)

Influence of Nagara and Dravidian style of temple architecture on the style of Vesara

- The plan of shrine, subsidiary shrine, panchayatan style bears similarity to Nagara School.
- The plan of vestibule joining the sanctum to mantapa bears resemblance to Odishan temples.
- The most of the temple pillars in Karnataka region bears similarity to **sekhari and bhumija type of pillars in northern India.**
- The stepped diamond plan that is a plan of design arrangement as seen in **Chalukya temples is from northern region.**
- The most of the temples in kalyani portrays **Nagara articulation projecting stepped diamond or stellate plan.**
- The **Dravida influence is mainly visible in vimana** of the Chalukya temples in first part of the Chalukya rule
- Miniature decorative towers and ornamentation of walls in Chalukya temples

show combination of both Nagara and Dravida style.

Famous temples built during the reign of several empires in South India

Chalukyan architecture

- Their architecture consisted of admixture of Nagara and Dravidian styles.
- Temples built during this time can be found in- Aihole, Badami and Pattadakal
- Temples built during their time period do not have a covered ambulatory path
- The **Virupaksha temple** at **Pattadakal** built in imitation of Kailashnath temple is the jewel of Chalukyan architecture
- The **Rameshwaram** temple at **Ellora** built in 7th century was also built during the Chalukyan time period
- **Lad Khan temple and Durga temple** at Aihole are other noteworthy monuments built during this time period

Rashtrakuta architecture

- They were the successors of the Chalukyas
- Their temples were built mostly imitating the Chalukyan style
- The **Kailas temple at Ellora**, built during the time of Krishna II is the representative form of architecture of the empire
- The **Navalinga Temples in Kukkanur** is another temple built during this period

Hoysala temple architecture

- **Kesava temple at Belur** built during the time of Vishnuvardhana to commemorate his victory over the Cholas is a representative art of this period
- In this temple, there are multiple shrines grouped around a central pillared hall and laid out in the shape of an intricately-designed star
- Such an arrangement could be found in temples during this time in Halebid, Somnathpur and elsewhere
- **Hoysaleswara temple dedicated to Lord Shiva** is another famous temple built during this period

Vijayanagara architecture

- It is a vibrant combination of the Chalukya, Hoysala, Pandya, and Chola styles
- Local hard granite was the building material of choice, as it had been for the Badami Chalukyas.
- Vijayanagar temples are characterized by ornate pillared halls and rayagopurams, or monumental towers adorned with life-sized figures of gods and goddesses that stand at the entrance of the temple.
- Vijayanagar temples are also known for their carved pillars, which depict charging horses, figures from Hindu mythology, and yali (hippogriffs)

		<ul style="list-style-type: none"> ▪ Some of the larger temples are dedicated to a male deity, with a separate shrine intended for the worship of his female counterpart. Some famous temples exemplifying the Vijayanagar style include the Virupaksha Temple at Hampi and the Hazara Rama temple of Deva Raya I.
36	<p>Which of the following may result in loss of citizenship of an Indian citizen?</p> <ol style="list-style-type: none"> 1. If the citizen voluntarily acquires citizenship of another country. 2. If the citizen has been ordinarily resident out of India for six years continuously. 3. If the citizen has shown disloyalty to the Constitution of India. <p>a) 1 only b) 1 and 3 only c) 2 and 3 only d) 1, 2 and 3</p>	<p>b</p> <p>The Citizenship Act, 1955, prescribes three ways of losing citizenship whether acquired under the Act or prior to it under the Constitution, viz, renunciation, termination and deprivation: When an Indian citizen voluntarily (consciously, knowingly and without duress, undue influence or compulsion) acquires the citizenship of another country, his Indian citizenship automatically terminates. This provision, however, does not apply during a war in which India is engaged. Deprivation is a compulsory termination of Indian citizenship by the Central government, if:</p> <ul style="list-style-type: none"> · the citizen has obtained the citizenship by fraud: · the citizen has shown disloyalty to the Constitution of India: · the citizen has unlawfully traded or communicated with the enemy during a war; · the citizen has, within five years after registration or naturalisation, been imprisoned in any country for two years; and · the citizen has been ordinarily resident out of India for seven years continuously.

37	<p>In order to reduce or eliminate crowding out, expansionary fiscal policy can be accompanied by</p> <p>a) An increase in government spending b) A decrease in investment c) Expansionary monetary policy d) Contractionary monetary policy</p>	c	<p>Crowding out reduces the effectiveness of any expansionary fiscal policy, whether it be an increase in government purchases, an increase in transfer payments, or a reduction in income taxes.</p> <p>https://economictimes.indiatimes.com/definition/crowding-out-effect</p>
38	<p>Consider the following statements w.r.t. Alluri Sitaram Raju:</p> <p>1. He was against the Gandhiji's Non-Cooperation Movement.</p> <p>2. He asserted that India could be liberated only by the use of force.</p> <p>3. He made astrological predictions.</p> <p>Which of the statements given above are correct?.</p> <p>a) 2 only b) 1 and 2 only c) 1, 2 and 3 d) 1 and 3 only</p>	c	<p>Alluri Sitarama Raju was an Indian revolutionary involved in the Indian independence movement.</p> <ul style="list-style-type: none"> · He was born in present-day Andhra Pradesh in 1897 or 1898. · He became a sanyasi at the age of 18 and gained a mystical aura among the hill and tribal peoples with his austerity, knowledge of astrology and medicine, and his ability to tame wild animals. · At a very young age, Raju channelled the discontent of the hill people in Ganjam, Visakhapatnam, and Godavari into a highly effective guerrilla resistance against the British. · He became involved in anti-British activities in response to the 1882 Madras Forest Act, which effectively restricted the free movement of Adivasis (tribal communities) in their forest habitats and prevented them from practicing a traditional form of agriculture

		<p>known as podu (shifting cultivation).</p> <ul style="list-style-type: none"> · Rising discontent towards the British led to the Rampa Rebellion/Manyam Rebellion of 1922, in which he played a major part as a leader. · The Rampa Rebellion coincided with Mahatma Gandhi's Non-Cooperation Movement. He persuaded people to wear khadi and give up drinking. · But at the same time, he asserted that India could be liberated only by the use of force, not non-violence. · He was nicknamed "Manyam Veerudu" (Hero of the Jungle) by local villagers for his heroic exploits. · In 1924, Raju was taken into police custody, tied to a tree, and shot by a public execution, effectively ending the armed rebellion.
39	<p>Which of the following statements is/are correct?</p> <p>1. Lord Cornwallis introduced English as the literary and official language of India.</p> <p>2. Lord Macaulay put forth the Downward Filtration Theory.</p> <p>(a) Only one (b) Only two (c) Both 1 and 2 (d) Neither 1 nor 2</p>	<p>b</p> <p>Macaulay introduced English as the literary and official language of India.</p> <p>https://iasgoogle.com/editorial/lord-macaulay-s-minute-1835</p>

40	<p>Consider the following statements with reference to Minamata Convention:</p> <p>1. Global Environment Facility is the financial mechanism for Minamata Convention.</p> <p>2. The convention is hosted by the United Nations Environment Programme.</p> <p>Which of the statements given above is/are correct?</p> <p>(a) Only one (b) 2 only (c) Both 1 and 2 (d) Neither 1 nor 2</p>	c	<p>https://indianexpress.com/article/lifestyle/life-style/skin-bleaching-safety-tips-skincare-8509896/</p> <p>Minamata Convention is an international treaty signed in 2013. The convention aims to protect human health and the environment from the harmful effects of Mercury and its compounds. It caters to the release of mercury emissions and its releases into the environment. The convention is named after the Japanese City Minamata due to its symbolic importance as the city went through a devastating incident of Mercury poisoning. It is a UN treaty under the United Nations Environment Programme. India is a party to the convention and ratified it in 2018. India has ratified Minamata Convention in 2018.</p> <p>https://minamataconvention.org/en/implementation/gef</p> <p>Harmful products such as Hydroquinone, Kojic acid, and Mercury are present in many skin lightening products. Hydroquinone is considered as a primary topical ingredient for inhibiting melanin production because it reduces the skin's production of melanin which is responsible for skin color.</p> <p>Minamata Convention is an international treaty signed in 2013. The convention aims to protect the human health and environment from the harmful effects of Mercury and its compounds. It caters to the release of mercury emissions and its releases in the environment.</p>

Applications of Mercury:

- Thermometers and Barometers: Mercury's high coefficient of thermal expansion and easy visibility make it suitable for use in traditional thermometers and barometers.
- Chemical and Mining Processes: Mercury has been used in various chemical and mining processes, including the production of chlorine and mining of gold.

Electronics and Electrical Switches: Mercury-wetted switches are used in various electrical applications because mercury's conductivity and low resistance make it suitable for creating a reliable electrical connection.

Sources of Mercury Pollution:

Natural Sources:

- Volcanic eruptions release small amounts of mercury.
- Erosion of rocks and soil can release mercury into water bodies.

Anthropogenic Sources:

- Artisanal and Small-Scale Gold Mining (ASGM): ASGM is a major source of mercury pollution, where mercury is used to extract gold from ore.
- Mercury is used to extract gold particles from ores, creating amalgams that are later heated to evaporate the mercury, leaving behind gold.
- Artisanal gold mining operations are responsible for 37% of global mercury pollution.
- Industrial Processes: Various industries, such as chlorine production, cement manufacturing, and

		<p>waste incineration, emit mercury.</p> <ul style="list-style-type: none">· The cement industry is responsible for around 11% of global anthropogenic mercury emissions.· Waste Disposal: Improper disposal of e-waste products containing mercury, such as fluorescent bulbs and batteries, leads to mercury leaching into the environment. <p><u>Associated Impact:</u></p> <ul style="list-style-type: none">· Methylmercury accumulates in aquatic organisms like fish. People primarily come into contact with methylmercury through the consumption of fish and shellfish.· This compound carries a higher risk of causing Minamata disease, a condition characterized by sensory impairment, tremors, and both auditory and visual deficits.· This illness was initially observed in the residents of Minamata Bay, Japan, who consumed mercury-contaminated fish due to industrial waste pollution.· Note: Methylmercury and ethyl mercury differ significantly. While methylmercury is linked to health issues, ethylmercury is utilized as a preservative in certain vaccines and is not associated with health concerns. <p><u>Way Forward</u></p> <ul style="list-style-type: none">· Mercury-Removing Filters: Innovative mercury-removal filters for industrial emissions, wastewater treatment, and consumer products can be designed and deployed.· These filters could selectively capture and adsorb
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		<p>mercury particles from air and water streams.</p> <ul style="list-style-type: none"> · Phytoremediation: Phytoremediation, allows plants to absorb and accumulate mercury from soil, water, or sediments. These plants can then be harvested and safely disposed of, effectively removing mercury from the environment. · Implementing planetGOLD Program: There is a need for global implementation of the planetGOLD program, led by UNEP, which seeks to eliminate mercury from artisanal gold mining and create safer working conditions. It operates under the Minamata Convention on Mercury. · Funded by the Global Environment Facility, the program provides financial and technical support to help miners transition away from mercury use. · planetGOLD's mercury-free processing plant in Burkina Faso serves as a model for transitioning away from mercury.
41	<p>Which one of the following sequences was proposed by Darwin and Wallace for organic evolution?</p> <p>a) Overproduction, variations, constancy of population size, natural selection.</p> <p>b) Variations, constancy of population size, overproduction, natural selection.</p> <p>c) Overproduction, constancy of population size, variations, natural</p>	<p>a</p> <p>Darwin and Wallace proposed the theory of organic evolution, which is based on the following sequence:</p> <ol style="list-style-type: none"> 1. Overproduction: Organisms have the potential to produce more offspring than the environment can support. This leads to competition for limited resources. 2. Variations: Within a population, individuals exhibit variations in their traits. These variations can be inherited from parents or arise due to random mutations. 3. Constancy of population size: Despite the

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	<p>selection.</p> <p>d) Variations, natural selection, c) overproduction, constancy of population size.</p>		<p>overproduction of offspring, populations tend to remain relatively stable in size over time. This is due to limited resources and other factors such as predation, disease, and competition.</p> <p>4. Natural selection: In a population with variations, individuals with traits that are advantageous in their environment are more likely to survive and reproduce. This is known as natural selection. Over time, the frequency of advantageous traits increases in the population, leading to evolutionary change.</p>
42	<p>A dark room technician losing his job because fewer people use film cameras represents</p> <p>a) recessive unemployment b) frictional unemployment c) structural unemployment d) regressive unemployment</p>	c	<p>https://www.vedantu.com/commerce/unemployment-and-employment-generation</p>
43	<p>Consider the following statements:</p> <p>1. Swadesh Sevak Home was set up by G.D Kumar in Vancouver.</p> <p>2. Komagata Maru killing happened during the First World War.</p> <p>Which of the statements given above is/are correct?.</p> <p>(a) 1 only.</p>	c	<p>https://pib.gov.in/newsite/erecontent.aspx?relid=110116</p> <p>World War-I & Revolutionaries</p> <p>Onset of World War-I received a divided Indian response. While moderates & extremists supported British in the war, revolutionaries decided to utilise this opportunity.</p> <p>America</p> <ul style="list-style-type: none"> • G D Kumar set up Swadesh Sevak Home in Vancouver and launched a paper in Gurmukhi, Swadesh Sewak. • United India House in Seattle was set up

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<p>(b) 2 only (c) Both 1 and 2 (d) Neither 1 nor 2</p>	<p>in 1910 by G D Kumar and Taraknath Das.</p> <ul style="list-style-type: none"> · There was a restriction on Indian immigration into Canada in 1908. Taraknath Das, an Indian student, and one of the first leaders of Indian community in North America to start a paper (called Free Hindustan). He realized that while the British government was keen on Indians going to Fiji to work as a labourer for British planters, it did not want them to go to North America where they might be infected by ideas of liberty. · Centre of revolutionary activity soon shifted to the US, which provided a free political atmosphere. Ghadar party · It began in 1913 and conducted revolutionary activity in North America. It organized a weekly newspaper, The Ghadar with its headquarters in San Francisco. Ghadar means Revolt. On front page of each issue was a feature titled Angrezi Raj Ka Kacha Chittha or 'An Expose of British Rule.' · Most powerful impact was made by poems that appeared in The Ghadar, soon collected & published as Ghadar di Goonj and distributed free of cost. · Notable members were Lala Hardayal, Bhagwan Singh, Barkatullah, Kartar Singh, Bhai Parmanand etc. · Plans of Ghadarites were encouraged by two events in 1914—Komagata Maru incident and outbreak of First World War. · Komagata Maru was a ship carrying 370
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		<p>passengers, mainly Sikh and Punjabi Muslim would-be immigrants, from Singapore to Vancouver. Canadian authorities backturned them after two months of privation and uncertainty. It was believed that Canadian authorities were influenced by British government. The ship finally anchored at Calcutta in September 1914. Inmates refused to board the Punjab-bound train. In the ensuing conflict with police at Budge Budge near Calcutta, many died.</p> <ul style="list-style-type: none"> · Inflamed by this and with outbreak of First World War, Ghadar leaders decided to launch a violent attack to oust British rule in India. · Defence of India Act was passed in 1915 primarily to smash Ghadar movement. <p>Europe</p> <ul style="list-style-type: none"> · Berlin Committee for Indian independence was established in 1915 by Virendra Nath Chattopadhyay and Bhupendra Dutta.
44	<p>Consider the following statements regarding Histamine:</p> <ol style="list-style-type: none"> 1. It is an amino acid derivative. 2. It is a vasodilator. 3. It is released from mast cells. 4. It causes inflammation in the body. <p>Which of the statements given above is/are correct?</p>	<p>d</p> <p>https://www.thehindu.com/sci-tech/science/what-are-antihistamines/article68090729.ece</p> <p>A mast cell is the cell of connective tissue proper. Mast cells are like basophils of blood in structure and function. When an allergic substance enters into body mast cells secrete histamine. Because of histamine a part of blood comes out and is called exudate which causes swelling.</p> <p>A basophil is a type of white blood cell and a type of granulocyte. Basophils secrete histamine,</p>

	<p>a) 1 only b) 1 and 2 only c) 2 and 3 only d) 1, 2, 3 and 4</p>		<p>serotonin, heparin, etc., and are involved in inflammatory reactions.</p>
45	<p>The most complex level of organization among the following is present in</p> <p>a) Leech b) Ascaris c) Hydra d) Plasmodium</p>	a	<p>https://www.vedantu.com/question-answer/give-characteristics-of-all-phylums-under-class-11-biology-cbse-5f8e9240813eab67c14d614c</p> <p>Protozoa are unicellular, eukaryotic, heterotrophic organisms. They are either free-living or parasites. There are around 65000 species of protozoans categorised in different groups. They lack a cell wall. There are many different cell organelles, that perform various tasks performed by different organs in higher animals, e.g. mouth, anus, intestinal tract, etc. There are many protozoa, that cause various diseases in animals and humans, e.g. Plasmodium (malarial parasite), Trypanosoma (sleeping sickness), Trichomonas (trichomoniasis), etc.</p>
46	<p>Which of the following is/are found in Mohenjadaro?</p> <p>1. Mother Goddess 2. Male Torso 3. Painted Earthen Jar</p> <p>a) 1, 2 and 3 b) 2 only c) 1 & 3 only</p>	a	<p><u>The Male Torso:</u></p> <ul style="list-style-type: none"> · It is found at Harappa. · It is made up of red sandstone. · It is chiselled in the round. · It is remarkable for its naturalistic pose and sophisticated modeling, highlighting its physical beauty. · The head and arms of this figure were carved separately and socketed into the drilled holes of the

	<p>d) 2 & 3 only</p>	<p>torso.</p> <p><u>Mother Goddess</u></p> <p>The sculpture "Mother Goddess" is one of the most fascinating Indus Valley Civilisation figures. Fashioned by hand, this clay sculpture originates in Mohenjo-Daro, and dates back to around 2500 BCE. It is 22cm in height, 8.5cm in width, and 3.4cm in depth.</p> <p>The people of Harappa seemed to have worshipped the Mother Goddess and Shiva Pashupati. The Mother Goddess was also known as Shakti; perhaps, they believed her to be the source of all creation. They also worshipped the male god, Shiva Pashupati. He was the lord of the animals. Shiva was also worshipped in the form of Linga and Yoni.</p> <p><u>Painted Earthen Jar</u></p> <p>Found in Mohenjodaro, this jar is made on a potter's wheel with clay. The shape was manipulated by the pressure of the crafty fingers of the potter. After baking the clay model, it was painted with black colour. High polishing was done as a finishing touch. The motifs are of vegetals and geometric forms. Designs are simple but with a tendency towards abstraction.</p>
<p>47</p>	<p>“Ricardian Equivalence Proposition” is best described as</p> <p>a)taxation and borrowing are equivalent means of financing expenditure.</p> <p>b)wealth that can be stored in the form of money for future use</p>	<p>a</p> <p>Ricardian equivalence theory</p> <p>This theory was developed by David Ricardo in the early 19th century and later was elaborated upon by Harvard professor Robert Barro. For this reason, Ricardian equivalence is also known as the Barro-Ricardo equivalence proposition.</p> <p>It is an economic theory that says that financing</p>

	<p>c).a system in which the central bank allows the exchange rate to be determined by market forces. d)exchange of commodities without the mediation of money.</p> <hr/>	<p>government spending out of current taxes or future taxes (and current deficits) will have equivalent effects on the overall economy. Hence option (a) is the correct answer.</p> <p>This means that attempts to stimulate an economy by increasing debt-financed government spending will not be effective because investors and consumers understand that the debt will eventually have to be paid for in the form of future taxes.</p> <p>The theory argues that people will save based on their expectation of increased future taxes to be levied in order to pay off the debt and that this will offset the increase in aggregate demand from the increased government spending. This also implies that Keynesian fiscal policy will generally be ineffective at boosting economic output and growth.</p>
48	<p>How many of the above provisions of the Constitution of India have a bearing on Education?.</p> <ol style="list-style-type: none"> 1. Directive Principles of State Policy 2. Rural and Urban Local Bodies 3. Fifth Schedule 4. Sixth Schedule 5. Seventh Schedule <p>a) Only four</p>	<p>c Article 45- Provides for early childhood care and education below the age of six years.</p> <ul style="list-style-type: none"> ▪ Under Schedule 11 of the constitution, the Panchayati raj institutions have allowed 29 subjects to work in their local areas. Education is one of them. Similarly, Schedule 12 of the constitution provides for 18 subjects and education is included here also. ▪ The Fifth Schedule of the Indian Constitution deals with the administration and management of Scheduled areas and

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<p>b) Only two c) All the five d) Only three</p>	<p>Scheduled tribes where tribal communities are in majority.</p> <ul style="list-style-type: none">▪ This Schedule aims to hold the state accountable for the advancement of tribals' educational and economic objectives. It also attempts to give them social justice and protect them from all forms of exploitation.▪ According to the Sixth Schedule Autonomous District Councils (ADC) were established in four northeastern states, namely Assam, Meghalaya, Tripura and Mizoram.▪ These councils within their respective districts, shall have power to make laws with respect to education, primary and secondary and vocational training.▪ The seventh schedule of the constitution deals with the distribution of powers among states and centres via three lists i.e State List, Center List and Concurrent List.▪ 42nd amendment Act 1976 shifted below mentioned five subjects from the State list to Concurrent List:<ul style="list-style-type: none">▪ Education▪ Forests▪ Protection of wild animals and birds▪ Weights and measures and▪ Administration of justice, constitution and organisation of all courts except the Supreme Court and the High
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			Courts
49	<p>Which of the following is known as “Tight Oil”?</p> <p>a) Coal Bed Methane b) Methane Hydrates c) Shale Gas d) Syngas</p>	c	<p><u>Shale Oil</u></p> <p>Shale gas is natural gas, one of several forms of unconventional gas (also known as methane or CH₄).</p> <p>It is trapped within shale formations with low permeability, which is fine-grained sedimentary rock which acts as its source as well as reservoir. It is an unconventional oil produced from oil shale rock fragments by pyrolysis, hydrogenation, or thermal dissolution.</p> <p>These processes convert the organic matter within the rock into synthetic oil and gas.</p> <p><u>Difference from crude oil:</u></p> <p>The key difference between shale oil and conventional crude is that the former, also called ‘tight oil’, is found in smaller batches, and deeper than conventional crude deposits.</p> <p>Its extraction requires creation of fractures in oil and gas rich shale to release hydrocarbons through a process called hydraulic fracking.</p> <p><u>Largest producers:</u></p> <p>Russia and the US are among the largest shale oil producers in the world, with a surge in shale oil production in the US having played a key role in turning the country from an importer of crude to a net exporter in 2019.</p> <p>A number of US shale exploration firms, including Halliburton, have faced litigation from citizens living in areas adjacent to shale production sites</p>

		<p>who have claimed that hydraulic fracking has contributed to groundwater contamination.</p> <p><u>Shale oil extraction methods:</u></p> <p>Mined shale oils are transported to the processing plants, heated to 500OC, and oil comes out from these rocks.</p> <p>Situ technique: Oil shale is broken by explosion and Kerogen comes out like crude oil from these rocks.</p>
50	<p>Which of the following statements regarding laterite soils of India are correct?.</p> <p>1. They are generally red in colour.</p> <p>2. They are rich in nitrogen and potash.</p> <p>3. They are well-developed in Rajasthan and UP.</p> <p>4. Tapioca and cashew nuts grow well on these soils.</p> <p>a) 1, 2 and 3 b) 2, 3 and 4 c) 1 and 4 d) 2 and 3 only</p>	<p>c</p> <p>Lateritic Soils</p> <ul style="list-style-type: none"> ▪ Laterite soils are mostly the end products of weathering. ▪ They are formed under conditions of high temperature and heavy rainfall with alternate wet and dry periods. ▪ Heavy rainfall promotes leaching (nutrients gets washed away by water) of soil whereby lime and silica are leached away and a soil rich in oxides of iron and aluminium compounds is left behind. ▪ 'Laterite' means brick in Latin. They harden greatly on losing moisture. ▪ Laterite soils are red in colour due to little clay and more gravel of red sand-stones. ▪ Chemical composition of Laterite – Lateritic Soils

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- Laterite soils are rich in bauxite or ferric oxides.
- **They are very poor in lime, magnesia, potash and nitrogen.**
- Sometimes, the phosphate content may be high in the form of iron phosphate.
- In wetter places, there may be a higher content of humus.
- **Distribution of Laterite – Lateritic Soils**
 - Laterite soils cover an area of 2.48 lakh sq km.
 - A continuous stretch of laterite soil is found on the **summits of Western Ghats at 1000 to 1500 m above mean sea level, Eastern Ghats, the Rajmahal Hills, Vindhyan, Satpuras and Malwa Plateau.**
 - They also occur at lower levels and in valleys in several other parts of the country.
 - They are well developed in south Maharashtra, parts of Karnataka etc. and are widely scattered in other regions.

			<ul style="list-style-type: none"> ▪ Crops in Laterite – Lateritic Soils <ul style="list-style-type: none"> ▪ Laterite soils lack fertility due to intensive leaching. ▪ When manured and irrigated, some laterites are suitable for growing plantation crops like tea, coffee, rubber, cinchona, coconut, arecanut, etc. ▪ In some areas, these soils support grazing grounds and scrub forests.
51	<p>Consider the following statements w.r.t. Farmers Distress Index.</p> <ol style="list-style-type: none"> 1. The index will assign a value between 0 and 10 to indicate the level of distress. 2. The index is designed by NSSO. 3. The index is based on 21 questions mapped against seven indicators. <p>How many of the statements given above is/are correct?.</p> <p>a) Only one b) Only two c) All the three d) None of these</p>	a	<p>The index will assign a value between 0 and 1 to indicate the level of distress.</p> <p>https://www.downtoearth.org.in/news/agriculture/explainer-what-is-the-farmers-distress-index--90439</p>

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52	<p>Bhaga, Bhoga, Kara and Hiranya refer to</p> <p>a) handicrafts b) paintings c) taxes d) crops</p>	c	
53	<p>With reference to the Indian economy, consider the following statements:</p> <p>1. An increase in Nominal Effective Exchange Rate (NEER) indicates the appreciation of rupee.</p> <p>2. An increase in the Real Effective Exchange Rate (REER) indicates an improvement in trade competitiveness.</p> <p>3. An increasing trend in domestic inflation relative to inflation in other countries is likely to cause an increasing divergence between NEER and REER.</p> <p>Which of the above statements are correct?</p> <p>a) 1 and 2 only b) 2 and 3 only c) 1 and 3 only d) 1, 2 and 3</p>	c	<p>1. An increase in Nominal Effective Exchange Rate (NEER) indicates the appreciation of the rupee.</p> <p>This statement is correct. The NEER is an index that measures the value of a country's currency relative to a basket of other major currencies, weighted by their relative trade with the country. An increase in NEER means that the Indian rupee has appreciated in value compared to this basket of currencies, which implies that it takes fewer rupees to buy the same amount of foreign currency.</p> <p>2. An increase in Real Effective Exchange Rate (REER) indicates an improvement in trade competitiveness.</p> <p>This statement is not necessarily correct. The REER adjusts the NEER for inflation differentials between India and its trading partners. An increase in REER suggests that the Indian currency has appreciated in real terms, which could make Indian exports more expensive and imports cheaper, potentially reducing trade competitiveness. However, it is also possible that an increase in REER reflects higher productivity or</p>

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			<p>quality improvements in a country's goods and services, which could enhance competitiveness. Therefore, an increase in REER does not unambiguously indicate an improvement in trade competitiveness.</p> <p>3. An increasing trend in domestic inflation relative to inflation in other countries is likely to cause an increasing divergence between NEER and REER.</p> <p>This statement is correct. If India experiences higher inflation than its trading partners, the NEER may not change much, but the REER will increase because the domestic currency's real value is eroding due to higher prices. This divergence occurs because the REER is adjusted for inflation, while the NEER is not.</p>																		
54	<p>How many of the following battles was/were fought by Babur?.</p> <ol style="list-style-type: none"> 1. First Battle of Panipat 2. Battle of Khanwa 3. Battle of Chanderi 4. Battle of Ghaghra <p>a) Only one b) Only two c) Only three d) All the four</p>	d	<table border="1"> <thead> <tr> <th>Battle</th> <th>Year</th> </tr> </thead> <tbody> <tr> <td>First Battle of Panipat</td> <td>1526</td> </tr> <tr> <td>Battle of Khanwa</td> <td>1527</td> </tr> <tr> <td>Battle of Chanderi</td> <td>1528</td> </tr> <tr> <td>Battle of Ghaghra</td> <td>1529</td> </tr> <tr> <td>Battle of Kalinjar</td> <td>1531</td> </tr> <tr> <td>Battle of Gujarat</td> <td>1535</td> </tr> <tr> <td>Battle of Surajgarh</td> <td>1534</td> </tr> <tr> <td>Battle of Chunargarh</td> <td>1538</td> </tr> </tbody> </table>	Battle	Year	First Battle of Panipat	1526	Battle of Khanwa	1527	Battle of Chanderi	1528	Battle of Ghaghra	1529	Battle of Kalinjar	1531	Battle of Gujarat	1535	Battle of Surajgarh	1534	Battle of Chunargarh	1538
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	Battle of Chausa	1539	H
	Battle of Kannauj	1540	H
	Battle of Sammel	1543	S
	Battle of Kalinjar	1545	S
	Battle of Machhiwara	1555	H
	Battle of Sirhind	1555	H
	Second Battle of Panipat	1556	A
	Akbar's Military Campaigns		
	Malwa	1561	A
	Chunar	1561	A
	Gondwana	1564	A
	Merta	1562	A
	Mewar	1567	A
	Battle of Haldighati	1576	A
	Ranthambore	1569	A
	Kalinjar	1569	A
	Marwar	1570	A
	Jaisalmer	1570	A
	Bikaner	1570	A
	Gujarat	1572	A
	Surat	1573	A

			<p>Paatan 1573</p> <p>Kabul 1581</p> <p>Kashmir 1586</p> <p>Sindh 1591</p> <p>Orissa 1591</p> <p>Khandesh 1591</p> <p>Balochistan 1595</p> <p>Kandhar 1595</p> <p>Ahmednagar 1597</p> <p>Asirgarh 1601</p>
55	<p>Which of the following rulers was not a contemporary of Akbar?.</p> <p>a) Elizabeth of England</p> <p>b) Shakespeare</p> <p>c) Henry IV of France</p> <p>d) Victoria of England</p>	d	<p>Akbar's period, 1556 to 1605, was the period of great rulers. His nearest contemporary was Elizabeth of England. Shakespeare was living around this time. Henry IV of France, first ruler of the Bourbon dynasty, and Abbas the Great of Persia, the strongest ruler of the Safavid dynasty, were ruling their kingdoms during his period. The revolt of the Netherlands against Spanish rule in Europe that commenced during this period lasted for about eighty years and ended in 1648.</p>
56	<p>Consider the following statements regarding Balance of Payments (BoP).</p>	b	<p>The compilation and dissemination of BoP data is the prime responsibility of RBI.</p> <p><u>Balance of Payment</u></p>

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1. NRI deposits are calculated under Capital Accounts while Private Remittances are calculated under Current Account.

2. The compilation and dissemination of BoP data is the prime responsibility of Central Statistical Organisation.

3. If an Indian investor earns interest or dividend in his investment abroad, that will be included in the current account of India.

Which of the above statement(s) is/are correct?.

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

- Balance of Payment (BoP) of a country can be defined as a systematic statement of all economic transactions of a country with the rest of the world during a specific period usually one year.
- It indicates whether the country has a **surplus or a deficit on trade.**
 - When exports exceed imports, there is a **trade surplus** and when imports exceed exports there is a **trade deficit.**
- **Purposes of calculation of BoP:**
 - Reveals the **financial and economic status** of a country.
 - Can be used as an **indicator** to determine whether the **country's currency value is appreciating or depreciating.**
 - Helps the Government to decide on **fiscal and trade policies.**
 - Provides important information to analyze and understand the economic dealings of a country with other countries.
- **Components of BoP:**
 - For preparing BoP accounts, economic transactions between a country and rest of the world are **grouped under - Current account, Capital account and Errors and Omissions.** It also

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		<p>shows changes in Foreign Exchange Reserves.</p> <ul style="list-style-type: none">▪ Current Account: It shows export and import of visibles (also called merchandise or goods - represent trade balance) and invisibles (also called non-merchandise).· Invisibles include services, transfers and income.<ul style="list-style-type: none">▪ Capital Account: It shows a capital expenditure and income for a country.· It gives a summary of the net flow of both private and public investment into an economy.· External Commercial Borrowing (ECB), Foreign Direct Investment, Foreign Portfolio Investment, etc form a part of capital account.<ul style="list-style-type: none">▪ Errors and Omissions: Sometimes the balance of payment does not balance. This imbalance is shown in the BoP as errors and omissions. It reflects the country's inability to record all international transactions accurately.▪ Changes in Foreign Exchange Reserves: Movements in the reserves comprises changes in the foreign currency assets held by the Reserve Bank of India (RBI) and also in Special Drawing Rights (SDR) balances.▪ Overall the BoP account can be a
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			<p>surplus or a deficit. If there is a deficit then it can be bridged by taking money from the Foreign Exchange (Forex) Account.</p>
57	<p>Which of these statements are correct?</p> <p>1. At the South Pole, the sun rises on September 21 and does not set until March 22, the following year.</p> <p>2. The midnight sun occurs because the earth's axis tilts toward the sun in summer and away from the sun in winter.</p> <p>3. Above the Arctic Circle, the sun never rises on the day of the winter solstice.</p> <p>a) 1 and 2 b) 1 and 3 c) 2 and 3 d) 1, 2 and 3</p>	d	<p>The darkest time of year at the North Pole is the Winter Solstice, approximately December 21. There has been no sunlight or even twilight since early October. The darkness lasts until the beginning of dawn in early March.</p> <p>Equinox vs Solstice</p> <p>Equinox</p> <p>Time of the year when the sun is nearest to the equator giving equal lengths of day and night.</p> <p>An equinox occurs at the start of the spring and fall.</p> <p>Occurs on March 21 (Vernal equinox) and on September 21 (Autumnal equinox).</p>
58	<p>A golden chain having 60 bells and weighing several "maunds" was fastened between the Shahburj of Agra fort and a stone pillar raised on the banks of river Jamuna. People seeking justice were required to pull this chain in order to put forth their</p>	b	<p>Jahangir was the fourth Mughal Emperor who ruled from 1605 until his death in 1627. He is famous for his 'golden chain of justice'. A golden chain having 60 bells and weighing several 'maunds' was fastened between the Shahburj of Agra fort and a stone pillar raised on the banks of river Jamuna. People seeking justice were required to pull this chain in order to put forth their</p>

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	<p>complaints or petitions to the King. Who set up this?.</p> <p>a)Aurangazeb b)Jahangir c)Akbar d)Shahjahan</p>		<p>complaints or petitions to the King. This act speaks highly of the importance of justice during his reign.</p>
<p>59</p>	<p>. Consider the following statements w.r.t. color perception by Human Eye.</p> <p>1. The colour white comprises seven colours.</p> <p>2. When red, green, and blue lights are mixed in equal amounts, they produce black light.</p> <p>Which of the statements given above is/are correct?</p> <p>a) Only 1 b) Only 2 c) Both 1 and 2 d) Neither 1 nor 2</p>	<p>A</p>	<p>Additive and subtractive color mixing are two different ways in which colors are combined to create new colors.</p> <ul style="list-style-type: none"> · Additive color mixing occurs when different colors of light are combined. This is the process used in devices such as computer monitors, television screens, and stage lighting. In additive color mixing, the primary colors are red, green, and blue (RGB). When these colors are combined at full intensity, they create white light. By adjusting the intensity of each primary color, a wide range of colors can be created. · Subtractive color mixing, on the other hand, occurs when different colors of pigment or dye are mixed together. This is the process used in traditional art, printing, and color mixing in everyday objects. The primary colors in subtractive color mixing are cyan, magenta, and yellow (CMY). When these pigments are mixed together, they absorb certain wavelengths of light, resulting in the perception of different colors. When all three primary colors are combined, they absorb all wavelengths and appear black. · In printing, a fourth color, black (K), is often

		<p>added to the CMY model to improve the reproduction of dark colors and to save on the use of colored inks. This is known as the CMYK color model.</p> <ul style="list-style-type: none"> · The physics behind these processes involves the way light and pigments interact with each other and with our eyes. Additive color mixing involves the combination of different wavelengths of light, while subtractive color mixing involves the absorption and reflection of light by pigments. · A Newton's disc can be created by painting a disc with the seven different colours: violet, indigo, blue, green, yellow, orange and red. When the disc is rotated, it appears white. This explains that white light consists of seven colours. · The phenomenon due to which white light splits into seven colours on passing through a prism is called dispersion. White light is made up of seven bands of colors each having different wavelengths. Upon passing through a medium, each of the colors travels at different speeds and hence has different angles of refraction leading to the splitting of the light i.e. dispersion.
60	<p>. Which of the following statements is/are correct w.r.t. "The Spices Board"?</p> <ol style="list-style-type: none"> 1. It is an executive body. 2. It functions under under the Ministry of Food Processing Industries. 	<p>d</p> <p>https://www.thehindu.com/news/national/why-mdh-everest-spices-are-under-international-scrutiny-explained/article68130961.ece</p> <p>The Spices Board under the Ministry of Commerce and Industry, is a flagship regulatory and export promotion agency for Indian spices.</p> <p>The board is headquartered in Kochi.</p>

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	<p>Select the correct answer using the code given below:</p> <p>a) Only 1 b) Only 2 c) Both 1 and 2 d) Neither 1 nor 2</p> <hr/>		<p>[Kochi is known by a lot of nicknames such as God's Own Country and the Queen of the Arabian Sea. It has also been known as the Spice Capital of the world, since ancient times.]</p> <p>Spices Board was constituted in 1987 under Spices Board Act 1986 with the responsibility of production/development of cardamom and export promotion of 52 spices shown in the schedule of the Act.</p> <p>The Board functions an international link between the Indian exporters and the importers abroad and it has been involved in various activities which touch upon every segment of the spices sector.</p>
61	<p>“Amaterasu” seen in news refer to a/an</p> <p>A) martian rock</p> <hr/> <p>b) atomic mineral c) cosmic rays d) variety of Pearl</p>	a	<p>https://www.thehindu.com/sci-tech/science/amaterasu-cosmic-ray-physics-explained/article67690711.ece</p>
62	<p>Consider the following statements.</p> <p>1. Upwelling elevates cold, nutrient-rich water to the euphotic zone, the upper layer of the ocean.</p> <p>2. During an El Niño event, westward-blowing trade winds weaken along the Equator.</p>	c	<p>https://iasgoogle.com/current_affair/june-27-current-affairs-2023</p>

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	<p>Which of the above statements is/are true?</p> <p>a) Only 1 b) Only 2 c) Both 1 and 2 d) Neither 1 nor 2</p>		
63	<p>Consider the following statements about Narrow and Broad Money:</p> <p>1. M1 includes financial assets, such as bonds.</p> <p>2. M2 is the most liquid and easiest for transactions.</p> <p>3. M4 is the least liquid.</p> <p>4. M3 is the most used measure of money supply.</p> <p>Which of these is/are true?.</p> <p>a) 3 only b) 2 and 4 only c) 3 and 4 only d) 1, 2 and 4</p>	c	<p>M1 = Currency with the Public + Demand Deposits with the Banking System + 'Other' Deposits with RBI*</p> <p>=Currency with the Public + Current Deposits with the Banking System + Demand Liabilities Portion of Savings Deposits with the Banking System + 'Other' Deposits with RBI*</p> <p>M2=M1+ Time Liabilities Portion of Savings Deposits with the Banking System + Certificates of Deposit issued by Banks + Term Deposits of residents with a contractual maturity of up to and including one year with the Banking System</p> <p>=Currency with the Public + Current Deposits with the Banking System + Savings Deposits with the Banking System + Certificates of Deposits issued by Banks + Term Deposits of residents with a contractual maturity up to and including one year with the Banking System + 'Other' Deposits with RBI*.</p> <p>M3=M2+ Term Deposits of residents with a contractual maturity of over one year with the Banking System + Call/Term borrowings from 'Non-depository' financial corporations by the Banking System.</p> <p>Note: * 'Other' deposits with RBI comprise mainly:</p>

		<p>(i) deposits of quasi-government and other financial institutions including primary dealers, (ii) balances in the accounts of foreign Central banks and Governments, (iii) accounts of international agencies such as the International Monetary Fund, etc.</p> <p>M1 and M2 are known as narrow money while M3 and M4 are known as broad money. These measures are in decreasing order of liquidity. M1 is most liquid and easiest for transactions whereas M4 is least liquid of all. M3 is the most commonly used measure of money supply.</p>
64	<p>Consider the following statements w.r.t. Pro-cyclical Fiscal Policy.</p> <p>1. Government spending increases and taxes decrease in a recession.</p> <p>2. Pursuing a pro-cyclical fiscal policy could raise macroeconomic volatility.</p> <p>Which of the statements given above is/are correct?</p> <p>a) Only 1 b) Only 2 c) Both 1 and 2 d) Neither 1 nor 2</p>	<p>b</p> <p>https://indianexpress.com/article/opinion/columns/in-a-pre-election-budget-stability-not-political-gestures-9139712/</p>
65	<p>Which one of the following statements is not correct?</p>	<p>d</p> <p>Charter Act of 1853 was passed when charter act of 1833 timed out and had to be renewed. It was</p>

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<p>a) The charter act of 1793 enabled the governor general to exercise the same authority in Madras and Bombay presidencies as he did in Bengal.</p> <p>b) The charter act of 1813 laid down the undoubted sovereignty of the crown in and over the possessions of the east India company.</p> <p>c) The charter act of 1833 took away from the subordinate presidencies all powers of making law.</p> <p>d) The charter act of 1853 included Indians in the Legislative Council.</p>	<p>renewed but no substantial changes were made. However, this was for the first time, that this charter act, unlike other charter acts, did not fix any limit for the continuance of the administration of the company in India. The act provided that the Indian territories will remain under the Governance of the company, until the parliament otherwise directed.</p> <p>The Charter Act of 1853 has some of the everlasting impression as it marked the journey of the Parliamentary system in India and became an integral part of the Indian polity and constitution in the forthcoming years.</p> <p>Several issues got their peak in 1853 and the situation compelled to demand the decentralization of powers thus empowering the local Indian citizen's share in business and management. The trade and business underwent several delays, unnecessary expenditures as the control and regulating powers of dispatch were under the Court of directors. There were annexation of Sindh and Punjab territory and many other political changes took place after the act of 1833. There were certain veiled whispers and allegations on the Governor-General of India being in favour of Bengal and making certain favourable decisions for them. The above-mentioned reasons and the prevalence at that time compelled the British parliament to renew the East India Company's charter as in 1853. Two Committees were set up and based on their reports, the Charter Act 1853 was formulated.</p>
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Charter Act of 1853

- The Charter Act of 1853 was a significant legislative enactment during British rule in India.
- It aimed to reform various aspects of governance and administration in British India.
- This act introduced significant changes, particularly in the realm of education and legislative powers.

Features

- The Charter Act of 1853 introduced several notable features aimed at reforming governance in British India.
- It expanded the powers of legislative councils and introduced a system of open competition for civil service recruitment.
- The act also addressed issues related to Indian finances and judicial administration.
- Understanding the features of the Charter Act of 1853 is crucial for comprehending its impact on the administrative and legislative framework in colonial India.

Key Provisions

Changes to the Legislative Powers:

- The **executive functions were separated** from the Governor-legislative General's Council for the first time.
- It **created a distinct Legislative council (known as the Indian Central Legislative council)** which ordered the **addition of six new members to the council making it 12 members in total**. The twelve members were: one Commander-in-Chief, one Governor-General, four

		<p>members of the Governor-General's Council, one judge of the Calcutta Supreme court, one Chief Justice of the Supreme Court at Calcutta, and four other representative members having the criteria of being company's servants with at least 10 years tenure and should be appointed by the local legislature of Bengal, Madras, North-Western Provinces, and Bombay.</p> <ul style="list-style-type: none">· The right to veto a bill was transferred to Executive Council as it was earlier with the legislative council.· It was during this charter that the Legislative council was considered as a distinct government body and required specialized procedures.· The legislative matter was carried out in public discussion and the bills were passed to the Select Committee rather than to any individual member. <p>Changes to the Salary Provision:</p> <ul style="list-style-type: none">· The salaries of the Boards of controls, its Secretary, and other officers would be approved by the British government and payable by the East India Company.· The court of directors number was reduced from 24 to 18 and out of it, 6 members were to be nominated by the British Crown. Furthermore, the court of directors' powers was weakened in terms of their patronage, subjects of the high posts were brought to equal opportunities through competitive exams and thus selection was made irrespective of their caste, creed, religion, etc.· This scheme was further highlighted by the
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		<p>formation of The Macaulay Committee of 1854, constituting the Indian Civil exams sets and procedures.</p> <ul style="list-style-type: none">· The Court of Directors was assigned with the power of forming a new Presidency, altering the state boundaries, incorporating the newly acquired state. This provision thus empowered the formation of a separate Lieutenant Governorship for Punjab, 1859. <p>Changes to the Law Commission Powers and Provision</p> <ul style="list-style-type: none">· The British Crown now had the power to appoint a Law Commission in England as per the Charter Act 1853.· The law commission was assigned with the powers and duty to analyse the papers, reports, drafts of the Indian Law Commission.· The members of the Law Commission were to be elected from the Governor-General's Executive Council and for this purpose, the Council membership was extended by six members.· The representatives in the Provinces should be civil servants for more than or at least 10 years. <p>Changes to the Powers for the Presidency</p> <ul style="list-style-type: none">· As per the Charter Act 1853, the Governor-General of Bengal Presidency appointment provisions were made. Until the Bengal Governor-general was appointed, the Court of Directors had the power to appoint a civil service candidate with 10 years of service or more as the Lieutenant-Governor of the province.
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		<ul style="list-style-type: none">· This empowerment of altering the existing province boundaries and incorporation of acquired states, to constitute a new province by the Court of Directors was brought into effect with the creation of Punjab into a Lieutenant-Governorship.· This empowerment further leads to the formation of Central Province, Assam, and Burma. <p>Changes to the Civil service (Open Competition)</p> <ul style="list-style-type: none">· It laid down the foundation of civil service exams and opened the gates of a fair competition system for civil servants' recruitment and selection.· Thus as per the provision for ICS (Indian Civil Service), it opened the gates to Indians as well as the service was made available to Indians as well.· The Macaulay Committee was formed in 1854, to serve the purpose and is known as the Committee on Indian Civil Service. <p>Some of the Major Significance of the Charter Act 1853</p> <ul style="list-style-type: none">· It was the Charter Act, of 1853 that separated the legislative and executive functions of the Governor-General's council for the first time.· The Governor-General's Council proved to be a basic foundation for the modern-day Parliamentary and Government structure. The legislative wing was a model of the British Parliament.· It differed from the previous Charter act of 1793, 1813, and 1833 as it allowed the East India Company's Rule for an indefinite period, thus could be acquired by the British Government at
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		<p>any point.</p> <ul style="list-style-type: none">· This act has taken over company power and thus reduces its influence as Board of Directors, and those will be nominated by the British Crown.· It introduced ICS (Indian Civil Service) and opened the gates to all Indians by appearing in ICS.· This act for the first time introduced the local members from the governments of Bengal, Bombay, Madras and North Western Provinces into the legislative council. <p>Criticism or Drawbacks of the Charter Act, 1853</p> <ul style="list-style-type: none">· The major drawback of the Charter Act 1853 is it failed to include Indians in the Legislative Council.· The Charter Act 1853, has not given the East India Company the legal period of 20 years for its governance, rather it has given the power to the Crown Government to step in at any point of time and take over from East India Company. This was further taken the pace after the 1857 Revolution or Mutiny. <p><i>Importance of Charter Act 1853</i></p> <ul style="list-style-type: none">· The Charter Act of 1853 holds significant importance in the history of British colonial rule in India.· It marked a turning point in administrative reforms and governance policies in British India.· The act's provisions influenced various aspects of Indian society, including education, administration, and legislative procedures.
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			<ul style="list-style-type: none"> Recognizing the importance of the Charter Act of 1853 is essential for understanding the dynamics of British colonialism and its impact on Indian governance
66	<p>The CAFE norms seen in news pertain to</p> <p>(a) additives in beverages</p> <p>(b) vehicular emissions</p> <p>(c) afforestation efforts under CAMPA Fund</p> <p>(d) issues of net neutrality</p>	b	<p>https://www.thehindubusinessline.com/economy/major-rift-among-automobile-makers-over-calculation-of-carbon-credits-under-cafe-norms/article67860043.ece</p>
67	<p>"Hiroshima Action Statement for Resilient Global Food Security" was agreed in the recent past by the members of</p> <p>(a) UN</p> <p>(b) BRICS</p> <p>(c) G7</p> <p>(d) WTO</p>	c	<p>G7</p> <p>Origin</p> <ul style="list-style-type: none"> The origin of G7 lies in the oil shocks of 1973 and the corresponding financial crisis. In order to address the situation after oil shock, the heads of the world's six leading industrial nations decided to hold a meeting in 1975. These six nations were - <u>the US, UK, France, Germany (West), Japan and Italy</u>. These countries were joined by Canada in 1976 and G7 came into existence. <p>Current Members</p> <ul style="list-style-type: none"> <u>US, UK, Canada, France, Germany, Italy and Japan</u> It can be said that the members of this group are the most developed and the advanced economies of the world.

			<ul style="list-style-type: none"> The European Union is also represented within the G7. <p>https://www.thehindu.com/opinion/editorial/solidarity-for-peace-on-the-hiroshima-meet-of-the-g-7/article66881627.ece</p>						
68	<p>Consider the following statements:</p> <ol style="list-style-type: none"> Hubble constant is a measure of surface temperature of the stars. “Lambda CDM” Model describes the reason for Energy of the Sun. <p>Which of the statements given above is/are correct?</p> <p>(a) 1 only (b) 2 only (c) Both 1 and 2 (d) Neither 1 nor 2</p>	d	<p>The Hubble constant tells us how fast the universe is expanding, which can be used to determine the age of the universe and its history. It gets its name from UChicago alum Edwin Hubble, who was first to calculate the constant from his measurements of stars in 1929.</p> <table border="1" data-bbox="778 958 1536 1541"> <thead> <tr> <th data-bbox="778 958 1126 1014">Ajanta caves</th> <th data-bbox="1126 958 1536 1014">Ellora caves</th> </tr> </thead> <tbody> <tr> <td data-bbox="778 1014 1126 1541"> <p>Ajanta caves are located in the Sahyadri ranges (Western Ghats). These are a series of rock-cut caves on Waghora river near Aurangabad in Maharashtra.</p> </td> <td data-bbox="1126 1014 1536 1541"> <p>It is located nearly 100 Kms away from Ajanta caves in the Sahyadri range of Maharashtra.</p> </td> </tr> <tr> <td data-bbox="778 1541 1126 1998"> <p>There are a total of 29 buddhist caves in Ajanta of which 4 were used as Chaitya or prayer halls while 25 were used as Viharas or residential caves..</p> </td> <td data-bbox="1126 1541 1536 1998"> <p>Ellora caves are a group of 100 caves at the site of which 34 caves are open to the public. 17 caves out of these 34 are themed around Hinduism, 12 caves depict the themes of Buddhist and 5 caves</p> </td> </tr> </tbody> </table>	Ajanta caves	Ellora caves	<p>Ajanta caves are located in the Sahyadri ranges (Western Ghats). These are a series of rock-cut caves on Waghora river near Aurangabad in Maharashtra.</p>	<p>It is located nearly 100 Kms away from Ajanta caves in the Sahyadri range of Maharashtra.</p>	<p>There are a total of 29 buddhist caves in Ajanta of which 4 were used as Chaitya or prayer halls while 25 were used as Viharas or residential caves..</p>	<p>Ellora caves are a group of 100 caves at the site of which 34 caves are open to the public. 17 caves out of these 34 are themed around Hinduism, 12 caves depict the themes of Buddhist and 5 caves</p>
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			<p>are of Jain faith.</p> <p>Ajanta Caves are mostly Buddhist sites.</p> <p>The caves were developed in the period between 200 B.C. to 650 A.D.</p>	<p>Ellora has a better mix of Hindu, Jain, and Buddhist structures.</p> <p>They date to the period between the 6th and 11th Centuries AD.</p>
69	<p>Consider the following statements w.r.t. Ajanta and Ellora caves.</p> <ol style="list-style-type: none"> 1. Ajanta caves are Buddhist caves while Ellora caves are multi-religious caves. 2. Ajanta is mostly about beautiful paintings while Ellora is all about sculpture. 3. The flying apsara and dying princess are the major sculptures in Ellora. 4. Famous carpenter's cave is in Ajanta. <p>Which of the statements given above are correct?</p> <p>(a) 1 and 3 only (b) 1 only (c) 1 and 2 only (d) 1 and 4 only</p>	d	<p>https://www.thehindu.com/sci-tech/science/hubble-tension-cosmic-distance-ladder-riess-webb-telescope/article68064403.ece</p>	<p>https://timesofindia.indiatimes.com/city/aurangabad/ajanta-ellora-now-part-of-swadesh-darshan-scheme/articleshow/107475542.cms</p> <p>https://timesofindia.indiatimes.com/travel/destinations/explore-the-caves-of-ajanta-and-ellora/articleshow/37961004.cms</p>

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70	<p>1. Archaea 2. Rice fields 3. Discarded household waste 4. Oceanic sediments</p> <p>How many of the above release methane?</p> <p>(a) Only one (b) Only two (c) Only three (d) All the four</p>	a	<p>https://www.thehindu.com/sci-tech/science/study-says-microbes-not-fossil-fuels-produced-most-new-methane/article68124627.ece</p> <p>Discarded household waste also releases large quantities of methane when it decomposes, if left to rot in landfills.</p>
71	<p>Consider the following river valleys.</p> <p>1. Damodar 2. Godavari 3. Mahanadi 4. Sone</p> <p>How many of these have Coal reserves in India?</p> <p>(a) Only one (b) Only two (c) Only three (d) All the four</p>	D	<p>Over 97 per cent of coal reserves occur in the valleys of Damodar, Sone, Mahanadi and Godavari. They lie in the Jharkhand-Bengal coal belt and the important coal fields in this region are Raniganj, Jharia, Bokaro, Giridih, and Karanpura.</p> <ul style="list-style-type: none"> • Jharkhand has the first rank in coal reserves and its production. • Most of the coalfields in the state of Jharkhand are located in a narrow belt running in the east-west direction almost along 24 degrees north latitude from the Gondwana period. • The main coal mining centres of the state are Auranga, Bokaro, Dhanbad, Jharia, Giridih, Karanpur, Ramgarh and Hutar. • Jharia coalfield is one of the oldest and richest coal fields of India. • It lies south of Dhanbad and stores the best of metallurgical coal (bituminous) in the country.
72	With reference to the Gross	a	<p>https://iasgoogle.com/n/explain-the-difference-</p>

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	<p>Domestic Product (GDP) of an economy, consider the following statements:</p> <ol style="list-style-type: none"> 1. Since 2015, India has been calculating the GDP at the basic prices, rather than at the market prices. 2. The GDP at the basic prices is derived by deducting the GDP at the market prices with net of product taxes and subsidies. <p>Which of the statements given above is/are incorrect?</p> <p>(a) 1 only (b) 2 only (c) Both 1 and 2 (d) Neither 1 nor 2</p>		<p>between-computing-methodology-of-indias-gross-domestic-product-gdp-before-the-year-2015-and-after-the-year-2015</p>
73	<p>The following activities could be possibly used to reduce global warming.</p> <ol style="list-style-type: none"> 1. Using giant mirrors in space 2. Use of bio-char 3. Increasing the amount of iron in the ocean. <p>(a) 1 and 2 only (b) 1, 2 and 3 (c) 1 only (d) 1 and 3 only</p>	b	<p>All the options given above are included under Climate engineering, also referred to as geo-engineering It is the deliberate and large-scale intervention in the Earth's climatic system with the aim of reducing global warming: -</p> <ul style="list-style-type: none"> ✓ Use of giant mirrors in space to reflect the sunlight so as to reduce the warming of earth. ✓ Aerosols in space also reflect the incoming sunlight and thus reduce the warming of earth. ✓ Biochar is essentially charcoal made through pyrolysis of biomass and then burying it mixed with the soil. With regard to long-term carbon storage potential, biochar can work on a large

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			<p>scale with, in most cases, no negative soil side effects, but increase its fertility. Some estimates show biochar having the potential to sequester one billion tons of CO₂ each year.</p> <p>✓ Fertilizing the oceans with iron to stimulate phytoplankton blooms to absorb carbon dioxide from the atmosphere and export carbon to the deep sea is another possible option.</p> <p>However, all these steps are still contested and yet remain a possible option to be taken up on a large scale.</p>
74	<p>"Dirty Dozen" to refer to Persistent Organic Pollutants was coined by</p> <p>(a) IUCN (b) WWF (c) UNEP (d) GEF</p>	c	<p>These 12 chemicals include 8 pesticides (Aldrin, Chlordane, DDT, Dieldrin, Endrin, Heptachlor, Mirex and Toxaphene), two industrial chemicals (Polychlorinated biphenyls and hexachlorobenzene) and 2 unintended by products- dioxins and furans.</p> <p>https://www.unep.org/cep/persistent-organic-pollutants-pops-and-pesticides</p>
75	<p>Which one of the following statements does not apply to the system of Subsidiary Alliance introduced by Lord Wellesley?</p> <p>(a) To maintain a large standing army at other's expense (b) To keep India safe from Napoleonic danger (c) To secure a fixed income for the Company (d) To establish British paramountcy over the Indian States</p>	c	<ul style="list-style-type: none"> • The Company forced the states into a "subsidiary alliance". According to the terms of this alliance, Indian rulers were not allowed to have their independent armed forces. They were to be protected by the Company, but had to pay for the "subsidiary forces" that the Company was supposed to maintain for the purpose of this protection. If the Indian rulers failed to make the payment, then part of their territory was taken away as penalty.

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• Napoleonic invasion of Egypt in the summer of 1798 offered Wellesly a useful tool to soften London's resistance to expansion, although he never believed for a moment that there was any danger of a French invasion of British India either over land from Egypt or a naval attack round the Cape of Good Hope. However, to assuage London's concerns he evolved the policy of 'Subsidiary Alliance', which would only establish control over the internal affairs of an Indian state, without incurring any direct imperial liability.

• There was no component of fixed income under this system.

Subsidiary Alliance

Under the Subsidiary Alliance system, the Indian ruler who is in question would be protected against any external attacks. In response to it, the rulers should:

- Post the company army in the capital of their state.
- Provide capital or territory for the company for maintenance of the troops.
- Expulsion of other Europeans from the state, whether they were employed in the army or civil service.

- A European official is to be kept as a “resident” of the capital of the state. This meant, no direct correspondence is possible with other states, without the resident’s approval.

Chronology of States under Subsidiary Alliance

States	Years
Hyderabad	1798
Mysore	1799
Tanjore	1799
Awadh	1801
Peshwa (Marathas)	1802
Scindia (Marathas)	1803
Gaekwad (Marathas)	1803

Features of the Subsidiary Alliance Treaty

- The initiation of the subsidiary alliance system was done by Lord Wellesley but introduced by the French Governor-General Dupleix.
- While entering into a subsidiary alliance with the British, the Indian rulers had to do away with their armed forces and accept the British

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			<p>forces in their territory.</p> <ul style="list-style-type: none">• He also had to pay for the maintenance of the British army and if failed to make the payments, a portion of his territory would be taken away and given to the British state.• In favor, the British would protect the Indian state against any form of foreign attack or any internal revolt.• The British promised non-interference in the internal affairs of Indian states, but this was hardly kept.• Indian states were not allowed to enter alliances with any other foreign power. He would also not employ any other foreign nationals other than Englishmen at his service.• Indian states were not allowed to enter any political connection with any other Indian state without the permission of the British.• The control and power of Indian rulers were hence lost concerning foreign affairs and the military. The Indian ruler became the British “protectorate”.
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Effects of Subsidiary Alliance System

Due to the imposition of the subsidiary alliances, the Indian rulers were disbanded and many people were rendered unemployed. Many of the Indian states have lost independence and most parts of the Indian subcontinent were coming under the British sway. The first one to accept the subsidiary alliance was the Nizam of Hyderabad in 1798. Lord Clive introduced the subsidiary alliance in Oudh and the subsequent Treaty of Allahabad was signed; where the British promised Oudh territory from enemies like the Marathas.

Impact of Subsidiary Alliance System

- In case of failure of the ruler to make the payment, a portion of his territory was taken and ceded to the British, in the name of maintaining the troops.
- Subsidiary alliances acted as “Trojan horse tactics” in case of building the empire; which disarmed the Indian rulers and placed them under the protection of the British.
- The Governor-General placed a proxy in every Indian state which accepted a subsidiary

alliance.

- It helped the company to maintain a large standing army at the expense of Indian princes.
- It gave the control of strategic and key positions in India and Britishers wielded considerable influence on the internal affairs of the Indian state. It also reduced the threat from the French army.

Various stages of the Subsidiary Alliance System

- In the foremost stage of the subsidiary alliance, the English asked for a fixed army from the native rulers in exchange for a fixed sum of money.
- Next stage, the English keep a permanent military force in the states of natives to assist the allies in exchange for an annual sum of money.
- In the third stage, the English asked not only to maintain a fixed subsidiary force but also to keep the force within the boundaries of the allies.
- In the final stage, a fixed and permanent force was kept

within the territories of their allies, which was started by Lord Wellesley.

Subsidiary Alliance System Impacts

Nizam of Hyderabad

The Nizam of Hyderabad ties were broken with the French in 1798 and allying with the Marathas was made illegal if permission from the British was not sought. The Nizam was the first one to sign the contract of a Subsidiary Alliance.

Nawab of Awadh

Mysore became the second state under a subsidiary alliance in the year 1799 and in 1801, Nawab of Awadh was forced to join the Subsidiary Alliance policy.

Peshwa Baji Rao II

Peshwa Baji Rao II used the subsidiary alliances system to subdue his realm and by 1803 many Maratha states agreed to the policy like that of Scindia and Bhosle. Even the last of the confederation, the Holkars, also agreed on the requirements of the policy.

Treaty of Allahabad

Treaty was adopted by Lord Clive in Oudh and the Treaty of Allahabad was formed, in which the British committed to protecting the Oudh area from adversaries. Gorakhpur, Rohilkand, and Doab were also forcibly given the

maintenance of troops by the company.

Advantages of the Subsidiary Alliance System on the Britishers

1. There were many advantages of the subsidiary alliance with the Britishers. Some of the benefits are mentioned below:
2. The French would no longer be employed in the courts of the native rulers, which was a complete advantage for the Britishers; as their influence was wiped out.
3. There was a bridge created between the native states, as most of the things were controlled by the Britishers under the subsidiary alliance policy.
4. The area of influence of the Britishers was expanded and the natives became entirely dependent on the Britishers due to the presence of British forces in their states. They were reduced to being the British "protectorate" under the policy of subsidiary alliances.
5. Britishers had the plus point of maintaining a large military force at the expense of native

rulers and the territories of the native rulers would be utilized in an optimum way by the Britishers.

6. Maintenance of the subsidiary alliance policy was expensive and hence heavy financial pressure was felt by the natives; because of this natives had to surrender most of their territories; which helped to expand their hold in the country.

Disadvantages of Subsidiary Alliance System on the Native Rulers

- The subsidiary alliance came to be a big disadvantage for the native rulers. This can be pointed out from the following:
- They slowly lost most of the fertile lands and important locations to that the British.
- Financial pressure was huge from the subsidiary alliance which pushed people to live in poverty, for maintaining the army felt directly on the people.
- According to the policy, Britishers couldn't interfere in the policies of the native rulers; however in reality they often interfered in every state matter.
- The position and prestige of the rulers

			<p>gradually felt in the eyes of the masses whom they governed and this resulted in the loss of their capacity and also personality to rule these states.</p> <ul style="list-style-type: none"> • Subjects of the state were also no longer in control of the matters and couldn't dethrone incompetent rulers because the British protected the allied rulers against internal and external forces.
76	<p>1. It studies the relationship between economic development and population growth.</p> <p>2. It can be used to describe and predict the future population of an area.</p> <p>Which of the above is/are incorrect w.r.t. Demographic Transition Theory?.</p> <p>(a) Only 1 (b) Only 2 (c) Both 1 and 2 (d) Neither 1 nor 2</p>	c	<p>https://www.thehindu.com/opinion/lead/charting-a-path-for-the-population-committee/article67825927.ece#:~:text=With%20the%20TFR%20projected%20to,of%20the%20working%2Dage%20population.</p> <p>Demographic transition theory can be used to describe and predict the future population of any area. The theory tells us that population of any region changes from high births and high deaths to low births and low deaths as society progresses from rural agrarian and illiterate to urban industrial and literate society. These changes occur in stages which are collectively known as the demographic cycle.</p> <ul style="list-style-type: none"> • Demographic transition is a term, first used by Warren S. Thompson (1929), and later on by Frank W. Notestein (1945), referring to a historical process of change that accounts for the trends in births, deaths, and population growth that occurred in today's industrialized societies,

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		<p>especially European societies. This process of demographic change began for the most part in the later 18th century.</p> <ul style="list-style-type: none">• The demographic transition should not be regarded as a 'law of population growth but as a generalized description of the evolutionary process. In simple terms, it is a theory that attempts to specify general laws by which human populations change in size and structure during industrialization. It is frequently accepted as a useful tool in describing the demographic history of a country.• The theory postulates a particular pattern of demographic change from high fertility and high mortality to low fertility and low mortality when society progresses from a largely rural agrarian and illiterate society to a dominant urban, industrial, literate and modern society.• The model has four stages:<ul style="list-style-type: none">○ pre-industrial,○ urbanizing/industrializing,○ mature industrial, and○ post-industrial.• The theory of demographic transition deals with the transition from high to low birth rates and death rates.• These stages of demographic transition can be explained with the help of diagram 3 given below:• Stage I is characterised by a high birth
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			<p>rate, death rate, and low rate of population growth.</p> <ul style="list-style-type: none"> ○ The first stage of demographic transition is characterized by high birth rates and high death rates. ○ The first stage of demographic transition was experienced in India, during the period of 1891-1921. • Stage II is characterised by a high and stationary birth rate, rapidly declining death rate, and very rapid increase in population. <ul style="list-style-type: none"> ○ <u>India entered Stage II after 1921.</u> • Stage III is characterised by a falling birth rate, low and stationary death rate, and a rapidly rising population. • Stage IV is characterised by a low birth rate and low death rate with a stationary population at a low level.
77	<p>Which one of the following statements is not true?</p> <p>(a) Ghaggar is a tributary of river Saraswati, which ends in the Thar desert.</p> <p>(b) Damodar river has a rift valley due to down warping.</p> <p>(c) Nizam Sagar is situated on the Manjra River.</p> <p>(d) Manjra River is a tributary of the Krishna.</p>	a	<p>Indira Gandhi Canal originated from Harike barrage at Sultanpur on Sutlej but Ghaggar is a tributary of river Saraswati, which ends in the Thar desert.</p> <p>Damodar is an east-flowing river with a rift valley due to down warping. A down warp denotes a segment of the earth's crust that is broadly bent downward.</p> <p>The Narmada, the biggest west streaming waterway of the Peninsula, ascends close to the Amarkantak scope of mountains in Madhya Pradesh.</p>

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		<p>Nizam Sagar is the oldest dam in the state of Telangana, situated on the Manjira River. Manjira River is a tributary of the Godavari River, between Achampet and BanjePally villages of the Kamareddy district in Telangana, India. It is located at about 144 km (89 mi) north-west of Hyderabad.</p> <p>The Painganga River is the central stream of the Buldhana area, Hingoli region, Nanded locale, Yavatmal region, Chandrapur region, and Washim region in the Maharashtra state in India.</p>
78	<p>Consider the following statements:</p> <ol style="list-style-type: none"> 1. Almost all the weather phenomena like rainfall, fog and hailstorm occur in Troposphere. 2. Meteorites burn up in Mesosphere on entering from the space. <p>Which of these statements are correct?</p> <ol style="list-style-type: none"> (a) 1 and 2 are correct (b) Only 1 is correct (c) Only 2 is correct (d) None is correct 	<p>Mesosphere: This is the third layer of the atmosphere. It lies above the stratosphere. It extends up to a height of 80 km. Meteorites burn up in this layer on entering from the space.</p> <p>Weather Phenomena in the Troposphere</p> <p>The troposphere is the lowest layer of the Earth's atmosphere, extending from the Earth's surface up to an average height of about 7-20 kilometers (4-12 miles). It is the layer in which weather phenomena occur. Here is a detailed explanation of the weather phenomena that occur in the troposphere:</p> <ol style="list-style-type: none"> 1. Rainfall <p>Rainfall is a common weather phenomenon that occurs in the troposphere. It is the result of the condensation of water vapor in the air, which forms clouds. When the water droplets in the clouds become too large to be suspended in the air, they fall to the ground as precipitation, which can be in the form of rain, snow, sleet, or hail.</p>

			<p>2. Fog</p> <p>Fog is another weather phenomenon that occurs in the troposphere. It is a cloud that forms near the ground when the air is cooled to its dew point, causing the water vapor in the air to condense into water droplets. Fog reduces visibility and can be formed by various processes such as radiation fog, advection fog, and upslope fog.</p> <p>3. Hailstorm</p> <p>Hailstorms are severe weather events that can occur in the troposphere. They are characterized by the formation of large hailstones, which are balls of ice that can range in size from small pebbles to golf balls or even larger. Hailstones are formed when updrafts in thunderstorms carry raindrops upward into extremely cold areas of the atmosphere, where they freeze and accumulate layers of ice. Eventually, the hailstones become too heavy for the updrafts to support and fall to the ground during a hailstorm.</p>
79	<p>Which of the following is correct definition of Biosphere reserves?.</p> <p>(a) Biosphere Reserves are areas of terrestrial and coastal ecosystems some of which are internationally recognized within the framework of the Man and the Biosphere Programme of UNESCO.</p> <p>(b) Biosphere Reserves are areas of terrestrial and coastal ecosystems</p>	a	

	<p>some of which are internationally recognized within the framework of the Man and the Biosphere Programme of UNEP.</p> <p>(c) Biosphere Reserves are areas of terrestrial and coastal ecosystems some of which are internationally recognized within the framework of the Man and the Biosphere Programme of UNDP.</p> <p>(d) Biosphere Reserves are areas of terrestrial and coastal ecosystems some of which are internationally recognized within the framework of the Man and the Biosphere Programme of FAO.</p>	
80	<p>Consider the following statements w.r.t. Swadeshi movement:</p> <ol style="list-style-type: none"> 1. It was initiated by the moderates, but was taken over by the revolutionary nationalists at a later stage. 2. It was marked by the mass mobilization through labour strikes. 3. It promoted Atma Shakti. <p>Which of the statements given above are correct?</p> <p>(a) 1, 2 and 3 (b) 1 only (c) 1 and 2 only (d) 3 only</p>	<p>a</p> <p>The formal proclamation of the Swadeshi movement was made on August 7, 1905 at a meeting held at the Calcutta Town Hall. Leaders like Surendranath Banerjee, Ananda Mohan Bose, K. K. Mitra. Prithwischadra Ray attempted to bring the people of Bengal through addressing a huge gathering. Soon the movement spread to other parts of the country; in Pune and Bombay under Tilak, in Punjab under Lala Lajpat Rai and Ajit Singh, in Delhi under Syed Haider Raza and in Madras under Chaidamabaram Pillai.</p> <p>The Swadeshi Movement introduced the concept of boycotting foreign goods, which aimed to hit the british economically. it became a means for indians to assert their economic independence</p>

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			and protest against british policies. the movement also emphasized the importance of national education and enterprises, promoting self-rule (swaraj) and self-assurance (atma shakti).
81	<p>What is/are true about “F-gases” that are seen in news sometimes?.</p> <p>(a) They are powerful greenhouse gases.</p> <p>(b) They are not included in the basket of gases controlled by the Kyoto Protocol, as they occur naturally in the atmosphere.</p> <p>(c) Both (a) & (b)</p> <p>(d) Neither (a) nor (b)</p>	a	<p>Fluorinated greenhouse gases (F-gases) highly contribute to global warming. Their warming impact is often thousands of times higher than that of carbon dioxide (CO₂). Initially introduced to replace ozone-depleting substances (ODS), F-gases were found to trap heat from the sun and thus make the planet warm up faster.</p> <p>Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs) and Sulphur Hexafluoride (SF₆) are collectively known as fluorinated greenhouse gases.</p>
82	<p>With reference to the President's rule, consider the following statements:</p> <p>1. It is imposed under Article 365 of the Indian Constitution.</p> <p>2. A proclamation imposing President's Rule must be approved by both the Houses of Parliament within 30 days from the date of its issue.</p> <p>Which of the statements given above is/are correct?</p> <p>(a) 1 only</p> <p>(b) 2 only</p> <p>(c) Both 1 and 2</p> <p>(d) Neither 1 nor 2</p>	a	<ul style="list-style-type: none"> • President's Rule : <ul style="list-style-type: none"> ○ Grounds of Imposition : <ul style="list-style-type: none"> ▪ Article 356 empowers the President to issue a proclamation if he is satisfied that a situation has arisen in which the government of a state cannot be carried on in accordance with the provisions of the Constitution. Notably, the president can act either on a report of the governor of the state or otherwise too (i.e., even without the governor's

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report).

- **Article 365** says that whenever a **state fails to comply with or to give effect to any direction from the Centre**, it will be lawful for the president to hold that a situation has arisen in which the government of the state cannot be carried on in accordance with the provisions of the Constitution.
- **Parliamentary Approval and Duration :**
 - A proclamation imposing **President's Rule must be approved by both the Houses of Parliament within two months from the date of its issue. Hence, Statement 2 is not correct.**
 - However, if the proclamation of President's Rule is issued at a time when the Lok Sabha has been dissolved or the dissolution of the Lok Sabha takes place during the period of two months without approving the proclamation, then the proclamation survives until 30 days from

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		<p>the first sitting of the Lok Sabha after its reconstitution, provided the Rajya Sabha approves it in the meantime.</p> <ul style="list-style-type: none">▪ If approved by both the Houses of Parliament, the President's Rule continues for six months.▪ It can be extended for a maximum period of three years with the approval of the Parliament, every six months. <ul style="list-style-type: none">○ Consequences of President's Rule :<ul style="list-style-type: none">▪ S/He can take up the functions of the state government and powers vested in the governor or any other executive authority in the state.▪ S/He can declare that the powers of the state legislature are to be exercised by the Parliament.▪ S/He can take all other necessary steps including the suspension of the constitutional provisions relating to anybody or authority in the state.• The President either suspends or dissolves the state legislative assembly. In case of
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			dissolution, fresh elections are held for constituting a new legislative assembly in the state.
83	<p>For the first time the draft of the Indian Constitution was framed by</p> <p>(a) Dr. BR Ambedkar (b) Jawaharlal Nehru (c) KM Munshi (d) BN Rau</p>	d	<p>First draft of the Indian constitution was prepared by B N Rau.</p> <ul style="list-style-type: none"> • Constituent Assembly had appointed 22 committees and assigned different issues to deal with. • These committees submitted their reports between April and August 1947. • Then based on these reports BN Rau, the constitutional advisor to the constituent assembly drafted the initial draft of the Indian constitution in October 1947. • That draft contained 240 clauses and 13 schedules. <p>Then this draft was forwarded to the Drafting Committee for further procedure.</p>
84	<p>Which of the following is/are true ?.</p> <p>(a) The Buguns are a major tribe living near Eaglenest Wildlife Sanctuary. (b) Eaglenest Wildlife Sanctuary is in Arunachal Pradesh. (c) Both (a) and (b) (d) Neither (a) nor (b)</p>	c	<p>https://www.deccanherald.com/india/arunachal-pradesh/arunachal-tribe-donates-land-for-critically-endangered-songbird-bugun-liocichla-2940635</p>
85	<p>Which of the following is characterized by a beehive shaped curvilinear tower made up of layer</p>	a	<p>Seljuk architecture is characterized by its use of stone and brick, its elaborate geometric and vegetal decoration, and its towering minarets.</p>

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upon layer of architectural elements and a cruciform ground plan?

- (a) Nagara style of temple architecture
- (b) Dravidian style of temple architecture
- (c) Vesara style of temple architecture
- (d) Seljuq style of temple architecture

Khilji Bas ruled from 1290 AD to 1320 AD and established the Saljuk style of architecture. The specialty of the construction of this period is the use of red sandstone. Along with this, the arched style gained prominence in this period. Seljuq architectural tradition is noticed in 1. The Alai Darwaza in the Qutub complex 2. Jamat Khana Masjid at Nizamuddin.

Aspect	Nagara	Dravidian
Region	Northern India	Southern India
Vimana (Tower) Shape	Curvilinear (Shikhara)	Rectangular (Gopuram)
Entrance	Generally single entrance on the east side	Multiple entrances, often elaborate and decorated
Mandapa (Pillared Hall)	Typically two types: Ardha Mandapa (front) and Maha Mandapa (main hall)	Typically larger and more elaborate with multiple halls
Material	Often built with sandstone or brick	Usually constructed with granite or other local stone
Garbhagriha (Inner Sanctum)	Smaller, usually square or circular	Generally larger and rectangular
Decoration	Complex carvings	Elaborate

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			and sculptures on outer walls	sculptures and carvings showing deities and mythological scenes
		Influence	Influenced by Vedic and Indo-Aryan architecture	Influenced by Dravidian and Tamil architecture
		Examples	Kandariya Mahadeva Temple in Khajuraho, Somnath Temple in Gujarat	Brihadeeswarar Temple in Thanjavur, Meenakshi Temple in Madurai
		<p>Vesara is a combination of Nagara and Dravidian style of temple architecture styles. The term Vesara is believed to have been derived from the Sanskrit word vishra meaning an area to take a long walk. Many historian agree that the Vesara style originated in the what is today Karnataka. The trend was started by the Chalukyas of Badami (500-753AD) who built temples in a style that was essentially a mixture of the Nagara and the Dravida styles, further refined by the Rashtrakutas of Manyakheta (750- 983AD) in Ellora, Chalukyas of Kalyani (983-1195 AD) in Lakkundi, Dambal, Gadag etc. and epitomized by the Hoysalas (1000-1330 AD) The Hoysalas temples at Belur, Halebidu and Somnathpura are prime examples of this style.</p>		

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Unique features of Vesara style of temple architecture

- **Ornamentation:** In case of ornamentation of temple walls and pillars, Chalukyan temple shows indigenous quality.
- **Transformation of Dravida tower:** The Chalukyan builders modified the Dravida towers by minimizing the height of each storey and arranging them in descending order of height from base to top with much ornamentation in each storey.
- **Transformation of Nagara tower:** Instead of inclined storey here modification is seen in the vertical shape of the tower
- **Two special features of Chalukya temples – Mantapa and Pillars:**
 1. **Mantapa:** The mantapa has two types of roof – domical ceilings (the dome like ceilings standing on four pillars are very attractive) or Square ceilings (these are vigorously ornamented with mythological pictures).
 2. **Pillars:** the miniature decorative pillars of Chalukya temples stands with its own artistic value.
- **Famous temples built with this style include:** Kallesvara temple, Kukkanur; Ramalingesvara temple, Gudur; Mahadeva temple,

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Ittagi; Kasivisvesvara temple, Lakkundi (and several other temples at Lakkundi); Brahmadeva temple, Savadi – notable for being fully stellate; Mallikarjuna temple, Sudi (and Joda-kalasha temple)

Influence of Nagara and Dravidian style of temple architecture on the style of Vesara

- The plan of shrine, subsidiary shrine, panchayatan style bears similarity to Nagara School.
- The plan of vestibule joining the sanctum to mantapa bears resemblance to Odishan temples.
- The most of the temple pillars in Karnataka region bears similarity to **sekhari and bhumija type of pillars in northern India.**
- The stepped diamond plan that is a plan of design arrangement as seen in **Chalukya temples is from northern region.**
- The most of the temples in kalyani portrays **Nagara articulation projecting stepped diamond or stellate plan.**
- The **Dravida influence is mainly visible in vimana** of the Chalukya temples in first part of the Chalukya rule
- Miniature decorative towers and ornamentation of walls in Chalukya temples show combination of both Nagara and Dravida style.

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Famous temples built during the reign of several empires in South India

Chalukyan architecture

- Their architecture consisted of admixture of Nagara and Dravidian styles.
- Temples built during this time can be found in- Aihole, Badami and Pattadakal
- Temples built during their time period do not have a covered ambulatory path
- The **Virupaksha temple** at **Pattadakal** built in imitation of Kailashnath temple is the jewel of Chalukyan architecture
- The **Rameshwaram** temple at **Ellora** built in 7th century was also built during the Chalukyan time period
- **Lad Khan temple and Durga temple** at Aihole are other noteworthy monuments built during this time period

Rashtrakuta architecture

- They were the successors of the Chalukyas
- Their temples were built mostly imitating the Chalukyan style
- The **Kailas temple at Ellora**, built during the time of Krishna II is the representative form of architecture of the empire
- The **Navalinga Temples in Kukkanur** is another temple built during this period

Hoysala temple architecture

- **Kesava temple at Belur** built during the

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time of Vishnuvardhana to commemorate his victory over the Cholas is a representative art of this period

- In this temple, there are multiple shrines grouped around a central pillared hall and laid out in the shape of an intricately-designed star
- Such an arrangement could be found in temples during this time in Halebid, Somnathpur and elsewhere
- **Hoysaleswara temple dedicated to Lord Shiva** is another famous temple built during this period

Vijayanagara architecture

- It is a vibrant combination of the Chalukya, Hoysala, Pandya, and Chola styles
- Local hard granite was the building material of choice, as it had been for the Badami Chalukyas.
- Vijayanagar temples are characterized by ornate pillared halls and rayagopurams, or monumental towers adorned with life-sized figures of gods and goddesses that stand at the entrance of the temple.
- Vijayanagar temples are also known for their carved pillars , which depict charging horses, figures from Hindu mythology, and yali (hippogriffs)
- Some of the larger temples are dedicated to a male deity, with a separate shrine intended for the worship of his female

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			<p>counterpart. Some famous temples exemplifying the Vijayanagar style include the Virupaksha Temple at Hampi and the Hazara Rama temple of Deva Raya I.</p>
86	<p>Which of the following may result in loss of citizenship of an Indian citizen? 1. If the citizen voluntarily acquires citizenship of another country.</p> <p>2. If the citizen has been ordinarily resident out of India for six years continuously.</p> <p>3. If the citizen has shown disloyalty to the Constitution of India.</p> <p>(a) 1 only</p> <p>(b) 1 and 3 only</p> <p>(c) 2 and 3 only</p> <p>(d) 1, 2 and 3</p>	b	<p>The Citizenship Act, 1955, prescribes three ways of losing citizenship whether acquired under the Act or prior to it under the Constitution, viz, renunciation, termination and deprivation: When an Indian citizen voluntarily (consciously, knowingly and without duress, undue influence or compulsion) acquires the citizenship of another country, his Indian citizenship automatically terminates. This provision, however, does not apply during a war in which India is engaged. Deprivation is a compulsory termination of Indian citizenship by the Central government, if:</p> <ul style="list-style-type: none"> • the citizen has obtained the citizenship by fraud: • the citizen has shown disloyalty to the Constitution of India: • the citizen has unlawfully traded or communicated with the enemy during a war; • the citizen has, within five years after registration or naturalisation, been imprisoned in any country for two years; and • the citizen has been ordinarily resident out of India for seven years continuously.
87	<p>In order to reduce or eliminate crowding out, expansionary fiscal policy can be accompanied by</p>	c	<p>Crowding out reduces the effectiveness of any expansionary fiscal policy, whether it be an increase in government purchases, an increase in</p>

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	<p>(a) An increase in government spending</p> <p>(b) A decrease in investment</p> <p>(c) Expansionary monetary policy</p> <p>(d) Contractionary monetary policy</p>		<p>transfer payments, or a reduction in income taxes.</p> <p>https://economictimes.indiatimes.com/definition/crowding-out-effect</p>
<p>88</p>	<p>Consider the following statements w.r.t. Alluri Sitaram Raju:</p> <ol style="list-style-type: none"> 1. He was against the Gandhiji's Non-Cooperation Movement. 2. He asserted that India could be liberated only by the use of force. 3. He made astrological predictions. <p>Which of the statements given above are correct?.</p> <p>(a) 2 only</p> <p>(b) 1 and 2 only</p> <p>(c) 1, 2 and 3</p> <p>(d) 1 and 3 only</p>	<p>c</p>	<ul style="list-style-type: none"> • Alluri Sitarama Raju was an Indian revolutionary involved in the Indian independence movement. • He was born in present-day Andhra Pradesh in 1897 or 1898. • He became a sanyasi at the age of 18 and gained a mystical aura among the hill and tribal peoples with his austerity, knowledge of astrology and medicine, and his ability to tame wild animals. • At a very young age, Raju channelled the discontent of the hill people in Ganjam, Visakhapatnam, and Godavari into a highly effective guerrilla resistance against the British. • He became involved in anti-British activities in response to the 1882 Madras Forest Act, which effectively restricted the free movement of Adivasis (tribal communities) in their forest habitats and prevented them from practicing a traditional form of agriculture known as podu (shifting cultivation). • Rising discontent towards the British led to the Rampa Rebellion/Manyam Rebellion of 1922, in which he played a major part as a leader. • The Rampa Rebellion coincided with Mahatma

			<p>Gandhi's Non-Cooperation Movement. He persuaded people to wear khadi and give up drinking.</p> <ul style="list-style-type: none"> • But at the same time, he asserted that India could be liberated only by the use of force, not non-violence. • He was nicknamed "Manyam Veerudu" (Hero of the Jungle) by local villagers for his heroic exploits. • In 1924, Raju was taken into police custody, tied to a tree, and shot by a public execution, effectively ending the armed rebellion.
89	<p>Which of the following statements is/are correct?</p> <ol style="list-style-type: none"> 1. Lord Cornwallis introduced English as the literary and official language of India. 2. Lord Macaulay put forth the Downward Filtration Theory. <p>(a) 1 only (b) 2 only (c) Both 1 and 2 (d) Neither 1 nor 2</p>	b	<p>Macaulay introduced English as the literary and official language of India.</p> <p>https://iasgoogle.com/editorial/lord-macaulay-s-minute-1835</p>
90	<p>Consider the following statements with reference to Minamata Convention:</p> <ol style="list-style-type: none"> 1. Global Environment Facility is the financial mechanism for Minamata Convention. 2. The convention is hosted by the 	c	<p>https://indianexpress.com/article/lifestyle/life-style/skin-bleaching-safety-tips-skincare-8509896/</p> <p>Minamata Convention is an international treaty signed in 2013. The convention aims to protect human health and the environment from the harmful effects of Mercury and its compounds. It</p>

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<p>United Nations Environment Programme.</p> <p>Which of the statements given above is/are correct?</p> <p>(a) 1 only</p> <p>(b) 2 only</p> <p>(c) Both 1 and 2</p> <p>(d) Neither 1 nor 2</p>	<p>caters to the release of mercury emissions and its releases into the environment. The convention is named after the Japanese City Minamata due to its symbolic importance as the city went through a devastating incident of Mercury poisoning. It is a UN treaty under the United Nations Environment Programme. India is a party to the convention and ratified it in 2018. India has ratified Minamata Convention in 2018.</p> <p>https://minamataconvention.org/en/implementation/gef</p> <p>Harmful products such as Hydroquinone, Kojic acid, and Mercury are present in many skin lightening products. Hydroquinone is considered as a primary topical ingredient for inhibiting melanin production because it reduces the skin's production of melanin which is responsible for skin color.</p> <p>Minamata Convention is an international treaty signed in 2013. The convention aims to protect the human health and environment from the harmful effects of Mercury and its compounds. It caters to the release of mercury emissions and its releases in the environment.</p> <p><u>Applications of Mercury:</u></p> <ul style="list-style-type: none"> • Thermometers and Barometers: Mercury's high coefficient of thermal expansion and easy visibility make it suitable for use in traditional thermometers and barometers. • Chemical and Mining Processes: Mercury has been used in various chemical and mining processes, including the production of chlorine
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		<p>and mining of gold.</p> <p>Electronics and Electrical Switches: Mercury-wetted switches are used in various electrical applications because mercury's conductivity and low resistance make it suitable for creating a reliable electrical connection.</p> <p><u>Sources of Mercury Pollution:</u></p> <p><u>Natural Sources:</u></p> <ul style="list-style-type: none">• Volcanic eruptions release small amounts of mercury.• Erosion of rocks and soil can release mercury into water bodies. <p><u>Anthropogenic Sources:</u></p> <ul style="list-style-type: none">• Artisanal and Small-Scale Gold Mining (ASGM): ASGM is a major source of mercury pollution, where mercury is used to extract gold from ore.• Mercury is used to extract gold particles from ores, creating amalgams that are later heated to evaporate the mercury, leaving behind gold.• Artisanal gold mining operations are responsible for 37% of global mercury pollution.• Industrial Processes: Various industries, such as chlorine production, cement manufacturing, and waste incineration, emit mercury.• The cement industry is responsible for around 11% of global anthropogenic mercury emissions.• Waste Disposal: Improper disposal of e-waste products containing mercury, such as fluorescent bulbs and batteries, leads to mercury leaching into the environment. <p><u>Associated Impact:</u></p> <ul style="list-style-type: none">• Methylmercury accumulates in aquatic
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organisms like fish. People primarily come into contact with methylmercury through the consumption of fish and shellfish.

- This compound carries a higher risk of causing Minamata disease, a condition characterized by sensory impairment, tremors, and both auditory and visual deficits.
- This illness was initially observed in the residents of Minamata Bay, Japan, who consumed mercury-contaminated fish due to industrial waste pollution.
- Note: Methylmercury and ethylmercury differ significantly. While methylmercury is linked to health issues, ethylmercury is utilized as a preservative in certain vaccines and is not associated with health concerns.

Way Forward

- Mercury-Removing Filters: Innovative mercury-removal filters for industrial emissions, wastewater treatment, and consumer products can be designed and deployed.
- These filters could selectively capture and adsorb mercury particles from air and water streams.
- Phytoremediation: Phytoremediation, allows plants to absorb and accumulate mercury from soil, water, or sediments. These plants can then be harvested and safely disposed of, effectively removing mercury from the environment.
- Implementing planetGOLD Program: There is a need for global implementation of the planetGOLD program, led by UNEP, which seeks

			<p>to eliminate mercury from artisanal gold mining and create safer working conditions. It operates under the Minamata Convention on Mercury.</p> <ul style="list-style-type: none"> • Funded by the Global Environment Facility, the program provides financial and technical support to help miners transition away from mercury use. • planetGOLD's mercury-free processing plant in Burkina Faso serves as a model for transitioning away from mercury.
91	<p>Which one of the following sequences was proposed by Darwin and Wallace for organic evolution?</p> <p>(a) Overproduction, variations, constancy of population size, natural selection.</p> <p>(b) Variations, constancy of population size, overproduction, natural selection.</p> <p>(c) Overproduction, constancy of population size, variations, natural selection.</p> <p>(d) Variations, natural selection, overproduction, constancy of population size.</p>	a	<p>Darwin and Wallace proposed the theory of organic evolution, which is based on the following sequence:</p> <ol style="list-style-type: none"> 1. Overproduction: Organisms have the potential to produce more offspring than the environment can support. This leads to competition for limited resources. 2. Variations: Within a population, individuals exhibit variations in their traits. These variations can be inherited from parents or arise due to random mutations. 3. Constancy of population size: Despite the overproduction of offspring, populations tend to remain relatively stable in size over time. This is due to limited resources and other factors such as predation, disease, and competition. 4. Natural selection: In a population with variations, individuals with traits that are advantageous in their environment are more likely to survive and reproduce. This is known as natural selection. Over time, the frequency of

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			advantageous traits increases in the population, leading to evolutionary change.
92	<p>A dark room technician losing his job because fewer people use film cameras represents</p> <p>(a) recessive unemployment (b) frictional unemployment (c) structural unemployment (d) regressive unemployment</p>	c	<p>https://www.vedantu.com/commerce/unemployment-and-employment-generation</p>
93	<p>Consider the following statements:</p> <p>1. Swadesh Sevak Home was set up by G.D Kumar in Vancouver.</p> <p>2. Komagata Maru killing happened during the First World War.</p> <p>Which of the statements given above is/are correct?.</p> <p>(a) 1 only (b) 2 only (c) Both 1 and 2 (d) Neither 1 nor 2</p>	c	<p>https://pib.gov.in/newsite/erecontent.aspx?relid=110116</p> <p>World War-I & Revolutionaries</p> <p>Onset of World War-I received a divided Indian response. While moderates & extremists supported British in the war, revolutionaries decided to utilise this opportunity.</p> <p>America</p> <ul style="list-style-type: none"> • G D Kumar set up Swadesh Sevak Home in Vancouver and launched a paper in Gurmukhi, Swadesh Sewak. • United India House in Seattle was set up in 1910 by G D Kumar and Taraknath Das. • There was a restriction on Indian immigration into Canada in 1908. Taraknath Das, an Indian student, and one of the first leaders of Indian community in North America to start a paper (called Free Hindustan). He realized that while the British government was keen on Indians going to Fiji to work as a labourer for

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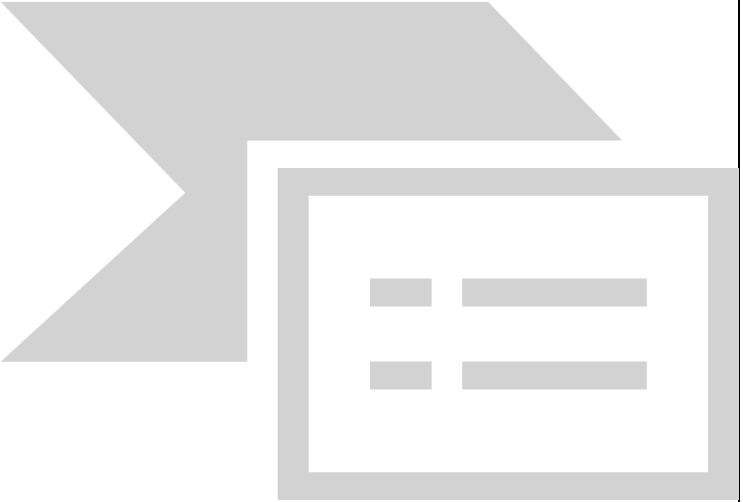
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		<p>British planters, it did not want them to go to North America where they might be infected by ideas of liberty.</p> <ul style="list-style-type: none">• Centre of revolutionary activity soon shifted to the US, which provided a free political atmosphere. <p>Ghadar party</p> <ul style="list-style-type: none">• It began in 1913 and conducted revolutionary activity in North America. It organized a weekly newspaper, The Ghadar with its headquarters in San Francisco. Ghadar means Revolt. On front page of each issue was a feature titled Angrezi Raj Ka Kacha Chittha or 'An Expose of British Rule.'• Most powerful impact was made by poems that appeared in The Ghadar, soon collected & published as Ghadar di Goonj and distributed free of cost.• Notable members were Lala Hardayal, Bhagwan Singh, Barkatullah, Kartar Singh, Bhai Parmanand etc.• Plans of Ghadarites were encouraged by two events in 1914—Komagata Maru incident and outbreak of First World War.• Komagata Maru was a ship carrying 370 passengers, mainly Sikh and Punjabi Muslim would-be immigrants, from Singapore to Vancouver. Canadian authorities backturned them after two months of privation and uncertainty. It was believed that Canadian authorities were influenced by British government. The ship finally anchored at
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			<p>Calcutta in September 1914. Inmates refused to board the Punjab-bound train. In the ensuing conflict with police at Budge Budge near Calcutta, many died.</p> <ul style="list-style-type: none"> • Inflamed by this and with outbreak of First World War, Ghadar leaders decided to launch a violent attack to oust British rule in India. • Defence of India Act was passed in 1915 primarily to smash Ghadar movement. <p>Europe</p> <ul style="list-style-type: none"> • Berlin Committee for Indian independence was established in 1915 by Virendra Nath Chattopadhyay and Bhupendra Dutta.
94	<p>Consider the following statements regarding Histamine:</p> <ol style="list-style-type: none"> 1. It is an amino acid derivative. 2. It is a vasodilator. 3. It is released from mast cells. 4. It causes inflammation in the body. <p>Which of the statements given above is/are correct?</p> <p>(a) 1 only (b) 1 and 2 only (c) 2 and 3 only (d) 1, 2, 3 and 4</p>	d	<p>https://www.thehindu.com/sci-tech/science/what-are-antihistamines/article68090729.ece</p> <p>A mast cell is the cell of connective tissue proper. Mast cells are like basophils of blood in structure and function. When an allergic substance enters into body mast cells secrete histamine. Because of histamine a part of blood comes out and is called exudate which causes swelling.</p> <p>A basophil is a type of white blood cell and a type of granulocyte. Basophils secrete histamine, serotonin, heparin, etc., and are involved in inflammatory reactions.</p>
95	<p>The most complex level of organization among the following is present in</p>	a	<p>https://www.vedantu.com/question-answer/give-characteristics-of-all-phylums-under-class-11-biology-cbse-5f8e9240813eab67c14d614c</p>

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	<p>(a) Leech (b) Ascaris (c) Hydra (d) Plasmodium</p>	<p>Protozoa are unicellular, eukaryotic, heterotrophic organisms. They are either free-living or parasites. There are around 65000 species of protozoans categorised in different groups. They lack a cell wall. There are many different cell organelles, that</p>  <p>perform various tasks performed by different organs in higher animals, e.g. mouth, anus, intestinal tract, etc. There are many protozoa, that cause various diseases in animals and humans, e.g. Plasmodium (malarial parasite), Trypanosoma (sleeping sickness), Trichomonas (trichomoniasis), etc.</p>
<p>96</p>	<p>1. Urea has 46% nitrogen content 2. Though most crops use nitrate as source of nitrogen, a few crops such as Paddy prefer Ammonical form over nitrate. 3. Once nitrate reaches underground water, it is most difficult to remove. 4. Nitrate causes blue baby syndrome.</p>	<p>D With 46% N content, Urea is the most popular Nitrogenous fertilizer around the world. When Urea is applied to soil, it is first hydrolysed (i.e. broken by water) into Ammonical form (Ammonium Ion i.e. NH_4^+) and then to nitrite (NO_2^-), followed by to nitrate (NO_3^-) forms by the process called nitrification. Here, we note that most crops use nitrate as source of nitrogen (A few crops such as Paddy prefer Ammonical form over nitrate.). Thus nitrification process is</p>

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<p>Choose the incorrect statement/(s).</p> <p>(a) 3 and 4 Only</p> <p>(b) 2 and 3 Only</p> <p>(c) 1 and 2 Only</p> <p>(d) None of these</p>	<p>necessary for making nitrogen available to plants. However, if the process of nitrification is too rapid; nitrogen will escape to atmosphere and plants will not be able to recover it from Urea efficiently. Generally, the plants are able to recover a fraction of all Urea N and this fraction is known as Nitrogen Use Efficiency (NUE). This NUE stands anywhere between 30 to 50%. Thus, two third of Urea Nitrogen escapes from the soil and is not used by the plants. Further, faster conversion of nitrate into Urea also results in accumulation of nitrates in soil / underground water. Once nitrate reaches underground water, it is most difficult to remove; and causes diseases such as blue baby syndrome. This implies that there is a need to regulate the urea hydrolysis and nitrification. This is done by some chemical / natural agents which are called Nitrification inhibitors. However, most of the nitrification inhibitors are costly chemicals (examples nitrapyrin, dicyandiamide and ammonium thiosulphate) beyond reach of Indian farmers.</p> <p>Coating Urea with Neem oil or Neem cake has been proved to be an effective natural alternative to these chemicals. It has been scientifically established that Neem oil serves as an effective inhibitor if coated on Urea. Thus, the benefits are as follows: Neem coating leads to more gradual release of urea, helping plants gain more nutrient and resulting in higher yields. Lower underground water contamination due to leaching of urea. Neem serves as a natural</p>
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			<p>insecticide Collection of neem seeds is needed for manufacturing of neem coated urea. This would generate employments in rural areas. Neem-coating will help check heavily subsidized urea's pilferage to chemical industry and other uses such as making of adulterated milk.</p>
<p>97</p>	<p>Consider the following statements:</p> <ol style="list-style-type: none"> 1. The theosophical society opposed religious conversions. 2. The theosophical society favoured the study of comparative religion and philosophy. 3. The theosophical society supported the belief in occult mysticism. <p>Which of the statements given above are correct?.</p> <p>(a) 1, 2 and 3 (b) 1 and 2 (c) 2 and 3 (d) 1 and 3</p>	<p>A</p>	<ul style="list-style-type: none"> • The Theosophical Society : <ul style="list-style-type: none"> ○ Theosophy is the wisdom underlying all religions when they are stripped of accretions and superstitions. ○ The Theosophical Society was founded by Madame Blavatsky and Col. Olcott in 1875 in New York. ○ It was only in 1879, that this ideology gained its roots in Indian culture and society. ○ It was crystallised in the Madras Presidency with its headquarters in Adayar. ○ The movement was popularised by Annie Besant in India. ○ Theosophy was based on three principles : <ul style="list-style-type: none"> ▪ Universal brotherhood. ▪ The study of comparative religion and philosophy. ▪ Investigations into the natural laws which seek to understand the unexplained

			<p align="center">mystic laws.</p> <ul style="list-style-type: none"> ○ The Society accepted the Hindu beliefs in reincarnation, Karma and drew inspiration from the philosophy of the Upanishads and Samkhya, Yoga, and Vedanta Schools of thought. ○ The movement aimed at the quest of Hindu spiritual wisdom through Western enlightenment. ○ The movement revived and strengthened faith in the ancient doctrines and philosophies of the Hindus. ○ Apart from the philosophical and spiritual discourse, which the Society carried on, its valuable contribution to the Hindu awakening came from its literary and research activities. <ul style="list-style-type: none"> ▪ Hindu scriptures were published and translated. ○ The Society encouraged reforms and framed educational schemes to work them out.
98	<p>1. Uranium deposits can be found in the Dharwar rocks of India.</p> <p>2. Thorium deposits have been found in the Andhra Pradesh and Odisha.</p> <p>Which of the statements given</p>	C	<p>Uranium deposits occur in the Dharwar rocks. Geographically, uranium ores are known to occur in several locations along the Singbhum Copper belt. It is also found in Udaipur, Alwar and Jhunjhunu districts of Rajasthan, Durg district of Chhattisgarh, Bhandara district of Maharashtra</p>

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	<p>above is/are correct?</p> <p>(a) 1 only (b) 2 only (c) Both 1 and 2 (d) Neither 1 nor 2</p>		<p>and Kullu district of Himachal Pradesh.</p> <p>Thorium is mainly obtained from monazite in the beach sands along the coast of Kerala and Tamil Nadu. World's richest monazite deposits occur in Palakkad and Kollam districts of Kerala, near Vishakhapatnam in Andhra Pradesh and Mahanadi river delta in Odisha.</p>
99	<p>Which of the following is/are the harmful effect of carbon monoxide?.</p> <p>1. It causes damage to the Red Blood cells. 2. It reduces the effective transport of Carbon Dioxide. 3. It reduces the effective transport of Oxygen.</p> <p>(a) 1, 2 and 3 (b) 2 and 3 only (c) 3 only (d) 1 and 3 only</p>	C	<p>The Red blood cells have a strong affinity for carbon monoxide and in the presence of carbon monoxide, they do not rapidly bind with oxygen. This reduces the transport and delivery of oxygen to the organs. It also reduces the transport of carbon dioxide but the harm is mainly caused by ineffective oxygen supply. It does not cause any damage to Red blood cells and cannot increase the transport of carbon dioxide.</p>
100	<p>1. Equator receives comparatively less insolation than the tropics. 2. In winter, the middle and higher latitudes receive less radiation than in summer. 3. In the same latitude the insolation is more over the continent than over the oceans.</p> <p>Which of these is/are FALSE?.</p> <p>(a) 1 & 3 (b) Only 3 (c) Only 2</p>	D	<p>The Equator receives less insolation than the tropics because of the presence of clouds. At the same latitudes the insolation is more over the continent than oceans because clouds over the ocean reflect back the sunlight.</p> <p>Insolation over continents and oceans at the same latitude</p> <p>Insolation refers to the amount of solar radiation that reaches a specific area. It plays a significant role in determining the climate and weather patterns of a region. In this context, we are comparing the insolation over continents and</p>

	(d) None of these		<p>oceans at the same latitude.</p> <p>1. Oceans are cloudier:</p> <ul style="list-style-type: none"> - Oceans have a higher potential to be cloudier compared to continents. This is because water bodies have higher evaporation rates, leading to increased moisture content in the atmosphere. - The presence of clouds can significantly affect the amount of solar radiation reaching the surface. Clouds can reflect or absorb solar radiation, reducing the amount that reaches the surface. - Therefore, due to the higher likelihood of cloud cover over oceans, the insolation is generally lower compared to continents at the same latitude. <p>2. Continents have varied relief:</p> <ul style="list-style-type: none"> - Continents are characterized by varied relief features such as mountains, plateaus, and plains. These relief features can influence the distribution of solar radiation. - Mountains, for example, can intercept the path of incoming solar radiation, causing shadows and reducing the amount of insolation reaching the surface. This phenomenon is known as the orographic effect. - In contrast, plains and low-lying areas tend to receive more direct solar radiation as there are no significant barriers to block or divert the incoming solar radiation. - Therefore, the varied relief of continents can lead to differences in the distribution of insolation at the same latitude compared to oceans.
101	It is the oldest artificial port and the	C	<ul style="list-style-type: none"> • Ennore Port is located on the Coromandel

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<p>second most important port of the country. It is not much suitable for large ships because of the shallow waters near the coast. Name the port referred here.</p> <p>(a) Mumbai port (b) Deendayal port (c) Chennai port (d) Ennore port</p>	<p>Coast about 18 km north of Chennai Port, Chennai. It is the first port in India which is a public company. Ennore port is located on the east coast of the Indian peninsula known as the Coromandel Coast in the Bay of Bengal and is situated 2.6 km north of the Ennore Creek.</p> <ul style="list-style-type: none">• Deendayal Port (previously called Kandla port) is situated in the Kandla Creek and is 90 kms from the mouth of the Gulf Of Kachch in Gujarat. It is a protected natural harbour. It is recognized as one of the major ports in India. It was constructed in the 1950s as the chief seaport serving western India, after the partition of India from Pakistan left the port of Karachi in Pakistan. Deendayal Port is hub for major imports like petroleum, chemicals and iron also export grains, salt and textiles. It remains India's biggest state-owned cargo handler by volume, but it has steadily lost market share to privately owned Mundra Port (India's largest private port) 60km to the southwest.• The Mumbai Port, also known as the Bombay Port, is found in Maharashtra and is a natural harbor. It holds the title of India's largest and one of its oldest ports. This bustling port is the busiest in India, responsible for managing roughly one-fifth of the country's total exports. In the harbor, you'll also find an island called Jawahar Dweep, equipped with four jetties for handling crude and petroleum products. Moreover, the Mumbai Port boasts three dock facilities: Prince's, Victoria, and Indira.
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102	<p>Match the following</p> <table border="0"> <thead> <tr> <th style="text-align: center;">List I</th> <th style="text-align: center;">List II</th> </tr> </thead> <tbody> <tr> <td>A. Vienna Convention</td> <td>1. Prior Informed Consent Procedure</td> </tr> <tr> <td>B. Rotterdam Convention</td> <td>2. Protection of the Ozone Layer</td> </tr> <tr> <td>C. Aarhus Convention</td> <td>3. Access to Justice in Environmental Matters</td> </tr> <tr> <td>D. Ottawa Treaty</td> <td>4. Ban landmines</td> </tr> </tbody> </table> <p>Answer codes</p> <table border="0"> <thead> <tr> <th></th> <th style="text-align: center;">A</th> <th style="text-align: center;">B</th> <th style="text-align: center;">C</th> <th style="text-align: center;">D</th> </tr> </thead> <tbody> <tr> <td>(a)</td> <td style="text-align: center;">2</td> <td style="text-align: center;">1</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> </tr> <tr> <td>(b)</td> <td style="text-align: center;">3</td> <td style="text-align: center;">2</td> <td style="text-align: center;">1</td> <td style="text-align: center;">4</td> </tr> <tr> <td>(c)</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">4</td> <td style="text-align: center;">3</td> </tr> <tr> <td>(d)</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">1</td> <td style="text-align: center;">4</td> </tr> </tbody> </table>	List I	List II	A. Vienna Convention	1. Prior Informed Consent Procedure	B. Rotterdam Convention	2. Protection of the Ozone Layer	C. Aarhus Convention	3. Access to Justice in Environmental Matters	D. Ottawa Treaty	4. Ban landmines		A	B	C	D	(a)	2	1	3	4	(b)	3	2	1	4	(c)	1	2	4	3	(d)	2	3	1	4	A	<table border="0"> <thead> <tr> <th style="text-align: center;">List I</th> <th style="text-align: center;">List II</th> </tr> </thead> <tbody> <tr> <td>A. Vienna Convention</td> <td>1. Prior Informed Consent Procedure</td> </tr> <tr> <td>B. Rotterdam Convention</td> <td>2. Protection of Ozone Layer</td> </tr> <tr> <td>C. Aarhus Convention</td> <td>3. Access to Justice in Environmental Matters</td> </tr> <tr> <td>D. Ottawa Treaty</td> <td>4. Ban landmines</td> </tr> </tbody> </table> <p>Match the following</p> <p>Answer codes</p> <p>i. Rotterdam convention – Pesticides and industrial chemicals</p> <p>ii. Stockholm convention – production and use of persistent organic pollutants (POPs)</p> <p>iii. Cartagena protocol – “living modified organism” (LMO)</p> <p>iv. Vienna convention – Protection of the Ozone Layer</p> <p>The United Nations Economic Commission for Europe (UNECE) Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters was adopted on 25 June 1998 in the Danish city of Aarhus (Århus) at the Fourth Environment for Europe Ministerial Conference. It entered into force on 30 October 2001. The Aarhus Convention is created to empower the role of citizens and civil society organisations in environmental matters and is founded on the principles of participative democracy.</p>	List I	List II	A. Vienna Convention	1. Prior Informed Consent Procedure	B. Rotterdam Convention	2. Protection of Ozone Layer	C. Aarhus Convention	3. Access to Justice in Environmental Matters	D. Ottawa Treaty	4. Ban landmines
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			<p>The Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction of 1997, known informally as the Ottawa Treaty, the Anti-Personnel Mine Ban Convention, or often simply the Mine Ban Treaty, aims at eliminating anti-personnel landmines (APLs) around the world.</p>
103	<p>1. It was dropped on Hiroshima in 1945.</p> <p>2. It works through a combination of fission and fusion together.</p> <p>Which of the statements given above is/are correct w.r.t. Hydrogen Bomb?</p> <p>(a) Only 1 (b) Both 1 & 2 (c) Only 2 (d) Neither 1 Nor 2</p>	C	<p>https://indianexpress.com/article/explained/explained-sci-tech/the-science-behind-a-nuclear-bomb-8878006/</p>
104	<p>Anabaena is present in the root pockets of</p> <p>(a) Musa plant (b) Gossypium (c) Cycas (d) Azolla</p>	D	<p>Azolla forms a symbiotic relationship with the nitrogen-fixing cyanobacterium Anabaena. The small aquatic fern is its home, providing shelter and nutrients in specialized structures known as root pockets. This connection is advantageous to both parties – Azolla obtains fixed nitrogen from Anabaena, while the cyanobacterium gains a safe environment and nutrient supply within the root pockets of the fern.</p>
105	<p>Green Muffler is a technique of reducing</p>	C	<p>Green Muffler is a technique of reducing noise pollution by planting 4-6 rows of plants around</p>

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	<p>(a) Air Pollution (b) Soil Pollution (c) Noise Pollution (d) Water Pollution</p>		<p>the populated areas or noisy places like along roadsides, industrial areas, societies near highways, etc. These dense trees reduce noise pollution as they filter out the noise and obstruct it from reaching the citizens.</p>
106	<p>1. The Strait of Malacca lies between Malaysia, Singapore and Indonesia, linking the Indian Ocean with the South China Sea and the Pacific Ocean.</p> <p>2. The straits namely the Sunda and the Lombok are in the Red Sea.</p> <p>Which of these statements are correct?</p> <p>(a) Only 1 (b) Only 2 (c) Both 1 and 2 (d) Neither 1 nor 2</p>	A	<p>The straits namely the Sunda and the Lombok are in the Indian Ocean. Sunda lies between the Indonesian islands of Java and Sumatra and links the Java Sea with the Indian Ocean. The strait is shallow and narrow, has heavy tidal waves, drilling platforms and tiny islands, all of which do not make it attractive for movement of large oil tankers. Lombok lies between the islands of Bali and Lombok, and is a possible alternative route to the Malacca Strait, but using it adds 1,600 km and over three days to journey time.</p>
107	<p>As per Section 3 of The Fiscal Responsibility and Budget Management Act, 2003, Fiscal policy statements to be laid before Parliament are</p> <p>(I) the Medium - term Fiscal Policy Statement</p> <p>(II) the Fiscal Policy Strategy Statement</p> <p>(III) the Macro - economic Framework Statement</p> <p>(IV) the Medium - term</p>		<p>1. Medium Term Fiscal Policy Statement sets a three-year rolling target for prescribed fiscal indicators.</p> <p>2. Medium Term Expenditure Framework Statement contains explicit contingent liabilities.</p> <p>3. Fiscal Policy Strategy Statement contains evaluation of how the current policies of Central Government are in conformity with the fiscal management principles.</p> <p>4. Macro-Economic Framework Settlement contains assessment of growth prospects of the</p>

	<p>Expenditure Framework Statement</p> <p>Consider the following.</p> <ol style="list-style-type: none"> 1. Fiscal Policy Strategy Statement sets a three-year rolling target for prescribed fiscal indicators. 2. Macro-Economic Framework Settlement contains explicit contingent liabilities. 3. Medium Term Fiscal Policy Statement contains evaluation of how the current policies of Central Government are in conformity with the fiscal management principles. 4. Medium Term Expenditure Framework Statement contains assessment of growth prospects of the economy. <p>How many of the statements given above is/are correct?</p> <p>(a) All four (b) Only two (c) Only three (d) None of these</p>	<p>economy.</p> <p>https://economictimes.indiatimes.com/markets/stocks/news/what-is-medium-term-fiscal-policy-statement/articleshow/56737837.cms?from=mdr</p> <p>https://www.business-standard.com/about/what-is-medium-term-expenditure-framework-statement</p> <p>https://www.business-standard.com/about/what-is-fiscal-policy-strategy-statement</p> <p>https://www.business-standard.com/about/what-is-macro-economic-framework-statement</p>
108	<p>“CITES removes India from negative list for export of Red Sanders”. Headline News in recent times. Consider the following statements in this context.</p> <p>1. India was under Review of Significant Trade process for Red</p>	<p>D</p> <p>India was under Review of Significant Trade process for Red Sanders since 2004.</p> <p>The removal of Red Sanders from RST process from India was unconditional.</p> <p>The CITES Standing Committee has now decided to place India in Category 1 from Category 2.</p>

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<p>Sanders since 2020.</p> <p>2. The removal of Red Sanders from RST process from India was conditional.</p> <p>3. The CITES Standing Committee has now decided to place India in Category 2 from Category 3.</p> <p>How many of the statements given above is/are correct?.</p> <p>(a) Only one</p> <p>(b) Only two</p> <p>(c) All the three</p> <p>(d) None of these</p>	<p>https://pib.gov.in/PressReleasePage.aspx?PRID=1976624#:~:text=The%20Minister%20said%20India%20was,farmers%20who%20grow%20Red%20Sanders.</p> <p>Red Sanders</p> <p>Red sanders, classified as endangered by the IUCN, CITES (Appendix II), and Wildlife Protection Act (Schedule IV), are native to a specific region within the Eastern Ghats and are known for their unique flora. It is referred to as ‘the pride of Eastern Ghats’. These trees have a slow growth rate, taking 25 to 40 years to mature, and they display remarkable resistance to droughts.</p> <p>The Red Sanders heartwood is valued for its wavy grain. Besides its use in furniture, the red dye (called ‘santalin’) extracted from the wood serves as a colouring agent for textiles, medicine, and food.</p> <p>CITES</p> <ul style="list-style-type: none"> · CITES is an international agreement aimed to ensure that international trade in specimens of wild animals and plants does not threaten the survival of the species. · Currently there are 184 Parties to CITES. · It entered into force in 1975 and India became the 25th party, a state that voluntarily agrees to be bound by the Convention, in 1976. · Although CITES is legally binding on States it is generally not self-executing. · This means that it cannot be fully implemented until specific domestic measures have been adopted for that purpose.
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		<ul style="list-style-type: none"> · It is therefore essential that CITES Parties have legislation in place allowing them to implement and enforce all aspects of the Convention. <p>CITES National Legislation Programme:</p> <ul style="list-style-type: none"> · National laws must fulfill all these minimum requirements under CITES National Legislation programme: · Designate a Management Authority and a Scientific Authority. · Prohibit trade violating the Convention. · Penalize such illicit trade. · Confiscate illegally traded or possessed specimens. <p>After consulting the concerned Party, the CITES Secretariat assesses the national legislation concerning these criteria and categorizes it into one of three categories:</p> <ul style="list-style-type: none"> · Category 1: Legislation generally meeting CITES implementation requirements. · Category 2: Legislation generally not meeting all CITES implementation requirements. · Category 3: Legislation generally not meeting CITES implementation requirements.
109	<p>Which of the following is/are true w.r.t. “anti-profiteering provision under GST”?</p> <p>(a) Any reduction in GST rate or benefit of input tax credit should be passed on to the end consumer and not retained by the business.</p>	<p>A</p> <p>https://economictimes.indiatimes.com/news/india/setback-for-hul-nestle-patanjali-and-others-as-hc-upholds-anti-profiteering-provisions-under-gst/articleshow/107220027.cms?from=mdr</p> <p>The erstwhile National Anti-Profiteering Authority (NAA) was initially constituted on 28th November, 2017 under section ‘7’ (2) of central Goods and</p>

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	<p>(b) Anti-profiteering complaints is handled by National Anti-Profiteering Authority.</p> <p>(c) Both (a) and (b)</p> <p>(d) Neither (a) nor (b)</p>		<p>Service Tax (GST) Act, 2017. In 45th GST council meeting it was decided to explore possibility of transferring all cases to Competition Commission of India (CCI).</p> <p>The Ministry of Finance vide Notification No. 23/2022-C.T. dated 23.11.2022 in exercise of the powers conferred by sub-section (2) of Section 171 of the Central Good and Service Act, 2017 empowered the Competition Commission of India, established under Section 7(1) of the Competition Act, 2002 to examine whether input tax credits availed by any registered person or the reduction in the tax rate have actually resulted in a commensurate reduction in the price of the goods or services or both supplied by him.</p> <p>Aforementioned notification came into force with effect from 1st day of December, 2022.</p>
110	<p>1. Samannaphala Sutta makes a reference to Ajatashatru of Magadha meeting Gautama Buddha.</p> <p>2. The Bhagavati Sutra is a Buddhist text</p> <p>Which of the above statement is/are correct?</p> <p>(a) 1 only</p> <p>(b) 2 only</p> <p>(c) Both 1 and 2</p> <p>(d) Neither 1 nor 2</p>	A	<p>The Bhagavati Sutra, aur Vyakhyaprajnapti, is the fifth of the 12 Jain Agamas reported to have been published by Mahavira. Sudharmaswami of the Vtmbara school of Jainism is reported to have composed the Vyakhya Prajnapti, which is written in Jain Prakrit. It is the canon's largest work, containing 36,000 questions that Mahavira is supposed to have answered. The replies cover a wide range of topics, from dogma to ascetic norms.</p>
111	<p>Which animals are transgenic?</p>	C	<p>In order to produce transgenic genetic alteration is</p>

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	<p>1. Animals with foreign DNA in some cells</p> <p>2. Animals with foreign DNA in all cells</p> <p>3. Animals with foreign RNA in all cells</p> <p>(a) 1, 2 and 3</p> <p>(b) 2 and 3 only</p> <p>(c) 2 only</p> <p>(d) 1 and 2 only</p>		<p>introduced in the ovum or fetus level or the entire DNA of all the cells changes rather than affecting DNA in some cells. RNA alteration does not produce transgenic animals.</p>
<p>112</p>	<p>Which of the following statements is/are correct?</p> <p>(1) It was Lord Hastings who abolished Censorship.</p> <p>(2) The Bengal Gazette was started as a weekly during the tenure of Lord Wellesley.</p> <p>(3) JS Buckingham started the Calcutta journal during the tenure of Lord Hastings.</p> <p>(a) 3 only</p> <p>(b) 1, 2 and 3</p> <p>(c) 1 and 3 only</p> <p>(d) 2 and 3</p>	<p>C</p>	<p>The first newspaper to be printed in both the Indian subcontinent and Asia was the weekly newspaper Bengal Gazette started by James Augustus Hicky. The paper was published for two years, I.e., between 1780 and 1782, before the East India Company seized the newspaper's types and printing press. Because he was a strong critic of Governor General Warren Hastings' administration.</p> <p>Hickey began publication for the newspaper on 29 January 1780 after printing a prospectus announcing the fact that he will print newspapers. One must realise that the idea of printing a newspaper in India had been floating around for more than 12 years before Hickey took it upon him to execute the idea of printing.</p> <p>Hicky's Bengal Gazette was known for its sarcastic and provocative writing style. Unlike many newspapers of its time, the newspaper discussed taboo topics proto-class consciousness, arguing for the rights of the poor and the right to</p>

		<p>taxation with representation</p> <ul style="list-style-type: none">• Times of India – founded in 1838• Kesari – founded in 1881• Bengal gazette – founded in 1779• The Hindu – founded in 1878 <p>https://cmsadmin.amritmahotsav.nic.in/distri-ct-reopository-detail.htm?10986</p> <ul style="list-style-type: none">• One of the important events during the tenure of Lord Hastings was abolition of Censorship. This was basically because of his dislike towards “unnecessary” imposition of restrictions on Press. But as a precaution, he issued some guidelines prohibiting company’s policies in the newspapers.• The result was that many fresh newspapers came up. India’s first Vernacular newspapers Samachar Darpan was started in 1818. However, some scholars note that “Bengal Gazetti” was published even prior to this Vernacular magazine by Ganga Kishore Bhattacharya.• Then in 1818 only “Calcutta Journal” was started by J S Buckingham.• 3 years later Raja Ram Mohun Roy started national press in India. He published “Sambad Kaumudi” in 1821. This was one of the pre-reformist publications that had actively campaigned for “Abolition of Sati”.• There was a growing public outcry for Sati and it “inspired” Lord William Bentinck to abolish “Practice of Sati” in 1829.• However, this liberal policy of Lord Hastings could not continue further. The successors of Lord Hastings took harsh actions against the press
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			people.
113	<p>Consider the following statements:</p> <ol style="list-style-type: none"> 1. Mamulanar of the Sangam age has referred to a Mauryan expedition against a Tamil chieftain. 2. The term Nadukal mentioned in the Sangam literature was an item of export in Indo-Roman trade as evidenced by the remanats at Arikamedu. <p>Which of the statements given above is/are correct?</p> <p>(a) 1 only (b) 2 only (c) Both 1 and 2 (d) Neither 1 nor 2</p>	A	<p>The term Nadukal mentioned in the Sangam literature means memorial stone.</p> <p>Manulanar was a Brahmin caste member. Mamulanar has written about the Ganges" destruction of the Pataliputra. Manulanar was a poet of the Sangam age who has referred to a Mauryan expedition against a Tamil chieftain The fire of Patalipura in the first century CE, on the other hand, was not mentioned. Mamulanar lived no later than the 1st century BCE, according to these findings. Some have concluded that the Podiyil hill, which adjoins the Tirunelveli and Madurai districts (Tamil Nadu) to the west, was the farthest limit of the Mauryan invasion in the south, based on references to Mauryas in Sangam literature (in five Sangam poems, three by Mamulanar).</p>
114	<p>The Election Commission of India is responsible for holding elections to</p> <ol style="list-style-type: none"> 1. State Legislative councils 2. Office of President 3. Office of Vice-President <p>(a) 2 and 3 only (b) 1, 2 and 3 (c) 1 only (d) 1 and 2 only</p>	B	<p>The elections for the President and Vice President of India, the Rajya Sabha (council of states) and Lok Sabha (house of the people), State Legislative Assemblies (including Union territories of Delhi and Puducherry), and State Legislative Councils are conducted by the Election Commission of India (ECI).</p>
115	<p>The text of the document called</p>	C	<p>With the Mahzar Nama, Akbar pounced upon the</p>

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	<p>Mahzar, by which Akbar assumed the role of supreme arbiter in the matters of religion is found in</p> <p>(a) Nizamuddin's Tabaqat-I-Akbari (b) Arif Quandahari's Tarikh-I-Alfi (c) Abul Fazl's Akbarnama (d) Badauni's Muntakahab-ut-Tawarikh</p>		<p>dominance of the intolerant orthodox and allowed free development of a genuine religious spirit.</p> <p>Mahzar Nama was actually an idea of the father of Abul Fazal and Faizi , set that the authority of the King was higher than that of a Mujtahid (doctor of the faith) and if there is a variance, the emperor's decision should be binding on the Muslims of India. With this edict, Akbar's judgment was set above every legal and religious authority, so it was the promulgation of the doctrine of Imperial infallibility.</p>
116	<p>Consider the following.</p> <p>1. Most aerosols are found in the lower troposphere. 2. Aerosols have a cooling effect on Earth's climate.</p> <p>Which of these is/are true?.</p> <p>(a) Only 1 (b) Only 2 (c) Both 1 & 2 (d) Neither 1 Nor 2</p>	C	<p>Aerosols have a cooling effect on Earth's climate when they scatter solar radiation because some of the scattered light is reflected back into space.</p> <p>Major volcanic eruptions that inject large quantities of aerosols into the stratosphere, such as that of Mt. Pinatubo in 1991, can noticeably reduce average global surface temperatures for some time afterward.</p>
117	<p>Granville Austin describes the following as "Conscience of the Constitution".</p> <p>(a) Preamble and Fundamental Rights (b) Preamble, Fundamental Rights and Directive Principles of State Policy (c) Fundamental Rights and</p>	D	<p>Kesavananda Bharti v. State of Kerala: The fundamental rights and directive principles constitute the "conscience of the constitution" there is no antithesis between the fundamental rights and directive principles and one supplements the other.</p>

	Fundamental Duties (d) Fundamental Rights and Directive Principles of State Policy		
118	<p>1. 2nd Schedule 2. 3rd Schedule 3. 5th Schedule 4. 4th Schedule</p> <p>Which of the above Schedules of the Constitution can be amended by a simple majority of the Parliament?.</p> <p>(a) 1 and 2 only (b) 2 and 4 only (c) 3 and 4 only (d) 1 and 3 only</p>	D	<p>A number of provisions in the Constitution can be amended by a simple majority of the two Houses of Parliament outside the scope of Article 368. These provisions include:</p> <p>Admission or establishment of new states.</p> <p>Formation of new states and alteration of areas, boundaries or names of existing states.</p> <p>Abolition or creation of legislative councils in states.</p> <p>Second Schedule-emoluments, allowances, privileges and so on of the president, the governors, the Speakers, judges, etc.</p> <p>Quorum in Parliament.</p> <p>Salaries and allowances of the members of Parliament.</p> <p>Rules of procedure in Parliament.</p> <p>Privileges of the Parliament, its members and its committees.</p> <p>Use of English language in Parliament.</p> <p>Number of puisne judges in the Supreme Court.</p> <p>Conferment of more jurisdiction on the Supreme Court.</p> <p>Use of official language.</p>

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			<p>Citizenship-acquisition and termination.</p> <p>Elections to Parliament and state legislatures.</p> <p>Delimitation of constituencies.</p> <p>Union territories.</p> <p>Fifth Schedule-administration of scheduled areas and scheduled tribes.</p> <p>· Sixth Schedule-administration of tribal areas.</p>
119	<p>1. The horse latitudes are regions located at about 30 degrees north and south of the equator.</p> <p>2. The horse latitudes are characterized by calm winds and little precipitation.</p> <p>Which of these statements are correct?</p> <p>(a) Only 1</p> <p>(b) Only 2</p> <p>(c) Both 1 and 2</p> <p>(d). Neither 1 nor 2</p>	C	<p>These diverging winds are the result of an area of high pressure, which is characterized by calm winds, sunny skies and little or no precipitation.</p>
120	<p>1. It is a squared building.</p> <p>2. It was built by Qutb ud-Din Aibak.</p> <p>Which of the statements given above is/are correct w.r.t. Gol Gumbaz?</p>	C	<p>Gol Gumbaz: Bijapur (modern Vijayapura) was the capital of the Adil Shahi dynasty during 1480-1686. It is famous for its magnificent buildings and dargahs. Gol Gumbaz (round dome) is the mausoleum of the seventh ruler of the dynasty</p>

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<p>(a) 1 only (b) 2 only (c) Both 1 and 2 (d) Neither 1 nor 2</p>	<p>Mohammad Adil Shah (1627-1656). Mohammad Adi Shah commissioned the mausoleum in his lifetime. Built of dark grey basalt and decorated plaster, the exterior of Gol Gumbaz is simple but beautiful. On the four corners of the bare walls are four doomed octagonal towers. Each tower has seven storeys and each storey has several windows which give the structure a striking look. The dome is the second largest in the world after St. Peter's Basilica in Rome. The huge chamber of 135 ft each wall and 178 ft high contain an elevated platform on which five cenotaphs are placed. Those are of Muhammad Adil Shah, his wife Arus Bibi, a daughter, a grandson and his favourite mistress Rambha.</p> <p>The structure is known for its acoustics, as a whisper on one side of the dome can be heard clearly on the other side, over 100 feet away.</p> <ul style="list-style-type: none"> · Gol Gumbaz is situated in Bijapur, Karnataka. · Gol Gumbaz built by Mohammad Adil Shah is the largest masonry dome in the world. <p>Adil Shahis of Bijapur (1490 AD-1686 AD)</p> <ul style="list-style-type: none"> · It was founded by Yusuf Adil Shah. · It was annexed by Aurangzeb. · Mohammed Adil Shah was the seventh ruler of Bijapur. · The greatest ruler of the kingdom was Ibrahim Adil Shah. · He introduced Dakini in place of the Persian language.
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		<ul style="list-style-type: none"> · Adil Shahis belonged to the Bahamani Kingdom. <p>Bahamani Kingdom</p> <ul style="list-style-type: none"> · The Bahamani kingdom of Deccan was founded by Hasan Gangu. · The capital was Gulbarga. · Hasan Gangu took the title of Alauddin Hasan Bahaman Shah and became the first king of Bahaman in 1347 AD.
121	<p>1. Methane makes up far less of the atmosphere than carbon dioxide.</p> <p>2. Clearing of the rain forests greatly reduces the methane content of the atmosphere.</p> <p>3. Water vapor is a good absorber of Earth's outgoing radiation.</p> <p>Which of the statements is/are correct?</p> <p>(a) Only 2 and 3 are correct</p> <p>(b) Only 1 and 3 are correct</p> <p>(c) Only 1 is correct</p> <p>(d) All are correct</p>	<p>B</p> <p>Methane is a colorless, odorless gas that's produced both by nature (such as in wetlands when plants decompose underwater) and in industry (for example, natural gas is mostly made of methane). It is widely regarded as the second most important greenhouse gas, after carbon dioxide (CO₂). However, methane is about 200 times less abundant in the atmosphere and lasts there for only about a decade on average—while CO₂ can last for centuries. To put it another way: methane does its damage quickly but soon fades away, while CO₂ traps a smaller amount of heat consistently, decade after decade.</p> <p>Termites eat wood and produce methane as a result of the breakdown of cellulose in their digestive tracts. They are thought to be responsible for 11% of the methane in the atmosphere (some estimates are as high as 20% - 40%). The clearing of the rain forests greatly impacts termite populations and in turn the methane content of the atmosphere. When a patch of rain forest is cleared, termite populations explode due to the</p>

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			<p>ample food source that is left behind. Water vapor can vary from 4% in the steamy tropics to nearly nonexistent in the cold dry regions of the Antarctic. Water vapor is a good absorber of Earth's outgoing radiation and thus is considered a greenhouse gas. When water vapor is converted to a liquid during condensation, clouds are formed.</p>
122	<p>1. A thicker layer of ozone would be harmful.</p> <p>2. Radio Transmission is possible due to Mesosphere.</p> <p>3. 1° C is higher than 1° F by a factor of 1.8.</p> <p>4. The atmosphere reaches its coldest temperature of around -900C in the mesosphere.</p> <p>Choose the incorrect statement/(s) using the codes below</p> <p>(a) 3 and 4 Only</p> <p>(b) 2 and 3 Only</p> <p>(c) 1 and 2 Only</p> <p>(d) 2 Only</p>	D	<p>Radio Transmission is possible due to Ionosphere.</p> <p>The thickness of the ozone layer generally varies with the seasons and other geographical factors. According to reports, the ozone layer is approximately 20 to 30 kilometres above Earth, which is about 3 mm in thickness or about 300 Dobson Units. Every year, 16th of September is observed as the World Ozone Day. The ozone layer plays a very significant role both by protecting the planet earth and the lives existing on it. Therefore, we all should protect the ozone layer by limiting the use of CFCs – Chlorofluorocarbons, Chlorine, pesticides, nitrous oxide, halo-carbons and other harmful gases and help in the restoration of the Ozone layer.</p> <p>Negative effects of thickening of Ozone layer</p> <ul style="list-style-type: none"> · Climate change: Ozone is a greenhouse gas, and a thicker ozone layer could contribute to warming of the Earth's atmosphere. This could potentially exacerbate climate change and its associated impacts, such as rising global temperatures and changing weather patterns. · Interference with atmospheric processes: Changes in the ozone layer thickness could disrupt

		<p>atmospheric processes, such as the formation of weather patterns and the circulation of air masses. This could have unpredictable effects on regional and global climate systems.</p> <p>https://www.vedantu.com/question-answer/degrees-celsius-will-be-equal-to-1-degree-class-7-maths-cbse-5fe0df5dc4ebda49e13b1ae5</p> <p>https://scied.ucar.edu/learning-zone/atmosphere/mesosphere#:~:text=The%20mesosphere%20is%20a%20layer,with%20height%20throughout%20the%20mesosphere.</p> <p>Celsius to Fahrenheit $T^{\circ}F = (9/5)T^{\circ}C + 32$</p> <p>Fahrenheit to Celsius $T^{\circ}C = (5/9)(T^{\circ}F - 32)$</p>
123	<p>1. Salts of sorbic acid 2. Salts of propanoic acid 3. Sugar 4. Sodium Bisulfite</p> <p>How many of the above are used as Food preservatives?</p> <p>(a) Only one (b) Only two (c) Only three (d) All the four</p>	<p>D</p> <p>Food preservatives prevent spoilage of food due to microbial growth. The most commonly used preservatives include table salt, sugar, vegetable oils and sodium benzoate, C₆H₅COONa. Sodium benzoate is used in limited quantities and is metabolised in the body. Salts of sorbic acid and propanoic acid are also used as preservatives.</p> <ul style="list-style-type: none"> The most common chemicals used to inhibit the growth of microorganisms are salts and edible oils. As a result, they are referred to as preservatives. To prevent microbes from attacking pickles,

			<p>we add salt or acid preservatives.</p> <ul style="list-style-type: none"> · These are also used to prevent spoilage in jams and squashes. · Common preservatives include sodium benzoate and sodium metabisulphite. · Sodium benzoate is used as a food preservative because of its anti-fungal properties. This chemical compound enters each cell and balances the pH of the food, effectively increasing the acidity of the food and assisting in food preservation. · Many pharmaceutical formulations contain sodium metabisulphite as an antioxidant. It is widely used as a preservative and disinfectant in food.
124	<p>1. Electrons are not made of quarks. 2. Protons and Neutrons are made up of quarks.</p> <p>Which of the statements given above is/are correct?</p> <p>(a) 1 only (b) 2 only (c) Both 1 and 2 (d) Neither 1 nor 2</p>	C	<p>An electron cannot be composed of quarks because quarks are affected by the strong nuclear force whereas an electron is not. They are in a separate "family" of particles known as LEPTONS.</p> <p>https://www.thehindu.com/sci-tech/science/massive-neutron-stars-quark-matter-open-problem/article68128512.ece</p>
125	<p>Consider the following statements.</p> <p>1. Gymnosperms and angiosperms both have seeds. 2. Gymnosperms are wind pollinated.</p>	A	<p>https://www.thehindu.com/sci-tech/science/understanding-of-earths-flowering-plants-blossoms-in-genome-study/article68105084.ece</p>

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	<p>3. Gymnosperms succeeded angiosperms on the Earth.</p> <p>How many of the statements given above is/are incorrect?</p> <p>(a) Only one (b) Only two (c) All the three (d) None of these</p>		<p>Gymnosperms preceded angiosperms on the Earth.</p>
126	<p>The pyramid which cannot be inverted in a stable ecosystem is that of</p> <p>(a) Energy (b) Numbers (c) Biomass (d) Both (a) and (b)</p>	A	<p>Ø Pyramids of energy show the relative amount of energy available at each trophic level. his pyramid is always upright because of the loss of energy as each level consumes the lower one.</p> <p>Ø A pyramid of biomass illustrates the relative amount of living organic matter at each trophic level.</p> <p>A pyramid of numbers shows the relative number of individual organisms at each trophic level in an ecosystem</p>
127	<p>How many of the following statements is/are true about Magnetars?</p> <p>1) They are different from neutron stars. 2) They produce gamma-ray bursts. 3) The X-ray bursts from the magnetar were detected by Astrosat.</p> <p>Select the correct answer using the codes given below:</p> <p>(a) Only one</p>	C	<p>https://www.thehindu.com/sci-tech/science/huge-energetic-flare-from-magnetic-neutron-star-detected/article68105064.ece https://pib.gov.in/PressReleasePage.aspx?PRID=1990198</p>

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	<p>(b) Only two (c) All the three (d) None of these</p>		
128	<p>Consider the following statements:</p> <p>1. The President can promulgate an ordinance only when both the Houses of Parliament are not in session.</p> <p>2. The decision of the President to issue an ordinance can be questioned in a court of law.</p> <p>Which of the statements given above is/are not correct?</p> <p>(a) 1 only (b) 2 only (c) Both 1 and 2 (d) Neither 1 nor 2</p>	A	<p>The ordinance-making power is the most important legislative power of the President. It has been vested in him to deal with unforeseen or urgent matters. But, the exercise of this power is subject to the following four limitations:</p> <ul style="list-style-type: none"> · He can promulgate an ordinance only when both the Houses of Parliament are not in session or when either of the two Houses of Parliament is not in session. An ordinance can also be issued when only one House is in session because a law can be passed by both the Houses and not by one House alone. · He can make an ordinance only when he is satisfied that the circumstances exist that render it necessary for him to take immediate action. In Cooper case, (1970), the Supreme Court held that the President's satisfaction can be questioned in a court on the ground of malafide. This means that the decision of the President to issue an ordinance can be questioned in a court on the ground that the President has prorogued one House or both Houses of Parliament deliberately with a view to promulgate an ordinance on a controversial subject, so as to bypass the parliamentary decision and thereby circumventing the authority of the Parliament. · His ordinance-making power is coextensive as

			<p>regards all matters except duration, with the law-making powers of the Parliament.</p> <ul style="list-style-type: none"> · Every ordinance issued by the President during the recess of Parliament must be laid before both the Houses of Parliament when it reassembles.
129	<p>1. There was a complete disunity among Hindu and Muslim peasants.</p> <p>2. Hem Chandra Kar was one of the prominent leaders of the rebellious ryots.</p> <p>3. Christian Missionaries extended active support to Indigo ryots.</p> <p>Which of the statements given above are correct regarding of the Indigo Revolt (1859-60)?</p> <p>(a) 1 and 2 only (b) 2 and 3 only (c) 2 only (d) 1 only</p>	B	<p>It was a result of both the major religious groups of farmers in Bengal, notably a farmer Haji Molla of Nischindipur said that he would rather beg than sow indigo. The farmers were in no possession of any type of arms and had no proper organization and discipline. Hem Chandra Kar was one of the prominent leaders of the rebellious ryots.</p> <p>The key objective of the Indigo Revolt of 1859-60 was to stop the forced cultivation of indigo by European planters, who oppressed the peasants. The Revolt was a success because by 1860, most of the indigo factories were shut down and the ryots won the freedom to sow the crop of their choice in their fields.</p> <p>Hindu-Muslim-Christian unity – Hindus and Muslims fought shoulder – to shoulder, whereas missionaries extended active support to the ryots.</p>
130	<p>Which one of the following statements is/are wrong?</p> <p>(1) Dharmapala established Somapura Mahavihara.</p> <p>(2) Haribhadra was the spiritual preceptor of Dharmapala.</p> <p>(3) Agama Shastra was written by Gaudapada.</p>	D	<p>Sashanka, the Gauda ruler, believed to have ruled between 590 and 625 CE, is considered the first prominent king of ancient Bengal. After the fall of the Gauda kingdom, there was no central authority, which led to recurring wars between petty chieftains. So, in 750 CE, a group of chiefs met and decided on a “Kshatriya chief” named Gopala to be their ruler. There is a story that</p>

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<p>(4) Ramacharitam is a biography of a later Pala ruler Ramapala.</p> <p>(a) 1 and 3 only (b) 2 and 3 only (c) 1 and 2 only (d) 1, 2, 3 and 4</p>	<p>Gopala was elected because of his ability to kill a “demoness” that had killed those who were previously elected like him. Though Gopala did not have royal antecedents, he succeeded in acquiring a kingdom. Gopala’s political authority was soon recognised by several independent chiefs. His original kingdom was in Vanga or East Bengal.</p> <p>Pala Rulers</p> <p>Gopala I was succeeded by his son Dharmapala (770–815 CE) who made the Pala kingdom a force to reckon with. Bengal and Bihar were directly ruled by him. Kanauj was ruled by his nominee. The rulers of the Punjab, Rajaputana, Malwa and Berar accepted his suzerainty. He assumed titles like Paramesvara, Parambhataraka and Maharajadhiraja.</p> <p>Dharmapala proved to be a great patron of Buddhism. He founded the Vikramasila monastery in Bhagalpur district in Bihar, which developed into a great centre of Buddhist learning and culture. He built a grand vihara at Somapura in modern Paharapura (present-day Bangladesh). Dharmapala also built a monastery at Odantapuri in Bihar. He patronised Harisbhadra, a Buddhist writer.</p> <p>Dharmapala’s son Devapala extended Pala control eastwards up to Kamarupa (Assam). He defeated Amoghavarsha, the Rashtrakuta ruler, by allying with all the states that regarded the Rashtrakutas as their common enemy. Devapala was also a great patron of Buddhism. He granted five villages to Balaputradeva, the king of the Sailendra dynasty of</p>
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		<p>Suvarnadipa (Sumatra), to maintain a monastery built by him at Nalanda. Nalanda continued to flourish as the chief seat of Buddhist learning even during the Pala reign.</p> <p>Devapala was succeeded by Vigramapala, who abdicated his throne after ruling for a few years and went to lead an ascetic life. Narayanapala, son of Vigramapala, was also a man of pacific and religious disposition. The Rashtrakutas and the Pratiharas took advantage of Narayanapala's disposition and defeated the Palas. The rise of the Pratiharas in Jalore under Mihira Bhoja and the advance of the Rashtrakutas into Pala territories inevitably brought about the decline of the Palas. The petty chiefs, who formerly owed allegiance to the Palas, also started asserting their independence.</p> <p>The slide of the Pala dynasty was accelerated during the rule of his three successors – Rajyapala, Gopala III and Vigramapala II. The fortunes of the dynasty, however, were revived by Mahipala I, son of Vigramapala II. The most important event of his period was the invasion of northern India by Rajendra Chola sometime between 1020 and 1025 CE. However, the advance of the Cholas beyond the Ganges was checked by Mahipala I.</p> <p>After 15 years of Mahipala's rule, four insignificant rulers followed. Ramapala was the last ruler who tried to recover the lost glory of the dynasty. He ruled for about 53 years and after his death, the presence of Pala dynasty was confined to only a portion of Magadha (Bihar) and continued to exist</p>
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		<p>only for a short period. Vijayasena of the Sena dynasty who had become powerful by then in northern Bengal expelled the last ruler Madanapala (1130–1150 CE) from Bengal and established his dynastic rule.</p> <p>Religion - The Palas were great patrons of Mahayana Buddhism. The Buddhist philosopher Haribhadra was the spiritual preceptor of Dharmapala, the founder of the Pala kingdom. Bengal remained one of the few places where Buddhist monasteries continued to exist. The kingdom as well as Buddhism soon suffered decline because of large-scale conversion of merchants and artisans to Islam.</p> <p>Art and Architecture - Two artists of this period were Dhiman and his son Vitapala. They were great painters, sculptors and bronze statue makers. The Pala school of sculptural art was influenced by the Gupta art. Mahipala I constructed and repaired several sacred structures at Saranath, Nalanda and Bodh Gaya. Gopala founded the famous monastery at Odantapura (Bihar). Dharmapala established the Vikramashila and the Somapura Mahaviharas (Bangladesh).</p> <p>Literature - The prominent Buddhist scholars of Vikramashila and Nalanda universities were Atisha, Saraha, Tilopa, Dansheel, Dansree, Jinamitra, Muktimitra, Padmanava, Virachan and Silabhadra. The notable Pala texts on philosophy include Agama Shastra by Gaudapada, and Nyaya Kundali by Sridhar Bhatta. Many texts on medicine were compiled by Chakrapani Datta,</p>
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		<p>Sureshwar Gadadhara Vaidya and Jimutavahana. The Palas also patronised Sanskrit scholars. Many Buddhist tantric works were authored and translated into Sanskrit. The original tantric works comprise a varied group of Indian and Tibetan texts. The “Mahipalageet” (songs on Mahipala), a set of folk songs, are still popular in the rural areas of Bengal. Sandhyakar Nandi’s epic Ramacharitam, a biography of a later Pala ruler Ramapala, describes how forest chiefs were brought into their alliance through lavish gifts.</p>
131	<p>What is meant by “Momentum investing”?.</p> <p>(a) It refers to a style of investing wherein investors purchase assets such as stocks or bonds that are consistently rising in price while selling assets whose prices are falling.</p> <p>(b) It refers to a style of investing wherein investors buy assets when they are selling at low prices, such as during times of a financial crisis, as assets could be found selling at prices well below their intrinsic value.</p> <p>(c) It refers to a style of investing that cannot generate high returns that comfortably beat the benchmark indices.</p> <p>(d) It refers to a style of investing</p>	<p>A https://www.thehindu.com/specials/text-and-context/the-logic-behind-momentum-investing/article67724617.ece</p>

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	that can cause a sustainable rise or fall in prices.		
132	<p>In relation to Article 20 of the Constitution of India, which of the below statements is/are correct?</p> <p>1. It prohibits retrospective criminal legislation.</p> <p>2. The protection against self-incrimination extends to both criminal and civil proceedings.</p> <p>3. It provides immunity from double jeopardy including Prosecution for an offence.</p> <p>(a) 1 only (b) 1 and 3 (c) 3 only (d) 1, 2 and 3</p>	B	<p>According to Article 20(1), No person can be convicted except for the violation of an offence under the law prevalent at the time of commission of the act charged as an offence. It prohibits retrospective legislation only for Criminal laws. Any retrospective increase in the penalty (or) the punishment for an offence provided is valid for civil and tax laws and not for criminal laws.</p> <p>Article 20(3) prohibits the compulsion to give self-incriminating evidence only in criminal proceedings and not for civil proceedings. An accused cannot be compelled to be a witness against himself/herself.</p> <p>Article 20(2) states that No person shall be prosecuted and punished for same offence more than once which means that, this article provides immunity from double jeopardy not only against Punishment for an offence but also against Prosecution.</p>
133	<p>Consider the following statements.</p> <p>(i) Once it has been liquefied, the methane takes up much less space.</p> <p>(ii) LNG spills require bio-remediation of soil.</p> <p>Which of the above is / are true w.r.t. LNG?.</p> <p>(a) Only (i) (b) Only (ii)</p>	A	<p>Unlike crude oil and crude-derived liquid fuels, LNG spills do not require any remediation of soil, groundwater or surface waters because it evaporates immediately and dissipates quickly into the atmosphere.</p> <p>https://indianexpress.com/article/explained/explained-climate/what-is-liquified-natural-gas-impact-climate-8397534/</p> <p>https://indianexpress.com/article/explained/explained-economics/small-scale-lng-vijaipur-fuel-</p>

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<p>(c) Both (i) and (ii) (d) Neither (i) nor (ii)</p>	<p>energy-9221867/</p> <p>Petroleum / Mineral oil</p> <p>Found in sedimentary rocks of marine origin</p> <p>Formed by decomposition of tiny marine creatures, plants & vegetation under mud, silt & sand. Over the years, it undergoes chemical changes to form crude oil & natural gas under the action of heat & pressure.</p> <p>20 % of India's crude oil & gas demand is produced domestically & 80 % is imported from (UAE, Saudi, Iran, Russia).</p> <p>Jamnagar Refineries of Reliance industries is world largest refinery complex.</p> <p>Natural Gas</p> <p>NG is odorless, colorless gas made of variety of compounds but methane is the most imp. It is found in association with mineral oil (75% is in Bombay High and Bassein).</p> <p>NG gas 70-90% Methane, Ethane, Propane and Butane (0-20% combined), CO2, Oxygen, Nitrogen, H2S and Trace gases like (A, He, Ne, Xe).</p> <p>40% Goes to Chemical fertilizers, 30% (Power generation) and 10% LPG.</p>
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		<p>HPCL is a Navratna company. It has 2 refineries - Mumbai and Vishakhapatnam.</p> <p>Compressed Natural Gas</p> <p>CNG is obtained by compressing NG under high pressure. Reduces its volume.</p> <p>Advantages</p> <p>Viable alternative fuel (Storage cylinders)</p> <p>Cheaper and reduce emissions.</p> <p>Versatile and low storage costs.</p> <p>Cleaner solution from diesel</p> <p>Disadvantages</p> <p>Explosion ka risk.</p> <p>Infra support needed.</p> <p>Applications: Buses, Trucks.</p> <p>>90% is Methane and 3-4% is Ethane.</p> <p>CNG is also very</p> <p>Liquefied Natural Gas</p> <p>LNG is produced by cooling NG to - 162 degree C in Cryogenic stage through Liquifaction. Kept in liquid form to increase quantities of NG that can be stored in tanks.</p> <p>Advantages</p> <p>Easy to transport.</p> <p>Helps in electrification.</p> <p>Clean burning fuel, smoke free, less CO₂ than Coal, no black carbon.</p> <p>Disadvantages:</p> <p>Explosion and Infra.</p> <p>Application: Business, Industry, Power generation, Cooking.</p> <p>LNG takes less storage space than CNG.</p>
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			<p>light, so if there is a leak, it will dissipate rapidly into air but LPG will settle on ground. This makes CNG a safer choice over LNG. CNG releases less GHGs. Hydrogen Enriched Compressed Natural Gas (H-CNG)</p> <p>The blending of hydrogen with CNG provides a blended gas termed as HCNG. HCNG combines the advantages of both hydrogen and methane.</p> <p>Delhi - the first city in the country to roll out HCNG buses for public transport from November 2020. This is a step towards combating air pollution.</p> <p>LPG is a byproduct derived while extracting crude petroleum. It has Propane and Butane. It produces CO₂, NO_x and CO and is much cleaner than Gasoline. Heavier than air hence it will settle down</p>
134	1. India permits dual citizenship under specific circumstances.	A	<p>https://economictimes.indiatimes.com/nri/migrate/can-indians-have-dual-citizenship-heres-the-fine-print/articleshow/100406075.cms?from=mdr</p>

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	<p>2. India is a "coming together" federation.</p> <p>Which of the statements given above is/are correct?</p> <p>(a) 1 only (b) 2 only (c) Both 1 and 2 (d) Neither 1 nor 2</p>		<table border="0"> <tr> <td style="vertical-align: top;"> <p>Coming together federation</p> <p>In this type of federation, separate sovereign states connect together to become a greater government.</p> <p>Individual States combine their sovereign rights and assets to form a stronger nation.</p> <p>In this federation, the individual states have sole authority. The ultimate result is a more stable nation.</p> <p>Examples are the USA, Australia, Switzerland</p> </td> <td style="vertical-align: top;"> <p>Holding together federation</p> <p>In this type of federation, a broad force or country agrees to split its powers between the constituent states and the central government.</p> <p>There is no pooling of authority and retention of nationality in such a federation.</p> <p>In this federation, the central government has more authority than the states.</p> <p>Examples are India, Spain, Belgium</p> </td> </tr> </table>	<p>Coming together federation</p> <p>In this type of federation, separate sovereign states connect together to become a greater government.</p> <p>Individual States combine their sovereign rights and assets to form a stronger nation.</p> <p>In this federation, the individual states have sole authority. The ultimate result is a more stable nation.</p> <p>Examples are the USA, Australia, Switzerland</p>	<p>Holding together federation</p> <p>In this type of federation, a broad force or country agrees to split its powers between the constituent states and the central government.</p> <p>There is no pooling of authority and retention of nationality in such a federation.</p> <p>In this federation, the central government has more authority than the states.</p> <p>Examples are India, Spain, Belgium</p>
<p>Coming together federation</p> <p>In this type of federation, separate sovereign states connect together to become a greater government.</p> <p>Individual States combine their sovereign rights and assets to form a stronger nation.</p> <p>In this federation, the individual states have sole authority. The ultimate result is a more stable nation.</p> <p>Examples are the USA, Australia, Switzerland</p>	<p>Holding together federation</p> <p>In this type of federation, a broad force or country agrees to split its powers between the constituent states and the central government.</p> <p>There is no pooling of authority and retention of nationality in such a federation.</p> <p>In this federation, the central government has more authority than the states.</p> <p>Examples are India, Spain, Belgium</p>				
135	<p>With reference to the Cabinet Mission, consider the following statements:</p> <p>1. Its objective was to obtain an agreement with the Indian leaders as to the framing of a constitution for India.</p> <p>2. It proposed the creation of a</p>	D	<p>https://iasgoogle.com/editorial/the-cabinet-mission-1946</p>		

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	<p>full-fledged Pakistan.</p> <p>3. It proposed a three-tier federation for India.</p> <p>Which of the above given statements is/are correct?.</p> <p>(a) 1 only</p> <p>(b) 1 and 2 only</p> <p>(c) 1, 2 and 3</p> <p>(d) 1 and 3 only</p>		
136	<p>Consider the following statements w.r.t. Hepatitis:</p> <ol style="list-style-type: none"> Hepatitis A and E are transmitted through contaminated food and water. Hepatitis B can be prevented by medication. Hepatitis C can be cured with vaccination. Hepatitis D can only infect those who are already infected with hepatitis B. <p>Which of the statements given above is/are correct?.</p> <p>(a) 1 & 4</p> <p>(b) 2 & 3</p> <p>(c) 1, 2 & 3</p> <p>(d) 2 & 4</p>	A	<p>https://indianexpress.com/article/explained/explained-health/global-hepatitis-report-2024-world-health-organisation-hepatitis-b-tuberculosis-covid-19-tb-deaths-globally-9270443/</p>
137	<p>(1) Effective Exchange Rate is an index of the simple average of the</p>	A	<p>Effective Exchange Rate is an index of the weighted average of the rupee's exchange rates vis-à-vis the</p>

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	<p>rupee's exchange rates vis-à-vis the currencies of India's major trading partners.</p> <p>(2) Real effective exchange rate does not factor in inflation.</p> <p>(3) An increase in Nominal Effective Exchange Rate indicates the appreciation of rupee.</p> <p>Which of the above is/are correct?.</p> <p>(a) Only 3</p> <p>(b) Only 2 & 3</p> <p>(c) Only 1 & 3</p> <p>(d) 1, 2 & 3</p>		<p>currencies of India's major trading partners.</p> <p>https://indianexpress.com/article/explained/explained-economics/rupee-modi-government-9285946/</p>
138	<p>Consider the following statements:</p> <p>1. Article 176 of the constitution provides for customary address by Governor in State assembly.</p> <p>2. Governor has no discretion in reading out the text of the address.</p> <p>Which of the following statements is/are correct?</p> <p>(a) Only 1</p> <p>(b) Only 2</p> <p>(c) Both 1 and 2</p> <p>(d) Neither 1 Nor 2</p>	A	<p>Constitutional provision regarding customary address:</p> <ul style="list-style-type: none"> · The origin of the practice of customary address can be traced to the Government of India Act, 1919. · Article 87: President shall address both houses of the Parliament assembled together at the commencement of the first session after each general election to the House of People and at the commencement of the first session of each year. · Provisions regarding the address shall be made by the respective houses i.e. Lok Sabha and Rajya Sabha respectively. · Article 176: Governor shall address the state legislative assembly and in case of state legislative council, both the houses together. · Provisions regarding the address shall be made

by the respective houses.

Growing conflict in reading out the customary address:

- Kerala Governor Arif Mohammad Khan modified the portions of the text of customary address on his discretion. Meanwhile, this has been the case in many non -BJP ruled states like West Bengal and Tamil Nadu.
- **Article 163**– There shall be a Council of Ministers with the Chief Minister at the head to aid and advise the Governor in the exercise of his functions, except in so far as he is by or under this Constitution required to exercise his functions or any of them in his discretion.
- If any question arises whether any matter is or is not a matter required to act in his discretion, the decision of the Governor in his discretion shall be final, and the validity of anything done by the Governor shall not be called in question on the ground that he ought or ought not to have acted in his discretion.
- But, **Governor has used the above discretion provision in exercising discretion in delivering customary address.**
- **Important Cases related to Customary Address**
- In **Yogendra Singh Handa vs State of Rajasthan (1967)**, Rajasthan High Court held that some portion read by governor was good enough to deem the whole address as read (**Context: Then Rajasthan governor did not read the full address**).

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			<ul style="list-style-type: none"> In the Abdul Ghafoor Habibullah case, Kolkata high court held that governor cannot decline to deliver his address and refuse to fulfil his constitutional duty.
139	<p>Who is the founder of the Charvaka School of philosophy?.</p> <p>(a) Kumarila Bhatta</p> <p>(b) Sabar Swami</p> <p>(c) Jaimini</p> <p>(d) Brihaspati</p>	D	https://nios.ac.in/media/documents/SecIHCour/English/CH.08.pdf
140	<p>Consider the following statements:</p> <p>1. Thermal expansion of water contributes to sea level rise.</p> <p>2. Sea level rise leads to saltwater contamination of freshwater aquifers.</p> <p>3. Weakening of El Niño most likely slows down the rate of sea level rise.</p> <p>Which of the above statements is/are correct?</p> <p>(a) 1 only</p> <p>(b) 3 only</p> <p>(c) 1 and 2 only</p> <p>(d) 1, 2 and 3</p>	D	https://indianexpress.com/article/explained/explained-climate/sea-level-rise-9284789/
141	<p>Who composed "Dohas"?</p> <p>(a) Kabir</p>	A	https://nios.ac.in/media/documents/SecIHCour/English/CH.09.pdf

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	<p>(b) Ramananda (c) Jayadev (d) Namdeva</p>	
<p>142</p>	<p>Consider the following statements:</p> <p>1. Green Ammonia is produced by the Haber process.</p> <p>2. Ammonia cannot be used in a fuel cell.</p> <p>Which of the statements given above is/are incorrect?</p> <p>(a) 1 only (b) 2 only (c) Both 1 and 2 (d) Neither 1 nor 2</p>	<p>B</p> <ul style="list-style-type: none"> · Green ammonia, also known as sustainable or renewable ammonia, is an innovative and eco-friendly form of ammonia production that is gaining prominence in the global energy landscape. · It is produced using renewable energy sources, such as wind, solar, or hydropower, and serves as a promising energy carrier with applications in various sectors, including agriculture, transportation, and energy storage. <p>Production of Green Ammonia</p> <ul style="list-style-type: none"> · Haber-Bosch Process: Traditional ammonia production relies on the energy-intensive Haber-Bosch process, which consumes a significant amount of natural gas and emits substantial greenhouse gases (GHGs), mainly carbon dioxide (CO₂). · Electrolysis: Green ammonia production involves an alternative approach called "electrolysis," which utilizes renewable electricity to split water (H₂O) into hydrogen (H₂) and oxygen (O₂). This hydrogen is then used to synthesize ammonia (NH₃) through the Haber-Bosch process, but with zero carbon emissions. · Renewable Energy Sources: The key to green ammonia production is the use of renewable energy sources, such as solar, wind, or hydropower, to power the electrolysis process. This

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		<p>ensures that the entire production cycle is emissions-free.</p> <p>Applications of Green Ammonia</p> <ul style="list-style-type: none">· Agriculture: Green ammonia can serve as a sustainable and carbon-neutral source of fertilizer. It can replace traditional ammonia-based fertilizers, which are carbon-intensive to produce, thereby reducing the carbon footprint of agriculture.· Energy Storage: Green ammonia can be used as an energy carrier and energy storage medium. Hydrogen, a component of ammonia, can be extracted when needed to generate electricity or serve as a fuel for fuel cells, making it a versatile energy storage solution.· Transportation: Ammonia can be used as a clean and efficient fuel in the transportation sector. It can power fuel cell vehicles or be utilized in ammonia-powered combustion engines, reducing emissions.· Industrial Processes: Green ammonia can replace conventionally produced ammonia in various industrial processes, such as refrigeration, chemical manufacturing, and the production of explosives. <p>Advantages of Green Ammonia</p> <ul style="list-style-type: none">· Carbon Neutrality: The primary advantage of green ammonia is its carbon neutrality. By using renewable energy sources for production, it eliminates carbon emissions associated with traditional ammonia production.
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			<ul style="list-style-type: none"> · Versatility: Green ammonia can be used as a fertilizer, energy carrier, and energy storage medium, making it a versatile and multi-purpose resource. · Reduced Dependency on Fossil Fuels: It reduces reliance on fossil fuels for ammonia production, contributing to energy independence and sustainability. · Clean Transportation: As a fuel, green ammonia can power vehicles with lower emissions, reducing air pollution and greenhouse gas emissions. <p>Challenges and Considerations</p> <ul style="list-style-type: none"> · Energy Efficiency: Electrolysis processes need to become more energy-efficient to make green ammonia production economically viable. · Infrastructure: Developing the necessary infrastructure for green ammonia production, storage, and transportation is a significant challenge. · Costs: The initial investment in renewable energy sources and electrolysis equipment can be high, although costs are expected to decrease as technology advances.
143	<p>Who is charged with destroying the glorious Buddhist University of Nalanda in Bihar, and is said to have mistaken it for a military camp?.</p> <p>(a) Muhammad Ghori (b) Qutb-ud-din Aibak</p>	D	<p>https://www.bbc.com/travel/article/20230222-nalanda-the-university-that-changed-the-world</p>

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	(c) Iltutmish (d) Bhakthiyar Khalji		
144	<p>Consider the following Statements.</p> <p>1. Article 47 can be used to justify a restriction on citizens' rights under Article 19(1)(g).</p> <p>2. Article 47 of the Constitution places a duty on the State to "raise the level of nutrition and the standard of living and to improve public health".</p> <p>Which of the above statement is/are correct?</p> <p>(a) 1 only (b) 2 only (c) Both 1 and 2 (d) Neither 1 nor 2</p>	C	<p>https://indianexpress.com/article/explained/explained-sci-tech/us-bill-banning-tiktok-9287878/</p>
145	<p>Which of the following statements is/are true w.r.t. the Carbon Credit Trading Scheme of India?.</p> <p>1. It takes into account the mandatory implementation for the 'obligated' entities but excludes voluntary markets.</p> <p>2. It allows Indian companies to trade Carbon credit certificates in domestic as well as foreign markets.</p> <p>(a) 1 only (b) 2 only</p>	D	<p>https://www.businesstoday.in/opinion/columns/story/indias-proposed-carbon-credit-trading-scheme-what-it-is-why-it-matters-and-what-to-expect-424307-2024-04-04</p>

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	(c) Both 1 and 2 (d) Neither 1 nor 2		
146	<p>Consider the following statements w.r.t. Hydrofluorocarbons:</p> <p>Statement-I: They have zero Ozone Depletion Potential.</p> <p>Statement II: They have no chlorine.</p> <p>Which one of the following is correct in respect of the above statements?</p> <p>(a) Both Statement-I and Statement-II are correct and Statement- II is the correct explanation for Statement- I</p> <p>(b) Both Statement-I and Statement-II are correct and Statement- II is not the correct explanation for Statement-I</p> <p>(c) Statement I is correct but Statement II is incorrect</p> <p>(d) Statement I is incorrect but Statement II is correct</p>	A	<p>https://indianexpress.com/article/explained/explained-global/smuggling-greenhouse-gases-case-us-9203459/</p> <p>HFC, Ammonia, and Carbon dioxide do not cause depletion of Ozone.</p> <p>Hydrofluoroolefins (HFOs) are the fourth-generation of fluorine-based gases.</p> <p>HFOs are mainly used as refrigerants, blowing agents, propellants and solvents. As a refrigerant, you can find HFOs in heat pumps, air conditioning system and commercial cooling installations.</p> <p>As the role of Hydrofluorocarbons (HFCs) is phased-down, HFOs can help ensure systems maintain their safety and energy efficiency while still being an economical alternative.</p> <p>Additionally, because HFOs are already decoupled from natural gas, they are an ideal greener alternative to HFCs. HFOs have zero ODP (Ozone Depletion Potential) and a very low GWP (Global Warming Potential).</p>
147	<p>Which of the following statements are correct regarding 'Dashavtar Temple' of Deogarh?.</p> <ol style="list-style-type: none"> 1. It was built during Gupta period and is dedicated to Lord Vishnu. 2. It is the first pyramidal shaped temple of India. 	C	<p>Dashavtar temple is one of the earliest examples of temple architecture. It was made during Gupta Period and is dedicated to Lord Vishnu. It is the first pyramidal shaped temple in India. It is the first temple with a Shikhar (Tower). It is the first temple to have a mandapa. It is made of Stone. Garbha griha (the room where chief diety is kept) –</p>

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	<p>3. It is the first brick temple of India.</p> <p>(a) 1, 2 and 3 (b) 2 only (c) 1 & 2 only (d) 2 & 3 only</p>		<p>was generally made dark and narrow to keep its mystical value intact.</p> <p>The first brick temple built in India is Bhitargaon's Temple.</p>
<p>148</p>	<p>Which one of the following is the odd one out?</p> <p>(i) Udayagiri cave (ii) Ellora caves (iii) Elephanta cave (iv) Bagh cave</p> <p>(a) iii (b) i (c) ii (d) iv</p>	<p>D</p>	<p>Elephanta Cave (Maharashtra) - The Elephanta Caves are a group of Hindu rock-cut temples located on an island in Mumbai Harbor, Maharashtra, India. It was built during the reign of the Rashtrakuta dynasty not Gupta Period. Others the rock-cut cave temples of Gupta Period. Udaigiri and Khandagiri caves (Odisha) are situated on two adjacent hills, Udayagiri and Khandagiri mentioned as Kumari Parvata in the Hathigumpha inscription. These caves were carved out during the reign of King Kharvela for Jain monks.(1st century BC)</p> <p>Udayagiri Caves (MP) -The Udayagiri Caves are twenty rock-cut caves near Vidisha, Madhya Pradesh primarily denoted to Hindu gods Vishnu and Shiva from the early years of the 5th century CE. They are the only site that can be verifiably associated with a Gupta period monarch from its inscriptions</p> <p>Ajanta and Ellora Caves (Maharashtra) - The Ajanta and Ellora Caves are a group of Buddhist, Hindu, and Jain rock-cut temples located near Aurangabad in Maharashtra, India. They were built between the 2nd century BCE and 10th century CE, with the Gupta period (4th-5th century CE) being one of the major phases of construction.</p>

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			<p>Bagh (Madhya Pradesh) - The Bagh Caves are a group of ancient Buddhist rock-cut temples located in the Dhar district of Madhya Pradesh, India. They were built in the 5th-6th century CE, during the Gupta period.</p> <p>https://www.deccanherald.com/india/karnataka/great-indian-bustards-may-get-a-karnataka-nest-1240012.html</p>
149	<p>Consider the following statements w.r.t. Meguti Temple.</p> <ol style="list-style-type: none"> 1. It is a Jain temple. 2. It is well known for its Aihole Prashasti inscription. <p>Which of the statements given above is/are correct?</p> <p>(a) 1 only (b) 2 only (c) Both 1 and 2 (d) Neither 1 nor 2</p>	C	<p>https://timesofindia.indiatimes.com/city/hyderabad/archaeological-marvels-badami-chalukya-temples-and-inscriptions-discovered-along-river-krishna/articleshow/107919789.cms</p> <ul style="list-style-type: none"> · The only dated monument in Aihole, the Meguti Temple was built atop a small hill in 634 AD. · The Aihole Inscription, also known as the Aihole Prashasti, is a nineteen-line Sanskrit inscription in Kannada script at Meguti Jain temple in Aihole, Karnataka, India. · The Megudi temple is historically important for its Aihole Prashasti inscription. A slab on the outer east side wall of the temple is inscribed in the Sanskrit language and Old Kannada script. · It is dated to Saka 556 (634 CE) and is a poem by Jain poet Ravikirti. He was in the court of king Pulakeshin II. · This inscription opens with the equivalent of Jai Jinendra salutation in Sanskrit.
150	<p>Which of the following statements is/are correct w.r.t. Khooni</p>	A	<p>Khooni Bhandara, Burhanpur</p> <ul style="list-style-type: none"> · Khooni Bhandara is an underground water

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<p>Bhandara?.</p> <p>1. It is an underground water management system comprising eight waterworks.</p> <p>2. It was built by Palas.</p> <p>Select the correct answer using the code given below:</p> <p>(a) 1 only</p> <p>(b) 2 only</p> <p>(c) Both 1 and 2</p> <p>(d) Neither 1 nor 2</p>	<p>management system comprising eight waterworks built in the historical city of Burhanpur, Madhya Pradesh.</p> <ul style="list-style-type: none">· These water systems in Burhanpur were constructed in 1615 CE.· Khooni Bhandara consists of 103 kundis (well-like storage structures) constructed in a row. They are interconnected to each other through a 3.9 km long underground marble tunnel. This system checks the flow of rainwater from the Satpura hills towards the river Tapti.· The design is based on the simple law of gravity.· The technique used in Burhanpur was taken from the Persian Qanta systems of Iran and Iraq by the Mughals as technologies of public utility used to be imported from Persia for use in India during their times.· It provided water to the entire city for as long as 300 years before it collapsed in 1977.· The hint of red colour in this mineral-rich water gave it the name khooni (bloody). <p>https://www.deccanherald.com/india/madhya-pradesh/unesco-puts-6-new-madhya-pradesh-destinations-on-tentative-list-of-world-heritage-sites-2944661</p>
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OUR TEST 9 QN.NO.56
TEST 18, QN.NO.91

Consider the following statements

1. Thickness of Troposphere at the equator. 2. Thickness of Troposphere at the poles.
Which of the following is / are true?. (a) 1>2 (b) 1=2 (c) 1<2 (d) 1 = Four times 2
The bulk of heat energy transferred in the troposphere is done by (a) Convection...



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Statement-I: Thickness of the troposphere at the equator is much greater as compared to poles.
Statement-II: At the equator, heat is transported to great heights by strong convective currents.

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

- (a) Both ..explains (b) Both .. does not ...
(c) Statement-I is correct, ..
(d) Statement-I is incorrect,

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