

GENERAL STUDIES (PAPER-1)

Time Allowed: Two Hours

Maximum Marks: 200

INSTRUCTIONS

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS TEST BOOKLET DOES NOT HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS, ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET.
2. ENCODE CLEARLY THE TEST BOOKLET SERIES A, B, C OR D AS THE CASE MAY BE IN THE APPROPRIATE PLACE IN THE ANSWER SHEET.
3. You have to enter your Roll Number on the Test Booklet in the Box provided alongside. **DO NOT** write **anything else** on the Test Booklet.
4. This Test Booklet contains **100** items (questions). Each item is printed both in **Hindi** and **English**. Each item comprises four responses (answers). You will select the response which you want to mark on the Answer Sheet. In case you feel that there is more than one correct response, mark the response which you consider the best. In any case, choose **ONLY ONE** response for each item.
5. You have to mark all your responses **ONLY** on the separate Answer Sheet provided. See directions in the Answer Sheet.
6. All items carry equal marks.
7. Before you proceed to mark in the Answer Sheet the response to various items in the Test Booklet, you have to fill in some particulars in the Answer Sheet as per instructions sent to you with your Admission Certificate.
8. After you have completed filling in all your responses on the Answer Sheet and the examination has concluded, you should hand over to the Invigilator only the *Answer Sheet*. You are permitted to take away with you the Test Booklet.
9. Sheets for rough work are appended in the Test Booklet at the end.

10. Penalty for wrong Answers:

THERE WILL BE PENALTY FOR WRONG ANSWERS MARKED BY A CANDIDATE IN THE OBJECTIVE TYPE QUESTION PAPERS.

- (i) There are four alternatives for the answer to every question. For each question for which a wrong answer has been given by the candidate, **one-third (0.33)** of the marks assigned to that question will be deducted as penalty.
- (ii) If a candidate gives more than one answer, it will be treated as a **wrong answer** even if one of the given answers happens to be correct and there will be same penalty as above to that question.
- (iii) If a question is left blank i.e., no answer is given by the candidate, there will be **no penalty** for that question.

1. Regular intake of fresh fruits and vegetables is recommended in the diet since they are a good source of antioxidants. How do antioxidants help a person maintain health and promote longevity?

- (a) They activate the enzymes necessary for vitamin synthesis in the body and help prevent vitamin deficiency.
- (b) They prevent excessive oxidation of carbohydrates, fats and proteins in the body and help avoid unnecessary wastage of energy.
- (c) They neutralize the free radicals produced in the body during metabolism.
- (d) They activate certain genes in the cells of the body and help delay the ageing process.

Answer: (c): Beta-carotene absorbs free radicals that target molecules in the cell membrane. It is a source of Vitamin A.

It reduces risk of cataract, cancer, and heart attack, risk of stroke. Beta-carotene found in **orange-colored fruits and vegetables and dark**

green, leafy vegetables. Some of the best sources of beta-carotene are sweet potatoes, spinach, and carrots. **Source: CST Science Special, Page No. 136.**

In fact free radicals are atoms, molecules, or ions with unpaired electrons on an open shell configuration and if is allowed to be uncontrolled then it may be involved in

degenerative diseases and carcinogenic tendencies.

Although flax seeds themselves contain lignans, a class of phytoestrogens considered to have antioxidant and cancer-preventing properties. **CST Geography: India and the world, Page No. 211**

Explanation: Antioxidants are the vitamins and minerals found in foods and it helps us to fight off diseases. Antioxidants like Vitamin C, E and A are found in fruits and vegetables. By adding antioxidants in food, a person can be kept young and given a healthier and longer life.

2. Regarding the Indus Valley Civilisation, consider the following statements:

1. It was predominantly a secular civilization and the religious element, though present, did not dominate the scene.

2. During this period, cotton was used for manufacturing textiles in India.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 or 2

Answer: (c): The cotton called Sindon was the greatest contribution of the IVC not only to the Indian culture but also to the world civilization.

Source: CST Indian History, Page No. 25

In the absence of literary sources, the informations are conjectural and speculative and therefore, the domination of priests cannot be ruled out on the basis of archaeological sources. The presence of Great Bath, sculpture of priests

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substantiate this view also. In fact, the question is controversial and answer may (b) also.

3. The lower Gangetic plain is characterized by humid climate with high temperature throughout the year. Which one among the following pairs of crops is most suitable for this region?

- (a) Paddy and cotton (b) Wheat and Jute
(c) Paddy and Jute (d) Wheat and cotton

Answer: (c) Rice is a tropical and sub-tropical crop and requires high heat and high humidity.

Source: CST Geography, Page 658

► Temperature 24°C-35°C

► The Jute plant requires a high relative humidity between 80 and 90 per cent. Jute requires flooded fields. **Source: CST Geography, Page 660**

Explanation: Both paddy and jute cultivation in India requires humid climate with temperature fluctuating between 22-32 degree Celsius. The temperature must be higher during growing season. It thrives well in plenty of bright sunshine with an average temperature of 27 degree C and water. Cultivation of both requires abundant rainfall, ranging from 125-175 cm. New grey alluvial soil of good depth receiving silt from annual floods is most suitable for jute growth. However jute is grown widely in sanding looms and clay loams. This typical type of climatic conditions is found in the lower Gangetic plains; hence option C is the correct one. Wheat is a rabi crop in India and it requires a moderate cool climate with moderate rain. In India, it is grown in winter. It needs temperature 10 degree C to 15 degree C for its cultivation. It thrives well in an average temperature of 16-degree C. Cotton is essentially a tropical crop; but it is also grown in subtropical regions where there is no frost. Cotton plant requires medium temperature and rainfall. It needs summer temperatures between 20 degree C and 30 Degree C. Abundant sunshine are necessary during the growth of the plant. The plant requires rainfall of 50 cm to 80 cm.

4. What could be the main reason/reasons for the formation of African and Eurasian desert belt?

1. It is located in the sub-tropical high pressure cells.
2. It is under the influence of warm ocean currents.

Which of the statements given above is/are correct in this context?

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

Answer: (a): Canary Current, which is cold current flows along the western coast of North Africa between Maderia and Cape Verde. **Source: CST Geography, Page No. 152**

hot deserts are located between 20 degree - 30 degree latitude in both the hemisphere on the western coast of the continents. They are also called Tropical Deserts. They are different from the min-latitude deserts and cold deserts. Hot deserts are found in High pressure belts along the Tropics in the trade winds region. Distribution of Hot Deserts: (i) Asia- Thar desert and the Arabian Desert; (ii) Africa- The Sahara and the Kalahari; (iii) N.America- Lower California and Arizona states of USA; (iv) S.America-Atacama desert; (v) Australia- The Great Australian desert. **Source: CST Geography, Page No. 193**

Explanation: Desert Zone of the Temperate Belt: - It is a natural zone in the temperate belt of the northern

hemisphere in which the predominant landscapes are deserts. In Eurasia the zone stretches from the shores of the Caspian Sea in the west to the Ordos Plateau in the east and has a maximum width of 700-800 km. In North America the deserts of the temperate belt occur in patches in the broad inter-montane basins of the Great Basin highlands, where their existence is the result of topographic features. The Cascade Range acts as a barrier that intercepts much of the precipitation carried by the prevailing westerly winds. Deserts do not occur in the temperate belt of the southern hemisphere. (II) Desert Zones of Tropical Belts: - It is a natural zone in the tropical belts of the northern and southern hemispheres whose dominant landscapes are deserts. These zones lie in the interior and along the western coasts of most continents. The largest tropical desert zones are found in Asia and North Africa, where they form a distinct east-west belt that includes the Sahara, the world's largest desert, the Arabian Desert, and the deserts of India and Pakistan (Thar). (III) Desert Zones of Subtropical Belts:- It is a natural zone in the subtropical belts of the northern and southern hemispheres in which desert landscapes predominate. Whereas in North Africa these desert zones stretch along the southern Mediterranean coast, in Asia they are not continuous. They occur in parts of southern Middle Asia (south of 40° N. lat.), within the Iranian Plateau, and in patches in the semi-desert area of northern Syria and Iraq. The desert zones of the subtropical belts also include the high-altitude "cold" deserts of the Eastern Pamirs and Tibet. In North America, subtropical deserts are found in the southern part of the Great Basin, the Mojave Desert, and the northern part of the Mexican Meseta Central. In Australia, subtropical desert zones occupy the southern parts of the continent, where they are a continuation of the deserts of the tropical belt. In South Africa, the landscapes of the subtropical deserts lie on plateaus and within the intermontane depressions of the Great Karroo.

5. The jet aircrafts fly very easily and smoothly in the lower stratosphere. What could be the appropriate explanation?

1. There are no clouds or water vapour in the lower stratosphere.
2. There are no vertical winds in the lower stratosphere.

Which of the statements given above is/are correct in this context?

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

Answer: (c): Stratosphere: From Tropopause to about 50 Km; it is an Isothermal region and extremely dry free with clouds, water vapour and dust; here air is at rest and movement is almost horizontal. Some clouds found are called Mother of Pearls or Nacreous.

Source: CST Geography, Page No. 102

Explanation: At stratosphere, the temperature increases with increase in altitude. It extends to an altitude of about 50 Km. Airflow in the stratosphere is much less turbulent than in the troposphere. Here the air doesn't flow up and down, but flows parallel to the earth in very fast moving

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air streams. This is the layer where most jet planes fly. Hence option C is the correct one.

6. Consider the following statements:

1. Biodiversity is normally greater in the lower latitudes as compared to the higher latitudes.
2. Along the mountain gradients, biodiversity is normally greater in the lower altitudes as compared to the higher altitudes.

Which of the statements given above is/are correct?

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

Answer: (c) Gradient of Biodiversity: Biodiversity varies with the change in latitude or altitude. As we move from high to low latitudes, broadly speaking, the biological diversity increases. Similarly, we generally notice a decrease in species diversity from lower to higher altitudes on a mountain.

Source: CST General Science, Page No. 183

7. The Brahmaputra, Irrawady and Mekong rivers originate in the Tibet and flow through narrow and parallel mountain ranges in their upper reaches. Of these rivers, Brahmaputra makes a “U” turn in its course to flow into India. This “U” turn is due to

- (a) Uplift of folded Himalayan series
(b) Syntaxial bending of geologically young Himalayas
(c) Geo-tectonic disturbance in the tertiary folded mountain chains
(d) Both (a) and (b) above

Answer: (b) Most of the other Himalayan rivers drain the Ganga-Brahmaputra Basin. Its two main rivers are the Ganga and the Brahma and the Yamuna among other tributaries. The Brahmaputra originates as the Yarlung Tsangpo River in western Tibet, and flows east through Tibet and west through the plains of Assam. The Ganga and the Brahmaputra meet in Bangladesh, and drain into the Bay of Bengal through the world's largest river delta.

► The eastern-most Himalayan rivers feed the Ayeyarwady River, which originates in eastern Tibet and flows south through Myanmar to drain into the Andaman Sea.

► The Salween, Mekong, the Yangtze and the Huang He (Yellow River) all originate from parts of the Tibetan plateau that are geologically distinct from the Himalaya mountains, and are therefore not considered true Himalayan rivers.

Source: CST Geography, Page 383

Syntaxial bending means **having the form of a bow; curved.**

8. A state in India has the following characteristics:

1. Its northern part is arid and semi-arid.
2. Its central part produces cotton.
3. Cultivation of cash crops is predominant over food crops.

Which one of the following states has all of the above characteristics?

- (a) Andhra Pradesh (b) Gujarat
(c) Karnataka (d) Tamil Nadu

Answer: (b): Gujarat is the main producer of Cotton, Groundnut and Tobacco in the country and provides input for important industries like Textile, Oil and Soap. Other important cash crops are teak, khair, salad, haldariyo and manual bamboos. There has been increase in agri-production. Gujarat has put its feet on prio-tech, bio-diversity etc. The agro production export has also growing.

Source: CST Year Book 2011, Page No. 308

9. What is “Virtual Private Network”?

- (a) It is a private computer network of an organization where the remote users can transmit encrypted information through the server of the organization.
(b) It is a computer network across a public Internet that provides users access to their organization's network while maintaining the security of the information transmitted
(c) It is a computer network in which users can access a shared pool of computing resources through a service provider.
(d) None of the statements (a), (b) and (c) given above is a correct description of Virtual Private Network.

Answer: Source: (b) CST Science and Technology, Page No. 136. Virtual Private Network allows a user to connect to a network through a tunnelling protocol and access internal internet and intranet websites and e-mail.

Note: There may a confusion between option (a) and (b) due to the term ‘private network’ but the main point is the secrecy of the user on the public network.

Explanation: A VPN is a network that uses a public telecommunication infrastructure, such as the Internet, to provide remote offices or individual users with secure access to their organization's network. VPN clients and VPN servers are used in three scenarios:- (a) To support remote access to an intranet. (b) to support connections between multiple intranets within the same organization. (c) To join networks between two organizations, forming an extranet.

10. The “*dharma*” and “*rita*” depict a central idea of ancient Vedic civilization of India. In this context, consider the following statements:

1. Dharma was a conception of obligations and of the discharge of one's duties to oneself and to others.
2. Rita was the fundamental moral law governing the functioning of the universe and all it contained.

Which of the statements given above is/are correct.

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

Answer: (c): Source: CST Indian History, Page No. 134. Purushartha : It refers to a goal, end or aim of human existence and found in four forms and important elaborations are being made in *Kamasutra* of Vatsyayana (treating *kama*, particularly as "sexual gratification"), the Arthashastra of Kautilya (treating *artha* as "material pursuits"), the Dharmasastras of various authors, most notably Manu (treating *dharma* as "religious, social and personal ethics") and the principle sutras of the six orthodox schools of philosophy or *darsanas*, all of which are principally concerned with the attainment of *moksha*, often referred to as the parama-purusartha or "chief end of human life".

Source: CST Indian History, Page No. 50

Varuna: – Was an icon of mortality,
He has been mentioned in Bhogaz – Koi inscriptions;
He has been mentioned in 30 hymns;
He is also called head of the ethics as well as Rta;

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Explanation: The Vedic literature describes Rita as power of consciousness, of action and force. Rita is thus the law of action emanated from the consciousness and is given a supreme status in the Vedic literature. Dharma on the other hand is the fulfillment of once obligations and duties according to the prescribed norms and righteousness. Hence option C is the correct one.

11. In the context of global oil prices, "Brent crude oil" is frequently referred to in the news. What does this term imply?

1. It is a major classification of crude oil.
2. It is sourced from North Sea.
3. It does not contain sulphur.

Which of the statements given above is/are correct?

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

Answer: (b): Explanation: Basically, Brent Crude is one of the basis of the classifications of crude oil and is sourced from North Sea and used to price two thirds of the world's internationally traded crude oil supplies. Other classifications are Brent Sweet Light Crude, Oseberg, Ekofisk, Forties, OPEC Reference Basket, Dubai Crude and West Texas Intermediate. In many countries, including those in Europe, Brent Crude is used as a benchmark for pricing other classifications of oil. And it contains approximately 0.37 per cent of sulphur.

12. The function of heavy water in a nuclear reactor is to

- (a) Slow down the speed of neutrons
- (b) Increase the speed of neutrons
- (c) Cool down the reactor
- (d) Stop the nuclear reaction

Answer: (a) Source: CST Year Book, Page No. 130

Under the first stage of the Department of Atomic Energy's nuclear power programme, a series of Pressurised Heavy Water Reactors, using natural uranium as fuel and heavy water as both coolant and moderator, has already been built.

Explanation: In nuclear reactor heavy water is used as a moderator. It's there to act as a neutron moderating fluid. Moderator is the material in the core which slows down the neutrons released from

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fission so that they cause more fission. It is usually water, but may be heavy water or graphite. If graphite or heavy water is used as moderator, it is possible to run a power reactor on natural instead of enriched uranium. Natural uranium has the same elemental composition as when it was mined (0.7 per cent U-235, over 99.2 per cent U-238), enriched uranium has had the proportion of the fissile isotope (U-235) increased by a process called enrichment, commonly to 3.5 - 5.0 per cent. In this case the moderator can be ordinary water, and such reactors are collectively called light water reactors. Because the light water absorbs neutrons as well as slowing them, it is less efficient as a moderator than heavy water or graphite.

13. In India, if a religious sect/community is given the status of a national minority, what special advantages it is entitled to?

1. It can establish and administer exclusive educational

institutions.

2. The President of India automatically nominates a representative of the community to Lok Sabha

3. It can derive benefits from the Prime Minister's 15-Point Programme.

Which of the statements given above is/are correct?

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

Answer: (c): CST Indian Political System, Page No. 191 (Box). Article 30 : Clause (1) All minorities whether based on religion or language shall have the right to establish and administer educational institutions of their choice.

CST India Year Book, Page No. 181

The President of India in his address to the Joint session of Parliament on 25th February, 2005 announced that the Government of India would recast the 15 point program for Welfare of Minorities, in order to incorporate program specific interventions. The earlier program has been revised as the Prime Minister's New 15 Point Program for the welfare of Minorities.

Explanation: According to Article 30(1) of our constitution the minorities have been given the right to establish and administer educational institutions. Option 2 is incorrect because as per article 331 of our constitution notwithstanding anything in Article 81, the President may, if he is of opinion that the Anglo Indian community is not adequately represented in the House of the people, nominate not more than two members of that community to the House of the People. Option 3 is true as minorities are eligible for benefits under PMs 15 point programme. Hence option 1 and 3 are correct.

14. India is home to lakhs of persons with disabilities. What are the benefits available to them under the law?

1. Free schooling till the age of 18 years in government-run schools.
2. Preferential allotment of land for setting up business.
3. Ramps in public buildings.

Which of the statements given above is/are correct?

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

Answer: (d):

Explanation: All the three are correct. All the three benefits available to disabled in India are well explained in the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995. But it is very difficult to remember all the provisions of the Act

15. With what purpose is the Government of India promoting the concept of "Mega Food Parks"?

1. To provide good infrastructure facilities for the food processing industry.
2. To increase the processing of perishable items and reduce wastage.
3. To provide emerging and eco-friendly food processing technologies to entrepreneurs.

Select the correct answer using the codes given below:

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

Answer: (b): Source: CST May 2010, Page No. 15

Government of India is providing an assistance of Rs. 50 crores in this project. It is expected to leverage an investment of about Rs.200-250 crores in the form of food processing

units proposed to be set up in the mega food park. It will also attract a sizeable amount of Foreign Direct Investment (FDI), as FDI up to 100 per cent is under automatic route for most of the processed food products. This is a unique project and first of its kind the State because this would be the only project which will address the needs of the farmers and will ensure a sizeable investment in the State/Region and has the potential of being the engine to drive economic growth in the region.

Around 27 processing and ancillary units coming up in this food park will process about 180,000 TPA of raw materials primarily comprising of fruits and

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vegetables, rice and spices and will generate sizeable employment generation opportunities.

Explanation: The Union government had rechristened the Scheme of Food Parks launched under the 10th Five Year Plan and reformulated it as Mega Food Parks Scheme (MFPS) for the 11th Five Year Plan period. It aims to raise the processing of food items in the country from the existing 6 per cent to 20 per cent, value addition from 20 per cent to 35 per cent and increase India's share in the global food trade from 1.5 per cent to 3 per cent by the year 2015. The scheme aims to facilitate the establishment of a strong food processing industry backed by an efficient supply chain, which would include collection centres, primary processing centres and cold chain infrastructure. The MFPS scheme will be demand driven, pre marketed and would facilitate food processing units to meet environmental, safety and social standards.

16. The authorization for the withdrawal of funds from the Consolidated Fund of India must come from

- The President of India
- The Parliament of India
- The Prime Minister of India
- The Union Finance Minister

Answer: (b) Source: CST Indian Political System, Page No.

299. Consolidated Fund of India (Article 266): All revenues received by the government, loans raised by it and also its receipts from recoveries of loans granted by it are accounted in the CFI. No amount can be withdrawn from the CFI without the approval and authorization of the Parliament.

Explanation: Article 283(1) of our constitution clearly states that the custody of the Consolidated Fund of India and the Contingency Fund of India, the payment of moneys into such Funds, the withdrawal of moneys therefrom, the custody of public moneys other than those credited to such Funds received by or on behalf of the Government of India, their payment into the public account of India and all other matters connected with or ancillary to matters aforesaid shall be regulated by law made by Parliament, and, until provision in that behalf is so made, shall be regulated by rules made by the President and 283(2) states that the custody of the Consolidated Fund of a State and the Contingency Fund of a State, the payment of moneys into such Funds, the withdrawal of moneys therefrom, the custody of public moneys other than those credited to such

Funds, received by or on behalf of the Government of the State, their payment into the public account of the State and withdrawal of moneys from such account and all other matters connected with or ancillary to matters aforesaid shall be regulated by law made by the Legislature of the State, and, until provision in that behalf is so made, shall be regulated by rules made by the Governor of the State.

17. All revenues received by the Union Government by way of taxes and other receipts for the conduct of Government business are credited to the

- Contingency Fund of India
- Public Account
- Consolidated Fund of India
- Deposits and Advances Fund

Answer: (c) Source: CST Indian Political System, Page No.

299. Consolidated Fund of India (Article 266): All revenues received by the government, loans raised by it and also its receipts from recoveries of loans granted by it are accounted in the CFI.

Explanation: Article 266 of the constitution of India clearly states that all revenues received by the Government of India, all loans raised by that Government by the issue of treasury bills, loans or ways and means advances and all moneys received by that Government in repayment of loans shall form one consolidated fund to be entitled the Consolidated Fund of India, and all revenues received by the Government of a State, all loans raised by that Government by the issue of treasury bills, loans or ways and means advances and all moneys received by that Government in repayment of loans shall form one consolidated fund to be entitled the Consolidated Fund of the State.

18. Microfinance is the provision of financial services to people of low-income groups. This includes both the consumers and the self-employed. The service/services rendered under micro-finance is/are:

- Credit facilities
- Savings facilities
- Insurance facilities
- Fund Transfer facilities

Select the correct answer using the codes given below the lists:

- 1 only
- 2 and 3 only
- 1 and 4 only
- 1, 2, 3 only

Answer: (d)

Explanation: Microfinance is defined as financial services for poor and low-income clients. In practice, the term is often used more narrowly to refer to loans and other services from providers that identify themselves as "microfinance institutions" (MFIs). Microfinance thus includes basic financial services - including small loans, savings accounts, fund transfers and insurance. Microfinance clients are poor and low-income people that do not have access to other formal financial institutions. Microfinance clients are usually self-employed, household-based entrepreneurs.

19. Southeast Asia has captivated the attention of global community over space and time as a geostrategically significant region. Which among the following is the most convincing explanation for this global perspective?

- It was the hot theatre during the Second World War.
- Its location between the Asian powers of China and India.

of Ministers

Answer: (d) According to Article 110 of the constitution dealing with the definition scope and dimensions of the money bill, a money bill can only be introduced in the Lok Sabha and that too on the recommendations of the President. The Rajya Sabha has restricted powers with regard to a money bill. It cannot reject or amend a money bill. It can only make the recommendations. The Lok Sabha can either accept or reject all or any of the recommendation of the Rajya Sabha. Further, when a money bill is presented to the President, he may either give assent to the bill or withhold his assent to the bill but cannot return the bill for reconsideration of the houses. The defeat of the money bill in the Lok Sabha leads to the resignation of the government. The PM and his council are jointly accountable to the Lok Sabha, they sink and swim together, and the defeat of the government on a policy statement like budget, leads to loss of confidence of the house. Hence option A, B, C are incorrect and D is the best suited one. **(Source D.D. Basu "Introduction to the Constitution of India" Page 214-215) and M. Laxmikant "Indian Polity" Page 197-198)**

24. Under the Constitution of India, which one of the following is not a fundamental duty?

- (a) To vote in public elections
- (b) To develop the scientific temper
- (c) To safeguard public property
- (d) To abide by the Constitution and respect its ideals

Answer: (a) Source: CST Indian Political System, Page No.

215. The 11 Fundamental duties are: (1) To **abide by constitution** and respect its ideal and institutions, the National Flag and National Anthem.

- (2) To cherish and follow the noble ideals which inspired our national struggle for freedom.
- (3) To uphold and protect the sovereignty, unity and integrity of India.
- (4) To defend the country and render national service when called upon to do so.
- (5) To promote harmony and the spirit of common brotherhood amongst all the people of India transcending religious, linguistic and regional or sectional diversities; to renounce practices derogatory to the dignity of women.
- (6) To value and preserve the right heritage of our composite culture.
- (7) To protect and improve the natural environment including forests, lakes, rivers and wild life, and to have compassion for living creature.
- (8) To develop the **scientific temper**, humanism and the spirit of inquiry and reform.
- (9) To safeguard **public property** and to abjure violence.
- (10) To strive towards excellence in all spheres of individual and collective activity so that the nation constantly rises to higher levels of endeavour and achievements.
- (11) Every citizen who is a parent or guardian to provide opportunities for education to his child or, as the case may be, ward between the age of six and fourteen years. (inserted by the 86th Amendment Act, 2002).

Explanation: The Fundamental Duties (Article 51 A) of citizens were added to our Constitution by the 42nd Amendment in 1976, on the recommendations of the Swaran Singh Committee. The duties were originally ten in number, but the 86th Amendment in 2002, added the 11th duty on

every parent or guardian to ensure that their child or ward was provided opportunities for education between the ages of six and fourteen years. The other Fundamental Duties require all citizens to respect the national symbols of India, including the Constitution, to cherish its heritage, preserve its composite culture and assist in its defence. They also obligate all Indians to promote the spirit of common brotherhood, protect the environment and public property, develop scientific temper, abjure violence, and strive towards excellence in all spheres of life.

25. With reference to the Finance Commission of India, which of the following statements is correct?

- (a) It encourages the inflow of foreign capital for infrastructure development
- (b) It facilitates the proper distribution of finances among the Public Sector Undertakings
- (c) It ensures transparency in financial administration
- (d) None of the statements (a), (b) and (c) given above is correct in this context.

Answer: (d) Source: CST Indian Political System, Page No.

412. The precise manner of sharing taxes and the actual determination of grants is left to the deliberations of the Finance Commission, under Article 280, appointed by the President of India every quinquennium. Though the President is not bound to accept the recommendations of Finance Commission, they are generally accepted with the view of the quasi-judicial nature of the Commission.

Explanation: As per article 280 of our constitution the President shall, within two years from the commencement of this Constitution and thereafter at the expiration of every fifth year or at such earlier time as the President considers necessary, by order constitute a Finance Commission which shall consist of a Chairman and four other members to be appointed by the President. The Function of the Finance Commission include: - (a) It recommends to the President the distribution between the Union and the States of the net proceeds of taxes which are to be, or may be, divided between them and the allocation between the States of the respective shares of such proceeds. (b) Determine the principles which should govern the grants-in-

aid of the revenues of the States out of the Consolidated Fund of India. (c) Suggest the measures needed to augment the Consolidated Fund of a State to supplement the resources of the Panchayats in the State. (d) Suggest the measures needed to augment the Consolidated Fund of a State to supplement the resources of the Municipalities in the State on the basis of the recommendations made by the Finance Commission of the State. (e) Any other matter referred to the Commission by the President in the interests of sound finance. Hence none of the statements given in the question is correct.

26. The 2004 Tsunami made people realize that mangroves can serve as a reliable safety hedge against coastal calamities. How do mangroves function as a safety hedge?

- (a) The mangrove swamps separate the human settlements from the sea by a wide zone in which people neither live nor venture out

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- (b) The mangroves provide both food and medicines which people are in need of after any natural disaster
 (c) The mangrove trees are tall with dense canopies and serve as an excellent shelter during a cyclone or Tsunami
 (d) The mangrove trees do not get uprooted by storms and tides because of their extensive roots.

Answer: (d): Source: CST December 2010, Page 79, Col. II.

They colonise tidal shores and brackish waters in the tropics and subtropics and in doing so not only stabilize shorelines but also create new land by trapping debris, silt and mud along their interlacing roots. Mangroves spread out to the water by sending their branches roots that reach into the mud and develop into sturdy supporting props.

Gujarat has increased its mangrove cover by almost 10 times which acts as protection from tsunami. As they have their existence on mud flats and survive the daily tidal cycles, most species of mangroves either have prop roots or pneumatophores, i.e. additional roots, underground root system and grow erect out of the mud. This underground root system can obtain oxygen in an anaerobic substrate.

27. The Jain philosophy holds that the world is created and maintained by

- (a) Universal Law (b) Universal Truth
 (c) Universal Faith (d) Universal Soul

Answer: (a):

Explanation: "The world, for the Jain, is not created, maintained or destroyed by a personal deity, but functions only according to universal law". (Source Book "The Wonder That Was India" by A. L. Basham, Page number 290.

28. Salinization occurs when the irrigation water accumulated in the soil evaporates, leaving behind salts and minerals. What are the effects of salinization on the irrigated land?

- (a) It greatly increases the crop production
 (b) It makes some soils impermeable
 (c) It raises the water table
 (d) It fills the air spaces in the soil with water

Answer: (b)

Explanation: Irrigation salinity is the rise in salinity of groundwater and the build-up of salt in the soil surface in irrigated area. Salinity is the presence of soluble salts in the soil or water; it is generally used to describe the presence of elevated levels of different salts such as sodium chloride, magnesium, calcium sulfate and Bicarbonate in the soil and water table rising to or close to the ground surface. Saline soils are soil having excessive soluble salts that make the soils solution sufficient concentrated to injure plants and hinder soil productivity. Soil salinity problems generally occur in arid and semiarid regions, it reduces crop production at different levels and makes the soil impermeable. Salinity is a major limiting factor for crop yield in poorly drained soils.

29. The "Red Data Books" published by the International Union for Conservation of Nature and Natural Resources (IUCN) contain lists of

1. Endemic plant and animal species present in the biodiversity hotspots.
2. Threatened plant and animal species.
3. Protected sites for conservation of nature and natural resources in various countries.

Select the correct answer using the codes given below:

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

Answer: (b): Source: CST December 2010, Page No. 44, Col. I and II.

As per the IUCN Red List (2008), India has 413 globally threatened faunal species, which is approximately 4.9 per cent of the world's total number of threatened faunal species. The global estimates as per IUCN Red List, 2008 suggest that 10 per cent (5,966 species) of vertebrate and 0.20 per cent (2,496 species) of invertebrate described fauna is threatened. In 2004, one

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species, Megaptera novaeangliae, showed an upward trend of population while eleven species showed stable populations. Further, of the total 447 threatened species, for which trends are available, 218 are showing decreasing trend of population as per the 2004 status. The 2008 report, however, indicates upward population trend of one-horned rhinoceros in the country, as a result, the threat category has improved from endangered to vulnerable.

CST General Science, Page No. 183

The IUCN Red List Categories

The IUCN Red List is a catalogue of taxa that are facing the risk of extinction. It is important to understand that the Red List aims to impart information about the urgency and scale of conservation problems to the public and policy makers. The uses of the Red List are:

- (i) Developing awareness about the importance of the threatened biodiversity;
- (ii) Identification and documentation of endangered species;
- (iii) Providing a global index of the decline of biodiversity;
- (iv) Defining conservation priorities at the local level and guiding conservation action.

The World Conservation Union has recognised 8 RED LIST Categories of species: Extinct, Extinct in the Wild, Critically Endangered, Engangered, Vulnerable, Lower Risk, Data Deficient and Not Evaluated. This has been summarized in the table given hereunder:

The Red List also provides information to international agreements, such as the Convention on Biological Diversity and the Convention on International Trade in Endangered Species of Wild Fauna and Flora.

30. Why is the offering of 'teaser loans' by commercial banks a cause of economic concern?

1. The teaser loans are considered to be an aspect of sub-prime lending and banks may be exposed to the risk of defaulters in future.

2. In India, the teaser loans are mostly given to inexperienced entrepreneurs to set up manufacturing or export units.

Which of the statements given above is/are correct.

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

Answer: (a): Source: CST Year Book 2011, Page No. 170.

Reserve Bank of India (RBI) resorted to forestall a housing bubble by hiking the risk weightage for housing loans above Rs. 75 lakh to 125 per cent. The RBI also increased the standard asset provisioning by commercial banks for all housing loans with teaser rates to two per cent "in view of

the higher risk associated with such loans.”

Explanation: Teaser Loans are an adjustable-rate mortgage loan in which the borrower pays a very low initial interest rate, which increases after a few years. Teaser loans try to entice borrowers by offering an artificially low rate and small down payments, claiming that borrowers should be able to refinance before the increases occur. Teaser loans are considered an aspect of subprime lending, as they are usually offered to low-income home buyers. This method of loaning is considered risky, as default rates are high.

31. An artificial satellite orbiting around the Earth does not fall down. This is so because the attraction of Earth

- (a) does not exist at such distance
- (b) is neutralized by the attraction of the moon
- (c) provides the necessary speed for its steady motion
- (d) provides the necessary acceleration for its motion

Answer: (d) Source: CST Science and Technology, Page No. 418.

By orbiting at the same rate, in the same direction as Earth, the satellite appears stationary (synchronous with respect to the rotation of the Earth).

Explanation: An artificial satellite orbiting around the Earth does not fall down because the earth's gravity provides the necessary centripetal acceleration that keeps the satellite moving in a curved path. Hence option D is the correct one. (Source: - 'Certificate Physical and Human Geography' by G. C. Leong and NCERT Class IX).

32. In the context of Indian economy, consider the following statements:

1. The growth rate of GDP has steadily increased in the last five years.
2. The growth rate in per capita income has steadily increased in the last five years.

Which of the statements given above is/are correct?

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

Answer: (b)

Source: Economic Survey 2008-09: Economic growth decelerated in 2008-09 to 6.7 per cent. This represented a decline of 2.1 per cent from the average growth rate of 8.8 per cent in the previous five years (2003-04 to 2007-08). Backed by robust economic growth, India's per capita income has increased to Rs 33,283 in 2007-08 indicating an overall improvement in the living standards of the people. Rising by almost 60 per cent since 2003-04, India's per capita income, which indicates what an average person earns, has increased to Rs 33,283 in 2007-08, reveals the quick estimates of national income released by the Central Statistical Organisation (CSO).

The country's per capita income, has been growing at an annual rate of over 10 per cent since 2003-04.

India's per capita income is projected to grow by 17.3 per cent to Rs 54,527 in 2010-11 from Rs 46,492 in the year-ago period. The per capita income was slightly higher than Rs 43,749 as calculated by the Central Statistical Organisation (CSO) in its advance estimates for FY10. However, per capita income grew by 5.6 per cent last fiscal if it is calculated on the basis of 2004-05 prices, which is a better way of comparison and broadly factors inflation.

33. In India, which of the following have the highest share in the disbursement of credit to agriculture and allied ac-

tivities?

- (a) Commercial Banks
- (b) Banks
- (c) Regional Rural Banks
- (d) Microfinance Institutions

Answer: (a): Source: CST April 2011, Page No. 22, Col 2

In view of enhanced target for flow of agriculture credit, capital base of NABARD to be strengthened by Rs 3,000 crore in phased manner Agriculture development is central to our growth strategy. Measures taken during the current year have started attracting private investment in agriculture and agro-processing activities. This process has to be deepened further.

Rs 10,000 crore to be contributed to NABARD's Short-term Rural Credit fund for 2011-12.

34. Which of the following can aid in furthering the Government's objective of inclusive growth?

1. Promoting Self-Help Groups
2. Promoting Micro, Small and Medium Enterprises
3. Implementing the Right to Education Act

Select the correct answer using the codes given below:

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

Answer: (d): Source: CST April 2011, Page 12, Col. 1

The inclusive growth agenda of the Government is reflected in the 59 per cent rise in Net Bank Credit. The expenditure on Social sector programs has been stepped up by 5 percent point of GDP over the past five years.

CST April 2011, Page 17 and Col 3

Social sector and inclusive growth:

The Central Government expenditure on social services and rural development (Plan and non-Plan) which contributes to human development has gone up consistently over the years. It has increased from 13.75 per cent in 2005-06 to 19.27 per cent in 2010-11. In the Budget 2011-12, the allocation for social sector has been increased by 17 per cent to Rs. 1,60,887 crore which amounts to 36.4 per cent of the total plan allocation.

Employment: There is a need for better convergence of the schemes to address the issues of unemployment and poverty alleviation could avoid duplication and leakages. Further improvements in the Mahatma Gandhi National Rural Employment Guarantee Scheme suggested such as shifting to permanent asset building and infrastructure development activities, reducing transaction costs, better monitoring and extension of the scheme to urban areas. In the long run the potential engines of growth for the country could be from skill development and innovative activity and therefore, efforts should be made to promote them. On the National Skill Development Mission, it said that much more is required both in terms of achievements and speed. The National Skill Development Corporation (NSDC), set up in July 2008, has been mandated to achieve the target of creation of skilled work force of 150 million people by 2022. By the end of December 2010, 28 states and union territories had set up Skill Development Mission.

Explanation: The term "inclusive growth" was made popular by the India Development Policy Review 2006 titled "In-

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clusive Growth and Service Delivery: Building on India's Success". Promoting inclusive growth includes revamping labour regulations, improving agricultural technology and infrastructure, helping lagging states and regions catch up, and empowering the poor through proactive economic and social policies that help them to take part in the market on fair and equitable terms. Hence all the three option given in the question can help in achieving the goal of inclusive growth; hence option D is the correct one.

35. Why is the Government of India disinvesting its equity in the Central Public Sector Enterprises (CPSEs)?

1. The Government intends to use the revenue earned from the disinvestment mainly to pay back the external debt.
2. The Government no longer intends to retain the management control of the CPSEs

Which of the statements given above is/are correct?

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

Answer: (d): Source: CST Indian Economy, Page No. 367

One of the greatest advantage of the disinvestment is that it generates non-inflationary funds for the investment in the social and infrastructural sector. The new UPA Government has decided to go with the policy of disinvestment. It reduces Government borrowings to meet its expenditure. It will reduce non-planned expenditure of the Government and ultimately the fiscal deficit. It will produce non-inflationary revenues to Government to finance social sectors and infrastructural development.

Explanation: Disinvestment of public sector undertakings (PSUs) is one of the policy measures adopted by the government of India for providing financial discipline and improve the performance of this undertaking in tune with the new economic policy of Liberalisation, Privatisation and Globalisation, Privatisation and Globalisation (LPG) through the 1991 Industrial Policy Statement. The aims of disinvestments policy are: (i) Raising of resources to meet fiscal deficit; (ii) Encouraging wider public participation including that of workers; (iii) Penetrating market discipline within public enterprises; and (iv) Improving performance.

36. What is the difference between asteroids and comets?

1. Asteroids are small rocky planetoids, while comets are formed of frozen gases held together by rocky and metallic material.
2. Asteroids are found mostly between the orbits of Jupiter and Mars, while comets are found mostly between Venus and Mercury.
3. Comets show a perceptible glowing tail, while asteroids do not.

Which of the statements given above is/are correct?

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

Answer: (b): Source: CST Geography: India and the World, Page No. 14-15

Most of the asteroids orbit in a region between the orbits of Mars and Jupiter, while the home of comets lies far beyond the orbit of Pluto, in the Oort Cloud.

Page 16: Asteroid belt composed mainly of refractory rocky and metallic minerals. The main asteroid belt occupies the orbit between Mars and Jupiter.

Page 32: Comets are made up of frozen ammonia, dust particles and ice crystals and other chemicals. Comets are some-

times called dirty snowballs or "icy mud balls". Comets making journey towards sun develop small head and long tail, due to heat only as it approaches Jupiter.

Explanation: Asteroids are tiny rocky planets that orbit the Sun. They can be as small as 1 kilometre (km) across or as large as 700 km. There are thousands of asteroids in our Solar System. Most of them can be found in an asteroid belt between Mars and Jupiter. Asteroids whose orbits cross the Earth's orbit are called Apollo asteroids. There are so many asteroids that scientists just identify them with numbers or they may name them after people. On the other hand comets are mixtures of ice and dust. Comets are also known by their nickname of "dirty snowballs". They have many parts, like (a) Nucleus--Consists of mostly ice and gas, with some dust and other solids. (b) Coma-A dense water cloud, made up of carbon dioxide and neutral gases that come off of the nucleus. (c) Hydrogen cloud--A huge section of hydrogen. (d) Dust tail--The most visible part of the comet made of dust particles from the nucleus. Dust tails are very long and smoke-like. (e) Ion tail--Even longer than the dust tail, consists of plasma. This is the part of the tail that interacts with the solar wind.

Hence option B is the correct one.

"Apart from the stars, planets and satellites, there are numerous tiny bodies which also move

around the sun. These bodies are called asteroids. They are found between the orbits of Mars and Jupiter. The largest asteroid is the Ceres. Scientists are of the view that asteroids are parts of a planet which exploded many years back. On the other hand comets are mixtures of ice and dust. Comets are also known by their nickname of "dirty snowballs". Further Comets show a perceptible glowing tail, while asteroids do not. Hence option B is the correct one. (Source NCERT Class VI, Chapter 1 – The Earth in the Solar System")

37. Economic growth is usually coupled with

- (a) Deflation (b) Inflation
(c) Stagflation (d) Hyperinflation

Answer: (b): CST August 2010, Page 33 and Col II.

The short-term macroeconomic challenges of monetary and fiscal policy and the medium-term challenge of returning to the high growth path. Short-term macroeconomic challenges: It covers issues such as the trade-off between inflation and growth, the use of monetary policy versus use of fiscal policy, their relative effectiveness and coordination between the two.

Medium-term challenges: It includes the tension between short-and long-term fiscal policy, the immediate longer term imperatives of monetary policy and the policy and institutional reforms necessary for restoring high growth.

Also **CST Year Book 2011, Page No. 170. (Eighth line).** IMF Managing Director Dominique Strauss-Kahn visited India. He described India as an economic powerhouse and leading power but warned that a higher economic growth than what is being achieved could lead to risks such as inflation coupled with a high current account deficit.

Explanation: Inflation and economic growth are parallel lines and can never meet. Inflation is a condition, when cost

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of services coupled with goods rise and the entire economy seems to go haywire. Inflation has never done well to the economy. Inflation reduces the value of money and makes it difficult for the common people. The effect of inflation and economic growth is manifested in the following cases: (I) Investment (II) Exchange rates (III) Interest rates (IV) Unemployment (V) Stocks. Hence it can be concluded that inflation and economic growth are closely related to each other. Low inflation rate and an upward economic growth is never possible. Nevertheless, low inflation rate means slow economic growth.

38. The lowering of Bank Rate by the Reserve Bank of India leads to

- More liquidity in the market
- Less liquidity in the market
- No change in the liquidity in the market
- Mobilization of more deposits by commercial banks

Answer: (a): Source: CST Indian Economy, Page 17

It is a weapon of control of money supply—An increase in the Bank Rate by raising the cost of borrowed reserves, other things being the same, discourages bank borrowings from the Central Bank.

Explanation: This is the rate at which central bank (RBI) lends money to other banks or financial institutions. If the bank rate goes up, long-term interest rates also tend to move up, and vice-versa. Thus, it can be said that in case bank rate is hiked, there is going to be more liquidity in the market in all likelihood banks will hike their own lending rates to ensure and they continue to make a profit.

39. Westerlies in southern hemisphere are stronger and persistent than in northern hemisphere, Why?

- Southern hemisphere has less landmass as compared to northern hemisphere.
- Coriolis force is higher in southern hemisphere as compared to northern hemisphere

Which of the statements given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Answer: (a): Source: CST Geography: India and the World, Page No. 108.

Comparatively, anti-trade winds are faster in southern hemisphere than in the northern;

Due to Coriolis force, they become South Westerlies in the north and North Westerlies in the south.

In the southern hemisphere, due to oceans between 40 degree-60 degree South Westerlies blow with much greater force with regularity throughout the year. Here three types of winds are found:- Roaring 40s, Furious 50s, and Shrieking sixties 60s.

Explanation: The westerlies in the Southern Hemisphere are slightly faster than the westerlies in the Northern Hemisphere because (I) The Earth bulges out more in the Northern Hemisphere than in the Southern Hemisphere (II) The South Pole is colder than the North Pole (III) The Coriolis force turns motion to the left in the Southern Hemisphere but to the right in the Northern Hemisphere (IV) Gravitational Pull of the moon is stronger in the Southern Hemisphere. Hence only option 1 is correct.

40. Between India and East Asia, the navigation-time and distance can be greatly reduced by which of the following?

- Deepening the Malacca straits between Malaysia and In-

donesia

- Opening a new canal across the Kra isthmus between the Gulf of Siam and Andaman Sea.

Which of the statements given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Answer: (c):

Explanation: As the link between the Indian Ocean and the South China Sea, the Strait of Malacca is the shortest sea route between India and China. Malaccamax is a naval architecture term for the largest size of ship capable of fitting through the 25 metres (82 ft)-deep Strait of Malacca. Because the Sunda Strait is even shallower at 20 metres (66 ft) minimum depth, a post-Malaccamax ship would need to use even longer alternate routes such as: Lombok Strait, Makassar Strait, Sibutu Passage and Mindoro Strait

Ombai Strait, Banda Sea, Lifamatola Strait between the Sula Islands and Obi Islands, and Malacca Sea around Australia

or artificially excavated new routes such as:

deepening the Strait of Malacca, specifically at its minimum depth in the Singapore Strait.

the proposed Kra Canal, which however would take much more excavation.

41. Biodiversity forms the basis for human existence in the following ways:

- Soil formation
- Prevention of soil erosion
- Recycling of waste
- Pollination of crops

Select the correct answer using the codes given below:

- 1, 2 and 3 only
- 2, 3 and 4 only
- 1 and 4 only
- 1, 2, 3 and 4

Answer: (d): Source: Science and Technology, Page No.

368. Why to conserve Bio-diversity?

Each genetic resource has a certain specific character of its own. The genetic material can be exploited by the man in the form of food, medicines and specimens. For example, plant bio-diversity can be used to develop transgenic plants that can yield more production and are resistant to diseases, drought, and pests. Grains with higher percentage of protein and biofertilizer can also be produced by these genetic resources.

42. Aspartame is an artificial sweetener sold in the market. It consists of amino acids and provides calories like other amino acids. Yet, it is used as a low calorie sweetening agent in food items. What is the basis of this use?

- Aspartame is as sweet as table sugar, but unlike table sugar, it is not readily oxidized in human body due to lack of requisite enzymes
- when aspartame is used in food processing, the sweet taste remains, but it becomes resistant to oxidation
- Aspartame is as sweet as sugar, but after ingestion into the body, it is converted into metabolites that yield no calories
- Aspartame is several times sweeter than table sugar,

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hence food items made with small quantities of aspartame yield fewer calories on oxidation

Answer: (d)

Explanation: Aspartame is a sugar substitute used in products like diet soda. Unlike sugar, aspartame is a non-carbohydrate based product, so it contains virtually no calories. Hence option D is the correct one. It is also used in very small amounts because aspartame is approximately 180 times sweeter than sugar. The product is the result of an accidental discovery in 1965 by James Schlatter, who was working on a drug to prevent ulcers.

43. What was the purpose with which Sir William Wedderburn and W.S. Caine had set up the Indian Parliamentary Committee in 1893?

- (a) To agitate for Indian political reforms in the House of Commons
 (b) To campaign for the entry of Indians into the Imperial Judiciary
 (c) To facilitate a discussion on India's Independence in the British Parliament.
 (d) To agitate for the entry of eminent Indians into the British Parliament

Answer: (a)

Explanation: Sir William Wedderburn entered Parliament in 1893 as a Liberal member and sought to voice India's grievances in the House. He formed the Indian Parliamentary Committee with which he was associated as Chairman from 1893 to 1900.

44. What is the difference between a CFL and an LED lamp?

- To produce light, a CFL uses mercury vapour and phosphor while an LED lamp uses semi-conductor material
- The average life span of a CFL is much longer than that of an LED lamp.
- A CFL is less energy-efficient as compared to an LED lamp

Which of the statement given above is/are correct?

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

Answer: (c):

Explanation: Compact Fluorescent Lamps (CFL's) work by passing electricity through mercury vapour, which in turn produces ultraviolet light. The ultraviolet light is then absorbed by a phosphor coating inside the lamp, causing it to glow, or fluoresce. While the heat generated by fluorescent lamps is much less than its incandescent counterpart, energy is still lost in generating the ultraviolet light and converting this light into visible light. LEDs

are based on the semiconductor diode. When the diode is forward biased (switched on), electrons are able to recombine with holes and energy is released in the form of light. LEDs present many advantages over traditional light sources including lower energy consumption, improved robustness, smaller size and faster switching. The life time of CFLs is approximately 1,200 hours to 20,000 hours while the life time of LEDs is longer than CFL. Hence option 1 and 3 are correct while 2 is a wrong statement. Thus the correct answer is option C.

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45. Recently, "oilzapper" was in the news. What is it?

- (a) It is an eco-friendly technology for the remediation of oily sludge and oil spills
 (b) It is the latest technology developed for under sea oil exploration
 (c) It is a genetically engineered high biofuel-yielding maize variety
 (d) It is the latest technology to control the accidentally caused flames from oil wells

Answer: (a)

Explanation: This is an innovative technology developed by TERI, consisting of a bacterial consortium that degrades crude oil and oily sludge. The Oilzapper is essentially a mix of five different bacterial strains that are immobilized and mixed with a carrier material. The Oilzapper bio remediation process feeds on hydrocarbon compounds present in crude oil and oily sludge (a hazardous hydrocarbon waste generated by oil refineries) and converts them into harmless CO₂ and water. The Oilzapper is neatly packed into sterile polythene bags and sealed aseptically for safe transport.

46. A married couple adopted a male child. A few years later, twin boys were born to them. The blood group of the couple is AB positive and O negative. The blood group of the three sons is A positive, B positive, and O positive. The blood group of the adopted son is

- (a) O positive (b) A positive
 (c) B positive (d) Cannot be determined on the basis of the given data

Answer: (a): Source: CST General Science, Page No. 48

Explanation:

| Blood group of child | One of parent | The other parent | |
|----------------------|---------------|------------------|----------|
| | | May be | Can't be |
| O | O | A, B | AB |
| | A | O, B | |
| | B | O, A | |
| A | O | A, B | O, B |
| | B | | |
| B | O | B, AB | O, A |
| | A | | |
| AB | A | B, AB | O, A |
| | B | A, AB | O, B |
| | AB | A, B, AB | O |

47. Mahatma Gandhi said that some of his deepest convictions were reflected in a book titled, "Unto this Last" and the book transformed his life. What was the message from the book that transformed Mahatma Gandhi?

- (a) Uplifting the oppressed and poor is the moral responsibility of an educated man
 (b) The good of individual is contained in the good of all.
 (c) The life of celibacy and spiritual pursuit are essential for a noble life
 (d) All the statements (a), (b) and (c) are correct in this context

Answer: (b)

Explanation: Unto This Last was originally written by John Ruskin in December 1860 which Gandhiji read in 1904 and summerised into (a) The good of the individual is contained

in the good of all; (b) A lawyer's work has the same value as the barber's, as all have the same right of earning their livelihood from their work; and (c) A life of labor, i.e. the life of the tiller of the soil and the handicraftsman is the life worth living.

48. With reference to Indian freedom struggle, Usha Mehta is well-known for

- Running the secret Congress Radio in the wake of Quit India Movement
- Participating in the Second Round Table Conference
- Leading a contingent of Indian National Army
- Assisting in the formation of Interim Government under Pandit Jawaharlal Nehru

Answer: (a): Source: CST Indian History, Page No. 397

A transmission was opened at Choupati with following members: Daya Bhai Patel, Vitthal Das K.Javeri, Usha Mehta, Chandrakant Javeri and Vitthal Dhar Babubhai.

Explanation: Usha Mehta (1920 - 2000), the renowned Gandhian and one of the prominent women freedom fighters of India is remembered for broad casting the Congress Radio, and called her the Secret Congress Radio, an underground radio station, which was functioned for few months during the Quit India Movement of 1942. When she was just 8 years old, she participated in a protest march against the Simon Commission.

49. A new optical disc format known as the Blu-ray Disc (BD) is becoming popular. In what way is it different from the traditional DVD?

- DVD supports Standard Definition video while BD supports High Definition video
 - Compared to a DVD, the BD format has several times more storage capacity.
 - Thickness of BD is 2-4 mm while that of DVD is 1.2 mm.
- Which of the statements given above is/are correct?**

- 1 only
- 1 and 2 only
- 2 and 3 only
- 1, 2 and 3

Answer: (b)

Explanation: Blu-Ray uses a blue-violet laser as opposed to the red laser used on DVDs. This allows Blu-Ray discs to hold a lot more information on them than DVDs. BD offers more than five times the storage capacity of traditional DVDs and can hold up to 25GB on a single-layer disc and 50GB on a dual-layer disc. Disc thickness of both, the BD and the DVD is 1.2 mm. Hence option 1 and 2 are correct and 3 is incorrect.

50. With reference to the period of Indian freedom struggle, which of the following was/were recommended by the Nehru report?

- Complete Independence for India.
- Joint electorates for reservation of seats for minorities
- Provision of fundamental rights for the people of India in the Constitution.

Select the correct answer using the codes given below:

- 1 only
- 2 and 3 only
- 1 and 3 only
- 1, 2 and 3

Answer: (b): Source: CST Indian History, Page No. 428

The Features of Nehru Report

-Produced in Calcutta session in 1928 and it was ratified by all parties, except, Muslim League.

- It was presided by M.A. Ansari

- Features:

- Dominion status most viable option;**
- Envisioned future link-up with British and the Indian Federal States**
- Recommended joint electorate with reservation of seats for minorities based on population with the right to contest additional seats.**
- Protection to the interest of both Hindus and Muslims.**
- 19 fundamental rights**
- Indian Parliament to be constituted:**
 - Senate elected for 7 year. 200 members elected by provincial council;
 - House of Representatives with 500 members for 5 years through adult franchise;
- Governor General to be paid out of Indian revenues but to be appointed by British government**
- Governor General to act on behalf of Executive Council, collectively responsible to the Parliament**
- Provincial Council to be elected on Adult Franchise.**

51. Among the following States, which one has the most suitable climatic conditions for the cultivation of a large variety of orchids with minimum cost of production, and can develop an export oriented industry in this field?

- Andhra Pradesh
- Arunachal Pradesh
- Madhya Pradesh
- Uttar Pradesh

Answer: (b)

Explanation: Orchids can be divide into two groups - monopodial or sympodial depending upon their habit of growth. Arunachal Pradesh provides cool mountain areas where the average temperature is chilly between 18-27 degrees centigrade, which is good for cultivation of orchids. Orchids are prevalent in the tropical and sub-tropical areas. It is interesting to note that out of 1200 varieties of orchids found in India, 800 are found in the north-eastern parts. Arunachal Pradesh also has an orchid sanctuary at Tapi.

52. Which one of the following is not a site for in-situ method of conservation of flora?

- Biosphere Reserve
- Botanical Garden
- National Park
- Wildlife Sanctuary

Answer: (b): Source: CST December 2010, Page No. 65

India's major strength in in-situ conservation lies in its impressive Protected Area (PA) network, which currently comprises 661 PAs which includes ninety nine National Parks and five hundred fifteen Wildlife Sanctuaries, forty three Conservation Reserves and four Community Reserves.

Explanation: In-situ conservation is the conservation of species in their natural habitats. It is considered the most appropriate way of conserving biodiversity. Conserving the areas where populations of species exist naturally is an underlying condition for the conservation of biodiversity. This type of conservation efforts can be adopted in National Parks, Biosphere Reserves and Wildlife Sanctuaries. On the other hand Ex-situ conservation is the preservation of components of biological diversity outside their natural habitats. This involves conservation of genetic resources, as well as wild and cultivated or species.

53. Consider the following statements:

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In India, a Metropolitan Planning Committee

1. is constituted under the provisions of the Constitution of India.
2. prepares the draft development plans for metropolitan area.
3. has the sole responsibility for implementing Government sponsored schemes in the metropolitan area.

Which of the statements given above is/are correct?

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

Answer: (a): Source: CST Indian Political System, Page No. 377. Institutions for planning (Article 243ZX and 243ZE)

Explanation: Article 243ZE of the constitution clearly states the structure and functions of the Committee for Metropolitan Planning. Statement 3 is incorrect because the Chairperson of every Metropolitan Planning Committee forwards the development plan, as recommended by such Committee, to the Government of the State and thus it doesn't have the sole responsibility for implementing Government sponsored schemes in the metropolitan area. Hence option A is the correct one. (Source D.D. Basu "Introduction to the Constitution of India" Page 280-81-215) and M. Laxmikant "Indian Polity" Page 290-91).

54. What is the difference between "vote-on-account" and "interim budget"?

1. The provision of a "vote-on-account" is used by a regular Government, while an "interim budget" is a provision used by a caretaker Government.
2. A "vote-on-account" only deals with the expenditure in Government's budget, while an "interim budget" includes both expenditure and receipts.

Which of the statements given above is/are correct?

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

Answer: (b) Source: CST Indian Political System, Page No. 298. An interim budget is a statement of accounts that does not incorporate changes in the taxation rates from the prevailing rates at the time of budget being presented. Usually a caretaker government presents such budgets. In 1991, the Chandra Shekhar government presented such a budget.

Vote on Account. Article 116 empowers the Lok Sabha to make any grant in advance for a part of any financial year pending the completion of the Budgetary Process. A vote on account would be necessary to cover government's expenditure for the period between the budget being presented and its being passed. A vote on account only pertains to the expenditure side.

Explanation: Only option 2 is correct because a vote-on-account deals only with the expenditure in Government's budget, while an interim budget includes both expenditure and receipts. But both, vote on account and interim budget are generally adopted by the caretaker government in place of full budget.

55. Regarding the International Monetary Fund, which one of the following statements is correct?

- (a) It can grant loans to any country
(b) It can grant loans to only developed countries
(c) It can grant loans to only member countries
(d) It can grant loans to the central bank of country

Answer: (c): Source: CST Indian Economy, Page No. 199

Under General Agreement to Borrow (GAB) 11 industrial countries have undertaken to lend to IMF. Right now the total borrowing can be \$17 million from these nations. IMF lends to its members through a lot of schemes.

56. Consider the following:

1. Right to education
2. Right to equal access to public service
3. Right to food

Which of the above is/are Human Right/Human Rights under "Universal Declaration Human Rights"?

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

Answer: (d)

Explanation: All the three statements confer with Article 21, 25 and 26 of the declaration of Universal Declaration of Human Rights charter.

This Universal Declaration of Human Rights

as a common standard of achievement for all peoples and all nations, to the end that every individual and every organ of society, keeping this Declaration constantly in mind, shall strive by teaching and education to promote respect for these rights and freedoms and by progressive measures, national and international, to secure their universal and effective recognition and observance, both among the peoples of Member States themselves and among the peoples of territories under their jurisdiction.

Article 1: All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood.

Article 2: Everyone is entitled to all the rights and freedoms set forth in this Declaration, without distinction of any kind, such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status. Furthermore, no distinction shall be made on the basis of the political, jurisdictional or international status of the country or territory to which a person belongs, whether it be independent, trust, non-self-governing or under any other limitation of sovereignty.

Article 3: Everyone has the right to life, liberty and security of person.

Article 4: No one shall be held in slavery or servitude; slavery and the slave trade shall be prohibited in all their forms.

Article 5: No one shall be subjected to torture or to cruel, inhuman or degrading treatment or punishment.

Article 6: Everyone has the right to recognition everywhere as a person before the law.

Article 7: All are equal before the law and are entitled without any discrimination to equal protection of the law. All are entitled to equal protection against any discrimination in violation of this Declaration and against any incitement to such discrimination.

Article 8: Everyone has the right to an effective remedy by the competent national tribunals for acts violating the fundamental rights granted him by the constitution or by law.

Article 9: No one shall be subjected to arbitrary arrest, detention or exile.

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Article 10: Everyone is entitled in full equality to a fair and public hearing by an independent and impartial tribunal, in the determination of his rights and obligations and of any criminal charge against him.

Article 11: (1) Everyone charged with a penal offence has the right to be presumed innocent until proved guilty according to law in a public trial at which he has had all the guarantees necessary for his defence.

(2) No one shall be held guilty of any penal offence on account of any act or omission which did not constitute a penal offence, under national or international law, at the time when it was committed. Nor shall a heavier penalty be imposed than the one that was applicable at the time the penal offence was committed.

Article 12: No one shall be subjected to arbitrary interference with his privacy, family, home or correspondence, nor to attacks upon his honour and reputation. Everyone has the right to the protection of the law against such interference or attacks.

Article 13: (1) Everyone has the right to freedom of movement and residence within the borders of each State.

(2) Everyone has the right to leave any country, including his own, and to return to his country.

Article 14: (1) Everyone has the right to seek and to enjoy in other countries asylum from persecution.

(2) This right may not be invoked in the case of prosecutions genuinely arising from non-political crimes or from acts contrary to the purposes and principles of the United Nations.

Article 15: (1) Everyone has the right to a nationality.

(2) No one shall be arbitrarily deprived of his nationality nor denied the right to change his nationality.

Article 16: (1) Men and women of full age, without any limitation due to race, nationality or religion, have the right to marry and to found a family. They are entitled to equal rights as to marriage, during marriage and at its dissolution.

(2) Marriage shall be entered into only with the free and full consent of the intending spouses.

(3) The family is the natural and fundamental group unit of society and is entitled to protection by society and the State.

Article 17: (1) Everyone has the right to own property alone as well as in association with others.

(2) No one shall be arbitrarily deprived of his property.

Article 18: Everyone has the right to freedom of thought, conscience and religion; this right includes freedom to change his religion or belief, and freedom, either alone or in community with others and in public or private, to manifest his religion or belief in teaching, practice, worship and observance.

Article 19: Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers.

Article 20: (1) Everyone has the right to freedom of peaceful assembly and association.

(2) No one may be compelled to belong to an association.

Article 21: (1) Everyone has the right to take part in the government of his country, directly or through freely chosen representatives.

(2) **Everyone has the right to equal access to public ser-**

vice in his country.

(3) The will of the people shall be the basis of the authority of government; this will shall be expressed in periodic and genuine elections which shall be by universal and equal suffrage and shall be held by secret vote or by equivalent free voting procedures.

Article 22: Everyone, as a member of society, has the right to social security and is entitled to realization, through national effort and international co-operation and in accordance with the organization and resources of each State, of the economic, social and cultural rights indispensable for his dignity and the free development of his personality.

Article 23: (1) Everyone has the right to work, to free choice of employment, to just and favourable conditions of work and to protection against unemployment.

(2) Everyone, without any discrimination, has the right to equal pay for equal work.

(3) Everyone who works has the right to just and favourable remuneration ensuring for himself and his family an existence worthy of human dignity, and supplemented, if necessary, by other means of social protection.

(4) Everyone has the right to form and to join trade unions for the protection of his interests.

Article 24: Everyone has the right to rest and leisure, including reasonable limitation of working hours and periodic holidays with pay.

Article 25: (1) **Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.**

(2) Motherhood and childhood are entitled to special care and assistance. All children, whether born in or out of wedlock, shall enjoy the same social protection.

Article 26: (1) **Everyone has the right to education.** Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory. Technical and professional education shall be made generally available and higher education shall be equally accessible to all on the basis of merit.

(2) Education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms. It shall promote understanding, tolerance and friendship among all nations, racial or religious groups, and shall further the activities of the United Nations for the maintenance of peace.

(3) Parents have a prior right to choose the kind of education that shall be given to their children.

Article 27: (1) Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits.

(2) Everyone has the right to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author.

Article 28: Everyone is entitled to a social and international

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order in which the rights and freedoms set forth in this Declaration can be fully realized.

Article 29: (1) Everyone has duties to the community in which alone the free and full development of his personality is possible.

(2) In the exercise of his rights and freedoms, everyone shall be subject only to such limitations as are determined by law solely for the purpose of securing due recognition and respect for the rights and freedoms of others and of meeting the just requirements of morality, public order and the general welfare in a democratic society.

(3) These rights and freedoms may in no case be exercised contrary to the purposes and principles of the United Nations.

Article 30: Nothing in this Declaration may be interpreted as implying for any State, group or person any right to engage in any activity or to perform any act aimed at the destruction of any of the rights and freedoms set forth herein.

57. There is a concern over the increase in harmful algal blooms in the seawaters of India. What could be the causative factors for this phenomenon.

1. Discharge of nutrients from the estuaries.
2. Run-off from the land during the monsoon.
3. Upwelling in the seas.

Select the correct answer from the codes given below:

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

Answer: (d): Source: CST General Science. Page No. 192.

Eutrophication: Besides inorganic nutrient input with the inflow of wastewater, decomposition of organic wastes too, increases the nutrient content of the water bodies. Availability of excess nutrients causes profuse growth of algae (algal bloom), especially the blue-green algae. Such algal blooms may totally cover the water surface, often release toxins in water, and sometimes cause deficiency of oxygen in the water. Thus, in bloom-infested water body the growth of other algae may be inhibited due to toxins, and aquatic animals (e.g., fish) may die due to toxicity or lack of oxygen. The process of nutrient enrichment of water and consequent loss of species diversity is referred to as eutrophica

Explanation: All the three statement correctly highlight the reasons for the formation of algal blooms in the seawaters of India.

58. Consider the following:

1. Photosynthesis
2. Respiration
3. Decay of organic matter
4. Volcanic action

Which of the above add carbon dioxide to the carbon cycle on Earth?

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

Answer: (c)

Explanation: The processes of Respiration, Decaying of organic matter and volcanic action result in addition of Carbon dioxide, but the process of photosynthesis helps in removal of Carbon dioxide from the air and also assist the food production process of plants.

59. Recently, the USA decided to support India's membership in multi-lateral export control regimes called the "Aus-

tralia Group" and the "Wassenaar Arrangement". What is the difference between them?

1. The Australia Group is an informal arrangement which aims to allow exporting countries to minimize the risk of assisting chemical and biological weapons proliferation, whereas the Wassenaar Arrangement is a formal group under the OECD holding identical objectives.

2. The Australia Group comprises predominantly of Asian, African and North American countries, whereas the member countries of Wassenaar Arrangement are predominantly from the European Union and American continents.

Which of the statements given above is/are correct?

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

Answer: (d)

Explanation: Both the options are incorrect. The Australia Group (AG) is an informal forum of countries which, through the harmonisation of export controls, seeks to ensure that exports do not contribute to the development of chemical or biological weapons, while the Wassenaar Arrangement, formally established in July 1996, is a voluntary export control regime whose 40 members exchange information on transfers of conventional weapons and dual-use goods and technologies.

Australia Group has 41 members, including all Organisation for Economic Co-operation and Development (OECD) members except Mexico, the European Commission, all 27 Member States of the European Union, Croatia, Ukraine and Argentina. There is not even a single member from Africa.

60. The surface of a lake is frozen in severe winter, but the water at its bottom is still liquid. What is the reason?

- (a) Ice is a bad conductor of heat
(b) Since the surface of the lake is at the same temperature as the air, no heat is lost
(c) The density of water is maximum at 4°C
(d) None of the statements (a), (b) and (c) given above is correct

Answer: (c)

Explanation: At 4 °C, water has the least volume and maximum density. This expansion plays an important role by only freezing the upper layer in lakes and rivers.

61. A sandy and saline area is the natural habitat of an Indian animal species. The animal has no predators in that area but its existence is threatened due to the destruction of its habitat. Which one of the following could be that animal?

- (a) Indian wild buffalo (b) Indian wild ass
(c) Indian wild boar (d) Indian gazelle

Answer: (both b and c): Source: CST Geography: India and the World, Page No. 190

The biome represents the largest number of domesticated mammals because of the development of agriculture. (The lions of Gir forest of Gujarat, together with other animals like leopards, spotted deer, sambhar deer, Indian gazelle, Nilgai antelope, wild boar etc. are now endangered species because of enormous destruction of the Gir forest Ecosystem.)

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62. La Nina is suspected to have caused recent floods in Australia. How is La Nina different from El Nino?

1. La Nina is characterized by unusually cold ocean temperature in equatorial Indian Ocean whereas El Nino is characterized by unusually warm ocean temperature in the equatorial Pacific Ocean.

2. El Nino has adverse effect on south-west monsoon of India, but La Nina has no effect on monsoon climate.

Which of the statements given above is/are correct?

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

Answer: (d): Source: CST Geography: India and the World, Page No. 418

El-Nino effect-It is responsible for the widespread flood and drought in the tropical regions of the world.

Sometimes it increases becomes intense and increases the water temperature by 10 degree centigrade. This increase of temperature of tropical pacific waters affects the global pattern of pressure and wind systems including the monsoon winds in the Indian Ocean.

La Nina-Sometimes trade winds become so strong that they cause abnormal accumulation of cold water in the central and the eastern Pacific Ocean, which is called La Nina. It marks an active hurricane season.

For India this La Nina is exceptionally good as it is the harbringer of heavy monsoon showers in India.

Explanation: El Nino and La Nina are opposite phases of the same oscillation (El Nino Southern Oscillation) centered in the Tropical Pacific Ocean. During the period of El Niño weather that occurs in tropical waters of the Pacific Ocean. It affects the region

across the Pacific from New Guinea to South America, known as the Equatorial Pacific. During an El Niño season, which occurs on average every 2-7 years, a shift in ocean currents and winds brings warm water in a westerly direction, displacing the usual cold water that comes up from the ocean depths. As well as affecting marine life, the El Niño has an effect on weather patterns. La Niña is the opposite of El Nino. It involves cooler than normal sea temperatures in the same part of the Pacific Ocean. This means that weather conditions, etc, are in reverse to those seen during El Niño. La Nina has a beneficial effect on Indian Monsoon.

63. The tendency for increased litigation was visible after the introduction of the land settlement system of Lord Cornwallis in 1793. The reason for this is normally traced to which of the following provisions?

- (a) Making Zamindar's position stronger vis-a-vis the ryot
(b) Making East India Company an overlord of Zamindars
(c) Making judicial system more efficient.
(d) None of the (a), (b) and (c) above

Answer: (d): Source: CST Indian History, Page No. 312

The litigation increased because of the Cornwallis Code which was introduced in 1793 with following features :

- (1) It was based on the concept of separation of powers
(2) The Collector was the head of the revenue administration and divested him of all the judicial and magisterial powers.
(3) District Judge was appointed as the head of the judiciary

at the district level.

(4) A gradation of civil courts was set up.

(5) The distinction between revenue and civil cases abolished.

Regulation IX of 1793 amended the law of evidence by providing that the religious persuasions of witnesses shall not be considered as a bar to the conviction or condemnation of a prisoner.

64. Which one of the following observations is not true about the Quit India Movement of 1942?

- (a) It was a non-violent movement
(b) It was led by Mahatma Gandhi
(c) It was a spontaneous movement
(d) It did not attract the labour class in general

Answer: (a): Source: CST Indian History, Page No. 394

Besides various violent activities during the QIM, on 8th August, 1942, at Gowlia Tank in Bombay, Gandhiji announced four things:

1. "forget the difference between Hindu and Muslim and you are only Indians."
2. "you are not fighting against the British, but against British imperialism."
3. "feel that from today you are a free man and not dependent."
4. "do or die" - either free India or die in the attempt.

65. Which amongst the following provided a common factor for tribal insurrection in India in the 19th century?

- (a) Introduction of a new system of land revenue and taxation of tribal products
(b) Influence of foreign religious missionaries in tribal areas
(c) Rise of a large number of money lenders, traders and revenue farmers as middlemen in tribal areas
(d) The complete disruption of the old agrarian order of the tribal communities.

Answer: (a): Source: CST Indian History, Page No. 448-449

Munda (Ulughan): 1874-1900, took place in Santhal Pargana, led by Birsa Munda because the Khuntkanti (Joint ownership) land system was eroded.

Santhal Uprisings : 1855, took place in Santhal Parganas against the British rule, its policies of revenue and forestry.

Explanation: The new land new system of land revenue and taxation of tribal products initially British disrupted the tribal mode of production and did not replace it with any other mode of production and after that we saw the emergence of middle class, missionaries activities increased. So, the first cause was the new system of land revenue followed by the others.

66. India maintained its early cultural contacts and trade links with Southeast Asia across the Bay of Bengal. For this pre-eminence of early maritime history of Bay of Bengal, which of the following could be the most convincing explanation/explanations?

- (a) As compared to other countries, India had better ship-building technology in ancient and medieval times
(b) The rulers of southern India always patronized traders, brahmin priests and buddhist monks in this context
(c) Monsoon winds across the Bay of Bengal facilitated sea voyages
(d) Both (a) and (b) are convincing explanations in this con-

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Answer: (d)

Explanation: All the three options seem to be correct but no option has given which has included all the three.

67. What is the difference between Blue-tooth and Wi-Fi devices?

(a) Bluetooth uses 2.4 GHz radio frequency band, whereas Wi-Fi can use 2.4 GHz or 5 GHz frequency band

(b) Bluetooth is used for Wireless Local Area Networks (WLAN) only, whereas Wi-Fi is used for Wireless Wide Area Networks (WWAN) only.

(c) When information is transmitted between two devices using Blue-tooth technology, the devices have to be in the line of sight of each other, but when Wi-Fi technology is used the devices need not be in the line of sight of each other.

(d) The statements (a) and (b) given above are correct in this context

Answer: (a): Source: CST Science and Technology, Page No. 128.

But there is certain significant difference between them. They are:

(a) While Wi-Fi is deployed on a LAN, Bluetooth is used to create a Personal Area Network (PAN).

(b) While Bluetooth is more applicable in connecting two point-to-point devices, Wi-Fi is more of a network (multi-point) protocol. (c) Bluetooth is more of a wireless alternative for connecting devices such as digital cameras, PDAs and mobile phones with each other computer and it takes less power than Wi-Fi and therefore, bluetooth is preferred for connections and data transfer in low-powered handhelds.

(d) Wi-Fi is aimed at networking computers with other without wires. Blue-tooth has less bandwidth than Wi-Fi. The Indian Government's Wireless Planning and Coordination Wing have delicensed the indoor use of WLAN equipment using IEEE-802.11b.

Explanation: Only the statement number 1 is correct. Bluetooth uses 2.4GHz radio frequency band, whereas Wi-Fi can use 2.4 GHz or 5 GHz frequency band. Wi-Fi is used for both- WLAN and WWAN and Bluetooth doesn't require line of sight between communicating devices.

68. With reference to micro-irrigation, which of the following statements is/are correct?

1. Fertilizer/nutrient loss can be reduced

2. It is the only means of irrigation in dry land farming

3. In some areas of farming, receding of ground water table can be checked

Select the correct answer using the codes given below:

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

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

Answer: (c)

Explanation: Micro irrigation is a water-efficient method of irrigation that is being increasingly used in areas of low irrigation resources. With this the fertilizer/nutrient loss and depletion of ground water can be reduced. To help with water conservation, drip irrigation and drip sprinkler systems are employed for lawn irrigation, garden irrigation, greenhouse watering and landscape irrigation. Hence statement 1 and 3 are correct while the statement 2 is incorrect because of the use of the word "only".

69. With reference to the period of colonial rule in India. "Home Charges" formed an important part of drain of wealth from India. Which of the following funds constituted "Home Charges"?

1. Funds used to support the India Office in London

2. Funds used to pay salaries and pensions of British personnel engaged in India.

3. Funds used for waging wars outside India by the British

Select the correct answer using the codes given below:

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

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

Answer: (d): Source: CST September 2010, Page No. 28

Dadabhai Naoroji was first to decipher the complex mechanism of drain of wealth by the way of (a) remittances to England by European employed for the support of their families and education of their children. (b) remittances of savings by employees of the company, since most employees preferred to invest at home.

(c) remittances for the purchases of British goods in India.

(d) Government

purchase of stores manufactured in Britain.

(e) Interest charges on public debt held in for productive loans.

(f) Home Charges

: (i) the expenses of the office of Secretary of States; (ii) pensions of the British Indian officers and army officials; (iii) Army training, transport and campaigns outside India but charged on Indian revenue, (iv) drain through council bill.

The drain of wealth considerably affected the circulation of money and capital formation of India.

70. What was the reason for Mahatma Gandhi to organize a *satyagraha* on behalf of the peasants of Kheda?

1. The Administration did not suspend the land revenue collection in spite of a drought.

2. The Administration proposed to introduce Permanent Settlement in Gujarat

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only

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

Answer: (a): Source: CST Indian History, Page No. 377

Kheda: Cause : Extreme distress due to a failure of crops, no remission was given; Gandhiji was helped by Vallabhbhai Patel, Indulal Yagnik B.B.Patel, A.Sarabhai. The inquiry into the cause of the peasants was conducted by Vithalbai Patel, G.K.Parekh. Government, finally, ordered to collect the tax only from those who are in a position to give it.

71. Which one of the following is not a feature of "Value Added Tax"?

(a) It is a multi-point destination based system of taxation

(b) It is a tax levied on value addition at each stage of transaction in the production-distribution chain

(c) It is a tax on the final consumption of goods or services and must ultimately be borne by the consumer

(d) It is basically a subject of the Central Governments are only a facilitator for its successful implementation.

Answer: (d): Source: CST Indian Economy, Page No. 145.

It is regarded as the fastest growing tax in the world. The

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road map for the implementation by the states of a full-fledged VAT system requires that the (Central Sales Tax (CST) phase-out begin by 2007-08. As a part of states' compensation package for the phasing out CST, states are given the right to levy-VAT on imports.

Advantages of VAT:

1. VAT is multi stage tax levied on all stages of production distribution of a commodity.
2. Under VAT each input is taxed only once. Since an input is taxed only once VAT avoids cascading effect which is the chief advantage of the traditional system of excise and sales taxation.

Explanation: Value Added Tax is a multi-point sales tax with set off for tax paid on purchases. It is basically a tax on the value addition on the product. The burden of tax is ultimately born by the consumer of goods. In many aspects it is equivalent to last point sales tax. Sales Tax/VAT in India is a subject matter of state governments and the central government plays the role of facilitator in implementation of VAT. Option 1, 2, 3 are correct and option 4 is incorrect. Hence the correct answer is option D.

72. A "closed economy" is an economy in which

- (a) the money supply is fully controlled
- (b) deficit financing takes place
- (c) only exports take place
- (d) neither exports nor imports take place

Answer: (d) Source: Indian Economy, Page No. 467.

Mahalanobis: It was Mahalanobis two sector model was based on following assumptions: (a) it is related to a closed economy where there is no foreign trade.

Explanation: A closed economic model is considered an anomaly in the world today; a closed economy is a strategy that focuses all economic transactions inward rather than outward. The idea behind the closed economy is to meet all consumer needs with the purchase and sale of goods and services that are produced internally. In addition to meeting the needs and desires of all consumers within the economy, the method also excludes the possibility of exporting goods and services. Thus, the economy is considered to be completely self-sufficient.

73. When the bark of a tree is removed in a circular fashion all around near its base, it gradually dries up and dies because

- (a) Water from soil cannot rise to aerial parts
- (b) Roots are starved of energy
- (c) Tree is infected by soil microbes
- (d) Roots do not receive oxygen for respiration

Answer: (a)

Explanation: Removing the bark of a tree amounts to a process called "girdling" which prevents water and food from getting distributed throughout the tree.

74. The "New START" treaty was in the news. What is this treaty?

- (a) It is a bilateral strategic nuclear arms reduction treaty between the USA and the Russian Federation
- (b) It is a multilateral energy security cooperation treaty among the members of the East Asia Summit
- (c) It is a treaty between the Russian Federation and the European Union for the energy security cooperation
- (d) It is a multilateral cooperation treaty among the BRICS countries for the promotion of trade

Answer: (a): Source: CST February 2011, Page No. 19 (Box).

An arms control treaty paring back the US and Russian nuclear arsenal has won a decisive vote in the US Senate. Now the treaty's way for the final approval by President Obama is awaited. The Senate voted 67 to 28 to end debate on the treaty, known as New Start, mustering the two-thirds majority needed for ratification despite a concerted effort by Republican leaders to sink the agreement. The Republican critics called it a bad deal, arguing that the treaty's inspections were inadequate and non-binding language in its preamble could give Russia leverage to try to keep the US from deploying missile defence installations in Eastern Europe. It would also resume on-site inspections that lapsed last December when the original Strategic Arms Reduction Treaty or START expired in 2009. The US currently has 1950 deployed strategic warheads and 798 launchers, while the Russian side has 2540 deployed strategic warhead and 574 strategic launchers. Obama and his supporters argue that ratification is a key to build and maintain an international coalition against Iran's nuclear programme.

75. Three of the following criteria have contributed to the recognition of Western Ghats-Sri Lanka and Indo-Burma regions as hotspots of biodiversity:

1. Species richness
2. Vegetation density
3. Endemism
4. Ethno-botanical importance
5. Threat perception
6. Adaptation of flora and fauna to warm and humid conditions

Which three of the above are correct criteria in this context?

- (a) 1, 2 and 6
- (b) 2, 4 and 6
- (c) 1, 3 and 5
- (d) 3, 4 and 6

Answer: (c)

Explanation: The concept of biodiversity hotspots was originated by Norman Myers. A biodiversity hotspot is a biogeographic region with a significant reservoir of biodiversity that is under threat from humans. There are two factors that determine a hot spot: (a) Number of endemic species i.e. the species which are found nowhere else. (b) Degree of threat which is measured in terms of habitat loss. All over the world 25 areas have been identified as hot spots out of which 4 are in India i.e. Himalayas, Western Ghats, North East India and Andaman and Nicobar Islands.

76. Human activities in the recent past have caused the increased concentration of carbon dioxide in the atmosphere, but a lot of it does not remain in the lower atmosphere because of

1. its escape into the outer stratosphere.
2. the photosynthesis by phyto-plankton in the oceans.
3. the trapping of air in the polar ice caps.

Which of the statements given above is/are correct?

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

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- (b) FII helps in increasing capital availability in general, while FDI only targets specific sectors
 (c) FDI flows only into the secondary market, while FII targets primary market
 (d) FII is considered to be more stable than FDI

Answer: (b)

Explanation: FDI is more stable and there is less amount of scope for hot money.

84. A genetically engineered form of brinjal, known as the Bt-brinjal, has been developed. The objective of this is

- (a) To make it pest-resistant
 (b) To improve its taste and nutritive qualities
 (c) To make it drought-resistant
 (d) To make its shelf-life longer

Answer: (a): Source: CST Science and Technology, Page 581. Why Bt. Brinjal should be introduced?

1. Both Bt. Cotton and Bt. Brinjal are genetically modified (GM) crops basically incorporate the same foreign cry1Ac gene sourced from a soil bacterium called *Bacillus thuringiensis* or Bt.

2. This gene codes for a protein toxic to insect pests belonging to the lepidoptera order, which include the cotton bollworm and the fruit and shoot borer (FSB) in brinjal.

3. An important point to note here is that BT protein acts as mid-gut toxin and thus has practically no impact on other insects or humans with acidic pH in the gut.

4. The mode of action is similar in both cases. When the bollworm or FSB larvae feed on plants containing the cry1Ac gene, they also ingest the protein synthesised by it.

5. This protein then binds itself to the mid-gut of the larvae, disrupting their metabolic activity causing eventual death. The Bt proteins are toxic only to lepidopteran insects, simply because other organisms — human beings included — lack the specific receptors in their guts to bind these proteins.

6. Mahyco says that it was no different from the normal brinjal. The acidic medium of human digestive system would neutralise the gene that was targeted at fruit and shoot borer in brinjal. If approved, Bt brinjal will be the first GM food in the country being developed by Maharashtra Hybrid Seeds Company, (Mahyco) a subsidiary of the US multinational Monsanto.

7. The data from over 10 trials spread in different agroclimatic zones was evaluated for two years by GEAC and found to be satisfactory and approval for seed production of seven BT Brinjal hybrids was granted by last year.

8. Apart from Mahyco, BT technology for brinjal has been developed both by private and public sector institutions like the National Research Centre on Plant Biotechnology at the Indian Agricultural Research Institute (IARI) in partnership with Bejo Sheetal Seeds, Krishidhan Seeds, Nath Seeds, Vibha Agro-tech, and Indian Institute of Horticulture Research. The National Research Centre on Plant Biotechnology is also working towards developing drought and salt resistant brinjal.

9. Initially, a 450-gm packet of Bt. hybrid seeds, based on Monsanto's proprietary gene construct, was being sold for

Rs 1,600. But over time, the prices fell to Rs 650-750 — courtesy mainly proactive State Governments that forced Monsanto to accept a lower technology fee.

Explanation: The main objective of developing Bt brinjal hybrids and varieties is to control the damage caused by the stem and fruit borers (SFB) of brinjal.

85. With reference to "Aam Admi Bima Yojana", consider the following statements:

1. The member insured under the scheme must be the head of the family or an earning member of the family in a rural landless household.
2. The member insured must be in the age group of 30 to 65 years.
3. There is a provision for free scholarship for up to two children of the insured who are studying between classes 9 and 12.

Which of the statements given above is/are correct?

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

Answer: (c):

Explanation: Aam Aadmi Bima Yojana (AABY) covers death and disability insurance for the benefit of rural landless households in the country. To entail the benefits of the scheme the member should be aged between 18 and 59 years and should be either the head of the rural landless household or an earning member in the family. The scheme also provides scholarship benefit for the children of the members. A scholarship at the rate of Rs. 100/- per month will be given to maximum two children studying between 9th to 12th standard. This scholarship is payable half yearly on 1st July and on 1st January each year. Hence option 1 and 3 are only correct.

86. In the Union Budget 2011-12, a full exemption from the basic customs duty was extended to the bio-based asphalt (bioasphalt). What is the importance of this material?

1. Unlike traditional asphalt, bio-asphalt is not based on fossil fuels.
2. Bioasphalt can be made from non-renewable resources.
3. Bioasphalt can be made from organic waste materials.
4. It is eco-friendly to use bioasphalt for surfacing of the roads.

Which of the statements given above are correct?

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

Answer: (b)

Explanation: Bioasphalt is categorized as a renewable resource alternate to petroleum products. Bioasphalt is an asphalt based alternative which is being made from non-petroleum based resources. Bioasphalt is made from corn, molasses, potato starch, rice and sugar. Bioasphalt is a product from wastages as main ingredients, thus waste management plays a vital role in the process of making petrol alternative.

87. Consider the following:

1. Carbon dioxide
2. Oxides of Nitrogen
3. Oxides of Sulphur

Which of the above is/are the emission/ emissions from coal combustion at thermal power plants?

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

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Answer: (d): Source: CST General Science, Page 189.

Sulphur dioxide (SO_2) is the major constituent in the emission when sulphur-containing coal is burnt.

Page No. 190: Nitrogen oxides (NO_x), VOCs and SO_2 are produced during the combustion of coal (in industry) and petroleum (in automobile).

Source: CST Science and Technology, Page No. 376.

Currently, the atmospheric carbon dioxide concentration is rising at about 0.4 per cent per annum, and this rise is caused almost entirely by the combustion of fossil fuels (coal, oil and natural gas).

Explanation: All the three are the major emissions from coal combustion at thermal power plants. Hence option D is the correct one.

88. Satellites used for telecommunication relay are kept in a geostationary orbit. A satellite is said to be in such an orbit when:

1. The orbit is geosynchronous.
2. The orbit is circular,
3. The orbit lies in the plane of the Earth's equator.
4. The orbit is at an altitude of 22,236 km.

Select the correct answer using the codes given below:

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

Answer: (a) Source: CST Science and Technology, Page 418. An orbit is distinguished by three factors: (a) its shape, (b) its altitude, and (c) the angle it makes with Earth's equator. Most orbits are circular, but some satellites use elliptical orbits.

Geo-synchronous Orbit: A satellite in a geosynchronous orbit (GEO) follows a circular orbit over the equator. The satellite orbits at an elevation of approximately 35,790 km because that produces an orbital period (time for one orbit) equal to the period of rotation of the Earth (23 hrs, 56 mins, 4.09 secs). By orbiting at the same rate, in the same direction as Earth, the satellite appears stationary (synchronous with respect to the rotation of the Earth). Geostationary satellites provide a "big picture" view, enabling coverage of weather events. This is especially useful for monitoring severe local storms and tropical cyclones. Because a geostationary orbit must be in the same plane as the Earth's rotation, that is the equatorial plane, it provides distorted images of the polar regions with poor spatial resolution.

Explanation: The statements 1, 2, and 3 are correct but the 4th one is wrong because geostationary orbit is at an altitude of 22, 236 miles, not km, as is given in the question. In km, the altitude comes to be 35,786 km. hence the statement 4 is wrong.

89. India has experienced persistent and high food inflation in the recent past. What could be the reasons?

1. Due to a gradual switch over to the cultivation of commercial crops, the area under the cultivation of food grains has steadily decreased in the last five years by about 30 per cent.
2. As a consequence of increasing incomes, the consumption patterns of the percent people have undergone a sig-

nificant change.

3. The food supply chain has structural constraints.

Which of the statements given above 1 are correct?

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

Answer: (b): Source: CST April 2011, Page 12 and Col 3

The inflation pressure was aggravated by global prices and the rising purchasing power aiding spurt in food prices.

90. At present, scientists can determine the arrangement or relative positions of genes or DNA sequences on a chromosome. How does this knowledge benefit us?

1. It is possible to know the pedigree of livestock.
 2. It is possible to understand the causes of all human diseases.
 3. It is possible to develop disease-resistant animal breeds.
- Which of the statements given above is/are correct?

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

Answer: (d):

Explanation: The current scientific developments and the science of DNA sequencing allows us to treat every disease including the genetic disorder.

91. In terms of economy, the visit by foreign nationals to witness the XIX Common Wealth Games in India amounted to

- (a) Export (b) Import
(c) Production (d) Consumption

Answer: (a): Source: CST December 2010, Page No. 32

In fact, investments in these events may pave the way for the future investments and business and in a world of globalization without proper investment no business can be sustained. Therefore, these events have multi-dimensional impact over the future prospectus of the country in the world market.

Explanation: Tourism is a tertiary industry, or more specifically comes under the category of service industry. In terms of economy it functions as an export. If we make a good of service and send it overseas it is an export. If someone travels to our country buys something and brings it back with them that thing is an export. With tourism foreign money is buying local goods and services, hence it is an export.

92. Microbial fuel cells are considered a source of sustainable energy. Why?

1. They use living organisms as catalysts to generate electricity from certain substrates.
2. They use a variety of inorganic materials as substrates.
3. They can be installed in waste water, treatment plants to cleanse water and produce electricity.

Which of the statements given above is/are correct?

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

Answer: (c)

Explanation: Statement 1 and 3 are correct but statement 2 is incorrect because the substrates used in microbial fuel cells are of organic origin. For e.g. Lactate, glucose, acetate, etc.

93. Which one of the following statements appropriately describes the "fiscal stimulus"?

- (a) It is a massive investment by the Government in manu-

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facturing sector to ensure the supply of goods to meet the demand surge caused by rapid economic growth

(b) It is an intense affirmative action of the Government to boost economic activity in the country

(c) It is Government's intensive action on financial institutions to ensure disbursement of loans to agriculture and allied sectors to promote greater food production and contain food inflation

(d) It is an extreme affirmative action by the Government to pursue its policy of financial inclusion

Answer: (b): Source: CST Indian Economy, Page No. 130.

On the other hand, the second component, i.e. discretionary fiscal policy actions, after remaining relatively weak up to 2007-08, had shown increases in 2008-09 and 2009-10 which can be attributed to revenue losses due to slowdown in the economy and duty cut together with higher expenditure to provide fiscal stimulus to sustain economic growth.

Explanation: Fiscal stimulus basically means government measures, involving increased public spending and lower taxation, aimed at giving a positive jolt to economic activity.

94. The formation of ozone hole in the Antarctic region has been a cause of concern. What could be the reason for the formation of this hole?

(a) Presence of prominent tropospheric turbulence; and inflow of chlorofluorocarbons

(b) Presence of prominent polar front and stratospheric clouds; and inflow of chlorofluorocarbons

(c) Absence of polar front and stratospheric clouds; and inflow of methane and chlorofluorocarbons

(d) Increased temperature at polar region due to global warming

Answer: (b): Source: CST Year Book 2011, Page No. 15.

The Maldives has pledged to phase out by 2020 a group of chemicals (hydrochlorofluorocarbons (HCFCs)) which thin out the earth's ozone layer and warm the atmosphere, according to the UN Environment Programme.

Explanation: The severe depletion of stratospheric ozone in Antarctic winter is known as the "ozone hole". The formation of the Antarctic ozone hole is due to abundant reactive halogen gases, temperatures low enough to form polar stratospheric clouds (PSCs), isolation of air from other stratospheric regions, and sunlight. Presence of prominent polar front and stratospheric clouds; and inflow of chlorofluorocarbons accelerates the ozone layer formation in Antarctica. Hence option B is the correct one.

95. Consider the following actions which the Government can take:

1. Devaluing the domestic currency.

2. Reduction in the export subsidy.

3. Adopting suitable policies which attract greater FDI and more funds from FIIs.

Which of the above action/actions can help in reducing the current account deficit?

(a) 1 and 2

(b) 2 and 3

(c) 3 only

(d) 1 and 3

Answer: (d) Source: CST Indian Economy Special 2011, Page No. 179

The decline in exports of goods and services in response to weak global demand had a dampening impact on overall GDP growth. However, a higher current account deficit led

to stronger absorption of foreign capital. This implied higher investment activity financed by foreign capital, which partly contributed to the stronger recovery in growth. Major determinants of BoP transactions such as external demand, international oil and commodity prices, pattern of capital flows and the exchange rate changed significantly during the course of the year. With the turnaround in exports and revival in capital flows, external sector concerns receded gradually in the second half of 2009-10.

CST Indian Economy Special 2011, Page No. 222

Devaluation is a fall in the fixed exchange rate between one currency and others. Devaluation is used to correct the Balance of Payments (BoP) deficit but only as a last resort as it has major repercussions on the domestic economy. Devaluation can correct a BoP deficit because it lowers the price of exports in terms of foreign currencies and raise the price of imports on the home market.

Explanation: Four fundamental ways to reduce the current account deficit are: - (a) Devalue the currency. (b) Decrease demand for imports. (c) Improving exports. (d) Attracting greater FDI and more funds from FIIs.

96. The Constitution (Seventy-Third Amendment) Act, 1992, which aims at promoting the Panchayati Raj Institutions in the country, provides for which of the following?

1. Constitution of District Planning Committees.

2. State Election Commissions to conduct all panchayat elections.

3. Establishment of State Finance Commissions.

Select the correct answer using the codes given below:

(a) 1 only

(b) 1 and 2 only

(c) 2 and 3 only

(d) 1, 2 and 3

Answer: (c): Source: CST Indian Political System, Page No. 363. Part IX - article 243

1. Reviving gram sabha constitution of panchayats at village and other levels; 2. Direct elections to all;

3. Reservation of seats SC/ST- 1/3rd for women;

4. Duration 5 years for panchayats and holding elections within period of months in the event of suppression of any panchayat;

5. Powers to panchayats - preparation of plans for economic development and social justices;

6. Setting up of Finance commission in the states for periodical review of their financial position; also audit of accounts of panchayat

7. Setting up of the Election Commissions the states for

8. Bar to interference by covert in electoral matters;

9. Amendment is article 280 needed to augment Consolidated Fund of States to supplement the recommendation of state Finance Commission.

10. 11th Schedule - Providing the Panchayats with list containing of 29 items.

Explanation: Statement 2 and 3 are correct while statement 1 is incorrect because the constitution of District Planning Committees is provided by Article 243ZD which was inserted in the Constitution by 74th Amendment.

97. Two important rivers - one with its source in Jharkhand (and known by a different name in Odisha), and another,

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with its source in Odisha - merge at a place only a short distance from the coast of Bay of Bengal before flowing into the sea. This is an important site of wildlife and biodiversity and a protected area. Which one of the following could be this?

- (a) Bhitarkanika (b) Chandipur-on-sea
(c) Gopalpur-on-sea (d) Simlipal

Answer: (a): Source: CST Geography: India and the World, Page No. 458-459

Deepor Beel in Assam, Kabar in Bihar, Surahtal in Uttar Pradesh), Lagoons (e.g., Chilika in Orissa), Crater Wetlands (Lonar lake in Maharashtra), Salt water Wetlands (e.g., Pangong Tso in Jammu and Kashmir and Sambhar in Rajasthan), Urban Wetlands (e.g., Dal Lake in Jammu and Kashmir, Nainital in Uttaranchal and Bhoj in Madhya Pradesh), Ponds/Tanks, man-made Wetlands (e.g., Harike in Punjab and Pong Dam in Himachal Pradesh), Reservoirs (e.g., Idukki, Hirakund dam, Bhakra-Nangal dam), Mangroves (e.g., Bhitarkanika in Orissa), Coral reefs (e.g., Lakshadweep), Creeks (Thane Creek in Maharashtra), seagrasses, estuaries, thermal springs are some kinds of wetlands in the country.

Page 460: Bhitarkanika and Gahir-matha Beaches (famous for Olive Ridley turtle) are wetlands in Orissa.

Explanation: The confluence of rivers Brahmani and Baitarani is the site of the Bhitarkanika National Park. River Brahmani originates in Jharkhand in the name of Sankh and Baitarni originates in Odisha. Hence option A is the correct one.

98. A rapid increase in the rate of inflation is sometimes attributed to the "base effect". What is "base effect"?

- (a) It is the impact of drastic deficiency in supply due to failure of crops
(b) It is the impact of the surge in demand due to rapid economic growth
(c) It is the impact of the price levels of previous year on the calculation of inflation rate
(d) None of the statements (a), (b) and (c) 'given above is correct in this context

Answer: (c): Source: CST Indian Economy, Page No 416.

The best performer in terms of growth during 2002-03 to 2008-09 was Gujarat, followed by Bihar, Orissa, Haryana, and Uttarakhand. States like Madhya Pradesh, Assam, Punjab, and Uttar Pradesh registered a relatively lower growth rate. Interestingly, the best performer in 2008-09 was Bihar with a growth rate of 16.59 per cent. While the good growth performance of some of the hitherto backward states like Bihar and Orissa is a welcome sign, this may also be partially due to the low base effect because of the growth deficit in earlier years.

Explanation: The base effect relates to inflation in the corresponding period of the previous year. For e.g. if the inflation rate was two low in the corresponding period of the previous year, even a smaller rise in the Price Index will arithmetically give a high rate of inflation now; On the other hand if the price index had risen at a high rate in the corresponding period of the previous year and recorded high inflation rate, a similar absolute increase in the Price index now will show a lower inflation rate now.

99. India is regarded as a country with "Demographic Dividend". This is due to

- (a) Its high population in the age group below 15 years
(b) Its high population in the age group of 15-64 years
(c) Its high population in the age group above 65 years
(d) Its high total population

Answer: (b): Source: CST July 2011, Page No. 92

Our "demographic dividend" of a relatively younger population compared to developed countries is as much of an opportunity as it is a challenge.

Explanation: India's demographic dividend: that its working-age (15-59 years) population, as of now, largely consists of youth (15-34 years).

100. Regarding "carbon, credits", which one of the following statements is not correct?

- (a) The carbon credit system was ratified in conjunction with the Kyoto Protocol
(b) Carbon credits are awarded to countries or groups that have reduced greenhouse gases below their emission quota
(c) The goal of the carbon credit system is to limit the increase of carbon dioxide emission
(d) Carbon credits are traded at a price fixed from time to time by the United Nations Environment Programme

Answer: (d): Source: CST December 2010, Page No.87 and Col I and II.

Worth of global carbon markets in 2007 almost doubled compared to 2006 with EU Emission Trading System emerging as largest operational trading scheme.

The primary CDM market increased marginally by 25 per cent compared to a 10-fold increase in the secondary CDM market. China has emerged as a clear front-runner in CDM while share of other BRIC nations remains fluctuating - India's contribution dipped half to 6 per cent in 2007. According to a report released by World Bank has indicated that China is far ahead of India in terms of carbon credit business. China has become the world leader in the carbon credit business with a market share of 73 per cent in the volume of credits traded in 2007 as compared to India's 6 per cent. Carbon credits are generated under the Clean Development Mechanism, mandated by the UN, where developed countries having greenhouse gas emission reduction targets offset them by funding clean technology in developing nations. In return, they earn the credits that they can use to set off their reduction targets.

Explanation: Statement 1, 2 and 3 related to carbon credits are correct but the statement 4 is incorrect because the carbon credit prices are not fixed by UNEP. Regarding the trading of carbon credits it is here underscored that there are also many companies that sell carbon credits to commercial and individual customers who are interested in lowering their carbon footprint on a voluntary basis. The Clean Development Mechanism (CDM), defined in **Article 12 of the Protocol**, allows a country with an emission-reduction or emission-limitation commitment under the Kyoto Protocol (Annex B Party) to implement an emission-reduction project in developing countries. Such projects can earn saleable certified emission reduction (CER) credits, each equivalent to one tonne of CO₂, which can be counted towards meeting Kyoto targets. The mechanism is

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seen by many as a trailblazer. It is the first global, environmental investment and credit scheme of its kind, providing a standardized emissions offset instrument, CERs. A CDM project activ-

ity might involve, for example, a rural electrification project using solar panels or the installation of more energy-efficient boilers. The mechanism stimulates sustainable development and

emission reductions, while giving industrialized countries some flexibility in how they meet their emission reduction or limitation targets. ■

General Studies

Strategy to deal with changing trend

With the aim of making the Civil Services more competitive and challenging the UPSC has time and again introduced significant changes in its pattern of examination. The latest in the series was announced with last year, when the Optional Subject at the Preliminary examination was replaced by a Civil Services Aptitude Test at the entry level of the examination. From this year (2011) onwards, the Preliminary examination consists of two papers. Paper I - General Studies and Paper II- Aptitude Test. With the elimination of optional paper and introduction of Aptitude paper, the General Studies paper has assumed all the more significance for the candidates. Not only this, a close analysis of this year's examination concludes that the UPSC has significantly changed the nature of questions that are asked in the General Studies paper. The questions have become more general in nature and their number has also been reduced to 100 (Earlier there were 150 questions in GS paper and in 2011 paper the number of questions has been reduced to 100). Though the reduced number of question gives a little extra time for candidates to answer them but simultaneously the changing nature of questions possess a challenge for them.

A careful analysis of this year's GS question paper reveals that the major focus of the UPSC has been on Geography and Economic issues, they together carry 43 per cent of the weightage of the question paper. Another significant fact is that the Mental ability portion has been eliminated from the GS paper and it has been shifted to Paper II i.e. Aptitude section. Change is an inevitable part of the ICS examination, and the past few years have proved that one has to be fully prepared to face the difficult nature of this examination. It's not only hard work that will take one to the final destination; it's going to be a healthy combination of intelligence and hard work that will take the candidates to one's goal.

General Outline of the GS Syllabus: The first paper under the new syllabus is more or less like the erstwhile current general awareness paper, with additional issues such as climate change and biodiversity. The paper one intends to test the awareness of the aspirants on current events of national and international importance, Indian history, Indian and world geography, Indian polity and governance, economic and social development and general science, besides environmental ecology, biodiversity and climate change that do not require subject specialization. Given below is topic wise strategy to tackle the various topics asked in the General Studies paper.

TaThis year 13 questions were asked from the history section, out of which 4 were from the Ancient Indian history while 9 questions were asked from the Modern History section. If we analyze this year's history questions, it is easily recognizable that the nature of questions has changed drastically over the years.

History: The history questions are no longer simple straight forward facts; the questions now cover factual as well as analytical statements and to solve such questions, one requires through understating of the subject. Following is the list

GS 2011 Analysis

| Section | No. of Questions |
|-------------------------|------------------|
| Geography | 21 |
| Ancient History | 4 |
| Modern History | 9 |
| Biodiversity | 6 |
| Physics | 2 |
| Chemistry | 3 |
| Biology | 8 |
| Indian Polity | 9 |
| International Relations | 3 |
| Social Issues | 3 |
| Science & Technology | 6 |
| Current News | 4 |
| Economic Issues | 22 |

of books that should be read to master the subject: - A. Ancient India: - (I) NCERT Books of Class VI - X. (II) Ancient India by D. N Jha (II) A. Wonder That Was India by A. L. Basham. B. Medieval India: (I) Medieval India (NCERT) Satish Chandra (II) The Wonder That Was India (Vol.2) S.A.A. Rizvi. C. Modern India: (I) Modern India (NCERT) Bipan Chandra (II) Modern India by Sumit Sarkar (III) India's Struggle for Independence by Bipan Chandra and others (IV) Modern Indian history by Grover. Above all CST's Indian History is a well compiled version to meet both factual, conceptual and contextual aspects of the question.

Geography: Geography is the most important area in the GS paper. It is this subject which carries make or break importance in the General Studies paper in the prelims examination. This year 21 questions were asked from this section and all the questions were related to general understanding of the geography of India and the world. In order to solve the geography section of the paper, candidates need to have through understanding of the subject; superficial knowledge will take them to nowhere. Listed below is the list of books to be studies for conceptualizing geography:

(I) Principles of Geography (class IX-XII) NCERT.

(II) General Geography of India (class XII) Part-I NCERT.

(III) Geography of India-Resources and Regional Development Part II (Class XII)-NCERT

(IV) Physical Geography by G. C Leong.

(V) In addition to these books candidates are advised to do regular practices of India and World Atlas, so they are able to solve map based questions that form a good number of questions in geography section. CST's India and the World Geography would be an effective compilation for the changing trend of the questions.