

Business studies

Class 12

Ch-9 Leadership

Q1: Who is a leader?

Q2: What is leadership?

Q3: What are the characteristics of a leader?

Q4: What are the functions of a leader?

Q5: What are the different styles of leadership?

Commerce class 12

Ch-2 capital fixed and working

Q1: What are the factors that effect the capital structure?

Q2: What is fixed capital?

Q3: What are the factors that effect the working capital?

Q4: What is a capital structure?

Q5: What are the major sources of long term finance?

Class12 (History) Chapter:Decolonisation. Date-1/5/20

Kenya had been a difficult area to deal with as there were huge number of white settlers who were against black majority rule. They wanted to continue the white rule, thus a confrontation started. At this critical juncture the angry Kenyan people started terrorist attack on European owned Farms. Emergency was declared & many leaders along with Kenyatta was arrested. By 1960 the terrorists were defeated & the White's realised Kenyatta being a moderate man is good enough to be the Prime Minister. Kenyatta after becoming the Prime Minister allowed the White's to stay & provided citizenship too. Kenya adopted a Pro-Western stance & Kenya slowly moved towards one party state. Slowly agitation started throughout the country & social tension increased as the Black People were also angry. After Kenyatta's death D. Moi became the President.

Questions:

- a) Why social tension increased in Kenya?
- b) Why Kenyatta became unpopular?
- c) Name the next President after Kenyatta.

Commerce Class XII

Chapter : Management (Part -3)

3.14. Characteristics (or nature) of management principles

The following are the important characteristics of the principles of management :

- (i) **Universality** : Management principles are universal in the sense that this principles can be applied to all managerial situations. In other words, principles of management are fundamental statements of truths having universal validity.
- (ii) **Flexibility** : Management principles are flexible in the sense that these principles can be applied in different situations with modifications. In other words, principles of management can be modified to suit all kinds of changes in the business environment.
- (iii) **Directing human behaviour** : Management is a social science dealing with complex human behaviour. Management principles are directed towards regulating human behaviour for getting the best possible results.
- (iv) **Cause and effect relationship** : Management principles indicate cause and effect relationship between two or more events. These principles are used to solve different managerial problems with the help of observations, inspection and analysis.
- (v) **Equal importance** : All management principles have equal importance. These principles may be used with equal efficacy by the managers at different managerial levels.
- (vi) **Relative principle** : The principles of management are relative and not absolute. These principles should be applied according to the needs, place, time, culture, etc.

3.15. Henry Fayol's principles of management

Henry Fayol is popularly known as the father of modern management theory. Fayol suggested 14 principles of management for running the business efficiently. These principles may be briefly stated as follows :

- (i) **Division of work** : Division of work implies dividing the total task into compact jobs and allocating these compact jobs to different individuals. The object of division of work is to facilitate specialisation and improve efficiency. Due to division of work, higher productivity and better performance is possible. When an individual does the same job on a repetitive basis, he specialises in his task and thus acquires speed and accuracy in the performance.
- (ii) **Authority and responsibility** : Authority is the right to give orders and power to exert obedience. Responsibility implies obligations to perform the work in the manner desired and directed. Authority and responsibility must go side by side. There should be a parity between authority and responsibility. Authority without responsibility leads to irresponsible behaviour, while responsibility without authority makes a person ineffective.
- (iii) **Discipline** : Discipline means obedience and outward marks of respect. Discipline is essential for the smooth running of business and, without it, no business can prosper. Clarity of rules, good supervision and built-in system of reward and punishments ensure discipline in an enterprise.
- (iv) **Unity of command** : This principle states that one subordinate should receive orders from one superior only. The subordinate should be accountable to that superior from whom he received orders. In other words, every employee should have only one boss. Dual or multiple command creates chaos in the organisation, since it undermines authority. Authority should be delegated in such a manner that a subordinate works under one superior only.

- (v) **Unity of direction** : According to this principle, there should be one plan for a group of activities having the same objective. In other words, each group of activities having the same objective must have one plan of action and that action plan should be executed under the control of one superior.
- (vi) **Subordination of individual interests to general interest** : According to this principle, individual interests must be discarded and a general interest must be maintained. It means that the selfish attitude of an individual should be surrendered if it affects the interests of the enterprise. The interest of the group must always prevail over individual interests.
- (vii) **Fair remuneration to workers** : The remuneration payable to workers must be fair, reasonable and satisfactory. The management must ensure a fair reward for the work and decide the most equitable method of calculating wages. Fair remuneration brings about satisfaction to the workers and high productivity for the organisation.
- (viii) **Effective centralisation** : Centralisation means concentration of authority for decision-making, especially at the top managerial level. There should not be too much centralisation. The management has to decide the extent of authority to be concentrated at the top level and its dissemination among subordinates. There should be a proper balance between centralisation and decentralisation. Neither absolute centralisation nor absolute decentralisation is desirable.
- (ix) **Scalar chain** : This refers to the chain of superiors ranging from the top rank to the lowest ranks in the management. The scalar chain determines the clear line of authority from top to bottom linking managers at all levels. It serves as a chain of command and chain of communication.
- (x) **Order** : Order refers to a systematic arrangement of materials and placement of people in the organisation. This principle stresses upon the proper utilisation of physical and human resources of an enterprise. It implies the right man in the right job and right material in the right place for optimum utilisation of the available resources in an organisation.
- (xi) **Equity** : It signifies that management must treat employees with justice and equity-based kindness. There should neither be nepotism nor favouritism while selecting workers. All workers should be given a just and fair treatment. Equity promotes a friendly atmosphere between superiors and subordinates and encourages loyalty.
- (xii) **Stability in tenure of workers** : Stability in the tenure of workers brings prosperity in the organisation. Every employee should feel that his service is not going to be terminated without any substantial cause. In other words, for securing better results, guarantee of service should be awarded to every employee. Stability and continuity in the tenure of workers promote teamwork, loyalty, economy and minimise labour turnover.
- (xiii) **Initiative** : It means eagerness to initiate action in work-related matters without being asked to do so. Initiative is a powerful motivator of human behaviour and is a source of strength for the organisation. Every person has got his own inspiration of his mental faculty and he feels keenly that he must be provided with the scope to do the work with his own initiative. Workers must be encouraged to make suggestions or make improvements in the original plans.
- (xiv) **Esprit de corps** : This term comprises two principles — (a) union is strength, and, (b) team spirit is most essential. This principle implies that there should be co-operation and team work among the members of an organisation. The manager must always make a constant effort to ensure harmony among his subordinates to ensure unity and high morale. The

management should not follow the policy of divide and rule. Differences of opinion must be settled then and there. The manager should infuse a spirit of teamwork in his subordinates.

Henry Fayol's Principles of Management



- ➡ Division of work
- ➡ Authority and responsibility
- ➡ Discipline
- ➡ Unity of command
- ➡ Unity of direction
- ➡ Subordination of individual interest to general interest
- ➡ Fair remuneration to workers
- ➡ Effective centralisation
- ➡ Scalar chain
- ➡ Order
- ➡ Equity
- ➡ Stability of tenure of workers
- ➡ Initiative
- ➡ *Esprit de corps*

3.16. Other fundamental principles of management

Certain other principles having wide acceptance are given below :

- (i) **Principle of planning** : Good planning is the prerequisite of effective management. Planned work results in smooth running of an enterprise. Planning is one of the corner-stones upon which successful enterprise depends.
- (ii) **Principle of objective** : This principle states that the objectives of the organisation should be very clear and every employee should have the knowledge of these objectives. Each and every activity should be performed to attain predetermined objectives.
- (iii) **Principle of motivation** : This is the psychological process of creating an urge among the subordinates to do certain things. By motivating the workers from time to time, we can get more work in less time. A sound motivational system must be comprehensive, flexible, productive and competitive.
- (iv) **Principle of co-ordination** : This ensures that effective organisational performance is achieved when all persons and resources are co-ordinated in a balanced manner. Co-ordination is the art of achieving harmony of individual and group efforts for the achievement of a common goal.
- (v) **Principle of exception** : It implies that the management must transfer all routine work to subordinates and should concentrate on important matters only. The top management

should be free from the day-to-day routine nature of work. It should only perform planning, policy-framing and decision-making.

- (vi) **Principle of balance** : Stability in the organisation requires that authority, responsibility and accountability be balanced. Serious imbalances can threaten the continued existence of the organisation due to friction, resentment, strikes, etc.
- (vii) **Principle of span of control** : The activities of an organisation must be controlled properly to accomplish the predetermined objectives. Effective and efficient control decides the future of the organisation. A superior should supervise only that number of subordinates which he can properly manage.
- (viii) **Principle of leadership** : Motivation, direction and control are included under efficient leadership. Work cannot be performed properly without efficient leadership. A good leadership ensures mutual co-operation among the employees.
- (ix) **Principle of communication** : The success of planning depends upon the successful implementation of the communication system. Communication helps in effective planning and co-ordinating various activities in an enterprise. It establishes a cordial and friendly atmosphere in the organisation.
- (x) **Principle of departmentation** : The functions of the organisation should be divided in different departments for the complete utilisation of human and physical resources. Departmentation ensures maximum efficiency of the organisation.
- (xi) **Principle of policy-making** : Policies should be based on real facts. A clear and well thoughtout policy is required for effective management. The evolved policy should be such which is acceptable to all.
- (xii) **Principle of 'right man for the right job'** : Selection and recruitment of workers should be done keeping in view the principle of 'right man for the right job.'

Other Fundamental Principles of Management



- ☞ Principle of planning
- ☞ Principle of objective
- ☞ Principle of motivation
- ☞ Principle of co-ordination
- ☞ Principle of exception
- ☞ Principle of balance
- ☞ Principle of span of control
- ☞ Principle of leadership
- ☞ Principle of communication
- ☞ Principle of departmentation
- ☞ Principle of policy-making
- ☞ Principle of 'right man for the right job'



3.17. Importance of (or need for) principles of management

The following are the main reasons which highlight the importance of management principles :

- (i) **Improving efficiency of managers** : Management principles serve as a guideline for doing work with greater efficiency. These principles help managers to take a more realistic view of different managerial problems and to direct human behaviour effectively. The conscious manager can become more effective by using the established management principles to solve problems.
- (ii) **Improving art of management** : Management principles help in improving the art of management by suggesting how things should be done to get good results in an efficient manner. These principles provide a means of organising knowledge and experience in management.
- (iii) **Useful for research and practical guidance** : The network of management principles represents a key area for conducting research studies. These principles have expanded the horizons of knowledge and promoted further research. These principles have provided new ideas, imagination and vision to the organisation.
- (iv) **Helpful in management training** : Management principles are also needed to train managers. These principles provide a conceptual framework for systematic training and development of future managers. New techniques of management training make training programmes more meaningful and relevant.
- (v) **Emergence of clearer and systematic thinking** : Management principles make the thinking clearer and systematic. A new manager can well understand the nature of management with the help of these principles.
- (vi) **Developing the spirit of co-operation** : Co-operation is the willingness to help each other. It is the result of voluntary attitude of individuals to help one another. A good management is one which takes active co-operation from each and every individual. Management principles are aimed at achieving co-operation from others to achieve organisational goals.
- (vii) **Useful for spreading knowledge** : Management principles are useful for spreading knowledge of management through teaching. The teaching of management principles continue to be an integral part of management education. These principles help to develop an organised body of knowledge by management practitioners, thinkers and philosophers.
- (viii) **Reducing waste** : The principles of management help in optimum utilisation of available resources. Efficiency of management can be easily increased by reducing waste.
- (ix) **Evaluating the behaviour of managers** : Management principles prescribe what one should do to improve things in some ways. These principles attempt to prescribe and evaluate the behaviour of the managers of the organisation.
- (x) **Attaining social goals** : Management principles have helped to attain the social goals by increasing efficiency and productivity in the use of scarce resources. The supply of quality goods at a reasonable price boosts social welfare.



Home assignment :

1. Describe Henry Fayol's principles of general management.
2. Discuss the need for principles of management.

Sociology

Date – 02.05.2020

Class – XII

Social Institutions

Muslim Marriage

The Muslim marriage is known by the Arabic word “Nikah” Which means civil contract. Mulla writes, “Marriage according to Mohammedan law is not a sacrament but a civil contract. In the Muslim social system, marriage as an institution is governed basically by “Shariat”, the personal law. It is a contract because it can be broken at any time. The right to break the marriage contract remains with the husband. So Muslim marriage is not a religious sacrament like the Hindu marriage.

According to Ronal Wilson, “Muslim marriage is a contract for the purpose of legalizing sexual; intercourse and the procreation of children. According to fyzee the main aim of the Muslim marriage is to protect the society from foulness and un-chastity.

In the words of M.A. Quareshi the main object of marriage is the promotion of day to day family life and the legalization of children” Thus satisfaction of sex desire, mutual love, procreation and legitimization of children are the main aims of the Muslim marriage. Since Muslim marriage is a civil contract, it must fulfil certain essential conditions in order to be valid.

Types of Muslim Marriage:

There are three kinds of marriage according to the Muslim law.

These are:

(i) Valid (ii) Void (iii) Irregular

(i) Valid Marriage:

A marriage is considered valid provided if it fulfils the conditions and formalities as prescribed under the Muslim law. A valid marriage confers on the wife the right to dower, maintenance and inheritance of property. The children get legitimacy and the spouse gets the status of wife or husband in a valid marriage.

(ii) Void Marriage:

A void marriage is one which is basically un-lawful. If the marriage performed violates the prescribe prohibitions and norms namely affinity, fosterage, consanguinity etc., it is declared void. A void marriage does not confer any rights or obligations on the parties. The children of the union are declared illegitimate.

(iii) Irregular Marriage:

A marriage becomes irregular whose basis is sound but such marriage is un lawful due to the non-observation of some formalities. If this formality is fulfilled after marriage it becomes regular for example the marriage with a fifth woman can be regularized by divorcing one of the former four wives.

The following are some of the examples of irregular marriage:

- (1) Marriage without witness.
- (2) Marriage with a woman undergoing iddat.
- (3) A Muslim marrying a women who is an idol worshiper.
- (4) A marriage with two sisters at a time.
- (5) A marriage with the fifth woman.

An irregular marriage can be dissolved by either party by merely expressing the intention to do so. Further an irregular marriage has no legal consequence what over, if it is not already consummated.

Recent Changes In Marriage System

1. **Changes in the endogamic and exogamic rules** – Traditionally, in all societies the specific rules for endogamy or exogamy were practised. Marriage with specific group member was either allowed or prohibited and the members of the groups used to obey this so that the sanctity of marriage and the security of the group is ensured. But at the present moment any two adult human being can marry each other, though the norms of endogamy or exogamy are still prevailing in remote areas, in most of the cases those are not as rigid as the earlier times and in the urban areas these are almost non existent.

2. **Changes in marriage rites and rituals** – Changes have also been marked in respect of the rites and rituals of marriage, not only among the Hindus but also among all the other communities as people can now marry on the basis of universally applicable marriage registration acts. Though some traditional marriage rituals are followed to ceremonise the marriage, these are having only ornamental values and no more.

3. **Increase in the age of marriage** – At present, child marriage has become prohibited as people have become conscious of the ill effects of early marriage, the spread of education and the desire for higher education has been increased to engage probable partners in alternative pursuits.

4. **Decline of parental control over the arrangement marriage** – In modern times the decision of marriage is taken by the future mates themselves. Often they may show the courage to reject the decision of their parents and stay alone without marriage.

5. **Prohibition of Polygamy** – It is now universally accepted that no one can marry more than one mates at a time. The exceptions are there but this is a norm of a civilized society that if two partners are not compatible to one another they should opt for a divorce first and then go for another marriage.

6. **Changes in the aims of marriage** – Among the Hindus the purpose of marriage was very clear and specific as dharma, praja, rati but recently people hardly cares for such aims, rather they stay together as long as they feel themselves as mutually compatible.

Home Work

1. Define marriage.
2. Write a short note on Muslim Marriage.
3. How do you define the recent changes in marriage system.
4. Define void marriage.
5. Define irregular marriage

GEOGRAPHY
CLASS XII
CHAPTER- 6
NATURAL VEGETATION

**IMPACT OF HUMAN ACTIVITY ON
VEGETATION**

•FOR A TROPICAL COUNTRY LIKE INDIA,ABOUT ONE THIRD OF ITS TOTAL GEOGRAPHICAL AREA SHOULD BE UNDER FOREST FOR A NORMAL ECOLOGICAL BALANCE.

•BUT UNFORTUNATELY ,WE HAVE JUST 21.85% OF OUR GEOGRAPHICAL AREA UNDER FOREST.

•IN INDIA LAKSHADWEEP HAS ZERO PERCENT AREA, ON THE OTHER HAND ANDAMAN AND NICOBAR ISLAND HAVE 94.71% OF FOREST COVER.

Causes Of Deforestation



Causes of Deforestation

1. Clearing land to build housing

- Countries resort to deforestation to cope with the increasing demand for housing brought about by the growing population
-

2. Felling trees for wood

- Logging, or simply cutting down trees for timber is one of the main causes of deforestation
-

3. Agriculture

- To provide land for food crops such as palm oil and for rearing cattle, undisturbed rainforest areas end up being removed
-

4. Other land uses

- Land for mining and industrial projects
 - Building dams
-

1. Growing Demand for Housing



3.0 billion
1960

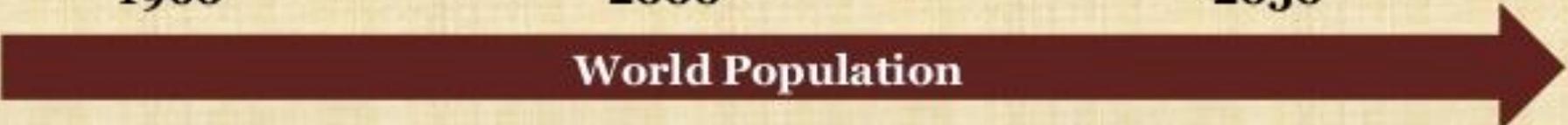


6.0 billion
2000



9.6 billion
2050

World Population



- 
- The current world population of 7.2 billion is projected to reach 9.6 billion by 2050, according to a UN report
 - To cater to the increasing housing needs, many resort to removing rainforests to create land

2. Logging

Wood felling by commercial logging companies



- Many commercial logging companies fell down trees in a process known as selective logging, where only the most valuable trees are felled

Growing demand for products made from wood



- Over the years, the uses of wood moved from wood fuel to construction materials such as shelters and furniture
- Today, almost every household has something made out of wood, eg. floor tiles, cutleries and musical instruments

3. Agriculture – Crop Planting & Cattle Ranching

Clearing of Land for Palm Oil and other Crop Plantations



Clearing of Land to Rear Cattle

Cattle Ranching



Subsistence Farming



Breeding Cows for Milk



4. Other Land Uses

Mining and Industrial Projects

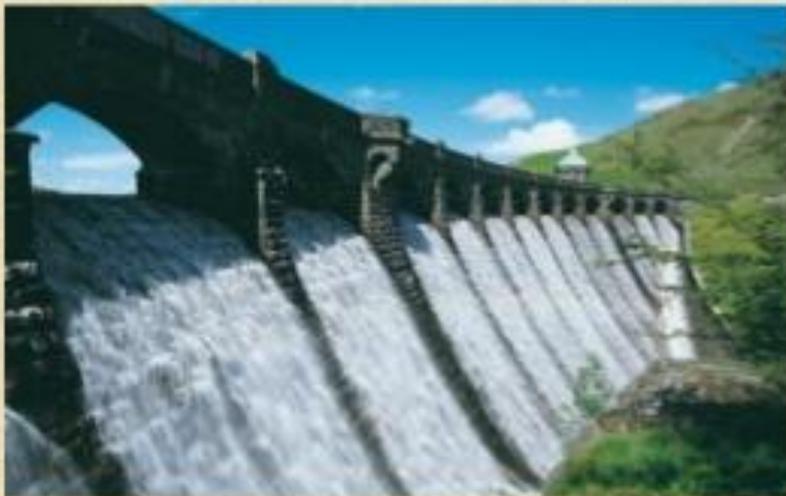
Mining Projects



Industrial Projects



Building Dams



- In India and South America, rainforests have been destroyed by the building of hydroelectric dams
- It was the dominant view that new dams had to be built or otherwise these countries would suffer an energy crisis

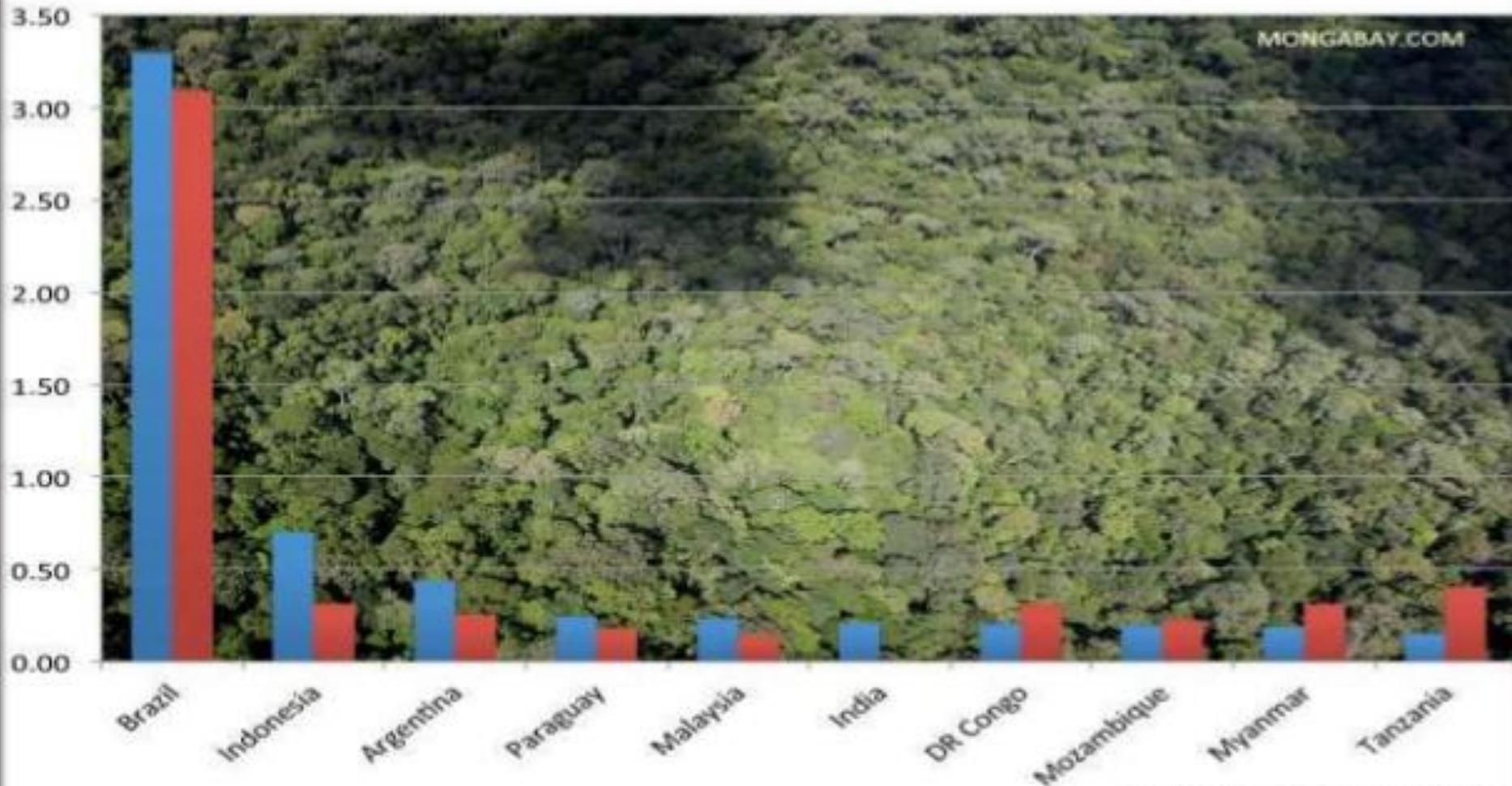
Global Deforestation



Tropical deforestation estimates, 2000-2005 (million ha/yr)

■ Harris et al 2012

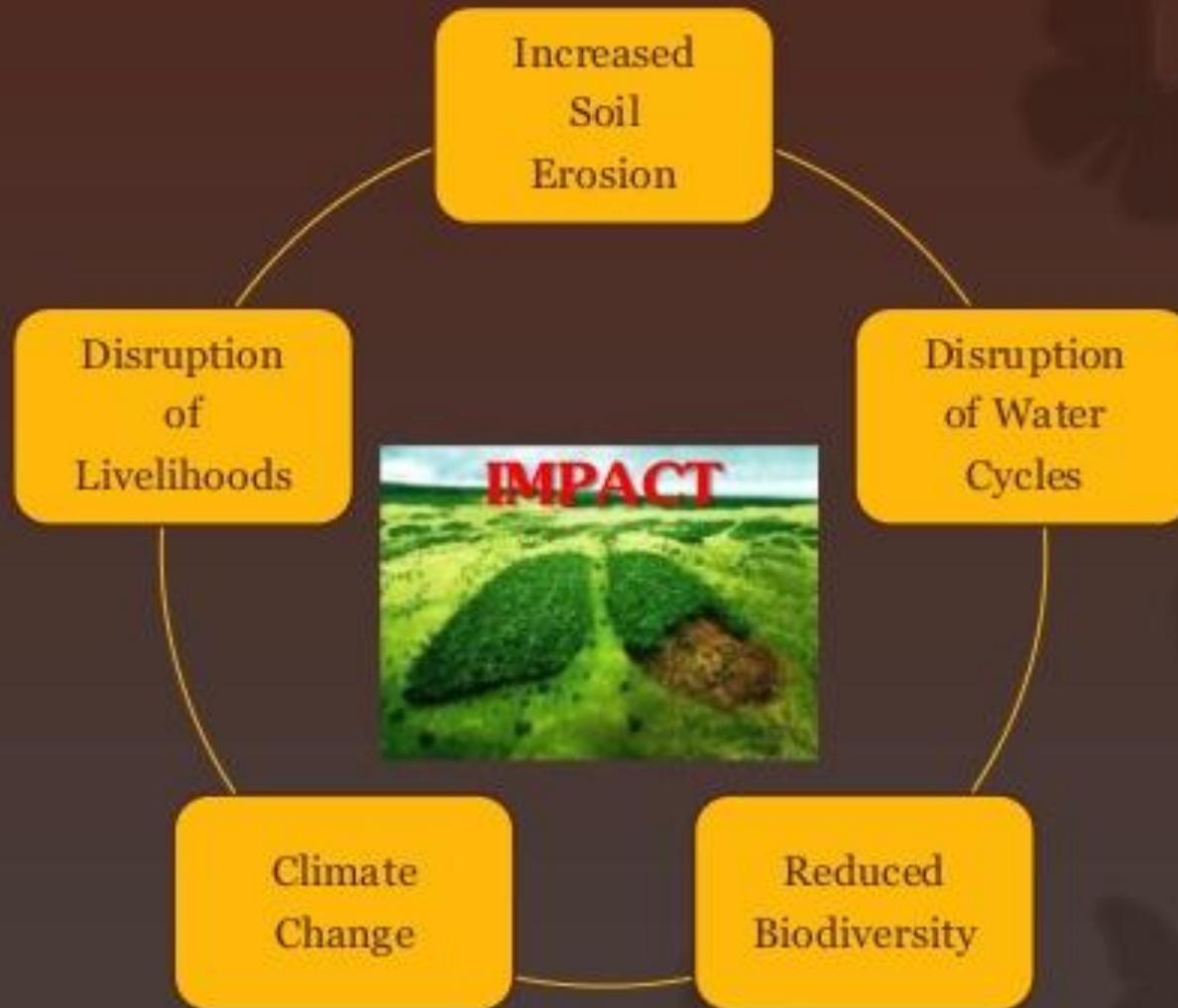
■ FAO 2007



MONGABAY.COM

FAO 2007 showed a net increase for India

Environmental & Economical Impacts





THANK YOU

SAYANTI CHATTERJEE

GEOGRAPHY
CLASS XII
CHAPTER 6 (part 2)

5. The Delta Or Tidal Forests:-

Characteristics:-

- Tidal areas and delta region abound in a special type of vegetation known as the Tidal forest..
- Sundari tree is abundantly grown there. Hence they have assumed the name Sundari forests..

Distribution

- Sundarvana of Ganga delta, deltas of the Mahanadi, the Godavari ,the Krishna , Cauvery and the Andaman and Nicobar Islands are areas where this type of forests are largely grown.

The important species of these forests are **Sundari, Hental trees etc.**

6. Mountainous Forests:-

Geographically they can be divided into two kinds - Northern or Himalayan Forest and Southern or Peninsular Forest.

i) Northern or Himalayan Forests:-

- i) The foot hills, are belts of deciduous types of deciduous tree types between 1000 to 2000 meters altitude. They cover mostly the hill ranges of North East India and the Himalayan part of West Bengal Bihar and Uttaranchal. The main trees are oaks, Chestnuts and sal etc. Pine forests are well developed between 1500 metres to 1750 metres. Higher part of the of this zone are covered with temperate grasslands in the main rangers as well as in the Shillong plateau.
- ii) Between 2000 to 3000 elevations the Himalayas are covered with moist temperature. Broad leaved evergreen trees of oake chestnuts are in plenty. Upper parts of this zone are covered with pines, silver firs, deodar etc. Deodar provides fine durable wood for construction and Railway sleepers at many places there temperate grassland.
- iii) Above 3000 metres elevation there is transition to Alpine forest and pastures. Fairly dense forest of silver firs, Pines etc are found between 3000 to 4000 meters altitude. Alpine pastures, with stunted conifers below and snow-fields above, occur at an altitude of 2250-2750 meters- these is covering the higher slopes almost below the permanent snow cover in Rangers like the Pir Panjal.

- ii) **Vegetation Of Peninsular Hills:-**We can find rain forest, Shrubs, masses and ferns in the Peninsula Hills. Eucalyptus now-a-days covers large slopes of Hills of Peninsular. This type of vegetation covers the Nilgiris, the Annamalai ,The Hills Mahabaleshwar etc.

Forest Policy And Law:- i)Forest policy was first declared by the British Government of India on 19 th October, 1894 at the recommendation of Dr. Voelcker.

ii)The government of free India thought it desirable to come out with a new National Forest Policy in 1952.

iii)the government of India came out with a new forest policy in December,1988.

Social Forestry:- Social forestry refers to the management of forests for the benefits of local communities. It includes aspects such as forest management, forest protection,

and afforestation of deforested lands with the objective of improving the rural, environmental, and social development. Unlike other forestry projects, in the setting of social forestry, the needs of local communities come first.

Agro Forestry:- Agro forestry is a collective name for land-use systems and technologies where woody perennials (trees, shrubs, palms, bamboos, etc.) are deliberately used on the same land-management units as agricultural crops and/or animals, in some form of spatial arrangement or temporal sequence. In agroforestry systems there are both ecological and economical interactions between the different components.

Community Forestry:- It involves the raising of trees on public or community lands aimed at providing benefit to the community as a whole .

Commercial Farm Forestry:- It involves growing of trees in the fields in place of food and other agricultural crops.

Urban Forestry:- It pertains to raising and management of trees on public and privately owned lands in an around urban centres.

Chipko Movement:- The movement originated in the Garhwal region of Uttarakhand in 1972 and quickly spread throughout the Indian Himalayas. The Hindi word *chipko* means “to hug” or “to cling to” and reflects the demonstrators’ primary tactic of embracing the trees to impede the loggers.

The rural villagers depended heavily on the forests for subsistence—both directly, for food and fuel, and indirectly, for services such as water purification and soil stabilization—government policy prevented the villagers from managing the lands and denied them access to the lumber. Many of the commercial logging endeavours were mismanaged, and the clear-cut forests led to lower agricultural yields, erosion, depleted water resources, and increased flooding throughout much of the surround.

The first Chipko protest occurred near the village of Mandal in the upper Alaknanda valley in April 1973. The villagers, having been denied access to a small number of trees with which to build agricultural tools, were outraged when the government allotted a much larger plot to a sporting goods manufacturer. When their appeals were denied, Chandi Prasad Bhatt led villagers into the forest and embraced the trees to prevent logging. After many days of those protests, the government canceled the company’s logging permit and granted the original allotment requested by DGSM.ing areas.

The movement achieved a victory when the government issued a ban on felling of trees in the Himalayan regions having an altitude of 1000 meters and above sea level and a slope of more than 30 degree for fifteen years in 1980 by then Prime Minister Indira Gandhi, until the green cover was fully restored.

Van Mahotsav is an annual tree-planting festival in India, celebrated in the first week of July. This movement was initiated in the year 1950. The aim of this festival is to create awareness regarding the importance and preservation of the forest.

Home Assignment 6 (part 2):

5. Name two factors leading to the decrease in forest cover of India.
6. Name the major region for the following : i) Arid Forest ii) Mountain Forest
7. With reference to forest conservation movement, explain The Chipko Movement.
8. Define the following terms:
 - i) Agro- forestry,
 - ii) Commercial Farm Forestry

CHAPTER – PERSONALITY

EXPLANATION-

TYPE THEORIES :-

What is Psychoanalysis? A Definition and History of Psychoanalytic Theory

Psychoanalysis is a type of therapy that aims to release pent-up or repressed emotions and memories in or to lead the client to catharsis, or healing (McLeod, 2014). In other words, the goal of psychoanalysis is to bring what exists at the unconscious or subconscious level up to consciousness.

This goal is accomplished through talking to another person about the big questions in life, the things that matter, and diving into the complexities that lie beneath the simple-seeming surface.

The Founder of Psychoanalysis: Sigmund Freud and His Concepts

Freud was born in Czech and spent most of his childhood and adult life in Vienna. He entered medical school and trained to become a neurologist, earning a medical degree in 1881.

Soon after his graduation, he set up a private practice and began treating patients with psychological disorders. Later he started treatment of hysteria by using Hypnosis Technique.

During his practice he gradually developed theories about human personality and mental illness. Freud depicted four central idea of personality-

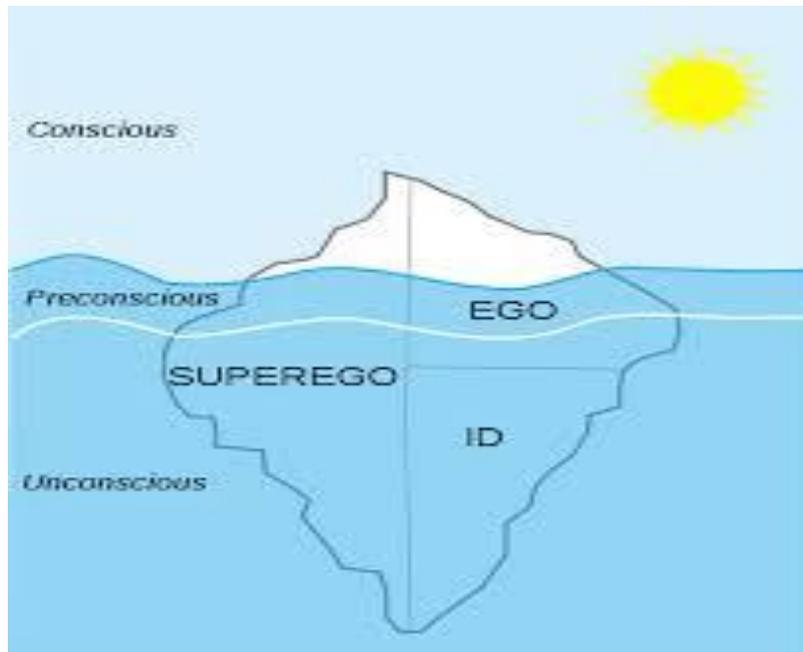
1. Levels of consciousness
2. Structure of personality
3. Defence mechanism
4. Psychosexual stages of personality development.

Levels of consciousness

Freud likened the three levels of mind to an iceberg. The top of the iceberg that you can see above the water represents the conscious mind. The part of the iceberg that is submerged below the water but is still visible is the preconscious. The bulk of the iceberg that lies unseen beneath the waterline represents the unconscious.

Freud delineated the mind in the distinct levels, each with their own roles and functions-

- **The preconscious** consists of anything that could potentially be brought into the conscious mind.
- **The conscious mind** contains all of the thoughts, memories, feelings, and wishes of which we are aware at any given moment. This is the aspect of our mental processing that we can think and talk about rationally. This also includes our memory, which is not always part of consciousness but can be retrieved easily and brought into awareness.



- **The unconscious mind** is a reservoir of feelings, thoughts, urges, and memories that are outside of our conscious awareness. The unconscious contains contents that are unacceptable or unpleasant, such as feelings of pain, anxiety, or conflict.

Structure of personality

According to Sigmund Freud, human personality is complex and has more than a single component. In his famous psychoanalytic theory of personality, personality is composed of three elements. These three elements of personality—known as the id, the ego, and the superego—work together to create complex human behaviors.

In this model, there are three metaphorical parts to the mind:

1. **Id:** The id operates at an unconscious level and focuses solely on instinctual drives and desires. Two biological instincts make up the id, according to Freud: eros, or the instinct to survive that drives us to engage in life-sustaining activities, and thanatos, or the death instinct that drives destructive, aggressive, and violent behavior.
2. **Ego:** The ego acts as both a conduit for and a check on the id, working to meet the id's needs in a socially appropriate way. It is the most tied to reality and begins to develop in infancy;
3. **Superego:** The superego is the portion of the mind in which morality and higher principles reside, encouraging us to act in socially and morally acceptable ways .

The image above offers a context of this “iceberg” model wherein much of our mind exists in the realm of the unconscious impulses and drives.

Defence mechanism

Freud believed these three parts of the mind are in constant conflict because each part has a different primary goal. Sometimes, when the conflict is too much for a person to handle, his or her ego may engage in one or many defense mechanisms to protect the individual.

These defense mechanisms include:

1. Projection: The ego attempts to solve discomfort by attributing the individual's unacceptable thoughts, feelings, and motives to another person; E.g-Students blaming the teacher after failing in exam
2. Rationalization- Justifying socially acceptable reasons for thoughts or actions based on unacceptable motives. For Example- not to pay fare in the bus.
3. Repression: The ego pushes disturbing or threatening thoughts out of one's consciousness. Pushing unacceptable thoughts from conscious level to unconscious. Eg-A girl pushes down her attraction for her sister's boyfriend.
4. Regression: As a defense mechanism, the individual moves backward in development in order to **cope with stress** (e.g., an overwhelmed adult acting like a child);
5. Reaction formation-Reversal or conversion of an unacceptable motive into its opposite. For example, A person who has been brought up that sex is "dirty".
6. Displacement: The individual satisfies an impulse by acting on a substitute object or person in a socially unacceptable way (e.g., releasing frustration directed toward your boss on your spouse instead);
7. Sublimation: Similar to displacement, this defense mechanism involves satisfying an impulse by acting on a substitute but in a socially acceptable way (e.g., channeling energy into work or a constructive hobby).

Psychosexual stages of personality development

Freud believed that personality developed through a series of childhood stages in which the pleasure-seeking energies of the id become focused on certain erogenous areas.

Psychosexual theory suggested that personality is mostly established by the age of five. Early experiences play a large role in personality development and continue to influence behavior later in life.

Each stage of development is marked by conflicts that can help build growth or stifle development, depending upon how they are resolved. If these psychosexual stages are completed successfully, a healthy personality is the result.

The Oral Stage

Age Range: Birth to 1 Year

Erogenous Zone: Mouth

During the oral stage, the infant's primary source of interaction occurs through the mouth, so the rooting and sucking reflex is especially important. The mouth is vital for eating, and the infant derives pleasure from oral stimulation through gratifying activities such as tasting and sucking.

Because the infant is entirely dependent upon caretakers (who are responsible for feeding the child), the child also develops a sense of trust and comfort through this oral stimulation.

The primary conflict at this stage is the weaning process--the child must become less dependent upon caretakers. If fixation occurs at this stage, Freud believed the individual would have issues with dependency or aggression. Oral fixation can result in problems with drinking, eating, smoking, or nail-biting.

The Anal Stage

Age Range: 1 to 3 years

Erogenous Zone: Bowel and Bladder Control

During the anal stage, Freud believed that the primary focus of the libido was on controlling bladder and bowel movements. The major conflict at this stage is toilet training--the child has to learn to control his or her bodily needs. Developing this control leads to a sense of accomplishment and independence.

According to Freud, success at this stage is dependent upon the way in which parents approach toilet training. Parents who utilize praise and rewards for using the toilet at the appropriate time encourage positive outcomes and help children feel capable and productive. Freud believed that positive experiences during this stage served as the basis for people to become competent, productive, and creative adults.

However, not all parents provide the support and encouragement that children need during this stage. Some parents instead punish, ridicule or shame a child for accidents.

According to Freud, inappropriate parental responses can result in negative outcomes. If parents take an approach that is too lenient, Freud suggested that an *anal-expulsive personality* could develop in which the individual has a messy, wasteful, or destructive personality. If parents are too strict or begin toilet training too early, Freud believed that an *anal-retentive personality* develops in which the individual is stringent, orderly, rigid, and obsessive.

The Phallic Stage

Age Range: 3 to 6 Years

Erogenous Zone: Genitals

Freud suggested that during the phallic stage, the primary focus of the libido is on the genitals. At this age, children also begin to discover the differences between males and females.

Freud also believed that boys begin to view their fathers as a rival for the mother's affections. The Oedipus complex describes these feelings of wanting to possess the mother and the desire to replace the father. However, the child also fears that he will be punished by the father for these feelings, a fear Freud termed *castration anxiety*.

The term Electra complex has been used to describe a similar set of feelings experienced by young girls. Freud, however, believed that girls instead experience *penis envy*.

Eventually, the child begins to identify with the same-sex parent as a means of vicariously possessing the other parent. For girls, however, Freud believed that penis envy was never fully resolved and that all women remain somewhat fixated on this stage. Psychologists such as Karen Horney disputed this theory, calling it both inaccurate and demeaning to women. Instead, Horney proposed that men experience feelings of inferiority because they cannot give birth to children, a concept she referred to as *womb envy*.

The Latent Period

Age Range: 6 to Puberty

Erogenous Zone: Sexual Feelings Are Inactive

During this stage, the superego continues to develop while the id's energies are suppressed. Children develop social skills, values and relationships with peers and adults outside of the family.

The development of the ego and superego contribute to this period of calm. The stage begins around the time that children enter into school and become more concerned with peer relationships, hobbies, and other interests.

The latent period is a time of exploration in which the sexual energy repressed or dormant. This energy is still present, but it is sublimated into other areas such as intellectual pursuits and social interactions. This stage is important in the development of social and communication skills and self-confidence.

As with the other psychosexual stages, Freud believed that it was possible for children to become fixated or "stuck" in this phase. Fixation at this stage can result in immaturity and an inability to form fulfilling relationships as an adult.

The Genital Stage

Age Range: Puberty to Death

Erogenous Zone: Maturing Sexual Interests

The onset of puberty causes the libido to become active once again. During the final stage of psychosexual development, the individual develops a strong sexual interest in the opposite sex. This stage begins during puberty but last throughout the rest of a person's life.

Where in earlier stages the focus was solely on individual needs, interest in the welfare of others grows during this stage. The goal of this stage is to establish a balance between the various life areas.

If the other stages have been completed successfully, the individual should now be well-balanced, warm, and caring.

Unlike the many of the earlier stages of development, Freud believed that the ego and superego were fully formed and functioning at this point. Younger children are ruled by the **id**, which demands immediate satisfaction of the most basic needs and wants. Teens in the genital stage of development are able to balance their most basic urges against the need to conform to the demands of reality and social norms.

Assignment-

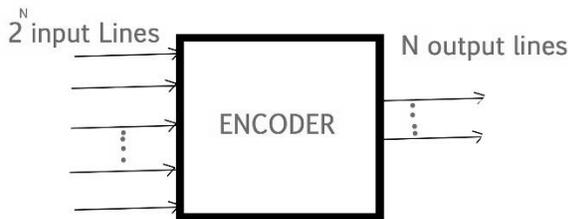
1. Who was Freud?
2. Write the idea of personality according to Freud.
3. Explain the level of consciousness according to Freud's model.
4. What is sublimation, displacement, regression according to Freud.
- 5 Name the psychosexual stages of per Freud Model and explain any two of them.

Madhubanti Banerjee

CLASS – 12
COMPUTER SCIENCE
COMPUTER HARDWARE

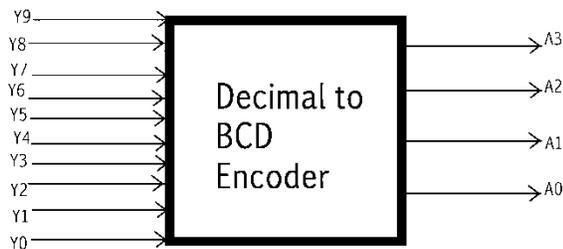
Encoder:

An Encoder is a combinational circuit which has maximum of 2^n input lines and 'n' output lines, hence it encodes the information from 2^n inputs into an n-bit code. It will produce a binary code equivalent to the input, which is active High. Therefore, the encoder allows 2 power N inputs and generates N -number of outputs. For example, in 4-2 encoder, if we give 4 inputs it produces only 2 outputs



Decimal to BCD Encoder –

The decimal to binary encoder usually consists of 10 input lines and 4 output lines. Each input line corresponds to each decimal digit and 4 outputs correspond to the BCD code. This encoder accepts the decoded decimal data as an input and encodes it to the BCD output which is available on the output lines. The figure below shows the logic symbol of decimal to BCD encoder :



The truth table for decimal to BCD encoder is as follows:

INPUTS										OUTPUTS			
Y9	Y8	Y7	Y6	Y5	Y4	Y3	Y2	Y1	Y0	A3	A2	A1	A0
0	0	0	0	0	0	0	0	0	1	0	0	0	0
0	0	0	0	0	0	0	0	1	0	0	0	0	1
0	0	0	0	0	0	0	1	0	0	0	0	1	0
0	0	0	0	0	0	1	0	0	0	0	0	1	1
0	0	0	0	0	1	0	0	0	0	0	1	0	0
0	0	0	0	1	0	0	0	0	0	0	1	0	1
0	0	0	1	0	0	0	0	0	0	0	1	1	0
0	0	1	0	0	0	0	0	0	0	0	1	1	1
0	1	0	0	0	0	0	0	0	0	1	0	0	0
1	0	0	0	0	0	0	0	0	0	1	0	0	1

Logical expression for A3, A2, A1 and A0 :

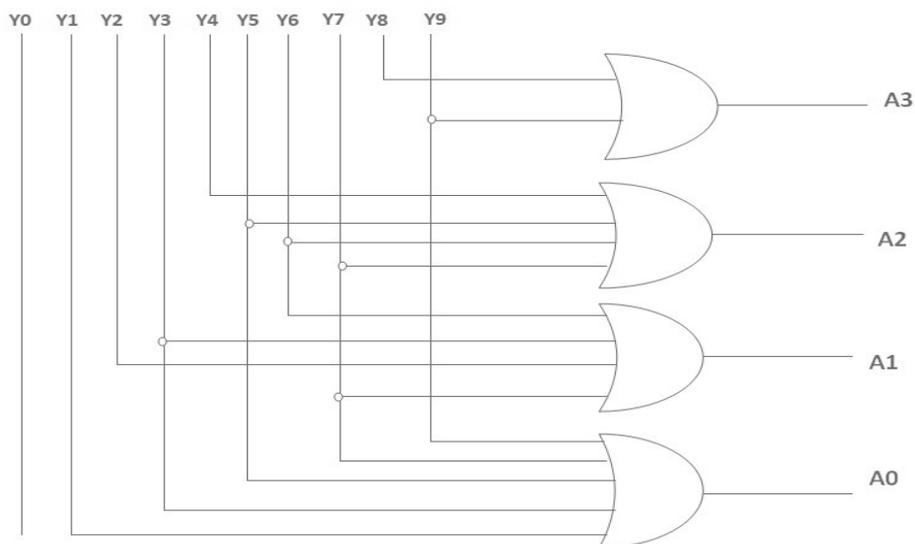
$$A3 = Y9 + Y8$$

$$A2 = Y7 + Y6 + Y5 + Y4$$

$$A1 = Y7 + Y6 + Y3 + Y2$$

$$A0 = Y9 + Y7 + Y5 + Y3 + Y1$$

Logic circuit for Decimal to BCD Encoder:



Octal to Binary Encoder:

The octal numbers system has base of 8. Hence the number of digits used in octal system is 8 and the octal digits are 0 to 7. Hence, there will be eight input line in a basic Octal to binary encoder. As binary equivalent of numbers 0 to 7 can be represented by only three binary bits, there will be three output lines to represent bits of binary equivalent of octal number.

The truth table for Octal to binary encoder is as follows:

Octal Digit	Binary Equivalent		
	A	B	C
$D_0 \rightarrow 0$	0	0	0
$D_1 \rightarrow 1$	0	0	1
$D_2 \rightarrow 2$	0	1	0
$D_3 \rightarrow 3$	0	1	1
$D_4 \rightarrow 4$	1	0	0
$D_5 \rightarrow 5$	1	0	1
$D_6 \rightarrow 6$	1	1	0
$D_7 \rightarrow 7$	1	1	1

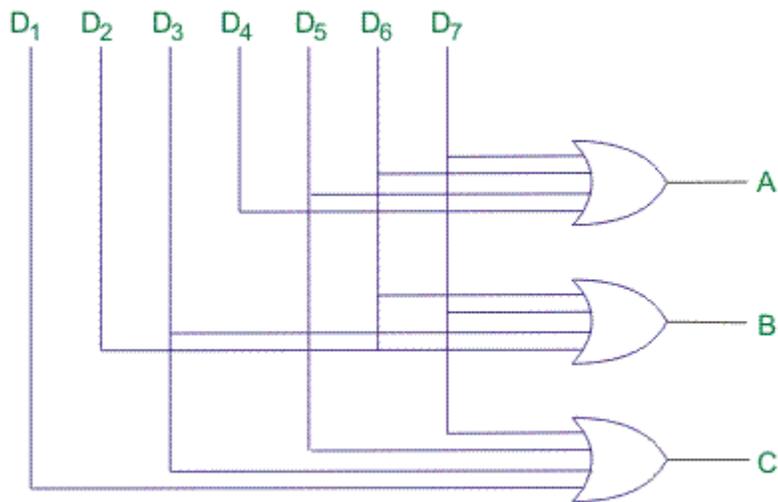
Logical expression:

$$A = D_4 + D_5 + D_6 + D_7$$

$$B = D_2 + D_3 + D_6 + D_7$$

$$C = D_1 + D_3 + D_5 + D_7$$

Logic circuit for Octal to Binary Encoder:



ASSIGNMENT IV (PART – 3)

10. Define encoder.
11. Draw the truth table and logic gate diagram for octal to binary encoder.
12. Draw the truth table and logic circuit diagram for hexadecimal to binary encoder.

Assignment-10

Maths class-12.

Differentiation.

Formula

- (1) If $y = f(x)$. Then $\frac{dy}{dx} = f'(x) = \lim_{h \rightarrow 0} \frac{f(x+h) - f(x)}{h}$
- (2) $y = x^n$ Then $\frac{dy}{dx} = nx^{n-1}$.
- (3) $y = \sin x$, $\frac{dy}{dx} = \cos x$.
- (4) $y = \cos x$, $\frac{dy}{dx} = -\sin x$.
- (5) $y = \tan x$, $\frac{dy}{dx} = \sec^2 x$.
- (6) $y = \cot x$, $\frac{dy}{dx} = -\operatorname{cosec}^2 x$.
- (7) $y = \sec x$, $\frac{dy}{dx} = \sec x \tan x$.
- (8) $y = \operatorname{cosec} x$, $\frac{dy}{dx} = -\operatorname{cosec} x \cot x$.
- (9) $y = e^x$, $\frac{dy}{dx} = e^x$.
- (10) $y = \log x$, $\frac{dy}{dx} = \frac{1}{x}$.
- (11) $y = a^x$, $\frac{dy}{dx} = a^x \log_e a$ ($a > 0$).
- (12) $y = c$ (Constant) $\frac{dy}{dx} = 0$.
- (13) $\frac{d}{dx}(u \pm v \pm w \pm \dots) = \frac{du}{dx} \pm \frac{dv}{dx} \pm \frac{dw}{dx} \pm \dots$
- (14) $\frac{d}{dx}\left(\frac{u}{v}\right) = \frac{v \frac{du}{dx} - u \frac{dv}{dx}}{v^2}$
- (15) $\frac{d}{dx}(u \cdot v) = u \frac{dv}{dx} + v \frac{du}{dx}$
- (16) $y = \sin^{-1} x$, $\frac{dy}{dx} = \frac{1}{\sqrt{1-x^2}}$ [$|x| < 1$]
- (17) $y = \cos^{-1} x$, $\frac{dy}{dx} = -\frac{1}{\sqrt{1-x^2}}$ [$|x| < 1$]
- (18) $y = \tan^{-1} x$, $\frac{dy}{dx} = \frac{1}{1+x^2}$ [$-\infty < x < \infty$]

Ex 1 If $y = (x + \sqrt{x^2 + a^2})^n$ then prove that

$$\frac{dy}{dx} = \frac{ny}{\sqrt{x^2 + a^2}}$$

Ans

$$\frac{dy}{dx} = n (x + \sqrt{x^2 + a^2})^{n-1} \left[1 + \frac{1}{2} (x^2 + a^2)^{-\frac{1}{2}} \cdot 2x \right]$$

$$= n (x + \sqrt{x^2 + a^2})^{n-1} \left[1 + \frac{x}{\sqrt{x^2 + a^2}} \right]$$

$$= n (x + \sqrt{x^2 + a^2})^{n-1} \left[\frac{\sqrt{x^2 + a^2} + x}{\sqrt{x^2 + a^2}} \right]$$

$$= n (x + \sqrt{x^2 + a^2})^{n-1+1}$$

$$= n (x + \sqrt{x^2 + a^2})^n$$

$$\frac{n (x + \sqrt{x^2 + a^2})^n}{\sqrt{x^2 + a^2}} = \frac{ny}{\sqrt{x^2 + a^2}} \text{ proved}$$

Ex 2 If $x^4 + 3x^2y^2 - 2y^4 = 5$ Find $\frac{dy}{dx}$

Now taking differentiation in both sides

$$4x^3 + 3 \left[2xy^2 + x^2 \cdot 2y \frac{dy}{dx} \right] - 8y^3 \frac{dy}{dx} = 0$$

or) $4x^3 + 6xy^2 + \frac{dy}{dx} [2x^2y - 8y^3] = 0$

or) $\frac{dy}{dx} = - \frac{(4x^3 + 6xy^2)}{(2x^2y - 8y^3)}$

$$= - \frac{2x(2x^2 + 3y^2)}{2y(x^2 - 4y^2)} = - \frac{x(2x^2 + 3y^2)}{y(x^2 - 4y^2)}$$

A.W
① If $y = \sqrt{x^2+1} - \log \left[\frac{1}{x} + \sqrt{1 + \frac{1}{x^2}} \right]$.
Find $\frac{dy}{dx}$.

② $y = \cot^{-1} \sqrt{\frac{1 - \sin x}{1 + \sin x}}$ ($0 < x < \frac{\pi}{2}$)

Find $\frac{dy}{dx}$

③ $y = 2^{x+2} - e^{x+1} + \log_{10} x$ find $\frac{dy}{dx}$.

④ Find $\frac{dy}{dx}$ if $x^2 + xy + y^2 = 100$

⑤ $y = \frac{5x}{\sqrt[3]{1-x^2}} + \sin^2(2x+3)$ find $\frac{dy}{dx}$.

DREAMLAND SCHOOL
CLASS XII (session 2020-21)
BIOLOGY HOME WORK-3C

Chapter 7: EVOLUTION(Contd..)

Quick review of the content

- Evidence for evolution comes from many different areas of biology:-
 - A. Evidences from palaeontology
 - B. Evidences from comparative Anatomy and Morphology
 - C. Evidences from embryology
 - D. Evidences from Bio geographical Distribution
 - E. Evidences from Taxonomy
 - F. Evidences from Molecular genetics
 - G. Evidences from Cytology

A.Evidences from palaeontology

Paleontology deals with locating, cataloging, and interpreting the life forms that existed in past millenium. It is the study of fossils—the bones, shells, teeth, and other remains of organisms, or evidence of ancient organisms, that have survived over long time.

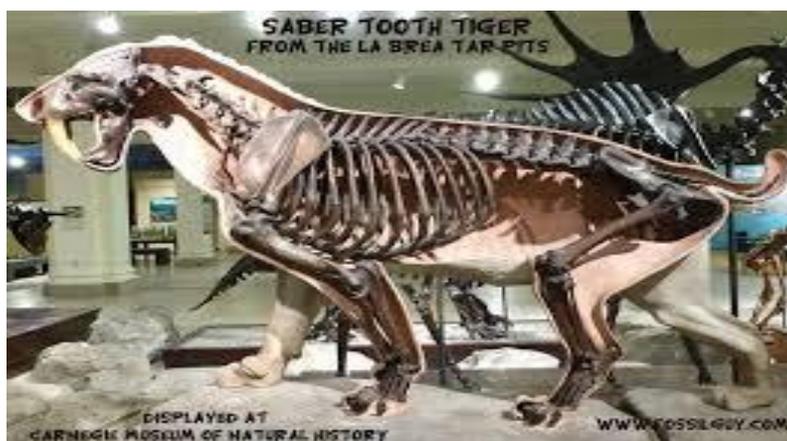
Types of fossils-

1. Unaltered remains

Unaltered fossil remains are comprised of the original materials—and sometimes tissues—produced by an organism when it was alive. These materials have not changed into something else over geological time as formed during ice age due to freezing of the body. Eg-Woolly Mammoths from Siberia

2.Permineralization/Petrified Fossil-

The most common method of fossilization is permineralization. After a bone, wood fragment, or shell is buried in sediment, it may be exposed to mineral-rich water that moves through the sediment. This water will deposit minerals, typically silica, into empty spaces, producing a fossil. Fossilized dinosaur bones, petrified wood, and many marine fossils were formed by permineralization.



3. Moulds and Casts

In some cases, the original bone or shell dissolves away, leaving behind an empty space in the shape of the shell or bone. This depression is called a mold. Later, the space may be filled with other sediments to form a matching cast in the shape of the original organism. Many mollusks (bivalves, snails, and squid) are commonly found as molds and casts because their shells dissolve easily.

4. Replacement and Pyritization

Fossil specimens exhibiting replacement do not preserve the original body parts produced by the organism when it was alive. Instead, a different, secondary material replaces the original material shortly following the death of the organism.

The mineral pyrite (“fools gold”) sometimes replaces calcite, leading to golden colored fossils that are said to be “pyritized.” In some rare cases, the pyrite not only replaces the hard shells of ancient animals, but also the soft parts, revealing features like the legs and antennae of trilobites and entire organisms.



- **Transitional Paleontology**-It involves study of missing links and connecting links.

Difference between Connecting link and missing link

Connecting Links

They are living organisms having the characters of two different groups.

E.g., Protopterus (lung fish), Peripatus

Missing Links

They are extinct organisms. They had the characters of two different groups of organisms

E.g., Seymouria, Archaeopteryx.

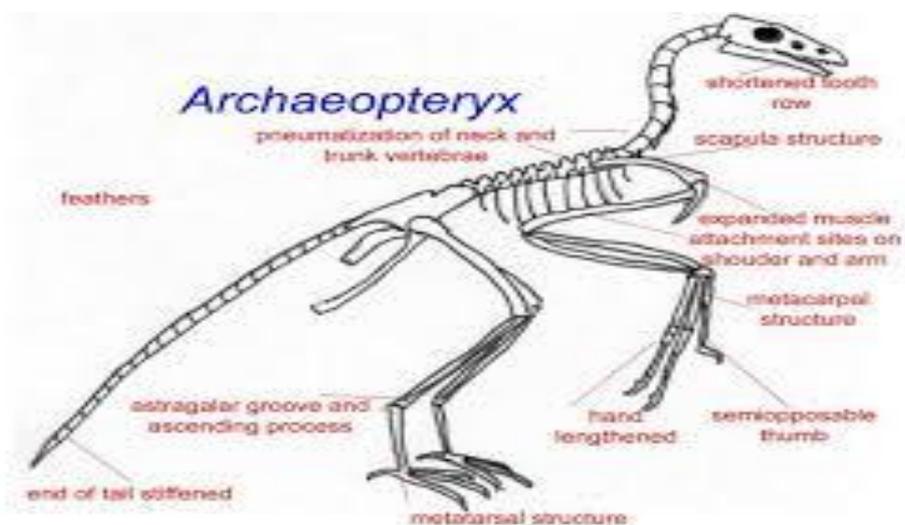
Detail of Archaeopteryx lithographica

It exhibits both reptilian and bird like **characteristics**.

Similar to reptilians,-

1. **Archaeopteryx** had a complete set of teeth in the beak

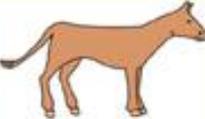
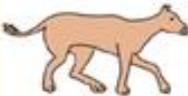
2. claws in each digit. three claws on the wing, believed to be used in grasping its prey or maybe tree,
3. Tail with caudal vertebrae.
4. Keel less sternum Unlike all living birds, **Archaeopteryx** had a flat sternum.



Avian features-

1. Presence of beak, Body covered with feathers.
2. Presence of fercula, rounded cranium, Forelimbs modified to wings.

Fossil study also depicts Evolution of Horse

Equus	Pliohippus	Merychippus	Mesohippus	Hyracotherium
				
1 million years ago	10 million years ago	30 million years ago	40 million years ago	60 million years ago
1.6m	1.0m	1.0m	0.6m	0.4m
 Single hoof, runs quickly over hard ground	 Other toes lost as only middle hoof used	 Middle toe developed into a hoof, to run faster	 Toe lost for moving faster over dry ground	 4 toed hoof, well spread for walking on soft ground
				

B. Evidences from comparative Anatomy and Morphology

It explains how many organisms had the same ancestor and how many different organisms evolved as a result of natural selection or genetic drift.

Homologous organs: These organs adapt the similar structure in different organisms. Thus, it clearly shows a common ancestor. A common species gave rise to many other species. This type of evolution is called divergent evolution. For example, the limbs of human, cheetah, whale, and wings of a bat. They all have different functions but have a similar structure indicating a common ancestor. So forms the example of divergent evolution

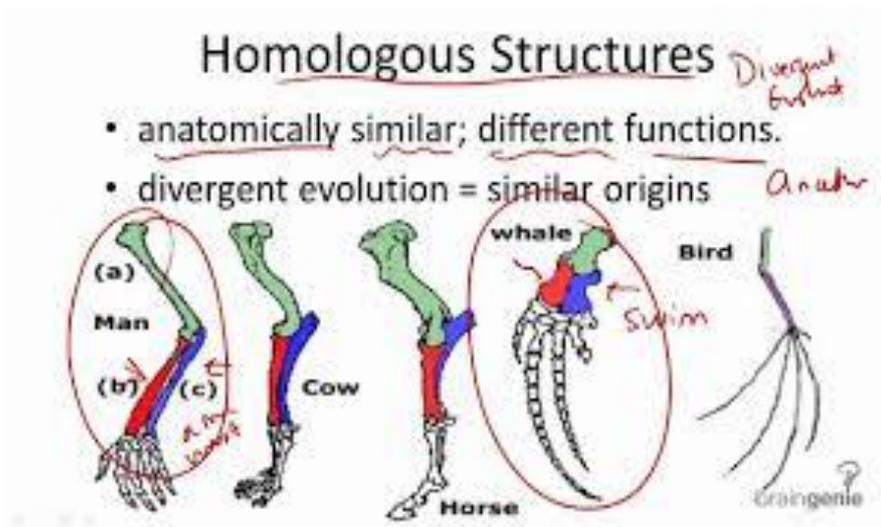
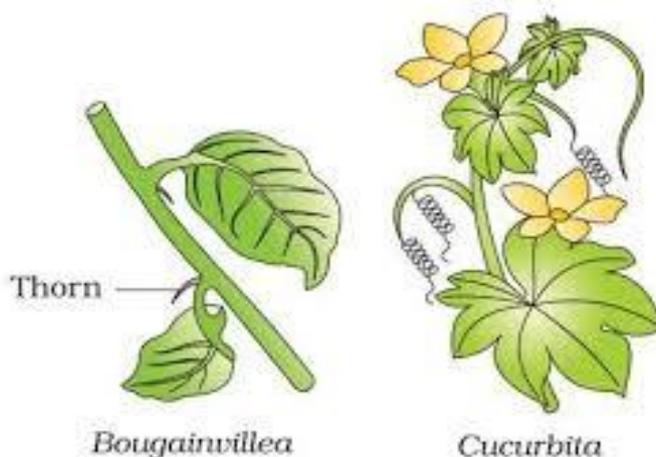


Fig- The forelimbs of a human and four animals showing the similarity in construction. All made up of same type of bones humerus, radius and ulna, carpal, metacarpals, phalanges.



Thorns of Bougainvillea and tendrils of cucurbita both are modified axillary bud but due to specific function they have separate structures.

We can also study the evolution of heart and vestigial organs as morphological evidences of evolution

Homology of Heart Structure

The **hearts** in various vertebrates such as fishes, amphibians, reptiles, birds and mammals are **homologous**. They show similarity in the basic plan but they have a varied degree of specialization according to the habitat in which they live, energy requirements and scale of evolution.

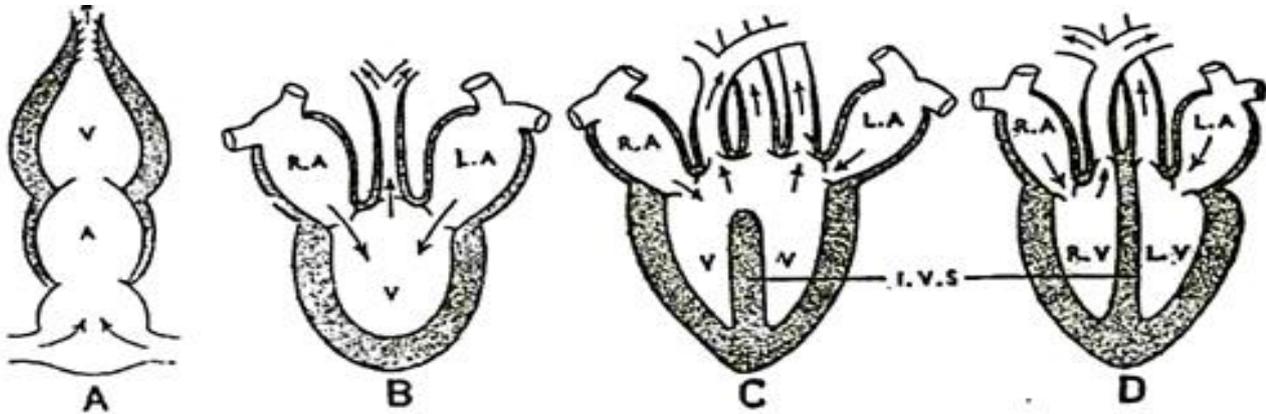


Fig. 189. Diagrammatic representation of the heart in fish (A), frog (B), lizard (C), and guinea-pig (D). In the fish the heart is two-chambered, there is one auricle (A) and one ventricle (V); in the frog the heart is three-chambered, there is a right auricle (R.A.), a left auricle (L.A.), and a ventricle (V); in the lizard the heart is three-chambered but the ventricle is partially divided by an incomplete interventricular septum (I.V.S.); in the guinea-pig the heart is four-chambered, there are two auricles and two ventricles.

Vestigial Organs

Homology is the existence of shared ancestry between a pair of **structures**, or genes, in different species. A **vestigial** structure is the structure in an organism that has lost all or most of its original function in the course of evolution.

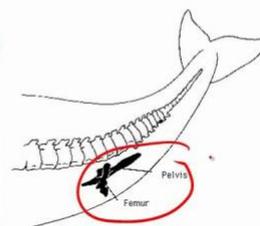
Vestigial Structures

- features present in modern animals that are no longer in use
- give hints as to the evolution of organisms

Ex: human tailbone, whale pelvis, appendix



Wisdom teeth



appendix

braingenie

ASSIGNMENT

1. Explain homology of heart structure as evidences of evolution.
2. What do you mean by convergent evolution.
3. What do you mean by pseudofossil.
4. Write difference between missing link and connecting link with example.

Madhubanti Banerjee

DATE-02.05.2020 (SATURDAY)

CLASS-XII

SUBJECT-PHYSICS

CHAPTER-2: GAUSS' THEOREM (1st CLASS)

- ◆ Electric flux through a surface $d\vec{S}$ in an electric field of intensity \vec{E} is,

$$\phi = \int_S \vec{E} \cdot d\vec{S}$$

- ◆ According to Gauss' theorem, total electric flux linked with a closed surface is given by,

$$\oint_S \vec{E} \cdot d\vec{S} = \frac{4\pi}{k} q \quad (\text{in CGS system})$$

where q is the charge enclosed by the closed surface and k is the permittivity of the medium.

$$\oint_S \vec{E} \cdot d\vec{S} = \frac{q}{\epsilon} \quad (\text{in SI})$$

where ϵ is the permittivity of the medium.

- ◆ The electric field intensity at a point due to a point charge,

$$E = \frac{q}{4\pi\epsilon r^2} \quad (\text{in SI}); \quad E = \frac{q}{kr^2} \quad (\text{in CGS system})$$

ASSIGNMENT-7

CHAPTER-2: GAUSS' THEOREM (1st CLASS)

(F.M.-10)

Answer the following questions

(Question No-1 carries 1 mark, 2 carries 2 marks, 3 carries 3 marks, 4 carries 4 marks)

1. What do you mean by solid angle?
1. What do you mean by electric flux? Write its mathematical expression.
2. Write down the properties of Gaussian surface.
3. (i) Write the conditions where the Gauss' law is applicable?
(ii) Derive the Coulomb's law from Gauss Theorem.