

SSC CHSL Tier I Test 7

Key Points

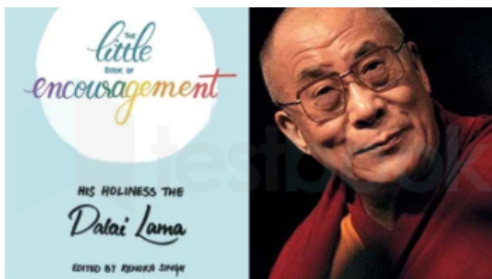
- **Francois Bernier** (1656-1668)
 - He was a **French physician and traveller**.
 - He was in India from 1656-1668
 - He visited India during the reign of Shah Jahan.
 - He was **physician to Prince Dara Shikoh and later was attached to the court of Aurangzeb**
 - '**Travels in the Mughal Empire**' was written by Francois Bernier.
 - The book mainly talks about the rules of Dara Shikoh and Aurangzeb.

Additional Information

- **Jean-Baptiste Tavernier** (1605 – 1689) was a 17th-century French gem merchant and traveller. He visited India during the reign of **Shahjahan**. Travels in India by Jean Baptiste Tavernier, clearly states that Tavernier identified the **diamond mining sites** in India very clearly.
- **Nicolo Conti** was an Italian merchant. He visited India during the reign of **Deva Raya I of Vijayanagar**.
- **Marco Polo** was a European traveller. He visited Southern India during the reign of Rudramma Devi of the **Kakatiyas**.

Key Points -

- The Tibetan Spiritual leader, his holiness **Dalai Lama**, has launched his new book '**The Little Book of Encouragement**'.
- The book comprises **130 quotes**.
- **Renuka Singh** has edited the book and Penguin Random House has published the book.
- He has praised India's rich civilizational heritage in his book, saying it is rooted in the long-standing traditions of karuna and ahimsa: compassion and non-violence.



Key Points

- **Cinchona** is a flowering plant of the family **Rubiaceae**.
- It is native to the Andes of South America.
- The bark is used for medicinal purposes.
- The **bark is dried** to obtain **alkaloids like quinine**.
- The features of Cinchona bark are:
 - **Colour** - Yellowish to brownish.
 - **Odour** - Slight and distinctive.
 - **Taste** - Highly bitter and astringent.
 - **Major Constituents** - Quinine, Hydroquinine, Cinchonine.
 - **Pharmacological Properties** - Antimalarial, antipyretic, stomachic, anti-inflammatory, anti-obesity, antioxidant, anti-cancer.
 - **Uses** - Quinine is used in treatment of malaria, increasing appetite, Quinidine is used to prevent arhythmias.

Additional Information

- Root of **Rauvolfia** - It contains '**reserpine**' which is an **anti-psychotic** and **anti-hypertensive drug** used to treat hypertension.
- Seeds of **Ricinus communis** - These are castor beans that yield **castor oil**, but is also the source of a **toxin called 'ricin'** which is released when chewed and swallowed.
- **Atropa belladonna** - It is a medicinal herb that yields '**atropine**', which can be toxic as well as **hallucinogenic**.

Key Points

- **The Macaulay's Minute on Indian Education, 1835**
 - Lord Macaulay arrived in India on **June 10, 1834**, as a law member of the Governor General's Executive Council and was appointed President of the Committee of Public Instruction.
 - In 1835, he was tasked with settling a **dispute between orientalists and Anglicists**.
 - He presented his famous minutes to the council in February 1835, which **Lord Bentinck approved**, and a resolution was passed in March 1835.
 - **The following points were emphasized by him:**
 - **That the main goal of the British government should be to promote European literature and science among Indians, and that "all funds appropriated for the purpose of education would be best spent on English education alone."**
 - All existing professors and students at all institutions under the committee's supervision shall continue to receive stipends, but no stipend shall be given to any students who may subsequently enter any of these institutions.
 - No funds from the government were to be spent on the printing of oriental works.
 - **All funds available to the government would be spent in the future on imparting knowledge of English literature and science to Indians.**

Additional Information

- **Charter act of 1813**
 - **Charter act of 1813 ended the monopoly of the East India Company in India, the company's monopoly in trade with China and trade in tea with India was kept intact.**
 - The company's rule was extended to another 20 years.
 - **The act granted permission to the persons who wished to go to India for promoting moral and religious improvements. (Christian Missionaries)**
 - This act regulated the company's territorial revenues and commercial profits. It was asked to keep its territorial and commercial accounts separate.
 - The company's dividend was fixed at 10.5% per annum.
 - **There was also a provision that Company should invest Rs. 1 Lakh every year in the education of Indians.**
 - It empowered the Local Governments in India to impose taxes on persons and to punish those who did not pay them.
- **Charter Act 1793**
 - The British Parliament passed the **Charter Act 1793 or the East India Company Act 1793** aimed at renewing the company's charter for the next 20 years which was first given by the **Regulating Act of 1773**.
 - This company's monopoly in trade with India continued and was given the right to trade with India for the next 20 years.
 - This was further renewed by the **Charter Act of 1813**.
- **The Sarda Act of 1929**
 - **The Child Marriage Restraint Act is popularly known as the Sharda Act after Harbilas Sarda.**
 - It was a statutory act passed on 28th September 1929 to fix the marriageable age of girls and boys at 14 years and 18 years respectively.

- **Sarpanch** plays a vital role in establishing the **Joint Action Committees** to look after the works taken up with the funds of Gram Panchayat.

Additional Information

- **Uttar Pradesh:**
 - **Capital:** Lucknow
 - **Governor:** Anandiben Patel
 - **Chief Minister:** Yogi Adityanath (Ajay Bisht)
 - It shares its borders with the states of **Rajasthan, Haryana, Delhi, Madhya Pradesh, Chhattisgarh, Bihar, Jharkhand, Uttarakhand, and Himachal Pradesh.**
 - It shares its **international border with Nepal.**

Key Points

- The Securities and Exchange Board of India (SEBI) **has appointed Ashish Kumar Chauhan** as the new MD and CEO of the National Stock Exchange (NSE).
- He will succeed Vikram Limaye whose 5-year term ended on 16 July 2022.
- Mr Chauhan is **the current MD & CEO of the Bombay Stock Exchange (BSE)**.
- He is known as the 'father of India's financial derivatives'.
- He is **one of the founders of the NSE**.

Additional Information

- The Securities and Exchange Board of India is the regulatory body for the securities and commodity markets in India under the ownership of the Ministry of Finance, Government of India.
- It was established on **12 April 1988** and given Statutory Powers on 30 January 1992 through the SEBI Act, 1992.
- **The Securities and Exchange Board of India:**
 - Founded: 1992 (Acquired Statutory Status)
 - Headquarters: Mumbai
 - Chairman: Madhabi Puri Buch

Key Points

- The **Indian Councils Act 1909** empowered the **Governor General** to nominate **one Indian member to the Executive Council** leading to the appointment of **Satyendra Prasanna Sinha** as the first Indian member.
- **Satyendra Prasanna Sinha** was born in Raipur in Bengal in 1863.
- In 1905, Satyendra Prasanna Sinha was appointed as **advocate-general of Bengal**, a post that was confirmed in 1908.
- In 1909, **Lord Morley** appointed him a legal **member of the Governor-General's Executive Council**, the first Indian in this position.
- **In 1915**, he was elected **President** of the **Indian National Congress**.
- A game of Basketball is played with two teams, with **5** players from each team on the court at one time (that means 10 playing at one time).
- The maximum number of players on the bench differs by the league you're playing in.
- In international play, a maximum of 7 players is allowed on the bench, resulting in a roster of 12 players.

Key Points

- **Yadwinder Singh** is the current captain of the Indian basketball team.
- Akanksha Singh is the current captain of India Women's National Basketball Team.
- Famous Indian Basketball Players of All Time:-
 - Satnam Singh.
 - Amjyot Singh.
 - Amritpal Singh.
 - Ajmer Singh.
 - Anitha Pauldurai.
 - Geethu Anna Jose.

Key Points

- Madhavpur Ghed, A Small But Culturally Significant Village, Is The Place Where, According To Folklore, **Lord Krishna Married Rukmini, The Daughter Of King Bhishmaka**.
- Madhavpur also has one of the meditation centers of Osho, where prominent Osho sanyasi Swami Brahm Vedant resides and gives lectures daily.
- Madhavpur Lies On The Seashore, Close To Porbandar.
- **A 13th Century Madhavrai Temple Marks The Site**.
- This Event Is Commemorated By A Cultural Fair Held Every Year, Commencing On Ram Navami.
- A Colourful Chariot Carrying The Idol Of Lord Krishna Circumnavigates The Village And The Festivities Usually Continue For Five Days.

Additional Information

- **Baneshwar Fair:**
 - Baneshwar Fair holds a lot of religious importance for the Bhils, a tribal community based in Rajasthan and the neighboring states.
 - This clan gathers here in large volume making the festival look no less than a Kumbh Mela of tribes.
 - The term Baneshwar is typically addressed to Lord Shiva and the shiva linga present in the Mahadev Temple which is situated near the confluence of the rivers Som, Mahi, and Jhakad.
- **Pushkar Fair:**
 - The Pushkar Fair (Pushkar Camel Fair) or Pushkar Mela, as it is locally known, is an annual five-day camel and livestock fair held in the town of Pushkar between the months of October and November.
 - It is one of the world's largest cattle fairs. Apart from the buying and selling of livestock, it has become an important tourist attraction.
 - Competitions such as the 'Matka phod', 'longest mustache, and 'bridal competition' are the main draws for this fair which attracts thousands of tourists.
- **Nauchandi Fair:**
 - The annual Nauchandi Mela which is held at Nauchandi Ground in Uttar Pradesh's Meerut every year attracts a lot of footfall.
 - The fair begins post-Holi celebrations and is held for around a month the star exhibits are the local arts and religious rituals from the rural land of Uttar Pradesh.

Key Points

- **Austrian capital Vienna** has been ranked as the world's most liveable city in the report '**Global Liveability Index 2022**'.
- Vienna replaced New Zealand's Auckland city as the most liveable city.
- **Delhi is ranked 140th**, while **Mumbai got 141st rank**.
- Syrian capital Damascus ranked at the bottom of the list.
- 'Global Liveability Ranking' is published annually **by the Economist Intelligence Unit**.

Additional Information

- **Kerala has been ranked first in Asia** in Affordable Talent in Global Startup Ecosystem Report (GSER) 2022.
- India has jumped six positions to **37th rank** on the annual **World Competitiveness Index** for the year 2022.
- **Denmark has been ranked at the top** while Switzerland has been ranked at second position.
- **The Indian Institute of Management Ahmedabad** in collaboration with Indian agri-land marketplace SFarmsIndia has announced the launch of the **IIMA-SFarmsIndia Agri Land Price Index (ISALPI)**.

Key Points

- During the **Swadeshi Movement**, "**Vande Mataram**" became a popular song of people.
- The Swadeshi movement began in **1905** with the **Viceroy of India, Lord Curzon**, partitioning Bengal and continued until 1911.
- This was the strongest in **Bengal** and was also recognized in India as the **Vandemataram Movement**.
- Among the movement's various forms of struggle, it was the boycott of foreign-made goods that encountered the greatest visible success on the practical and popular levels.
- Boycotts and public burning of foreign clothes, picketing of shops selling foreign goods, all became common in remote corners of Bengal as well as in many major cities and towns across the country.
- Another form of mass mobilization widely used by the Swadeshi movement was the corps of volunteers (samitis).
- Ashwini Kumar Dutt, a school teacher, set up the Swadesh Bandhab Samiti in Barisal which was the best-known volunteer organization of all of them.

Additional Information

- The **Shivaji** and **Ganapati festivals** in Western India (Maharashtra) were organized by **Lokmanya Tilak** to spread the swadeshi message and boycott movements among the masses.
- The Swadeshi and boycott movements placed great emphasis on 'Atmasakti' or self-reliance as a means of reasserting national dignity in different fields.

Key Points

- **Incredible India** is the name of an international tourism campaign by the Government of India since 2002, to promote tourism in India.
 - "Incredible India" title was officially branded and promoted since 2002 to an audience of global appeal.
 - The first marketing initiative of its kind, **Incredible India** was conceptualized in 2002 by V Sunil (while he was Creative Director, O&M Delhi), and Amitabh Kant, Joint Secretary, Ministry of Tourism.

Additional Information

- In 2017, **Actor Amitabh Bachchan and Priyanka Chopra** are chosen as the brand ambassador of the Incredible India campaign.

Key Points

- The language used for **Kathakali songs** is **Manipravalam**.
- Manipravalam is a **mixed language** of **old Malayam** and **Sanskrit**.
- **Kathakali**:
 - It is one of the 8 classical dances of India.
 - Kathakali is primarily performed by **male performers**.
 - This dance is known for spectacular **facial makeup**, **ornate masks** and **headgear**.
 - The theme of this dance is an **eternal conflict** between **good** and **evil**.
 - The **9 facial movements** known as '**Navarasas**' is an important feature of Kathakali.

Important Points

- **Important performers of Kathakali dance:**
 - Guru Kunchu Gurup
 - Kavungal Chathunni Panicker
 - Kalamandalam Gopi
 - Kottakkal Sivaraman
 - Kalamandalam Krishna Prasad
 - Kalamandalam Vasu Pisharody
 - Kalamandalam Kesavan Namboodiri
 - Kalanilayam Balakrishnan
 - Rita Ganguly



Key Points

- The National Health Authority (NHA), under its flagship scheme of Ayushman Bharat Digital Mission (ABDM), has announced integration with Aarogya Setu.
- The integration is aimed at **making the benefits of the ABDM** available to the users of Aarogya Setu.
- With this, over 21.4 cr Aarogya Setu users will be able to **create the 14-digit unique ABHA numbers** from the mobile app.

Additional Information

- Congress leader Rahul Gandhi on 3 Feb'22 launched a financial assistance scheme of the Chhattisgarh government for landless labourers of rural areas.
- The scheme is called '**Rajiv Gandhi Grameen Bhumiheen Krishi Mazdoor Nyay Yojana**'.
- '**Rajiv Yuva Mitran Club**' scheme' was also launched.
- A new scheme, **Prime Minister's Development Initiative for North-East, PM-DevINE** has been announced by the Union Finance Minister Nirmala Sitharaman while presenting the Union Budget 2022-23 on 01 February 2022.
- The **PM-DevINE** will be implemented through the **North-Eastern Council**.
- Four new **Advanced Centres of Excellence** will be set up under the **second phase of the capital goods** scheme notified by the union government in January 2022.
- Dr Mansukh Mandaviya, Union Minister for Health and Family Welfare digitally launched the revamped CGHS and mobile app, "**MyCGHS**", on 24 Jan 2022.
- It will greatly benefit the 40 lakh people connected with the CGHS.

Key Points

Vitamin E:

- Vitamin E is a good **antioxidant**.
- It helps in **protecting the cell from damage** caused by free radicals like bacteria and viruses.
- It is mainly found in **potatoes, guava, mango, pumpkin, milk, nuts and seeds, etc.**
- Deficiency of Vitamin E can cause heart **problems, hemolysis and sterility, etc.**

Thus, Vitamin E helps in protecting the cells.

Additional Information

- Vitamins are organic substances that we require in adequate quantities for good health.
- Our body cannot synthesize vitamins.
- Therefore we need to consume their natural sources such as fruits and vegetables.
- Each vitamin has a specific function and its deficiency leads to a particular deficiency disease.
- Vitamin is an organic non-protein substance that is required by an organism for normal metabolic function but cannot be synthesized in sufficient quantity by that organism.
- These can be divided into two categories: **fat-soluble and water-soluble.**

| Vitamin | Vitamins | Solubility | Diseases | Sources |
|------------|----------------------------------------|------------|----------------------------------------------------|----------------------------------------------------------------------------------------|
| Vitamin A | Retinol, retinal, and four carotenoids | Fat | Night-blindness, Hyperkeratosis, and Keratomalacia | Orange, ripe yellow fruits, leafy vegetables, carrots, pumpkin, squash, spinach, liver |
| Vitamin B1 | Thiamine | Water | Beriberi, Wernicke-Korsakoff syndrome | Pork, oatmeal, brown rice, vegetables, potatoes, liver, eggs |

| | | | | |
|------------|-------------------------------------|-------|--------------------------------|----------------------------------------------------------|
| Vitamin B2 | Riboflavin | Water | Ariboflavinosis | Dairy products, bananas, popcorn, green beans, asparagus |
| Vitamin B3 | Niacin, niacinamide | Water | Pellagra | Meat, fish, eggs, many vegetables, mushrooms, tree nuts |
| Vitamin B5 | Pantothenic acid | Water | Paresthesia | Meat, broccoli, avocados |
| Vitamin B6 | Pyridoxine, pyridoxamine, pyridoxal | Water | Anaemia peripheral neuropathy. | Meat, vegetables, tree nuts, bananas |

| | | | | |
|-------------|---------------------------------------------------|-------|--------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| Vitamin B7 | Biotin | Water | Dermatitis, enteritis | Raw egg yolk, liver, peanuts, certain vegetables |
| Vitamin B9 | Folic acid, folinic acid | Water | Megaloblast and deficiency during pregnancy are associated with birth defects, such as neural defects. | Leafy vegetables, pasta, bread, cereal, liver |
| Vitamin B12 | Cyanocobalamin, hydroxycobalamin, methylcobalamin | Water | Megaloblastic anaemia | Meat and other animal products |
| Vitamin C | Ascorbic acid | Water | Scurvy | Many fruits and vegetables, liver |
| Vitamin D | Cholecalciferol | Fat | Rickets and Osteomalacia | Fish, eggs, liver, mushrooms |
| Vitamin E | Tocopherols, tocotrienols | Fat | Deficiency is very rare; mild hemolytic anemia in newborn infants. | Many fruits and vegetables, nuts and seeds |
| Vitamin K | phylloquinone, menaquinones | Fat | Bleeding diathesis | Leafy green vegetables such as spinach, egg yolks, liver |

Key Points

- SEBI has approved the initial share sales of API Holdings, which operates PharmEasy, Adar Poonawalla-backed Wellness Forever Medicare, and metal recycling firm CMR Green Technologies.
- It has issued observation letters to the three companies, effectively giving nod to float their IPOs.
- PharmEasy's IPO (initial public offering) will only be a primary share sale of shares of ₹6,250 crores.

Additional Information

- Radiant Cash Management Services Ltd (RCMS), backed by Ascent Capital, has received approval from the Securities and Exchange Board of India (SEBI) to raise funds through a public listing.
- The Chennai-based firm intends to issue up to ₹60 crores worth of fresh shares.
- RCMS is one of the largest retail cash management firms in India by network locations or touchpoints served as of July 2021.
- The Securities and Exchange Board of India (SEBI) has set up an Advisory Committee for Leveraging Regulatory and Technology Solutions (ALeRTS) to enhance technological capabilities and explore suitable technology solutions for the early detection of market anomalies.
- Securities and Exchange Board of India:
 - Founded: 12 April 1992.
 - Headquarters: Mumbai.
 - Agency Executive: Ajay Tyagi (As of Feb 2022).
- National Stock Exchange of India Limited is the leading stock exchange of India, located in Mumbai, Maharashtra.
- NSE was established in 1992 as the first dematerialized electronic exchange in the country.

Key Points

- Ammeter is an instrument for measuring either direct or alternating electric current, in amperes.
- An ammeter can measure a wide range of current values because at high values only a small portion of the current is directed through the meter mechanism.



Important Point

- **Difference between Ammeter & Galvanometer:**

| <u>Parameter</u> | <u>Ammeter</u> | <u>Galvanometer</u> |
|-----------------------|---------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Definition | An instrument for determining the amount of current flowing in a circuit. | An instrument for detecting the strength and direction of minor currents in a circuit. |
| Magnetic field | It may operate with or without a magnetic field. | It operates only when a magnetic field is present. |

| | | |
|-----------------|-------------------------------------|---------------------------------------|
| Accuracy | More accurate | Less accurate |
| Measure | Both direct and alternating current | Only direct current |
| Useful | Electrical circuit | Bridge and potentiometer measurements |



Additional Information

| <u>Instrument</u> | <u>Measures</u> |
|----------------------------|-------------------------------------------------------------|
| Anemometer | Forces and velocity of wind and directions |
| Barometer | Atmospheric pressure |
| Electrocardiogram (ECG) | Traces the movement of the heart, recorded on a Cardiograph |
| Electroencephalogram (EEG) | Measures and record the electrical activity of the brain |
| Fathometer | Depth of the ocean |
| Hydrometer | Relative density of liquids |
| Hygrometer | Level of humidity |
| Micrometre | Distances/angles |

| | |
|--------------|-----------------------------------------------------------------------------------|
| Periscope | To view object above sea level |
| Pyrometer | Very high temperature |
| Radar | Detect the direction and range of an approaching aeroplane by means of radiowaves |
| Sonar | Detect object underwater |
| Sphygmometer | Blood pressure |
| Thermostat | Regulates temperature at a particular point |
| Venturimeter | Rate of flow of liquids |
| Vernier | Small subdivision of the scale |
| Voltmeter | An electric potential difference between |

Key Points

- **Right to Information (RTI), 2005**, is an act set up by the Parliament of India that frames the procedures and rules for the right to information to the citizen.
- RTI has replaced the **Freedom of information act, 2002**.

The following are the features of the RTI Act:

- It promotes **accountability and transparency** in every public authority.
- It promotes effective and timely **dissemination** of correct information by the public authority to any individual.
- It promotes the **establishment** of district, state, and central level information commissions as an appellate body.
- It may be written by **hand or online**.
- To **maintain all the records** which are appropriate to be computerized and should be connected with the network so that all the records are easily accessible.
- To **prepare reports** which include the number of report requests made by the general public to each authority.
- It is **transparent** and shows the amount collected by public authority as a charge from this act.

Key Points

- Prime Minister Narendra Modi is going to participate in the Quad Leaders' Summit **in Tokyo on 24th May** at the invitation of Japanese Prime Minister Fumio Kishida.
- **US President Joe Biden, Australian Prime Minister Scott Morrison and Japanese Prime Minister Fumio Kishida** will participate in the summit.
- The Quad is a strategic security dialogue between **Australia, India, Japan, and the USA**.
- **The current Prime Minister of Australia is Anthony Albanese. (2022)**

Additional Information

- The Quadrilateral Security Dialogue (QSD), colloquially the Quad, is a strategic security dialogue between Australia, India, Japan, and the United States.
- The dialogue was initiated **in 2007 by Japanese Prime Minister Shinzo Abe**.
- The dialogue was paralleled by joint military exercises titled **Exercise Malabar**.

Key Points

- He was born on **17th July 1458**. His real name was **Nizam Khan**.
- He was the **second son** of the **Delhi Sultan Bahlul Lodhi**. **Sikandar Lodhi's mother** belonged to the **Hindu community** and the **daughter** of a **Hindu Goldsmith**.
- He was the **second and most productive ruler** of the **Lodi dynasty** of the **Sultanate of Delhi**.
- **Sikandar Lodhi** had a **proficiency Poet** of the **Persian language** and prepared a **Diwan** of **9000 verses**.
- He was a very **audacious ruler** who fostered his military trade across his territory and expanded his borders to the regions of **Gwalior** and **Bihar**.
- He signed a **pact** with the ruler of **Bengal** at that time **Alauddin Hussain Shah**.
- In the year **1503**, he founded the **City of Agra**.
- The **Sikander Lodi** was the **Muslim follower**, and like his predecessors, acknowledged the preachings of the **Abbasid Caliphate** all over the **Muslim World**.
- He demolished **temples of Hindus**, and under immense pressure from the **Ulamas**, and he allowed the execution of a **Brahmin** who declared **Hinduism** to be faithful to **Islam**.
- He **abolished** women from visiting the **Mazars of Muslim Saints** and banned the **annual march** of the spear of the Veteran **Muslim Martyr Salar Masud**.
- He established **Sharia(Courts)**, Headed by the **Qazis** as an Administer the **Sharia law** to the **larger Muslim population**.
- **Sharia** was open to **Non-Muslims** also, including for **Non-Religious matters** such as **Property Disputes**.
- He died on **November 21st, 1517**.

Important Points

- **Bahlol Lodhi** was the **founder** of the **Lodhi Empire (1451-1489)**.
- **Ibrahim Lodhi** was the **last ruler** of this **dynasty** and he fought the **first battle of Panipat** against the **Mughal Emperor Babur** in **1526**.

Additional Information

- The current **Chief Minister** of **Uttar Pradesh** is **Mr. Yogi Adityanath** and he is the **21st** Chief Minister of **Uttar Pradesh**.
- The current **Governor** of **Uttar Pradesh** is **Mrs. Anandiben Patel**.

Key Points

- **An emulsion**
 - It can be defined as a colloid consisting of two or more non-homogenous types of liquids wherein one of the liquids contains the dispersion of the different forms of liquids.
 - **Emulsions are the mixtures of two or more types of liquids where, one is such as droplets, of tiny or even ultramicroscopic size, which are distributed throughout each other. Hence, Option 3 is correct.**
 - These are usually formed from the **component of liquids either in natural form or, more often, using mechanisms such as agitation, which is provided that these fluids mixed have no kind of mutual solubility.**
 - Emulsions are said to be stabilized by some agents forming films at the surface of droplets or those which impart to them a kind of mechanical stability.
 - The unstable form of emulsions eventually separates into two forms of liquid layers.
 - The stable emulsions are destroyed by destroying or by deactivating the emulsifying agent—for example by the addition of appropriate third-party substances or even by the process of freezing or by heating.
 - Some common emulsions are milk (where the dispersion of fat molecules or droplets in the aqueous solution) and also butter (which is the dispersion of droplets of particles of an aqueous solution in the fat).



Important Point

- **Theories of Emulsification**
 - Since there are different processes and mechanisms (both chemical and physical) involved in the process of emulsification, there are several theories that accompany it.
- **Surface Tension Theory:** This theory states or describes emulsification as a process that occurs by the reduction of interfacial tension between two phases.
- **Repulsion Theory:** With this theory, we learn that the emulsifying agent produces a film over one phase which further leads to the formation of globules. These compounds tend to repel each other and the repulsive force that exists between them helps them to remain suspended in the dispersion medium.

Key Points

- **Mother Nature** has won the **'Best Global Music Album'** award at the 64th Annual Grammy Awards 2022.
- **Olivia Rodrigo(19-year-old)**, an American singer-songwriter has won 3 awards.
- It includes **the Best New Artist**.
- She has also won **the Best Pop Vocal Album for "Sour"** and Best Pop Solo Performance "Drivers License."

Important Points

- The Grammy Awards, presented by the Recording Academy or National Academy of Recording Arts and Sciences, **since 1957** honour musical artists, compositions and albums.
- In Grammy 2022, the number of categories has been increased from **84 in 2020 to 86**.
- The 2 new categories are **Best Global Music Performance (Global Music Field)** and **Best Música Urbana Album (Latin Music Field)**.

Key Points

- Indian weightlifter **Jeremy Lalrinnunga on 31 July 2022** won the gold medal in the men's 67 kg category at the ongoing Commonwealth Games 2022 in Birmingham.
- He lifted a total of 160kg in the clean and jerk segment to finish with a grand total of 300kg.
- This is India's second gold medal at the CWG after **Mirabai Chanu delivered gold on 30 July**.
- Chanu had won gold in the women's 49 kg category.

Additional Information

- **Sports:**
 - **Indian weightlifter Harshada Garud** on 18 July 2022 won a gold medal in the 2022 Asian Youth and Junior Weightlifting Championship.
 - **The Netherlands** clinched their ninth FIH Women's Hockey World Cup by beating Argentina 3-1 in the final on 17 July 2022.
 - **Youth World Boxing champions Alfiya Pathan & Gitika** won gold medals at the first edition of the Elorda Boxing Cup in Nur-Sultan, Kazakhstan on 4 July 2022.
 - **Archers Jyothi Surekha Vennam and Abhishek Verma** won the gold medal in the compound mixed team event at the Archery World Cup 2022 Stage- 3 in Paris on 25 June 2022.
 - **Cyclist Ronaldo Singh** made history by winning a silver medal in the senior category sprint event at the Asian Track Cycling Championship 2022 (41st edition) held in New Delhi.
 - **Neeraj Chopra won the gold medal** at the Kuortane Games in Finland on 18 June 2022.
 - On 14 June 2022, Chopra also broke his own national record with a **throw of 89.30m at the Paavo Nurmi Games 2022**.

Key Points

- When **white** light is **passed** through a glass **prism** it splits into its **spectrum** of **colours** and this process of white light splitting into its constituent colours is termed **dispersion**.
 - The order of **colours** is **violet, indigo, blue, green, yellow, orange and red**.
 - A rainbow is a **multicoloured arc** made by **light striking water droplets**.
 - **When** the white light **strikes water droplets**, the **droplets** work as a **Prism** to **disperse** the **light** into a **spectrum** of **colours**.

Additional Information

- **Rainbows** are the result of the **refraction** and **reflection** of light.
 - Both **refraction** and **reflection** are phenomena that involve a **change** in a **wave's direction**.
 - A refracted wave may appear "bent", while a reflected wave might seem to "bounce back" from a surface or other wavefront.
 - When **light** travels from one **medium** to **another**, the **speed** of its propagation **changes**, as a result, it '**bends**' or is '**refracted**'.
 - Now when **light** passes through a **prism**, it is **refracted** towards the **base** of the **triangle**.
 - The **different colours** in the spectrum of light have **different wavelengths**.
 - Therefore, the **speed** with which they all bend **varies depending** on this **wavelength**, where violet bends the most, having the shortest wavelength and red bends the least, having the longest wavelength.
 - This is the reason for the **dispersion** of **white light** into its **spectrum** of **colours** when refracted through a prism.

Key Points

Sayyid Dynasty:

- **Sayyid Khizr Khan** (reigned 28 May 1414 – 20 May 1421) was the founder of the **Sayyid dynasty**, the ruling dynasty of the Delhi sultanate, in northern India soon after the **invasion of Timur** and the fall of the Tughlaq dynasty.
- **Khizr Khan was Governor of Multan under the Tughlaq ruler, Firuz Shah Tughlaq**, and was known to be an able administrator.
- He did not take up any royal title due to fear of **Amir Timur** (better known historically as Tamerlane) and contended himself with the titles of **Rayat-i-Ala** (Sublime Banners) and **Masnad-i-Aali** or (Most High Post).
- During his reign, **coins continued to be struck in the name of previous Tughlaq rulers**.
- After his death on 20 May 1421, he was succeeded by his son **Mubarak Khan**, who took the title of **Muizz-Ud-Din Mubarak Shah**.

Additional Information

Mohammad Bin Tughlaq (1325-1351):

- His reign marks the zenith of the Delhi Sultanate but also saw the beginning of disintegration.
- He defeated the Mongols. He appointed officials on the basis of merit. Advanced secular policies.
- Applied justice to Ulema.
- Ibn-Batuta (native of Morocco) was his contemporary of Muhammad Tughlaq and was his envoy to China.
- He Built the fort of Adilabad and the city of Jahanpanah.
- During his reign, 3 major kingdoms of South India emerged: Vijayanagar, Bahamani, and Madurai.

Bahlul Khan Lodi.

- He was the chief of the Pashtun Lodi tribe.
- He was the founder of the Lodi dynasty from the Delhi Sultanate.
- He was involved in the trading of horses and once sold his finely bred horses to the Sayyid dynasty Sultan Mohammad Shah.