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SAURABH PANDEY

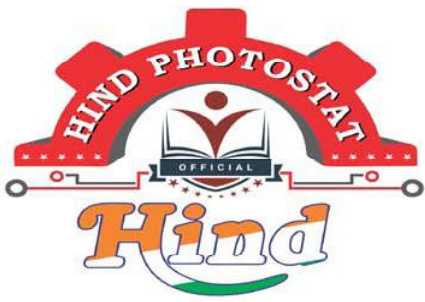
SSC JE 2023

GENERAL STUDIES

- ❖ 1. GENERAL KNOWLEDGE & ECONOMICS
- ❖ 2. GEOGRAPHY
- ❖ 3. HISTORY
- ❖ 4. INDIAN POLITY
- ❖ 5. GENERAL SCIENCE

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National Flag :- Adapted By Constituent Assembly on
22 July 1947.



Saffron colour - Courage, sacrifice and Renunciation
White colour - Truth and purity in thought
Green colour - Life abundance and prosperity

- These meanings were given by S. Radhakrishnan
1st Vice-president and
2nd president

Dimension 3:2

Cloth - silk, cotton

In 2002, Supreme court said and declared flag hoisting
is an fundamental right under article (19)(b)(a) but
flag code 2002 must be followed.

This decision was given by Supreme court on the PIL
filed by naveen Jindal

- designed by Pingali Venkaya in 1921

Note :- About Bharat Ratna - Indian highest civilian honou
- started in 1954
- Can be confer to citizen as
well as non-citizen.

→ Earlier, flag committee was headed by Dr. Rajendra
prasad

→ In 1906 1st time a tricolour flag was hoisted by
sachindra prasad base in calcutta.

- In 1907, Madam bhikai Cama hoisted another
- tricolour flag in stuttgart (Germany) and later in
Paris also
↳ Parsi lady

Indulal Yagnik smuggled this
flag to India.

- Can be confer to maximum 3 person at a time
(1999 - 4 persons)

- Can be confer in any field of Human endeavour

2 Non-citizens :- conferred with Bharat Ratna

- Khan Abdul Gaffar Khan : known as frontier Gandhi
or Badshah Khan

↓
- led Red shirt movement

- estd. Khudai Khidmatgar

Nelson Mandela :- 1st democratic president of South
Africa (1994)

- 18 July - Mandela day or Anti-Apartheid day
Autobiography - A long walk to freedom

→ 1954 - 1st Bharat Ratan :- S. Radhakrishnan (Teacher's day)

↙ C.V. Raman

C. Rajgopalachari

(1st Indian Govt. Gen of free India)

Raman effect on 28 Feb 1928

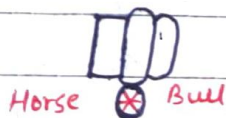
↓

Scattering of light

↓ National Science Day

National Emblem :- Adopted by C.A. on 26 Jan 1950

→ taken from Sarnath lion Capital of Ashoka



1 Lion, 1 Elephant, 1 Horse, 1 Bull

Satyameva Jayate Animal-Guardian of 4 direction.

National Anthem

Jana Gana Mana

- Adopted by CA on 24 June 1950
- Both have equal status
- Written by Tagore in 1911
- English translation done by Tagore himself, and Name is "Morning Song of India"
- Full version - 52 seconds
- 1st time Jana Gana Mana was published in 1912 in Tattvaabedhini pahika under the title "Bharat Vidhata"

National Song

Vande Mataram

- Adopted by CA on 24 June 1950
- taken from "Anand Math" written by Bankim Chandra Chatterjee
- Anand Math published in 1882
- Sanskrit + Bengali
- English translation was done by Aurobindo Ghosh
- 1st time, sung by R.N. Tagore in 1896, Calcutta Session.

National River: In 1985-86, then pm Rajiv Gandhi launched "Ganga Action Plan" to clean river Ganga but it was not successful

- later Ganga Action plan Phase-2 was launched and 4 more rivers Mahananda Gomti, Damodar, Yamuna were covered but it was also failed

In 2009, then PM Manmohan Singh estd. National Ganga river basin Authority (NGRBA) under environment Protection Act 1986. to deal with Ganga related issues.

→ In 2009, Ganga declared as Nation and Ganga river dolphin declared as National aquatic Animal.

- ↳ • Vikramshila Dolphin Sanctuary - Bhagalpur India.
- Dolphins Bats - produce ultrasonic waves.

Nation Heritage Animal - Elephant

Maximum Elephant Population - Karnataka

Project Elephant - 1992

Maximum gestation Period - 18-22 month

Largest land Animal - African Elephant

Note:- Elephant live in groups and it is led by female

National fruit - Mango (*Mangifera Indica*)

↳ yellow colour is due to Beta-Carotene

Note:- Nation fruit Ripening - Ethylene Gas
"hormone" - Auxin

Artificial fruit Ripening - Calcium Carbide (CaC_2)



when it reacts with water it produces

Acetylene gas

↳ Used for fruit Ripening

↳ Also used in welding

↳ Harmful

National Game - Hockey (de-facto National Game)
by default

De Jure: official

Nation Calendar - Saka Calendar Calendar

→ Adopted on 22 March 1957

→ 1st Day - Chaitra 1

↳ 22 March, Leap Year = 21 Mar

→ Pakistan Nation Sweet - Gulab Jamun

→ Lion - Gir forest (Gujarat)

Date

Page

→ Month of Hindi Calendar

* Chaitra - 1 Month

* Ashwin

* Baisakh

* Karthik

* Jyestha

* Agrahana

* Asaadh

* Paush

* Shraavan

* Maagh

* Bhadrapad

* Phalgun - Last Month

National Flower - Lotus (*Nelumbo Nucifera*)

National Bird - Peacock (*Pavo Cristatus*)

National tree - Banyan (*Ficus Benghal*)

National vegetable - Pumpkin

National Drink - Tea (*De-facto*)

National Sweet - Jalebi

National Animal - Tiger (*Panthera Tigris*)

↳ Till 1972, Lion was our national Animal but in 1973 Indira Gandhi launched "Project tiger for tiger conservation and 9 tiger reserves were declared and tiger declared as National Animal.

Note :- Tiger Population - ↑ 33%.

Lion Population - ↑ 29%.

Leopard Population - ↑ 60%.

International Tiger Day - 29 July

→ Presently, Total No. of Tiger reserves - 53.

53 Tiger Reserve - Guru Ghasidas National Park and Tamor Pingla Wildlife Sanctuary (Chhattisgarh)

52 Tiger Reserve - Ramgarh Vishdhari (Rajasthan)

51 Tiger Reserve - Srivilliputhur Meghmalai (Tamil Nadu)

Largest Tiger Reserve - Nagarjuna Sagar - Srirajam
(Telangana - Arunachal Pradesh)

Maximum No. of Tiger Reserves - Madhya Pradesh - 6

Maximum Tiger Population - Madhya Pradesh - 526
- Karnataka - 524

→ World Ist white tiger sanctuary - Mukundpur (M.P.)

Note:-

Indian Ist Nation Park - Hailey National Park (1935)



later known as Jim Corbett National Park
(Uttarakhand)

India's Ist Biosphere Reserve - Nilgiri
(Karnataka, Kerala, Tamil Nadu)

Indian cheetah - Fastest Land Animal

→ Extinct from India in 1952.

→ Blackstriped from eyes to mouth, yellow colour with

→ Snow Leopard - Project Snow Leopard (2009)

Higher Himalayas

(H.P, J&K, Ladakh, Uttarakhand, Sikkim, Ar. Pr.)

black dots.

→ Fastest Land Animal

→ Recently, Namibian cheetah was introduced in
Palpur - Kuno wildlife sanctuary (M.P.)

Current updation :-

Mudra Bank (Micro Units Development Refinance Agency) :-

→ Launched by P.M. Modi on 8th April 2015 to provide
low rate loans to MSME sector.



(Micro Small & Medium Enterprises)

→ Priority will be given to SC/ST and women entrepreneurs.

→ Under MUDRA scheme and 3 products were
launched

Shishu - upto 50,000 ₹ loan

Kishor - upto 5,00,000 ₹ loan

Tarun - upto 10,00,000 ₹ loan

Stand Up India :- Launched by PM Modi in 2016
to provide low rate loans to
SC/ST and women entrepreneurs

→ Loan Amount - 10L to 1cr ₹

→ SIDBI will provide loan under this scheme

↳ Small Industries Development Bank of India

↳ Head Quarter - Lucknow.

Start up India - To encourage entrepreneurship innovation in the country

- Initial 3 years profit will be tax free eligibility citizen of India (18th Age)
- launched in 2016, flagship initiative of govt. of India intended to build a strong ecosystem for nurturing innovations and startup in the country that will drive sustainable economic growth and generate large scale employment opportunities.

SETU-BHARATAM :- Launched in 2017 to make all our national highways free from railway crossings by the year 2019.

- Implemented by ministry of Road transport and Highways

SATH (Sustainable Action Plan for transforming Human Capital)

- launched by NITI Aayog in association with state government. to transform education and health sector in the country.

↓
National Institution for transforming India
(replaced Planning Commission)
(W.E.F. 1 Jan 2015)

- **Kayakalp Abhiyaan** -

It is an initiative launched by health ministry in 2016 under "Swachh Bharat Abhiyaan" to improve hygiene and Sanitation



CLASS NOTES

Useful for UPSC CSE & ESE, SSC JE
& CGL, PSUs, State exams etc.

Geography (India & World) 2023 Batch Notes






Saurabh Kr. Pandey

Founder :

Aarohan Education

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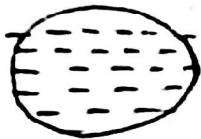
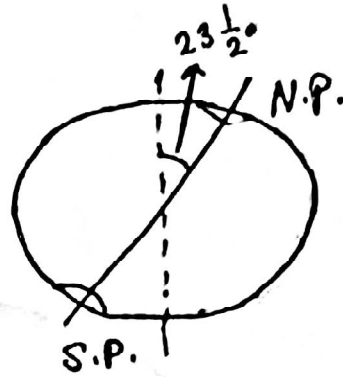
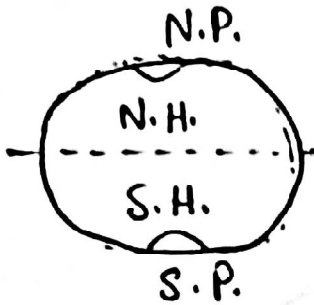
GEOGRAPHY



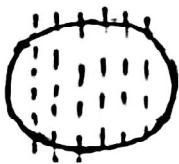
Geography

India World

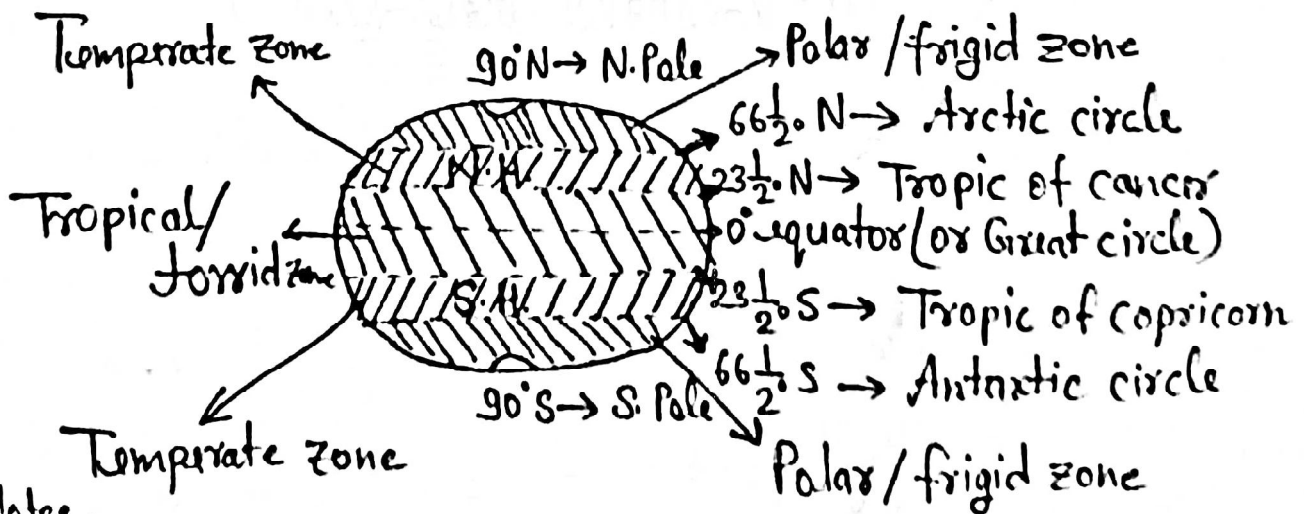
- Age of earth :- 4.5 billion yrs
- Shape of earth : Geoid or oblate spheroid



≡≡≡ Latitude :- temp^r coordinates



|||| Longitude :- Time coordinates



Note:-

In Northern hemisphere, more landmass lies as compared to southern hemisphere landmass whereas more water lies in southern hemisphere than northern hemisphere.

Note :-

About India :-

→ India lies in Northern hemisphere

↓
South Asian country

→ It lies in tropical & Sub-tropical zone

→ Population wise, India is 2nd largest country whereas
area wise it is 7th largest country.

India's total area :- 3.28 million sq. Km
(which is 2.4% of World's total area)

→ India consists 28 states & 8 UTs

easternmost state :- Arunachal Pradesh

westernmost state :- Gujarat

(It has longest coastline
in India : 1600 Km)

2nd :- Andhra Pradesh
(974 Km)

→ Tropic of Cancer passes through 8 Indian states
& these are :-

* Mizoram (Aizawl)

* Tripura (Agartala, Udaipur)

* West Bengal (Bardhaman)

→ Tripura Sundri
temple located here

* Jharkhand (Ranchi)

* Chhattisgarh (near Raipur)

* Madhya Pradesh (Sanchi, near Bhopal)

Ashoka UNESCO heritage site

* Rajasthan (Banswara, Durgapur)

* Gujarat (Gandhinagar)

→ A & N lies nearest to equator

→ India's Length :- North to South : 3214 Km
East to West : 2933 Km

→ India shares its longest boundary with Bangladesh
& shortest boundary with Afghanistan

→ Durand line :- Separates Pak & Afghanistan

→ McMahon line :- " India & China

→ Radcliffe line :- " India & Pak

→ Sikkim shares its boundary with only 1 state

(West Bengal)

→ Siachen :- highest battlefield in the world

(1984 :- op^r Meghdoot launched

by India against infiltrators)



CLASS NOTES

Useful for UPSC CSE & ESE, SSC JE
& CGL, PSUs, State exams etc.

Indian History notes (SSC) 2023

Useful for all the exams



Saurabh Kr. Pandey

Founder :

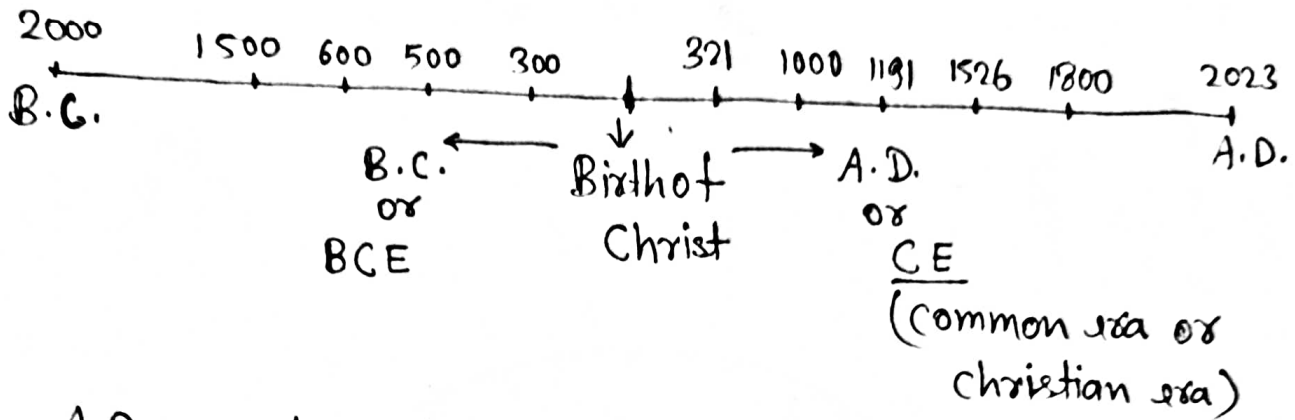
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Christian or Gregorian Calendar

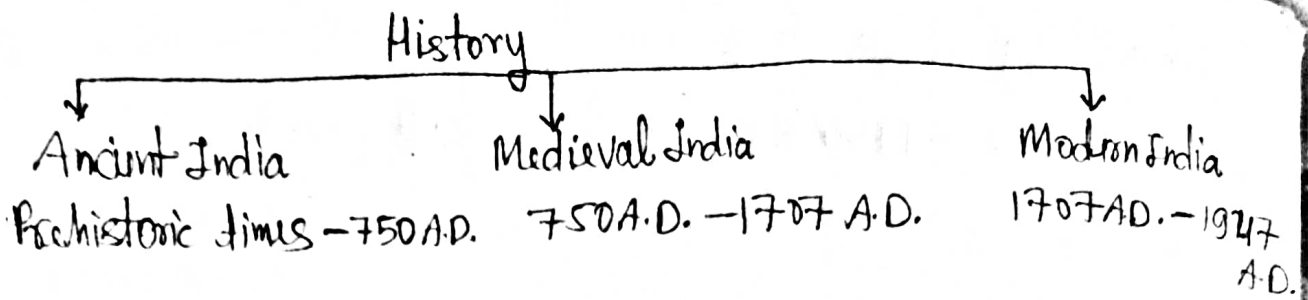


A.D. → Anno domini

C.E. → christian era

BCE → before christian era

B.C. → before christ.



Chronology of time period :-

> 10,000 B.C. :- Paleolithic Age

↓ ↓
 Old Stone

→ Hunting / Food gathering with crude stone tools.

10,000 - 4000 B.C. :- Mesolithic Age

↓ ↓
 middle Stone

→ Stone tools were used, known as microliths.

4000 - 1800 B.C. :- Neolithic Age

↓ ↓
 New Stone

→ Animal Husbandry & Agriculture were known

1800 - 1000 B.C. :- Chalcolithic or Bronze Age

↓ ↓
 Copper Stone
 ↓
 1st known metal

1000 B.C. :- Iron was known
(Iron Age)

• Chronology of events :-

• 2350 B.C. - 1750 B.C. → Indus valley civilization / Harappan civilization or period

• 1500 B.C. → 600 B.C. → Aryan Age / Vedic Age

(i) 1500 B.C. - 1000 B.C. :- Early Vedic Age

(ii) 1000 B.C. - 600 B.C. :- Later Vedic Age

600 B.C. :- Age of Transformation → * Political changes

↓
Rise of 16 great states

↓
most powerful :- Magadha

↓
State formation

(concept of Kingdom arises)

* Religious changes :-

→ Rise of new sects / Religion

(like Buddhism, Jainism)

600 B.C. - 25 B.C. :- Magadha empire

* Harshanka dynasty

* Nand Dynasty (343 - 321 B.C.)

* Maurya dynasty (321 - 185 B.C.)

* foreign dynasties (150 B.C. - 250 A.D.)
(Post Mauryan dynasty)

319 A.D. - 550 A.D. :- Gupta empire

550 A.D. - 750 A.D. :- Post Gupta Period

(1) 606 A.D. - 647 A.D. :- Harshavardhan's Rule
(Capital :- Kannauj)

750 A.D. - 1000 A.D. :- 3 party struggle

for occupation
of Kannauj

- * Gurjara - Pratihara of W. India
- * Palas of Bengal
- * Rashtrakutas of Deccan

• 1000 A.D. :- Mahmud of Ghazni from Afghanistan
came to India for ~~plude~~ plundering

→ He attacked 17 times

1025 A.D. → he attacked & looted Somnath temple

→ he died in 1030 A.D.

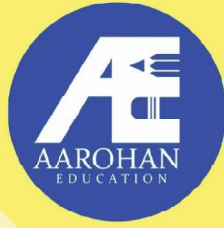
• 1175 - 1206 A.D. Mohd. Ghori (Afghanistan)
↓
he captured North India

• 1206 - 1526 A.D. :- Delhi Sultanate

• 1526 A.D. - 1707 A.D. :- Mughel empire
↓
associated with mongolians
(Taimur, chenghis Khan)

• 1498 - 1757 A.D. :- Advent of european companies

↓
1498:- Vasco da gama reached calicut via cape of
Good Hope (Africa) & Zamorin ruler welcomed
him



CLASS NOTES

Useful for UPSC CSE & ESE, SSC JE
& CGL, PSUs, State exams etc.

Indian Polity 2023



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1942 :- Quit India Movement

Slogan :- Do or Die

In 1942 criggs proposal rejected by Grandhi ji

1946 :- Cabinet Mission

Members :- S. criggs
A.V. Alexander
Pathick Lawrence

Idea :- To establish Constituent Assembly

↓
"To prepare our own Constitution".

Constituent Assembly

members :- Provinces + Princely Ruled States
(directly ruled by the britishers) (Indirectly ruled by the britishers)
60% 40%

elected members

Nominated members

↓
Constituent Assembly members

• 9th Dec, 1946 :- 1st meeting of constituent Assembly :- Delhi

Dr. Sacchidanand Sinha
(Provisional President)

Note :- Muslim league was also participated but Jinnah did not took part.

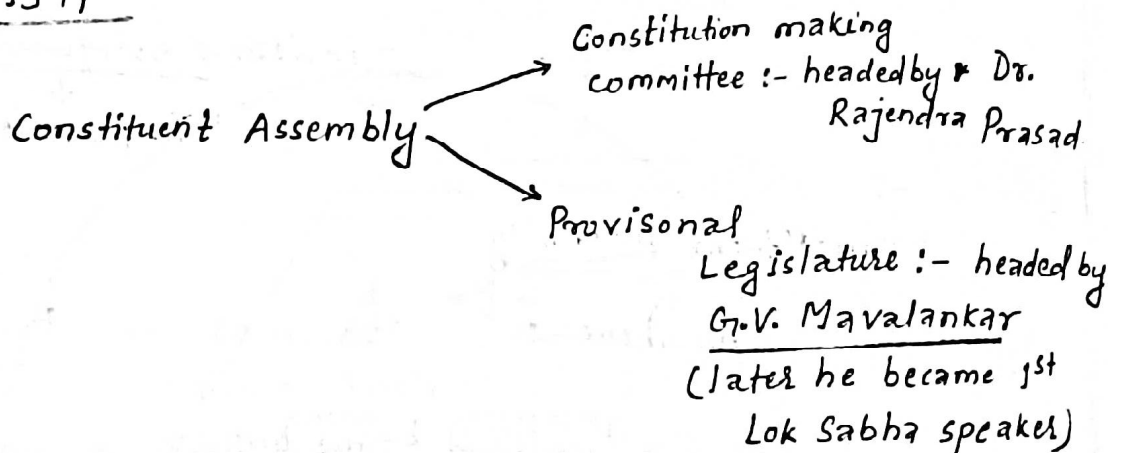
• 11th Dec, 1946 :- Constituent Assembly was elected Dr. Rajeno Prasad as the permanent president.

- 13th Dec, 1946 :- Constituent Assembly introduced
"Objectives Resolution"
 ↓
 drafted by J.L. Nehru

- Within constituent assembly, different committees were formed & different works were assigned.

Finally, committees report were sent to
B.N. Rau (not member of C.A.)
 but he was the advisor of.

15th Aug, 1947



- 29th Aug, 1947 :- Constituent Assembly (C.A.)

appointed "Drafting Committee"

7 members

- ⊙ K.M. Munshi
- ⊙ Mohd. Saahdullah
- ⊙ Alladi Krishnaswamy Iyer
- ⊙ Gopal Swami Iyengar
- ⊙ N. Madhav Rao
- ⊙ T.T. Krishnamachari

(6+1)

Chairman :- Dr. B.R. Ambedkar

(Later he became 1st law minister)

Birth Place :- Mhow (M.P.)

- Feb, 1948 :- Debates & discussions on the draft & finally voting done to pass the constitution.

- 26 Nov, 1949 :- Constituent Assembly adopted Partially.

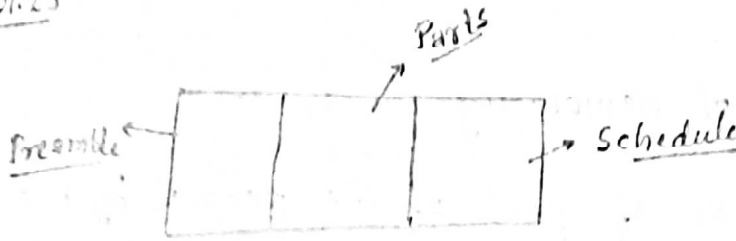
"The Constitution of India"



(Art 393)

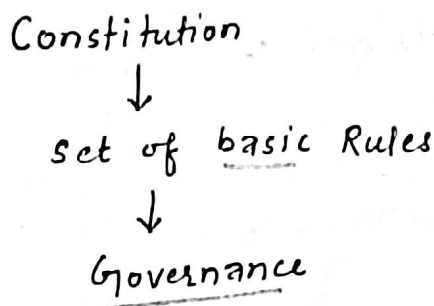
• 26 Jan, 1950 :- Commencement of the constitution of India
(full enforcement)

Date-12-01-23



→ Originally, Constitution of India contains preamble
+ 22 parts (395 Articles)
+ 8 schedules

Presently, it contains preamble + 25 parts (448 Articles)
+ 12 schedules



→ Constitution can never be detained & it is the source of making Law.

• Separation of Power :- This concept was given by French politician, Montesque.

→ He gave three pillars of democracy concept.
(Demo + cracy)
↓ ↓
People Rule

(i) Executive :- To rule to country with the help

(ii) Legislature :- To make law

(iii) Judiciary :- Adjudicates law

[Bureaucrat :- To implement the govt. policies at the ground level]

Note :-

• 4th pillar (or 4th estate) of democracy :- Press

• Democracy is the form of govt. of the people, by the people, for the people. This statement was given by Abraham Lincoln.

16th U.S. president
Republican Party
" (Assassinated in theatre)

[Note :- 1st U.S. president :- George Washington]

{ 4 US president who were assassinated :-

• Abraham Lincoln

• James A Garfield

• William McKinley

• John F. Kennedy } → shot dead when he moved with his convoy

• Distribution of Powers :-

→ Borrowed from Canada

→ Dual govt. (For distribution, atleast 2 govt. must be there)

Union list

* Parliament shall make law & governance by union govt.

State list

* State legislature shall make law & governance by state govt.

[India :- 28 states + 8 UTs
↳ Union Territories]

CLASS NOTES

**Life Sciences (class notes) by
Saurabh Kr. Pandey
Useful for All GS Related Exams**



**SAURABH
KR. PANDEY**

Life Science :-

1. Basics
2. Cell Biology / Cytology
3. Human diseases
4. Human Physiology
5. Human Genetics
6. Miscellaneous (like Plant Kingdom)

{ Culture → grow
-logy → study
-ose → carbohydrate }

Chapter-1 BASICS
x-----x-----x-----x-----x

• Life Science:-

Biology = Bios + logos → Study
(Greek term) ↓
life
↳ Plants
↳ Animals
↳ Micro-organisms
(bacteria, virus, protozoa, etc.)

→ This term was given by Jean Lamarck, Thomas Beddar, Treviranus.

→ Aristotle :- called as "father of biology".
↳ also called as father of Zoology.
(Study of animals)

Theophrastus :- called as "father of botany".
(Study of plants)

Hippocrates :- called as "father of medicine".

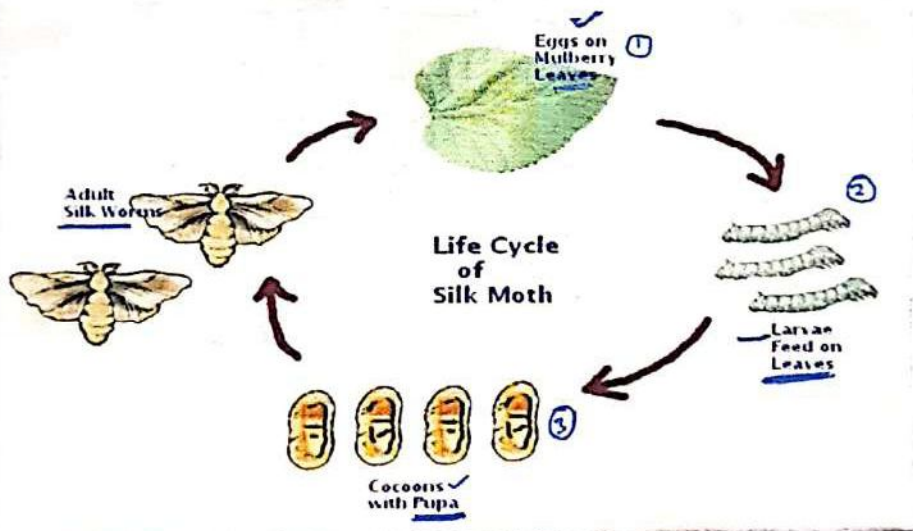
- Charakrambha → written by Charaka
(book on medicine)
Ayurveda
- Sushrutrambha → written by Sushruta
(book on surgery)
- Yogasutra → written by Patanjali
(book on yoga)

Sericulture

→ silk cultivation

Silk:- is predominantly protein (name:- fibroin)
 (long chain of Amino acids) (name of silk protein)
 contains COOH-NH₂
 contains C, O, N, H.
 contains carboxyl group and Amine group

Silk moth:- Bombyx Mori
 Pupa
 secretes silk fibre inside the cocoon.
 mainly secretes silk on mulberry leaves.



GENERAL SCIENCE

Date - 21/12/2022

ATOMS AND MOLECULES

- The idea of divisibility of Matter was considered in India, around 500 B.C. An Indian Philosopher Maharishi Kanada, Postulated that if we go on dividing matter, we shall get smaller and smaller particles and ultimately we will get smallest particle beyond which further division will not be possible and this particles known as 'Paramani'.
- Another Indian Philosopher Pakudha Katyayana elaborated this and said that these particles normally exist in a combined form which gives us various forms of matter.
- Around the same era, Greek Philosopher - Democritus and Leucippus, suggested that if we go on dividing matter, a stage will come when particles obtained cannot be divided further. Democritus called these indivisible particles as Atoms.
Meaning - Indivisible.
- All this was based on philosophical considerations and not much experimental work to validate these ideas could be done till 18th Century.
- By the end of 18th century, Scientist recognized the difference between elements and compounds and naturally became interested in finding out how and why elements combine and what happens when they combine.

- Antoine L. Lavoisier laid the foundation of chemical sciences by establishing 2 important laws of chemical combination:-

- i) Law of Conservation of Mass
- ii) Law of Constant Proportions.

i) Law of Conservation of Mass:-

→ It states that mass can neither be created nor be destroyed in a chemical reaction.

Or

During a chemical reaction, the sum of the masses of the reactants and products remains unchanged.

ii) Law of Constant Proportions:-

→ Lavoisier, along with other scientists, noted that many compounds were composed of 2 or more elements and each such compound had the same elements in the same proportions, irrespective of the source from where it came

Example - Water (H_2O), NH_3 .

↓
Ratio of the mass
of hydrogen to the mass
of Oxygen 1:8

↘ 14:3 ratio by mass.

→ It means if 9 gm of water is decomposed, it produce 1 gm of hydrogen and 8 gm of oxygen.

→ Law of constant proportion is also known as law of definite proportions this law was started by "Proust" as

"In a chemical substance the elements are always present in definite proportions by mass".

→ The next problem faced by scientists was to give appropriate explanation of these laws. British Chemist John Dalton provided the basic theory about the nature of matter and he took the idea of divisibility of matter and said that the smallest particles of matter are atoms.

→ His theory was based on the laws of Chemical Combination.

DALTON'S ATOMIC THEORY :-

→ In 1808, he presented his atomic theory and provided an explanation for the law of conservation of mass and law of definite proportions.

→ As per this theory, all matter, whether an element, a compound, a mixture is composed of small particles called atoms.

The Postulates of this theory may be stated as follows :-

i) All matter is made up of very tiny particles called atoms.

ii) Atoms are indivisible particles, which cannot be created nor destroyed in a chemical reaction.

iii) Atoms of a given element are identical in mass and chemical properties.

iv) Atoms of different elements have different masses and chemical properties.

v) Atoms combine in the ratio of small whole numbers to form compounds.

vi) The relative numbers and kinds of atoms are constant in a given compound.

NOTE:

→ The basic building block of all the matter are atoms.

IUPAC → International Union of Pure And Applied Chemistry.

↓
Approve name of elements.

HQ - North Carolina (USA).

ATOMIC MASS :-

→ It is one of the most remarkable concept of the Dalton Atomic Theory.

→ According to him, each element had a characteristic atomic mass. The theory could explain the law of constant proportions so well that the scientists were prompted/interested to measure the atom mass of an atom.

→ Since, determining the mass of an individual atom was relatively difficult task but relative atomic mass were determined by using the law of chemical combination and the compounds formed.

Atomic Radius - Measured in nanometer (10^{-9})

MOLECULE :-

→ A molecule is in general a group of 2 or more atoms that are chemically bonded together, tightly held together by attractive forces.

→ A molecule can be defined as the smallest particle of an element or a compound that is capable of an independent existence and shows all the properties of that substance. Atom of the same element or of different elements can join together to form molecules.

NOTE:

- The molecules of an element are constituted by the same type of atoms.

Example - O_2, N_2, O_3 .

- Atoms of different elements join together in definite proportions to form molecules of compounds.

Example - NH_3, H_2O .

ION :-

→ Compound composed of metals and Non-metals contain charged species. The charged species are known as Ions.

→ An ion is a charged particle. (either +ve or -ve)

Example - $Na^+ Cl^-$

↓
Cation.

↓
Anion

NOTE:

- The combining power (or capacity) of an element is known as its valency. Valency can be used to find out how the atoms of an element will combine with the atom of another element to form a chemical compounds.

* Molecular Mass :-

→ The molecular mass of a substance is the sum of the atomic mass of all the atoms in a molecule of the substance. It is therefore the relative mass of a molecule expressed in atomic mass unit.

→ The mole is the amount of substance that contains the same number of particles (atoms/Ions/molecules) as there are atoms in exactly 12gm of Carbon-12 mass of 1 mole of a substance is called its molar mass.