

Teaching and learning notes for the teacher and student.

FORM TWO

HISTORY AND GOVERNMENT

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TRADE

Definition of trade

Trade refers to the exchange of goods and services between people or countries.

Man must have started trading soon after the evolution of the homo sapien sapiens.

Trade was occasioned by the existence of varying environmental and climatic conditions. Trade arises from the basic human needs such as satisfying food requirements

Methods of trade.

There are two main *methods* of trade;

1. Barter trade
2. Currency trade.

a) Barter trade

This is the exchange of goods for goods. It is one of the earliest forms of trade that was even taking place during the reign of King Solomon of the Bible.

Barter trade emerged from the natural needs of the people. For example, among the Kenyan pre-colonial communities such as the Maasai who kept livestock but did not have grains which the neighbouring kikuyu possessed. Barter trade sometimes even took place within the same community where some people had some special talents that others did not possess. E.g ironsmiths

A form of barter trade known as 'silent trade' was practiced in some areas where the two involved communities could not speak the same language. For example, it existed between Morocco and Carthage in 400 BC.

Barter trade can still be witnessed in the modern society. For example, Kenya exchanges tea and coffee with petroleum, chemicals and machinery from other countries.

Barter trade however has the following disadvantages;

- a) It may involve bulky goods in the transaction.
- b) There may lack double coincidence. It is difficult always to get the goods one wants.
- c) Lack of standards of deferred payment; if a good was borrowed, it would be difficult to decide whether the same value was returned later or not.
- d) Some goods cannot be sub-divided into smaller units. If one wanted cloth equal to a half a sheep, then he could not divide the sheep into two parts.
- e) Lack of store of value for some goods which cannot be stored for a long time since they are perishable. E.g. milk, vegetables.
- f) Lack of measures of value; a specific quantity of goods cannot be measured vis-à-vis other goods.

Advantages of barter system.

- a) Poor countries without adequate foreign currencies benefit from it by being able to exchange goods they have for what they do not have.
- b) It benefits where money is non-existent.
- c) It avoids wastage as demand and supply tend to equate.
- d) It promotes interaction hence good relationship, peace and stability especially among

traditional African societies.

b) Currency trade.

This is a type of trade that involves the use of money.

Money is an item that is mutually recognized as a medium of exchange or a measure of value. In the pre-colonial times items like Gold dust, cloth, copper rods, and iron and cowrie shells were used as a form of currency.

Advantages of the use of money in trade.

- a) Money is a medium of exchange- it is needed to obtain goods or services.
- b) Money as a measure of value enables units of goods to be bought. A specific quantity of goods can be measured Visa- Vis other goods.
- c) Money is a standard of deferred (future) payments which allows borrowing and lending to take place.
- d) It is a store of value- one is able to defer satisfaction of a want to future times or make provision for one's want at a future date.
- e) It is a means through which immovable property can be transferred. For example when one sells a house in one city to go and dwell in another.
- f) Money as a unit of account is used as a calculating medium and assigning prices of goods and services.
- g) Money is easily divisible into smaller units. For example, if a product is valued at a lower price, the buyer only pays the agreed cost.
- h) The qualities of money and its functions overcome the difficulties of barter.

Money however becomes valuable only when those using it have confidence that it will continue to retain its value during the period it is in possession.

Technology today has made the use of currency easier. There is the use of Visa Card and Mobile money services like Mpesa and Airtel Money to carry out transactions.

Difference between barter trade and trade in which currency is used as a medium of exchange.

- a) In barter trade goods are exchanged for goods/in currency trade, there is use of money as a measure of value.
- b) In barter trade depends on the existence of a double coincidence of needs but in currency method one meets his needs by the use of money.
- c) Items used for barter trade are bulky (some) and inconvenient to handle-and others perishable. Money is not bulky.

Local trade.

This refers to the exchange of goods between people within the same geographical area such as a village or town.

Origin of local trade.

This form of trade took place between groups of people who produced different goods mainly because of varying ecological conditions. It was motivated by the following factors;

- a) Existence of surplus production e.g. where some community's harvest was excess; they could sell the excess commodity to carter for shortages elsewhere and to avoid wastage.
- b) Differences in climate and environmental conditions which affected the type of natural resources available in various places/ not all needs of a particular community can be satisfied by the resources available hence trade. The kikuyu of Nyeri had to go to Mathira

for their foodstuff requirements during drought periods.

- c) Specialization and improved technology which always creates a need to exchange skills and goods with those who do not have. E.g trade between Mathira kikuyu cultivators and the Mukurwe-ini kikuyu ironmongers and weavers. Some even exchanged skills for money.
- d) Population increase making man to begin to supplement his needs by trading with his neighbors.

Sometimes, this trade extended even beyond the local community to the neighbouring community. The Abagusii, for example, acquired hides, milk, snake poison, and pottery items from their Luo Neighbours.

Some seasonal markets emerged which enabled traders to meet and exchange goods on particular days of the week.

Factors that facilitated development of local trade.

- a) Availability of capital for investments in trade – to generate more wealth.
- b) Specialization and improved technology, e.g. specialization in production, in technology and in marketing. Sometimes people even exchanged their skills for money.
- c) Demand and supply; the growing demand for goods and services was met by increase in supply.
- d) Enterprise; many people began to take greater risk and invested more in trade.
- e) Peace and stability. This enabled people to interact more and hence the growth and expansion of trade.

Impact of local trade

- a) There was development of market places which specialized in certain items like pottery, iron tools and baskets. Others specialized in livestock
- b) Local trade helped to strengthen bonds between people in the same locality. It even enhanced intermarriages and other social functions.
- c) Local trade satisfied the requirements of the communities in terms of tools, foodstuffs, medicinal herbs etc.
- d) Local trade enhanced acquisition of new products that a particular community did not produce.
- e) There was an improvement of transport routes. Some markets were strategically located along transport routes.
- f) In centralized governments like Buganda, Bunyoro-Kitara, Mali, Ghana and Wanga, the local markets that developed due to the trade became important sources of revenue for the kingdoms. In Bunyoro-Kitara for example, the Omukama had officers whose duty was to collect taxes from the market places.
- g) Many people were brought together through trade. In Bunyoro–Kitara, communities like the Alur, Acholi, Langi, Basoga, Baganda, Kumani, Iteso and Banyankole interacted through trade.

NB; the greatest danger to the local traders was that they risked being attacked by hostile communities and wild animals.

Regional trade.

This refers to a type of trade between two distinct geographical regions

Characteristics of regional trade.

- ~ It Takes place within a bigger geographical area.
- ~ It Involves intermediaries or middlemen between producers and the buyers.
- ~ The trade often covers long distances to and from the market.
- ~ It involves people who specialize mainly in trade as their means of livelihood.
- ~ Larger Varieties of goods are involved.

In regional trade there existed established markets but goods did not have to be sold on a particular market days like the case of local trade.

It also involved large volumes of trade as compared to local trade

Examples of regional trade included;

- a) The Trans-Saharan trade
- b) The long-distance trade.

The trans-Saharan trade

'Trans' means across. This was therefore the exchange of goods across the Sahara between the peoples of North Africa (Berbers and Tuaregs) and the people of western Sudan (the dark-skinned people who occupy the region south of the Sahara)

The West African kingdoms of Mali, Ghana and Songhai were involved in this trade.

Development of the trans-Saharan trade. (8th-16th c AD)

Factors that led to the development of the trans-Saharan trade.

- a) Demand for West African good such as gold, slaves and kola nuts by the North Africans and for North African goods like horses, cotton cloth and weapons by the west Sudan people.
- b) Existence of rich merchants in the region, such as the Berbers and Tuaregs, who provided capital for investment in the trade/ *availability of capital.*
- c) Existence of Local trade in the western Sudan belt and among the barbers and Tuaregs provided a base for the regional trade.
- d) Existence of the Tuaregs, who provided security to traders, guided them through the deserts and maintained some water points like the oases where the Berber merchants watered their camels and rested before continuing with their journey to and from western Sudan.
- e) Availability of well established trade routes across the desert which made it easy for the traders to travel.
- f) Existence of Kings in western Sudan like Mansa Musa of Mali and Askia Muhamed of Songhai who provided protection to traders, ensured peace and political stability.
- g) Availability of pack animals like the camel and the horse which enabled easy movement through the desert. The camel could carry heavy loads and travel long distances without water.
- h) Existence of oases which became a source of water during the travels, for the camels and the traders.
- i) Invasion of North Africa by the Arabs and their eventual settlement led to increase in the volume of trade.
- j) There were also vast trade goods like gold, palm oil and ivory. This stimulated the development of trans-Saharan trade.

The trade goods in the trans-Saharan trade.

From western Sudan;

- a) Gold- this was by far the most important commodity that originated from the wangara region, Bornu, Upper Senegal and upper Niger.
- b) Slaves- they were forcefully captured and later used as soldiers and labourers in the Arab world.
- c) Kola nuts and feathers. Monopoly of the Hausa traders from Kano region.
- d) Hides and skins- from Hausa land for making leather clothing and shoes.
- e) Ivory- originated from western belt mainly from cote d'ivoire.
- f) Gum- from Mauritania and Senegal
- g) Dyed cloth and pepper

From the north.

- a) Salt- from Taghaza, Taodeni, Bilma and Ghadames.
- b) Horses- from Tripoli were on demand among the political leaders and their soldiers.
- c) Glassware, beads, mirrors, perfumes, spices, dried fruits, needles, firearms, daggers and cowrie shells.

Organization of the trans-Saharan trade.

Beginning of Trans-Saharan Trade was due to the fact that North Africa was rich in the salt that West Africa lacked while West Africa was rich in gold. The Trans-Saharan trade led to an exchange of salt for gold

The trade was between people of the western Sudan and Arabs from North Africa.

Because of the long distance involved, the traders had to organize themselves very well.

Traders travelled in large caravans of camels and traders to enhance their security.

The rich traders from North Africa initiated the trade. They provided trade goods, camels and horses to middlemen who coordinated the trade.

The middlemen would contact desert guides known as takshifs who also acted as desert guards.

They protected the traders and guarded the oases in the Sahara .The Tuaregs also provided the traders with security and acted as interpreters.

The caravans usually departed from the north after the rainy season when sandstorms would subside for smooth travel. The traders made stops at the oases to refresh themselves and let their camels drink water.

They carried gifts for leaders of the communities along the route to appease them and as reciprocation for security while traveling through their kingdoms. Rulers of western Sudan offered service to the traders while they were in the territory

The trade was conducted in barter/ exchanging one good for another/ silent trade. Some of the caravan traders used agents who sold goods on their behalf in the interim period between their departure back to the north until the time they came back to western Sudan.

The rulers of western Sudan controlled trade/regulated amount of gold to be sold. The traders paid taxes to the kings of western Sudan.

The main items of trade were gold and salt i.e. from the west came gold, ivory, slaves, ostrich feathers, leather, kola nuts and pepper. From the north came salt, horses, weapons, iron implements, clothes, silk and beads. Arabs and Berbers financed the trade.

The traders followed fairly defined route. The most important routes were as follows;

- a) A route Starting at Sijilmasa (an oasis) in Morocco through Taghaza (a desert town with a lot of salt) and ended at Andaghost in western Sudan.

- b) A route starting in Tunis and passing through Ghadames, Ghat, Agades and Gao. Then it passed through Hausaland, Gonja and eventually ended at Yorubaland in modern Nigeria.
- c) A route beginning at Sijilmasa and passing through Timbuktu before proceeding to Gao.
- d) A route beginning at Tripoli passing through Fezzan and eventually ending at Bornu in the Sudan Belt.

Challenges faced by the trans-Saharan traders.

- a) There was Communication barrier due to lack of a common language for transactions. This was a challenge during the pioneer years.
- b) Traveling long distances for many months, usually upto three months, across the desert was tedious and stressful.
- c) Traveling under extreme weather conditions; too hot during the day and too cold at night.
- d) Scarcity of water and food during the journeys. The traders suffered serious sickness due to such extreme weather variations.
- e) There were constant Attacks by hostile communities who sometimes robbed them of their merchandize.
- f) Traders were sometimes attacked by insects like scorpions and wild animals.
- g) The traders sometimes suffered from Loss of direction due to the vastness of the desert.
- h) Exposure to frequent sandstorms which killed many traders.
- i) Sometimes wars between kingdoms disrupted trade.

Impact of the trans-Saharan trade.

Positive impact;

- a) The trade stimulated the emergence of urban centres along the trade routes. Towns like Taghaza and Timbuktu developed due to the production of trade commodities like salt and gold respectively.
- b) Profits from the trade stimulated the growth of strong empires as the kings levied taxes on the caravan traders. Examples of such empires include Mali, Ghana and Songhai.
- c) Introduction of horses in the western Sudan belt led to strengthening of the state armies as horses were used by the armies to boost security in the region.
- d) A class of wealthy traders emerged in western Sudan. These were mainly the local merchants who interacted with the merchants from North Africa.
- e) The trade stimulated the emergence and growth of smithing technology and industry.
- f) The trade led to the introduction of iron tools in wider areas of western Sudan. This boosted agricultural production in western Sudan and ensured food security in the area.
- g) There was population increase in western Sudan due to increased food production as a result of better farming tools.
- h) It also enhanced contacts between North Africa and the Sudan belt. This facilitated the spread of European goods and ideas between the peoples of the two regions.
- i) The trade facilitated the spread of Islamic religion in the Sudan belt. For example, the Hausa traders were converted to Islam.
- j) There was introduction of the Islamic system of education in the Sudan belt. The University of Timbuktu for example, teaching mainly Islamic syllabus, was one of the institutions that emerged as a result of the trade.

- k) Sharia law was introduced in the states that accepted Islam in western Sudan.
- l) The trade led to the introduction of the Arabic architectural designs in West Africa.
- m) The Islamic and Arabic culture-language, mode of dressing and eating mannerisms also spread to western Sudan.
- n) The mode of transport in the region was remarkably revolutionized by the introduction of camels and horses making transport efficient.

Negative impacts;

- a) The trade increased warfare in the region as communities gained access to firearms and horses. Thousands of people lost their lives.
- b) Many people in the western Sudan belt were captured and taken into slavery to meet the demands of the trans-Saharan traders.
- c) The demand for ivory also led to the destruction of wildlife in western Sudan.

Decline of the trans-Saharan trade.

The trade reached its climax at around AD 8th c. by 15th c, the trade had declined due to the following reasons;

- a) Exhaustion of the salt and gold minefields as well as other like ivory. This discouraged traders from coming to West Africa.
- b) Increased political instability in the region due to so many wars of conquest created insecurity to the traders.
- c) The desert conditions e.g. harsh weather, dangerous insects, snakes and robbers discouraged many traders from the activity.
- d) Invasion of the region by the almorarids and the Tuaregs increased insecurity even more along the trade routes. Hence traders discontinued their involvement.
- e) Moroccan invasion of western Sudan in the 16th century undermined the trade.
- f) The growth of the trans-Atlantic trade attracted some of the trans-Saharan traders thus reducing the volume of commodities that were sold.
- g) Colonization of west and North Africa by Europeans who took over the resources hence African activities were undermined.
- h) Invasion of North Africa by the ottoman Turks created insecurity along the caravan routes leading to decline of the trade.
- i) Anti-slave trade pressure from the British and eventual abolition of slave trade reduced trade profits.
- j) The establishment of commercial ports on the western African coast and the use of navigable rivers by the 16th century AD rendered caravan trade unpopular as it was slow, cumbersome and risky.

International trade.

This is a type of trade that involves the exchange of goods between different countries in one continent or beyond the continent.

Examples of international trade include

- a) The Indian ocean trade
- b) The trans-Atlantic trade.

The trans-Atlantic trade

The trans-Atlantic trade involved Europe, Africa and the Americas thus earning it the name Triangular trade. It was also called the trans-Atlantic slave trade because it involved crossing the Atlantic and the main commodity was slaves.

The trade was fueled by the technological innovations especially in Spain and Portugal which facilitated sea transport.

The trade happened at a time when the Europeans were keen on expanding overseas (15th and 16th c AD) for the following reasons;

- a. They were searching for the sea route to India and Far East to get the spices and other commodities. The Turks had blocked the land route.
- b. The Europeans wanted to acquire gold and other precious items that believed to be in existence in Africa.
- c. The Europeans wanted to revenge against the Muslims who had colonized the Iberian Peninsula between 8th c and 1491 AD.
- d. They were motivated by the desire to spread their civilization to the backward areas of the world.
- e. European countries such as Portugal and Spain also wanted to increase their geographical knowledge.

Origin of the trans-Atlantic trade.

The exact date when the first slave was captured and sold was 1441 AD. Young Portuguese sailor named Ahtam Goncalvez captured a man and a woman on the Western Sahara coast whom he presented to Prince Henry the Navigator, the Portuguese king, thus setting off a chain of reaction in the trade.

The Portuguese built a fort on the Arguin Island on the coast of Mauritania in 1445 which was used as a base for buying slaves and Gold. The suppliers of the slaves at the fort were the Moors.

The Portuguese ventured into the gold coast in search of gold in 1471. They built a fort at Elmina in 1482

The Portuguese then established trading contacts with the king of Congo who even accepted Christianity and Portuguese culture. (He baptized his son Afonso Bemba Nzinga)

By 1500AD, the Portuguese established sugar plantations in the island of Sao Tome near modern Gambia. They relied on slave labour from Gambia.

Development and organization of trans-Atlantic slaves.

The demand for labor in the western hemisphere stimulated a profitable three-legged trading pattern. European manufactured goods, namely cloth and metal wares, especially firearms, went to Africa where they were exchanged for slaves.

The slaves were then shipped to the Caribbean and Americas from 1532 AD, where they were sold for cash or sometimes bartered for sugar or molasses. Then the ships returned to Europe loaded with American products

European ports of Bristol, Liverpool and Glasgow in Britain, Bordeaux and Nantes in France, and Amsterdam in Holland were crucial in this trade.

The forts that developed in West Africa due to this trade were Elmina, Lagos, Whydah, Accra, Badagri, Sekondi, Winneba, Goree and Dakar.

In the 16th c, the Portuguese emerged as the main suppliers of slaves to Spanish colonies, having been granted special licences, *asientos*, by the Spanish monarchy. African slaves were more preferred by Europeans because;

- a. They were available in large numbers.
- b. They were found to be cheaper to use than European labourers and American Indians.
- c. They were thought to be immune to both European and tropical diseases.
- d. They appeared stronger and therefore suitable for manual labour.

The Dutch were among the first European nations to compete the Portuguese in slave trade. For example in 1630, they wrestled the Elmina Fort from the Portuguese and captured Luanda in 1641. They were supplying slaves to new sugar plantations in the British Colony of Barbados and the French Caribbean colonies of Martinique and Guadalupe.

The British and the French used merchant companies to conduct the slave trade having been motivated by the fortunes the Dutch were making. e.g, the Royal African Company was granted charter in 1672 and began taking slaves to the British colony in Jamaica.

The original capture of slaves was almost always violent. As European demand grew, African chieftains organized raiding parties to seize individuals from neighboring societies. Others launched wars specifically for the purpose of capturing slaves

Factors that facilitated the acquisition of slaves.

- a. Existence of the institution of slavery in West Africa where the war captives, adulterers, witches, the weak, debtors and murderers were enslaved
- b. Availability of firearms to precipitate warfare and capture of the conquered as slaves.
- c. Existence of well defined trade routes easily used by the slave merchants to access the interior slave markets.
- d. The great demand for slaves in the New World (Latin America) and North America.

Ways of obtaining slaves

- a) Selling of domestic slaves in exchange for goods like beads, guns, glass etc
- b) Selling of criminals, debtors and social misfits in society by the local chiefs to the Arab slave traders.
- c) Prisoners of war could be sold off.
- d) Porters were sometimes kidnapped, transported and sold off to the Arab traders.
- e) Raiding villages, this would begin at night with gun shots and people would scatter consequently leading to their capture.
- f) Through inter tribal wars many Africans become destitutes and these would be captured by the slave traders.
- g) Tax offenders were sold off by the African chiefs.
- h) They were also captured through ambushes during hunting, travelling and gardening.
- i) Slaves would be acquired from the main slave trade market in Zanzibar.
- j) Other Africans are also said to have gone voluntarily in anticipation of great wonders and benefits from the new world.

Following capture, slaves were force-marched to the coast to holding pens where they were oiled and fed ready for inspection, before being loaded on ships. Prices of slaves depended on sex, age and size.

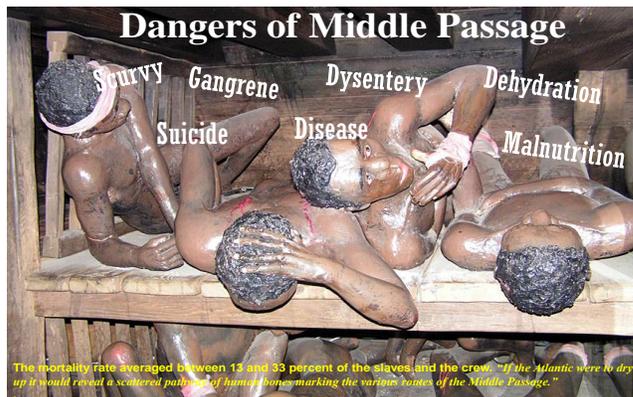
The slaves were bartered for guns, alcohol, gun-powder, cloth and different metals.

Two trading systems were used;

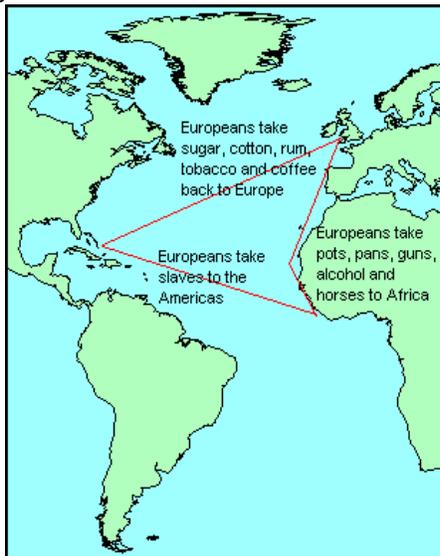
- a) Factory system where political authorities allowed Europeans to establish permanent coastal baracoons or fortresses where slaves were kept in bulk as they awaited shipment. This method was only used by chartered companies as it was expensive. It was also only viable in Dahomey where slaves were in large numbers.
- b) Private trading. Sailing with vessels down the coast, and then stopping at different points to purchase slaves until there was enough cargo.

The slaves were branded before loading them into the ships ready for the trans-Atlantic journey which was called the "Middle Passage". The ships were filthy, hot, and crowded.

- By 1654, some 8,000-10,000 Africans each year were undergoing the Middle Passage.



The moment of sailing is described as the most traumatic. Many Africans revolted during the middle passage in a bid to escape. For some jumping overboard was more preferable than their 'blood being turned into red wine, bones into gunpowder, skins, into black leather shoes and flesh -the Whiteman's meat' as they believed.



Factors which led to the development of the trans-Atlantic slave trade.

- a) Increased demand for slave labour by European countries led them to West Africa where they were available in large numbers.

- b) Greater preference for African slaves by the slave traders since they were thought to be more strong and resistant to tropical disease and could cope with stress easily.
- c) West Africa had well defined interior routes which enabled establishment of earlier strong trade links by the Europeans. There were also vast trade goods like gold, palm oil and ivory. This stimulated the development of trans-Atlantic trade.
- d) African chiefs had developed a taste for European goods like cloths, firearms and glass enabling exchange for slaves, gold ivory and palm oil. There was also existence of the institution of slavery in West African communities.
- e) The introduction of firearms facilitated the capture of slaves and hence their increased supply.
- f) The exploitation of minerals and establishment of plantations in the Americas pushed demand for slaves to higher levels hence trade with the region expanded.
- g) The increased demand for raw materials to feed the growing industries in Europe led to increased demand for slaves in cotton farms in the Americas.
- h) The rivalry between the Portuguese and the Spaniards and with the Britons over the control of slave trade pushed the trade to a higher new level.
- i) The fact the trade was very lucrative led to its further expansion.
- j) Improved technology which meant ability to construct greater capacity ships. This enhanced transportation of more slaves from West Africa and thus development of the trade.

Impact of trans-Atlantic trade on the people of West Africa.

- a) It caused immense suffering to many people.
- b) It led to forced emigration of about 10 million people to the Americas between 1500 and 1888.
- c) Many slaves died between capture and arrival to their destinations.
- d) Depopulation occurred in areas where slaves were taken from. This led to under-development since the young and productive people were taken away.
- e) African traditional industries were destroyed by the sale of cheap manufactured goods from Europe.
- f) There was increased conflict between communities especially where the gun was used. This led to destruction of property during the inter-community wars.
- g) Many African communities were weakened and were left unprepared for the scramble and partition of Africa which soon followed.
- h) It led to rise and growth of states e.g. Asante, Dahomey.
- i) It led to founding of Liberia and Sierra Leone as settlements for slaves who were freed.
- j) It led to changes to social roles; women became the heads of their families due to the enslavement of men.
- k) Some African cultures spread to the Americas e.g Jazz Music and samba dancing styles of Brazil and even witchcraft.
- l) The trade led to the rise of the mullato population. E.g in Senegal, where they are mainly found in Goree and Dakar, as a result of the intermingling between the European traders and the African women.
- m) It contributed to the decline of the trans-Saharan trade and the colonization of West Africa.

Economic impacts of slave trade.

- a) It led to introduction of new (manufactured) goods in West Africa which undermined many indigenous technologies like smithing and medicine.
- b) Africa was depleted of her vital manpower that was greatly needed in agriculture and defence. This led to economic retardation.
- c) Destruction of African property during the slave raids.
- d) Led to the eventual decline of the Trans Atlantic trade at its abolition.
- e) Stimulated development of ports in West Africa and in Europe.
- f) African leaders accumulated a lot of wealth e.g Dahomey, jaja, Asantehene.
- g) It led to development of European economies. A number of large cities grew along the coastal ports. For example Glasgow, Bordeaux Liverpool and Nantes.
- h) Growth of industrialization in Europe as the slave labour ensured constant flow of raw materials into the industries.
- i) Some of the slave dealers accumulated enormous wealth. For example, the merchants like Barclays Brothers and sailing companies like Lloyds.
- j) The trade led to the expansion of plantation farming in USA (cotton and sugar plantations) which relied on slave labour.

Decline of the trans-Atlantic slave trade.

In 1807, the British government made a decision to abolish slave trade.

Factors that led to the abolition of slave trade;

- a) Rise of humanitarians in Europe such as Christians and scholars condemned it on moral grounds. The missionaries wanted it to be stopped because they wanted good conditions for the spread of Christianity. The formation of the humanitarian movements in England aimed at stopping all kinds of cruelty including slave trade, flogging of soldiers and child labour.
- b) Industrialization in Britain was one of the main forces behind the abolition .E.g. Britain industrialists urged its abolition because they wanted Africans to be left in Africa so that Africa can be a source of raw materials for their industries, market for European manufactured goods and a place for new investment of surplus capital.
- c) Formation of Anti-slavery movement and the abolitionist movement in 1787. Its chairman was Granville Sharp and others like Thomas Clarkson, William Wilberforce who gathered facts and stories about the brutality of slave trade and slavery to arouse public opinion in Britain.
- d) The attainment of independence by USA in 1776 left Britain in a dilemma since she had no colonies where she would take the slaves to work.
- e) The French revolution of 1789 and the American revolution of 1776 emphasized liberty, equality and fraternity (brotherhood) of all human beings. As a result, people began to question whether anyone had a right to deprive fellow man of his liberty when he had done wrong.
- f) The British desire to protect their national interests, British planters wanted slave trade stopped to avoid competition with other European planters .This is because other planters were producing cheaper sugar, British sugar accumulated hence the need to stop over production.

- g) The closure of the American slave market after the defeat of the South American states in the American civil war of 1865 left the slave dealers with no market for their slaves.
- h) The rise of leading London economists with new ideas e.g. Prof. Adam Smith(challenged the economic arguments which were the basis of slave trade when he argued convincingly that hired labour is cheaper and more productive than slave labour, Rousseau spread the idea of personal liberty and equality of all men.
- i) Influential abolitionists like William Wilberforce (a British member of parliament) urged the British government to legislate against the slave trade in her colonies. They in turn influenced public opinion against slave trade.
- j) The ship owners stopped transporting slaves from Africa and began transporting raw materials directly from Africa and America to Europe, which led to a decline in slave trade.

TRANSPORT.

Definition of Transport.

Transport is the movement of people and from one place to another.

Transportation is usually classified by the medium in which the movement occurs. For example, land, air and water transport.

Transport can be categorized into traditional and modern means.

a) Traditional means of transport.

The means of transport at this category were land and water evolved.

Land transport.

People move on land either by walking or by using other human powered transport. People also use domestic animals as a means of transportation

Human transport.

Human powered transportation included carrying goods on their backs, heads and shoulders. Africans were used as porters during the slave trade. Human portage still goes on in the modern society.

Limitation of human portage.

- Human portage was cumbersome, slow and tiresome.
- Humans Carry limited amount of goods at particular time.
- It is not convenient over long distances.

Animal transport.

Early human beings used the domesticated animals to carry loads on their backs or pull carts. Such animals are referred to as pack animals.

In 500 AD a padded collar was devised that rested on the animals' shoulders. In 200 AD saddles were introduced in Egypt. Horse shoes were introduced in 700 AD

Donkey\Ass.

The first animals to be used as pack animals; they were used in Egypt as early as 3400bc to carry weight upto 80kg. They were commonly used in the trade between Nubia and South Sudan. In Ukambani today, donkeys are used to fetch water.

Oxen.

Referred to as draught animals used for ploughing and pulling carts and also transportation of goods and people.

Horses.

They were first rode but were later trained to pull wagons, chariots and passenger coaches.. in the Roman empire, they carried soldiers during war. (Soldiers on horseback are referred to as cavalry.

Disadvantages of horses.

- a) It is highly susceptible to diseases.
- b) It cannot survive in tsetse fly infected areas.
- c) The weight limit of the load it can carry is 120kg
- d) They are not suitable in arid and semi-arid areas because they need a lot of water.

NB; - horses are mainly reared by the rich as a symbol of high social status.

Mules.

A crossbreed of a horse and a donkey, they are sterile and carry loads upto 110kg.they are mostly used in mountainous areas in central and southern Europe and in Mexico.

Camels.

It is referred to as the ship of the desert.

What makes a camel ideal in desert transport?

- a) It has a unique ability to survive for long without food and water.
- b) They have an incredible water storage capacity, they do not sweat lose much moisture.
- c) They have broad padded, two toed feet ideal for walking on desert sand.
- d) The nostrils have flaps which keep away sand during sandstorms.
- e) Its fur is thick enough to protect it from the sweltering desert heat by day and extreme cold conditions at night.
- f) The hump contains a lot of fat which the camel uses when it goes without eating

Camels were commonly used during the trans-Saharan trade. They are in use in Kenya today among the Galla and Somali carrying weight upto 200kg.

Llamas and alpaca.

Members of the camel family found in central and south America. They carry load upto 40 kg.

Elephants.

They are used in Asia to carry people and heavy loads upto 250kg. In India, they were used to transport people and goods during war in 2500BC.

In Africa they were used in warfare in 270BC.

Water Buffalo.

A member of the cattle family and the only type of buffalo that has been domesticated. The cape buffalo of Africa and the Pygmy buffalo of Philippines have not been domesticated. It is used to pull ploughs and do other heavy work in India and south East Asia.

Reindeer.

A long-horned deer family breed used in the cold parts of Canada, Sweden and Norway for riding and transportation. It also provides milk, meat, hides and horns.

Dogs.

Dog types like Bouriers were used to pull small carts and sledges, especially in the Arctic thus making transportation of gods and people easy. Dogs are also used in guiding blind people in sports and as pets at home.

Advantages of animal transport.

- a) Pack animals can be used in largely inaccessible areas. The Llama, for example is used in the mountainous areas with narrow and meandering paths and steep cliffs. The camel is well adapted for deserts.
- b) Animals are cheap to maintain. They attract very little maintenance costs, since only feeding costs are incurred.
- c) Pack animals are safe as accidents are rare probably because they do not speed..
- d) Animals help to maintain the ecological balance since they do not interfere with the environment.
- e) Pack animals are capable of sensing danger. For example, horses and dogs can sniff out an enemy from a distance. This enhances security as dangerous confrontations with an enemy can easily be avoided.

Disadvantages of animal transport.

- a) Animal transport is slow and tedious. The animals need to feed and drink along the way.
- b) Pack animals may be attacked by wild animals, disease- causing insects such as tsetse-flies and disease.
 - a. Their movement is limited to the day only and cannot travel at night.
 - b. They can only carry small loads as compared to vehicles.
 - c. Some pack animals such as donkey are stubborn when tired and heavily loaded. The camel is only suited for the desert.
 - d. Pack animals use is limited to short distances as they fatigue when they travel for long.

The wheel.

The wheel was invented in sumeria at about 3000bc. By 2500BC, they had invented the spoked wheel used on horse drawn chariots. The chariot was used in Mesopotamia at around 2000BC and later spread to Egypt, Persia, Rome, china, Africa and Europe.

The cart or wagon pulled by humans or animals was the first wheeled vehicle. The wheeled wagons and carts created the need for roads

Today many types of wheels are in use. For example, the steering wheel for cars, turbines for jet engines and gyroscopes used in the automobile pilot technology.

Ways in which invention of the wheel impacted on road transport

- a) More roads were constructed to use wheel vehicles for transport
- b) Road transport became faster and efficient
- c) Bigger loads could be carried hence was cost effective – profitable
- d) It made the use of motor engine driven vehicles possible
- e) It enabled man to move over long distance to disseminated ideas and interact.

Water transport.

Water transport has progressed from early rafts and canoes to the modern large passenger and freight ships.

Rafts.

A raft is a simple floating structure, usually made by tying together floating material like animal skin, papyrus stalks or logs

The earliest people to make rafts were the Australians. They made rafts called catamaran by tying logs together. Long poles were then used to drive the raft.

Rafts however sank easily and required a lot of manpower upstream.

Canoes.

A canoe was a narrow boat that was propelled by one or more paddles. The oldest canoe was made by stripping the bark from trees (bark canoes). Later a new canoe was made from a hollow on a log (dug-out canoe)

In Kenya, canoes are used for transporting people and goods and for fishing in inland lakes and rivers.

Oar-driven boats.

Boats are small vessels for travelling on water and are powered by oars, sails or motor. The Egyptians pioneered in the building of boats that used oars (a short wooden pole with a flat end) instead of paddles in 3000BC. The Phoenicians, Greeks and the Romans developed oar-driven trading vessels and warships.

Sailing ships.

Humankind learned that the wind could move a boat more easily than human beings if the ship had a piece of cloth fixed on poles (sail). The Egyptians used the sailing ships by 3000BC on the Mediterranean and Red seas. The Greeks made sailing ships known as galleys which were used for trade and war. They used war galley known as triremes to defeat the Persians and Phoenicians.

Sailing ships were depending on monsoon winds discovered by Hippalus. The Arabs and Persians relied on the monsoon winds to reach the east African coast.

The Portuguese invented a three-masted ship called a caravel as the one used by Christopher Columbus and other explorers to sail to America and the Far East. The Carrack used by Vasco da Gama was five-masted to sail to east Africa. Ferdinand Magellan became the first person to sail around the world using a Sailing ship

Fast sailing ships called clippers were made in 1840s in America. It was a long and narrow ship with sharp bows and almost straight sides.

However, sailing ships could not sail on windy days and seasons. Some communities however still use sailing ships upto today for sports, fishing and leisure.

By the 12th c AD, the magnetic compass was being used in navigation aid

Factors that led to the development of various forms of transport

- a) technological development during the scientific age which enabled man to invent machines which could be used to manufacture various parts of cars , rails, airplanes, ships and motor boats.
- b) Expansion of geographical knowledge encouraged the development of transport so as to enable man to search new places faster and more safely.
- c) Introduction of specialization as a means of production which necessitated exchange o goods and services which could only be made possible through development of transport and communication.
- d) Population increase hence demands for more food and goods hence the need for essential transport system.
- e) In order to satisfy the desires of man there was need to develop a system of transport that would enable man to get the goods and services he needed so much.

Modern means of transport.

Road transport.

The invention of the wheel stimulated the construction of roads. The Roman soldiers built hard and straight roads all over Europe and North Africa by around 300 BC. The roads were built by digging a trench, 1.5 metres deep which then would be packed with heavy stones or rocks. Rough and fine concrete was added to the foundation, then layers of gravel, chalk and cement. The road surface was slightly convex with deep trenches on the sides. Roman roads declined with the fall of the Roman Empire.

Attempts to build better roads in Europe in the 18th c were made by George Wade (1673- 1748) built 400km of roads and John Metcalfe (1717-1810) built 290km of roads.

However modern road construction is attributed to John McAdam (1756-1836). McAdam laid three layers of small broken stones packed tightly together. He then placed a layer of gravel which was bound together by the weight of a vehicle. These roads were called the flexible road or macadamized road. These roads were straight and had a smooth surface. They were widely used all over the world. They have curved surfaces and had a Good drainage system. They are cheap and durable.

The roads were later improved by adding tar to produce a water proof surface called tarmac. By 1820, Britain had built 200,000km of road.

Advantages of macadamized roads.

- a) They were durable with three layers of small broken stones
- b) They were cheap to construct using stones as the basic material for construction
- c) They had a smooth motoring surface since the gravel layer was bound together by the weight of vehicles
- d) They were straight hence reduced occurrence of accidents
- e) They were easily drained due to their smooth surface and being raised.

The bicycle.

In 1790, a Frenchman, de Divrac made the first bicycle which was pushed with the feet thus called a walkalong.

A German named Baron Karl Drais invented a walkalong called draisine which had a steering bar connected to the front wheel

In 1860, Ernest Michaux, a French locksmith, invented a bicycle with two wheels and pedals attached to the front wheel.

In 1866, Pierre Allement a Frenchman, was given the first patent on a bicycle, boneshaker. It had iron wheels fixed to wooden spokes.

In 1873, a bicycle named a high-wheeler was introduced in England. The first bicycle in England was made by Kirk Patrick Macmillan of Scotland.

James Starley is referred to as the father of the cycle industry. In 1870, he invented the tension spoked wheel in which the rim and the hub were connected by wire spokes.

John Dunlop invented the tyre filled with compressed air in 1888 which replaced the iron tyres and solid rubber tyres.

In 1893, a bicycle with a diamond shaped frame with a roller-chain-drive and a compressed air wheel was invented.

The bicycle is today used all over the world not only for transport, but also for sporting and leisure activities. The advantage of a bicycle is that it easily used on narrow paths and on a fairly level surface. It is also cheap and convenient.

Motor vehicles.

These are self-propelled power-driven land transportation devices used to transport people or goods, especially on land. The device converts fuel into energy to provide the power for the vehicle to move.

The first attempt to power drive devices was the suggestion by a Swiss clergyman J.H Genevois in 1760 that wind springs be used to move wheels on roads.

However the making of an engine that could drive a vehicle is attributed to a French engineer, Nicholas Joseph Cugnot (1725- 1804). He built a three wheeled steam-driven vehicle in 1769, though he abandoned his experiment prematurely.

In 1883, a German, Gottlieb Daimler (1834-1900) produced a high speed petrol engine which he fitted on a wooden cycle in 1885. Karl Benz (1844-1929) fitted the same engine on a w tricycle in the same year.

In 1886, Daimler made the first petrol driven car with four wheels. Benz built the first four wheeled Benz car in 1893. In the same year, an American, Charles Duryea (1862-1938) built the first gasoline powered automobile. The tyres made by Dunlop were fitted on these cars to make them more comfortable.

The first car in the motor industry, *Panhard-Hevassor*, was made by a French company which had bought the rights to use Daimler's engine.

In 1903 in USA Henry Ford founded the Ford Motor Company in Detroit leading to mass production of cars in the world. For example the model T Ford was developed in 1909.

Students read more on the motor vehicle inventions.

Impact of road transport.

- a) Roads have promoted trade within and between countries since goods are transported by road to various markets. This case is true in east Africa.
- b) Road transport has stimulated industrial development as raw materials to factories and manufactured goods to the market are easily transported.
- c) Development of towns and urban centres along roads has been as a result of improved road transport.
- d) Many countries earn a lot of foreign exchange from the sale of motor vehicles. For example Japan, Germany and USA.
- e) Employment opportunities are created as many people work in the motor vehicle industry while others are employed to construct and maintain roads.

Advantages of road transport.

- a) Since it is the commonest mode of transport, it reduces the cost of movement of goods and people as well as promoting social interaction.
- b) It is cheaper compared to other forms of transport. Roads are easier to construct and maintain when compared to railway transport.
- c) It is faster when compared to water and railway transport unless in the case of electric trains.
- d) Roads are flexible and link with other forms of transport such as water, railway and air.

Disadvantages of road transport.

- a) The high number of accidents on roads leads to loss of lives.
- b) Road transport is responsible for pollution which causes environmental degradation.

- c) Due to an increased number of vehicles on roads, traffic congestion is a major concern in most urban cities and towns.
- d) Roads may sometimes inconvenience the users when they become impassable.
- e) The quantity of goods carried is limited as roads cannot carry bulky goods compared to the railway.
- f) The use of roads is limited to specific areas. It cannot go beyond land e.g across the sea or lake.
- g) Construction of all-weather roads is expensive. Developing countries find themselves constrained by limited resources that are needed to construct all-weather roads.

Rail transport.

Railway lines are paths of parallel metal rails that allow a wheeled vehicle to move easily by reducing friction. Initially, they were used in 1800s to guide horse drawn wagons. Later the steam engine replaced horses as the means of transport.

The development of modern railway was a gradual process that started in Britain and Germany with the use of wooden rails.

A British engineer, Richard Trevithick (1771-1833) designed a steam engine that was small enough to be put on a truck. This he fitted on a railway locomotive which he had bought in 1804 to pull a cargo and passenger train in south Wales.

Fenton, Murray and Wood of Leeds built the John Blenkinsopp locomotive in 1812.

William Hedley built the puffing Billy in 1813.

George Stephenson (1781-1845) a coal miner in Newcastle, England invented a locomotive engine called the Blucher which pulled eight laden wagons in 1814. He also built the world's first public railway between Stockton and Darlington near Durham in 1825.

In 1829, Stephenson and his son, Robert, built the most improved engine, the rocket, which had a speed of 48 km per hour. In 1830, he built the Northumbrian and the planet.

In 1825, in the United States, Colonel John Stevens built a tiny experimental locomotive. In 1929, a major railway was built by the Delaware and Hudson Canal Company to serve a coal mine.

Germany and Belgium had railroads by 1835, Russia by 1837, Spain by 1848 and Sweden by 1856.

In 1892, a Germany Rudolf Diesel designed a heavy oil-driven-engine which replaced the steam engine. It was cheaper and efficient

The first diesel railcar was used in 1913 in Sweden. Later diesel engines were replaced with electric engines which was an invention of the Siemens Brothers and John Hopkinson in Britain in 1883. The electric train from Paris to Lyon covers a distance of 212 km in one hour.

Railway transport has remained a major mode of passenger travel. In Europe and Japan, major cities are connected by high speed passenger trains such as the French TGV (Train a' Grange Vitesse) and the Japanese Shinkansen trains travelling at a speed of 300km/h.

Results of railway transport.

- a) It has promoted the movement of people thus leading to increased social and cultural interaction. People can migrate easily in Europe thanks to the faster electric trains.
- b) It has promoted trade as goods, light, heavy or bulky, are transported efficiently to the markets. It also supplements the use of other forms of transport.

- c) It has stimulated industrial development since industrial products and raw materials can now be transported faster and in large quantities.
- d) Railway transport has stimulated the growth of urban centers. In Kenya for example, urban centres like Nairobi, Kisumu, Mombasa and Voi either developed along the railway line or at the terminus.
- e) It has facilitated the spread of religious faiths and political ideas. This was the case in Kenya during the period of missionary work and colonization. In a way railway transport therefore facilitated European occupation of overseas colonies.
- f) There has been a significant improvement in agriculture since agricultural goods are transported more easily and faster using the railway.
- g) It has been a source of employment for many people in maintenance, engine driving etc.
- h) It has facilitated the exploitation of natural resources like mining, fisheries and forestry. The raw materials from these resources are transported faster using the railway.
- i) Railway transport has stimulated economic growth since it is a source of revenue for many governments.

Disadvantages of railway transport.

- a) It is expensive to construct. The wagons are also expensive to buy and maintain.
- b) Railway transport lacks in flexibility. It can only pass through certain landscapes.
- c) Smoke emitted from the trains lead to environmental pollution.
- d) Railway accidents might be rare but when they happen, they are fatal. This was the case in Kenya in 1998 when 200 people lost their lives.
- e) Railway transport is not self sufficient. It has to be supplemented with road transport.

Water transport.

Canal vessels.

A canal is an artificial river that is used to transport people and goods. It may be built to link a river and a lake, sea or a sea with a sea. Apart from transportation, their water may be used in irrigation like in the case of River Nile.

Canals have been used for centuries for transportation. The earliest canal was built by the Europeans nearly 4000 years ago to link the river Nile and the Red sea.

The longest canal, the Grand Canal in China is about 1900km long and it links the Yangtze and Yellow rivers.

Canal building in Europe was pioneered by the Romans who built them for transportation, irrigation and drainage. The Dutch, British and the French also constructed elaborate canals. Canal building in the US began in 1817 and ended in 1825 with the construction of the Erie Canal which is 845 km long connecting Hudson River with Lake Erie. It is now known as the New York State Barge. Up to 1840, 4,800 km of canals had been constructed in USA.

Another type of canals is the ship canals, for example the Suez Canal, Panama Canal and Kiel Canal, which are deeper. The Suez Canal in Egypt is 195 km long and links the Mediterranean Sea with the Red Sea. It was constructed between 1859 and 1869 by a French company under Ferdinand Lesseps. The Kiel Canal links the North Sea and the Baltic Sea. The Panama Canal was built by the USA Government between 1904 and 1914 linking the Pacific and Atlantic oceans. It is the most important canal as it shortened the long and dangerous trip around the southern tip of South Africa.

The St. Lawrence Seaway is the longest and most important inland waterway system in North America. It is 3,800 km long and was completed in 1855 in USA and 1895 in Canada.

Steamships.

Steamships were made after the invention of the steam driven engine. The first attempt to make a steamship was made by Dr. Denis Papin of France when he fitted a steam engine to a boat and sailed along river Fulda in Hanover.

In 1736, Jonathan Hollis of Gloucestershire patented a steam tugboat but it was never tried.

In 1774, Comte J B d'Auxiron of France experimented with a steamboat but also failed like Papin as it broke down.

In 1775, C Perier became the first person to move a small boat powered by steam engine on river Seine in Paris.

The first successful steamboat was built and tried out in 1783 by a Frenchman called Marquis de Jouffrey on River Saone near Lyons in France.

In America, John Fitch built a steamboat in 1787. It was used on river Delaware between Philadelphia and Trenton

In 1809, William Symington and Miller Pat succeeded in constructing a wooden steamship that was used on the Forth-Clyde Canal in southern Scotland.

In 1807, in America, Robert Fulton had invented a double –paddle-wheeled steamboat known as Clermont which began operating on the Hudson River.

In 1807, the phoenix became the first steamship that made regular voyage from Philadelphia to New York.

In 1819, the Savannah became the first ship equipped with a steam engine to cross the Atlantic Ocean.

In 1853, the Peninsular and Oriental Line built the iron-screw steamer, Himalaya, the biggest vessel as at that time.

John Elder invented a compound engine with two cylinders which reduced fuel consumption in steamships.

In 1838, Sirius sailed from London to New York, the Great Western, without using sails crossed the Atlantic in 15 days from Bristol.

In 1839, the Archimedes and the Robert F Stockton were built using Smith's and Ericsson's patent.

The most important ship to cross the Atlantic was the Great Britain built by the Kingdom of Brunei in 1843.

The first USA trans-Atlantic steamers were the Herman and Washington.

The first merchant ship to be all-welded without any rivets in its hull was the MS Fullagar in 1920.

Importance of the discovery and use of the steamship.

- a) Man could no longer depend on nature –wind for power. This made travel by sea easier and more comfortable.
- b) It led to expansion of international trade since transportation became cheap.
- c) Bigger volumes and varieties of goods could be carried including those that required special handling like petrol.
- d) It formed the basis for colonization as colonizers could move to other continents easily.

- e) It increased international migrations and spread of races , cultures, diseases , intermarriages, languages and religion
- f) It led to greater expansion of geographical knowledge. It gave access to countries bordered by sea.
- g) It led to expansion of world economies, industries, trade and commerce.
- h) Spread of plants and animals internationally.

Motor- Driven ships.

With the invention of the internal combustion engine, oil replaced coal. The *Caspian Steamer Wanal* was built in 1903 was the first sizeable ship with an internal combustion engine.

In the 20th c, the use of atomic energy (nuclear power) was developed. The first ship to use atomic power was the Nautilus in 1956. In 1961, an American merchant ship, MV Savannah, propelled by nuclear power was launched.

There are two types of ships based on the service offered;

- a) *The Liners* operate regular scheduled services on defined trade routes charging advertised rates.
- b) *The Tramp* ships carry any suitable cargo between any two points based on a negotiated contract. They have no regular route or timetable.

Modern passenger Liners.

The cruise ship, the most important passenger liner, is a specially designed vessel providing luxurious surroundings and entertainment to passengers. It is about 270 m and carries 2000 passengers.

New passenger Liners were developed after World War II for example the American United States of 1952 and the British Queen Elizabeth 2 of 1969.

The liners were overtaken by the development of the aeroplane and airline transport and only a few remain today.

Freight Vessels.

These are Special Ocean going ships designed for carrying large amounts of cargo.

Containerships transport large metal containers that have been pre-loaded with cargo. Some container ships carry over 6,800 containers.

Military Vessels.

In 1859, the French launched Gloire, the first iron-plated ship. During the American civil war (1861-1865), two iron-plated ships were used.

In world war II, battleships, Aircraft carriers (can carry 85 aircrafts) , cruisers, destroyers, destroyer escorts (frigates), minesweepers, torpedo boats, landing craft and other support vessels were developed.

Hydrofoils and hovercraft.

These are specialized water vessels (*a hydrofoil has small wing-like surfaces called foils attached to the bottom of its hull that lifts the hull out of water when the hydrofoil accelerates. A hovercraft is lifted entirely off the water surface by a cushion of air and are propelled by giant air propellers or by water jets*)

Ferries.

These are vessels used to transport people, animals and vehicles over water in places where bridges would be inconvenient or impossible to build.

Motorboats and personal craft.

These are small boats that are used for recreational purposes with either out boat motors or in boat motors.

Pipeline transport.

This is a form of transport used to move liquids, gases or solid liquid mixtures over long distances. The most common liquid that is transported by pipeline in many countries is water. Others are oil and gas. Pipelines are also used to transport solids suspended in liquids such as coal slurry which consists of powdered coal suspended in water.

Air Transport

This is the fastest form of transport over long distances and continents. Different types of Aircraft exist.

Aeroplane.

An airplane is an aircraft heavier than air that uses wings to obtain lift in order to fly thus transporting people, mail and cargo from place to place. They are also use in warfare.

The development of an aeroplane started in 1783 when a successful manned flight was made in France by two brothers, Jacques and Joseph Montgolfier using a hot air balloon.

Sir George Cayley, an English scholar and inventor, built model Gliders that could sail in the air in the 19th c. Later, Pilcher added wheels to the gliders in order for them to be towed into the air. By 1850, power driven planes were built. An English engineer, John String built and designed power-driven planes. In December 1903, An American astronomer, Samuel Langleys almost won the honour of perfecting the power driven airplanes, by making a full size airplane called the aerodrome. The plane unfortunately crashed in Potomac River before being launched.

On 17th December 1903, two weeks after Langley's failure, the Wright brothers, Orville and Wilbur Wright, produced the first manned power driven aeroplane at Kitty Hawk, North Carolina USA. Their machine was a wooden glider fitted with a petrol engine and two propellers.

In 1906, a Brazilian-born aviation pioneer made the first officially observed European flight in a powered bi-plane.

In 1909, Louis Bleriot of France became the first person to fly a plane across the English Channel in 35.5 minutes.

In 1915, the Germans used the first mono-plane during the First World War.

In 1919, John N. Alcock and Arthur W Brown flew non-stop across the Atlantic from Newfoundland to Ireland.

Later improvements in the plane were replacement of wood and cloth with aluminum and stainless steel, invention of a retractable gear that improved streamlining in planes

By 1920, plane speed had gone up to 303 km /h. in 1940; it was 755 km/h.

The best known aviator in 1920s was Charles Linburgh who accompanied a non-stop flight from New York to Paris in 1927 in his single monoplane called the spirit of Saint Louis in 33 hours.

In 1920, the first scheduled passenger service was made between Amsterdam and England by KLM Dutch Airlines.

In 1930, the first pressurized plane was launched.

The most popular passenger plane at that time was the DC-3 built by Douglas Aircraft Company. It had a capacity of 30 people and moved at a speed of 320 km.

The jet engine.

The jet engine was invented by German engineers in 1939. The first jet powered airplane was the German Heinkel HE-178. The first practical jet fighter was the Lockheed P-8 developed in 1944.

During the post war period, the jet engines were put to commercial use. For example, the Boeing 707 flight which was launched in 1958 in USA. The Boeing 747 Jumbo Jet which entered the market in 1970 can carry 375 passengers, 20 tonnes of freight and move at a speed of 900 km/h.

The Supersonic Loans Port (SST) is designed to fly at speeds of over 1180 km/h. The Russian TU-144 and the French – British Concorde are both SSTs and entered passenger market in 1972.

Helicopters.

It is a type of airplane which obtains its lift from a set of rotor blades rather than fixed wings. The first successful helicopter was made in 1907 when a French helicopter left the ground for a few seconds.

Germany made the first practical helicopter in 1936 while the United States Army unveiled its wartime helicopter in 1942.

Uses of helicopters.

Lighter- than-air-vehicles.

These include balloons relying on hot air and lighter than air gases like helium and hydrogen for lift.

Airships that combine lighter than air gas bags with propellers navigation were initially used for passenger traffic but their usage declined due to several fatal accidents. For example the disaster that befell the German airship, *Hindenburg*, in New Jersey in 1937.

The rocket engine.

Rocket engines use fuel. They carry chemicals which enable them to burn their fuel without air supply. The first rocket engine to be used was by a German manufacturer, Fritz von Opel in 1930. An American, R H Goddard also developed a modern rocket in Massachusetts in the USA.

Factors which encouraged the development of air transport.

- a) The effect of the First World War- it increased demand of war planes-jet fighters and fighter planes flying over 600kph were manufactured.
- b) The arms race and the cold war which also made many countries to acquire many planes.- fear , jealousy and competition based on ideological differences.
- c) Desire for comfort among passengers and the need to transport perishables quickly.
- d) Expansion of international trade and desire for more wealth.
- e) Colonization and international migrations.
- f) The expansion of the tourist industry.
- g) Vast improvement in science and technology and growth of industries.

Results of air transport.

- 1) Air transport is a major global employer. The air transport industry directly generates 5.5 million jobs globally and contributes USD 408 billion to global GDP. It directly contributed USD 1,830 billion to world GDP in 2007 and generated 79 million direct jobs globally – 2.8% of total employment.
- 2) Air transport is an important facilitator of international trade, thereby promoting economic growth and development. Forecasts suggest that the global economy will become even more dependent on trade over the next decade. World trade is expected to nearly double, rising at more than twice the rate of global GDP growth, with China, India and emerging markets leading the way.
- 3) Air transport stimulates Tourism which makes a major contribution to the global economy. The air transport industry plays a major role in supporting tourism. Over 40% of international tourists now travel by air, up from 35% in 1990. At the same time, the WTTC estimates that foreign visitors account for just fewer than 25% of overall tourism spending around the world. This includes spending by business travelers, as well as those on leisure trips or visiting friends and relatives.
- 4) Air transport is a significant tax payer. Unlike other transport modes, the air transport industry directly pays for its own infrastructure costs. The user charges collected by airport operators pay both for the day-to-day services they provide to airlines and their customers, and also for the massive investment in runways, terminals and other infrastructure required for a modern, efficient air transport service. In addition, companies in the air transport industry make significant tax payments to national treasuries.
- 5) Air transport expands the range of consumer choices and opportunities to visit other countries and to experience new cultures.
- 6) Air transport delivers humanitarian aid. Air services play an essential role in humanitarian assistance to countries facing natural disasters, famine and war – through cargo deliveries, refugee transfers or the evacuation of people trapped by natural disasters. They are particularly important in situations where access is a problem – for example, ‘air drops’ are among the first response of aid agencies to stem a humanitarian crisis.
- 7) Air transport also plays a vital role in the rapid delivery of Medical supplies and organs for transplantation worldwide.
- 8) Air transport provides access to remote areas. Air transport provides access to remote areas where other transport modes are limited. Many essential services, such as food deliveries, hospitals, education and post, would not be available for people in such locations without air services. And residents would be isolated from family, friends and business contacts.
- 9) Air transport has improved security as soldiers can be flown to troubled areas. Aeroplanes are also used in espionage
- 10) Air transport has led to improvement f space exploration. Satellites are used to study objects in space such as stars and planets.
- 11) Air transport has promoted international cooperation and understanding. People from different countries can exchange ideas..
- 12) It has provides the fastest means of transport for passengers and goods thus increasing cultural and social exchange.
- 13) Aeroplanes are used to break hail in order to cause rain.

- 14) Plans and other aircraft have added to variety to sporting and entertainment. E.g the staging of fighter plane shows in public holiday celebration.
- 15) Aircraft has revolutionized warfare especially during the Second World War when countries began using planes in warfare.
- 16) International terrorism has been facilitated in the recent past by aeroplanes. Incidents of planes being hijacked are becoming common in the world today.
- 17) Air transport contributes to environmental pollution due to waste discharged by the burning fuel. Jets cause noise pollution.
- 18) Air transport has enhanced agriculture as planes are used to spray and dust insecticides on crops in the case of large scale farming. They are also used in quick delivery of perishable farm produce from horticultural farms.
- 19) Planes assist in fire fighting, inspecting fence lines and power cables and border patrol.
- 20) Aeroplanes are used in making aerial survey in cartography thus improving map making.
- 21) Air transport enhances wildlife management and conservation. Counting of animals by wildlife officers is one used planes.
- 22) In meteorology, air transport has enhanced weather survey.
- 23) Air transport sometimes leads to deaths of many people when fatal accidents occur. For example, the mid-air blow-up of the trans World Airline plane over the Atlantic ocean in July 1996, the 5th may 2007 crashing of a Nairobi –bound KQ 507 moments after leaving Duala international Airport in Cameroon killing 114 passengers.

Space exploration

This is the attempt by scientists to reach the heavenly bodies namely the stars and moon to learn more about them and their importance to man as a whole.

Space age refers to the period in which the exploration of space became possible. It began with the launch of the first artificial satellite in October 1957 by the soviet union- Sputnik.

The first human to go to space was a Russian Major Yuri Gagarin using Vostok I in April 1961. In the same year an American, John Glenn also went to space.

Neil Armstrong, an American Became the first man to land on the moon in July 1969 in his space craft, Apollo II. He was accompanied by Edwin E Aldrin Jr and Michael Collins. Many other have toured the moon since then.

Later on a space shuttle was built. The first space shuttle, Columbia, launched in 1981, carried two American astronauts, John W. Young and Robert L Crpens. In 1983, the space shuttle, challenger released a satellite into space. One of the crew members, Sally K Ride became the first woman astronaut to go to space.

In 1984, Kathryn D Sullivan became the first American woman to walk in space.

By 1988, there were 300 operating satellites in space while 1200 were not functioning.

Challenges facing space exploration.

- a) Deadly hazards like cosmetics and solar radiation and micro meteorites dangerous to space craft.
- b) Hostile natural environment which is unsuitable for human life making it very expensive.
- c) Extreme temperatures and light intensities. Extreme darkness and brightness.

Such difficulties have been overcome through development of new tools and techniques for

space navigation.

Importance of space exploration to man.

- a) Spacecrafts continue to provide information about conditions in space in particular about the weather.
- b) Reports derived from weather satellite can act as warning systems about impending storm.
- c) It helps us to gain more knowledge about our planet earth. e.g. a scientific satellite known as Vanguard 1 sent back pictures, which showed that the earth was slightly pear-shaped.
- d) Communication satellites like the Telstra and Relay have made it possible to send television programmes and telephone calls over much longer distances.
- e) In 1965, the US achieved another momentous feat in space communication. The mariner4 in a deep space probe sent back pictures of mars that were taken as it passed the planet.
- f) Some space exploration offers possibilities without limit. Planets themselves may have metals and other resources that men on earth need.
- g) Information about outer space may make it possible to make rain and make long-range weather forecast more accurately than before.
- h) Some scientists are optimistic that space research might make it possible for human beings to settle on some planets; so far, we are not very definite about this.
- i) Humankind can benefit from medicine prepared under ideal conditions on the planet namely dust free and germ free medicine.
- j) Space exploration enhances technological development.
- k) It facilitates own understanding of the universe.
- l) It leads to improved manufacture of aircrafts, telescope and related machines.
- m) Contributed to development of advanced air force weapons.

Advances in transportation

Africa's first high speed train system, *the Gautrain*, was officially lanced in Johannesburg on 8th June 2010 to connect the cities of Johannesburg and Pretoria with a 160 km/h rail service.

Effects of modern forms of transport.

- a) It has made local and international trade more efficient. Trade in perishable goods such as flowers and vegetables have been expanded thanks to air transport.
- b) Population migration and settlement all over the world has been encouraged using the means of transport.
- c) It has facilitated the quick transfer of technology and ideas as people interact
- d) It has made industries more efficient. Raw materials, industrial workers, and manufactured goods are transported to their destinations cheaply and quickly.
- e) It has promoted tourist industry which is a major foreign exchange earner in many countries. Accessibility to tourist attraction sites has greatly improved.
- f) It has generated employment opportunities to many as road constructors, drivers, pilots and mechanics.
- g) It contributes additional revenue to the government. Countries charge toll fee, license fee and fuel levy.

- h) Air transport enhances space exploration.
- i) Has contributed to the growth of the service sector like banking and insurance.
- j) Transport has promoted humanitarian assistance particularly in disaster situations, e.g distribution of relief food, medical services and evacuations during catastrophes and wars.
- k) It has led to growth of schools and hospitals and social amenities. In Kenya most schools and hospitals are located along transport routes.
- l) It has led to agricultural development. Farmers have been able to increase food production since they can transport farm produce and inputs more efficiently and effectively.
- m) It has stimulated the growth of urban centres. Towns such as London, Nairobi and Harare started off due to their location along transport routes. The towns have also grown due to their transport function.
- n) Transport has enhanced political control in countries. National security has been enhanced due to accessibility of many areas of a nation.
- o) Transport facilitated colonization of Africa and Asian countries. Railway systems helped them to conquer and suppress local resistances to facilitate easy administration.

Negative effects of transport.

- a) Transport systems are responsible for many accidents in world leading to loss of lives. The Mtongwe ferry accident in Kenya claimed 257 lives in 1994; a plane crash in Ngong in 2012 killed the minister for internal security professor George Saitoti and six others.
- b) Transport is responsible for environmental pollution. Different forms of transport emit poisonous gases to the atmosphere. Oil –tankers cause oil spills in the sea s leading to marine pollution.
- c) Unless they complement each other, different forms of transport are unreliable. For example, water and railway transport have to be complemented by road transport.
- d) The growth of international terrorism has been attributed to transport network.

Communication

Definition

This is a Two-way process of reaching mutual understanding, in which participants not only exchange information but also create and share ideas and messages.

Communication includes writing, talking and Non-verbal communication (facial expressions, body posture, or gestures).

Traditional forms of communication.

The methods of communication that were used in the traditional society included;

Gestures

These are signals or body movements intended to pass a message. The person to whom the gesture is directed must know the meaning of the gesture.

It is sometimes referred to as sign language.(a combination of gestures that simulate actions or a sound)



Body language.

Sometimes gestures are used to enhance and emphasize speech. They are used where silence is required yet communication is vital like in operating theatres, and in traffic control.

Verbal communication-language.

This is the commonest form of communication among human beings involving the use of sound (spoken language) in combination with some gestures or alone, to express messages

There are over 6000 distinct languages world today.

Signals.

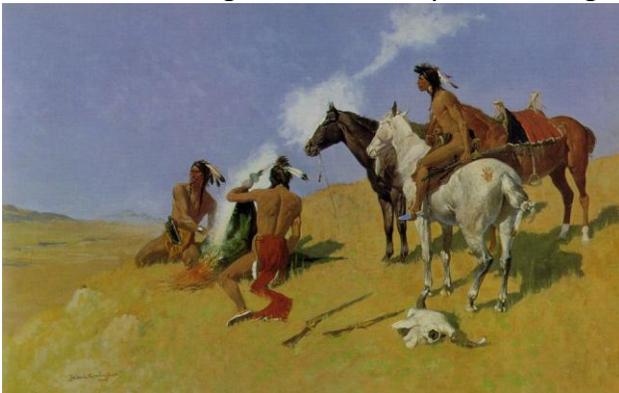
The use plants on the roadsides, the shaving of hair, physical marks on one's body or property are means through which communication is passed to others.

Fire and smoke signals.

Fire and smoke signals were used to send quick and urgent messages. Fire and smoke signals were coded such that strangers could not interpret the message correctly. They were commonly used in warning people of an impending danger.

The Jews used fire signals (torch light) to proclaim their feast days on mount Olives.

Fire and smoke signals were always sent at night.



Advantages of using fire and smoke signals.

- a) Fire and smoke signals Conveyed messages faster than a messenger.
- b) Confidentiality of messages was upheld since the messages were coded and could not be interpreted by strangers.
- c) It was a cheap method of passing a message.

Disadvantages of fire and smoke signals

- a) Messages could not be sent over long distances.
- b) Ranges of messages passed were limited.
- c) It was restricted by weather conditions/smoke is useless in cloudy and misty days. It is difficult to set fire in wet conditions. Smoke could be blown by wind.
- d) It was of little use if no one was on the look out to see and interpret.

Drumbeats.

In drumbeating as a means of communication, each beat was coded for relaying different messages. For example there were different beats for ceremonies, announcing funerals, meetings, declaration of war, arrival of strangers and impending attack. Once the initial beat was heard, the other drummers could pick up the beat in different areas thus spreading the message very quickly.



Advantages of drumbeating.

- a) Drumbeats could relay a wide range of messages-different beats could convey different messages. E.g. death, danger, festivities.
- b) In most cases drum beating could be used at any time both day and night whereas smoke signals could only be used during the day.
- c) Drum beats relayed specific messages whereas smoke relayed general messages.
- d) Drum beats could be used all seasons whereas smoke signals could not be used during certain seasons e.g. when it is raining.”
- e) Drumbeats could convey messages over wide areas.
- f) Messages by drumbeat were conveyed faster compared to smoke signals.

The major disadvantage of drumbeats was that at times it was difficult to differentiate the beats and therefore, the message could not be clearly interpreted thus leading to confusion.

Horn blowing

They were used to make public announcements, summon warriors or invite people to an important meeting. This was done by specialists with different tones that passed different messages thus passing a wide range of messages.

Screams and cries

Screaming was effective mostly on hill or mountain tops because of echoing. There were different ways of screaming in different situations.. Ululations signified feasting or good news like child birth.

Running messengers.

Sometimes there was use of trust worthy runners for very personal and urgent messages. However the accuracy of the message delivered depended on the memory of the messenger.

An Athenian soldier, Phidippides, is remembered in history as a great messenger for covering great distance from Marathon to Athens. Unfortunately, he dropped dead shortly after arrival. The Marathon race is named in his honour.

Messengers are still used to deliver messages today although there has been tremendous improvement after invention of writing.

Disadvantages of using messengers.

- a) Messages could not reach recipients on time since the messengers walked on foot to their destinations.
- b) Messengers sometimes forgot the message they were to deliver thus leading to inaccurate messages being passed.
- c) Information could be distorted in the process. Sometimes wrong messages were delivered.
- d) Messengers could be attacked on the way by wild animals.
- e) The distance to be covered by messengers was limited since they walked on foot. However this problem was overcome with improvements in forms of transport.

Written messages.

The oldest record of writing date back to about 5000years. Different communities use different symbols and alphabets to write messages. The messages were recorded on scrolls, stone tablets parchment (dried animal skin) or paper.

The earliest forms of writing were pictographic and ideographic. Examples of these were the cuneiform of Sumerians and Hieroglyphics of the Egyptians.

Cuneiform Writing

Development of Cuneiform, 3000 B.C.–600 B.C.

| | Meaning of Pictograph | | | | | |
|--|---|---|---|---|---|---|
| | Ear of Barley | Head and Body of Man | Fish | Bird | Bowl of Food | Stream of Water |
| Pictographs c. 3000 B.C. |  |  |  |  |  |  |
| Rotated Position Pictographs c. 2800 B.C. |  |  |  |  |  |  |
| Cuneiform Signs c. 600 B.C. |  |  |  |  |  |  |



“Wedge-Shaped” Writing

Scrolls

Scrolls are rolls of paper which were rolled around rods of wood or ivory for writing on. They were commonly used among the Egyptians, Romans, Asians, Jews, Greek, Hebrews, Chinese and Japanese.

Papyrus Reeds along the Nile were used for making writing material. Pens and brushes were also made from the reeds and the hard part of a feather.

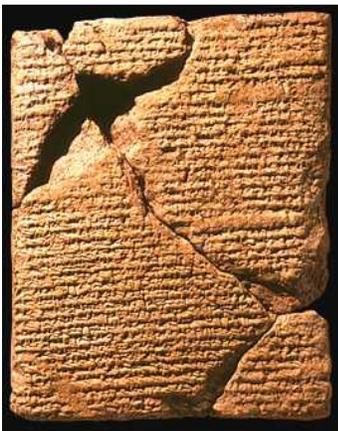
The Hebrews used scrolls for their sacred writings.

Stone Tablets.

The Sumerians wrote on clay tablets. Writing was done on wet clay which, after drying, hardened like a stone and left a permanent impression.. for example, Hammurabi the law giver wrote his laws on stone pillars for all to read and obey. The Ten Commandments were also written on stone tablets.



On the left is a **stela**, which has all 282 of Hammurabi's laws engraved on it. This stela is located in the Louvre Museum in Paris, France.



These tablets have been discovered by **archaeologists** and looked at by **historians**.

Advantages of written messages.

- a) They provided reliable information that was not easily forgotten.
- b) Information was stored in that form for future reference.
- c) Information could be interpreted into different languages so that it could be accessible to many.
- d) The message in most cases was accurate.

Limitations.

- a) They were only limited to literate people.
- b) At times the information could be biased depending on the writers' orientation.

c) Written messages were open to misinterpretation.

Modern means of communication.

Numerous modes of communication have been evolved over time since the time primitive speech was the main means of communication. The modern means of communication include telephone, radio, television, video, cinema, telegraph, telex, electronic mail. Pager etc.

The methods are categorized into telecommunications and print media.

Telecommunications.

This is a term that describes the technology of receiving and sending messages by telephone, radio, television, telegraph, telex, facsimile or e-mail. The message can be verbal, written or pictorial.

There are a wide range of devices in telecommunication through which messages can be sent in a variety of ways. For example.

Telephone.

This a communication device which is used to relay sound waves by converting them into electrical signals and then reconvertng them into sound waves. Telephones carry sound over a distance using electric current.

The history of the invention of telephones starts with the success of a Scottish-born American inventor, teaching speech to deaf children in Boston Massachusetts, Alexander Graham Bell, who built an experimental telegraph which broke down after one day. Bell constructed a transmitter and a receiver for which he received a patent on March 7, 1876. Assisted by Thomas Watson, he discovered that voice can be sent using wires.

Later, Almon Brown Strowger of Kansas City, Missouri, invented the first automatic telephone exchange using electromagnetic switchboard (Strowger Switches) in 1897.

By 1900, long distance service was possible through the use of repeaters (electromagnetic devices placed along the route of the call) which amplified and repeated conversations into the long distance instrument.

Radio transmission later replaced underground and submarine cables for long distance transmission.

In 1877, Graham Bell opened the Bell Telephone Company. In 1900, it was sold to the American Telephone and Telegraph Company (AT&T)

In Kenya, telephone communication was introduced in 1908 and has grown tremendously Cellphones.

A cellular telephony is a type of wireless communication which uses many base stations to divide a service area into multiple cells

The concept of cellular phones began in 1947 when researchers looked at the crude mobile car phones and realized that by using small cells with frequency reuse, they could increase the traffic capacity of mobile phones

Dr Martin Cooper, a former general manager of the systems division at Motorola is considered the inventor of the first modern portable handset. Which he used for the first time in April 1973.

The development of mobile telephony technology was slow in the earlier periods due to the hindrance by the strict federal regulations in USA and Europe. In 1921, the USA mobile Radio

began to operate

In June 1946, the first American Commercial mobile radio telephone service was introduced in Saint Louis, Missouri.

By 1950s, the first telephone equipped cars took to the roads in Stockholm.

In 1964, the Bell system introduced the mobile telephone service.

By 1982, commercial cellular phones were being used in the USA and Tokyo in Japan. By 1987, USA had over 1million cellular telephone subscribers.

Currently, there are many mobile manufacturing companies are now in operation. For example, Nokia, Motorola Inc., Sony, Alcatel, Samsung, Sagem, Siemens, AG, and Sony Ericsson

There are also a number of mobile phone service providers. In Kenya, the main ones are Safaricom, Airtel, Orange and Yu

Standard Features of cellphones

- a) They are used for making and receiving calls.
- b) All have a personal phone book.
- c) They all have the ability to send and receive SMS.
- d) They have the ability to store messages and display and record the telephone number of a caller.

The following features are not standard and vary from phone to phone.

- a) Calculator, clock and calendar.
- b) Access to the internet
- c) Digital camera capability
- d) A variety of ringtones

Limitations of cellphones.

- a) They may be prone to poor reception especially where they are reliant on internal antennas.
- b) Their use is dependent on the availability of electricity. The phone must be recharged after a number of days. In areas where accessibility to electricity is a problem, mobile phones may not be so much in use.
- c) The continuous use of mobile phones has raised fears of possible side effects of radioactive rays on human beings.
- d) Handsets are easily stolen due to their small size.

Television.

The a public broadcasting medium that uses a point to multipoint technology to broadcast to any use within the range of the transmitter

In 1855, the idea of a television was perceived but only came into use in 1922 when a Scot, Loggie Baird, showed how moving images could be transmitted by electromagnetic waves.

In 1931, the cathode ray tube (CRT) was invented in USA. The CRT transforms beams of electrons into visible images on the screen. This led to development of modern television.

The first television broadcasting service was launched in 1936 by BBC.

I 1942, Baird invented the colour transmission.

In Kenya, broadcast television began after a television station was opened in 1970. This was the Voice of Kenya. Kenya was connected to worldwide television via Longonont Satellite Station in 1972.

In 1990, KTN, the second channel was introduced in Kenya
Cable Television.

Cable television, a commercial service that links televisions to a source of many different types of video programming using Coaxial cables, was introduced in Kenya in 1994. The television users with personal satellite dishes can access satellite programming directly without a cable installation.

Recently, the digital television (DTV) was invented. This is the transmission of audio and video of digital signals, in contrast to analog signals

Television is an important means of communication since it is an audio-visual device.

Its importance can be summarized as follows;

- a) It conveys news and information from all over the world more vividly than other means of communication such as radio.
- b) It is a source of entertainment as it shows music and drama programmes.
- c) It is a device that may be used in educational broadcasting. Some educational programmes are broadcast on television. For example, programmes that sensitize people on HIV and AIDS pandemic.
- d) It is used in commercial advertisement by manufacturers and companies thus enabling them to sell their products.
- e) It is the best means of transmitting ideas since it commands attention.
- f) It is a source of employment in the television stations.
- g) Television has enabled humankind to bridge the gap of real-time communication between different time zones in the world.

Disadvantages.

- a) TV can only be viewed where there is electricity. It is expensive to install solar panels in areas where there is no electricity. The car batteries that may be used require constant charging.
- b) Pornographic programmes have eroded cultural values, especially among the youth. Such programmes originate in the west and the youth want to imitate what they see.
- c) Watching violent programmes has created the culture of violence among the youth. For example, watching of wrestling and violent movies.
- d) Some advertisements encourage deviant behavior. For example, advertisements of alcohol and cigarettes.
- e) Watching television can sometimes become addictive in some homes thus limiting the time to participate in other activities.

Radio.

The invention of the radio was a significant development in the electronics industry. In 1864, an English mathematical physicist, clerk Maxwell (1831-1879) suggested that there was the existence of waves.

In 1888, a German, Heinrich Rudolph Hertz, (1857-94) demonstrated the existence of electromagnetic waves (vibrations) that travel through space, which were named after him. These waves could be used in wireless communications.

In 1901, an Italian, Guglielmo Marconi (1874-1937) invented the radio and sent a radio

transmission across the Atlantic from Poldhu in Cornwall to Saint John, Newfoundland, Canada. The radio gained prominence during the World War I as it was used to communicate.

The Marconi Company made the first radio broadcast in Britain in 1920.

The British Broadcasting Company (BBC) was set up in London in 1922.

Kenya's Radio Broadcasts before independence depended on the BBC. The VOK began to air programmes after independence.

In 1990, VOK changed its name to KBC

In 1995, the FM meter Band was launched thus leading to an increase in radio stations

Importance of radio.

- a) Radio is easy to access since people can afford to buy the device.
- b) News and information from the radio is quickly received throughout the country
- c) It can also be accessed by the illiterate people who can listen and understand the radio news if broadcast in the language they can understand.
- d) Radio is used to enhance communication in transport systems like motor vehicles, railway, ships and airplanes.
- e) Radios are sometimes used to broadcast educational programmes and important government communications on issues like health, agriculture and family planning.
- f) The radio is a source of entertainment. E.g through Music and drama programmes.
- g) Radio can be used by manufacturers and companies to advertise their products thus stimulating business.
- h) Radio communication has enhanced space exploration. Radio signals are used to communicate with space vehicles.

Telegraph

This is a device or process by which messages are passed over a distance, especially using radio signals or coded electrical signals.

Telegraph messages are sent by a code in which numbers, letters and punctuation marks are represented by a combination of dashes and dots.

The earliest code to be used was the Morse code which evolved into the international Morse code.

A message sent by a telegraph was called a telegram.

Radio invention made it possible for wireless telegraphy.

Samuel Morse (1791-1892) is credited for the invention of the electric telegraph. In 1837, Morse made the first crude telegraph and by 1844, he successfully sent a telegraph over line.

By 1845, the first public telegraph was operating between Washington and Baltimore.

In 1851, the first telegraph cable was laid under the English Channel between London and Paris.

In 1866, the Trans-Atlantic cable was established.

In 1872, most cities in the world were linked by telegraph.

Disadvantage.

- ~ Communication through the telegraph could be rendered unreliable where accidents and poor weather could cut telegraph cables.

Internet.

This is a computer-based global communication network system that links thousands of computers using telephone lines. Currently Mobile phones are also used in internet

communication.

Internet forms one of the inexpensive and fastest communication means in the world today which has gained popularity..

Internet was introduced in the 1970s. Currently there are over 4000 million users of internet in the world today with its popularity being manifested in the social media networks like facebook, Twitter.

Results of internet.

- a) Education has been developed since research can be done on the internet.
- b) E-commerce can be done on the internet hence enhancing the sale of goods and services.
- c) The running of government operations can be done on the internet since the government may use it for internal communication, distribution of information and automated tax processing.
- d) Internet has led to expansion of Business as people use it to interact with other business people.
- e) Individuals use the internet to communicate through e-mail or other social network platforms such as facebook, Twitter, Skype, etc.

Electronic Mail. (E-mail)

This kind of communication is also reliant on internet. The communication is done using either computer or mobile phones with the help of a modem.

E-mails first came into widespread use in 1990s and has today become a major contributor to business development. It has taken the lead ahead of telephone, fax, radio and television in communication.

Facsimile transceiver (fax)

This is a method of transmitting text over telephone network. A written, printed or pictorial document is scanned then sent and reproduced photographically at the destination. The message /picture is transmitted within 30 seconds

The Fax machine was developed by a german named Arthur Korn in 1902 and was commercialized in 1926.

Telex.

This is system of direct dial teleprinter which uses a keyboard to transmit typed text over telephone lines to similar terminals

Satellites.

A Satellite is a spacecraft or an artificial device orbiting the earth, moon or another planet, transmitting back to earth scientific information. It is launched at a velocity of atleast 28,960 km per hour (escape velocity) to enable it overcome gravitational pull of the earth and thus remain in space.

In 1680, a British Scientist, Isaac Newton, introduced the idea of artificial satellites.

The first message to be transmitted by satellite was the Christmas greeting by President Dwight D Eisenhower of the USA in 1958.

In 1969, the first television pictures were relayed around the earth by satellites from Apollo II astronauts.

In October 1957, USSR sent sputnik I, the first satellite into the orbit. In the same year, the first living passenger, a little dog called Laika, was carried into space by a satellite.

In 1961, a Russian Yuri Gagarin went into space on board of a satellite.

In 1969, an American, Neil Armstrong, in his spacecraft Apollo I, landed on the moon.

In 1981, the US released the first space shuttle which is manned, airplane like craft which orbits the earth.

In 1983, Challenger, the space shuttle, released a satellite into space.

In 1986, an accident occurred on the space shuttle, Challenger, killing seven Astronauts

Pagers/beepers

These are portable communication message devices. In using it, the person sending the message uses a phone and calls a pager number.

The impact of telecommunications today.

- a) Telecommunication has revolutionized communication through enabling faster and easier communication between individuals. This has increased interaction and therefore international understanding.
- b) Telecommunication has enhanced information management e.g the use of computers for information storage and processing and the internet in communication.
- c) Telecommunication devices are also sources of entertainment. Radios and television broadcast music and movies to entertain people.
- d) Telecommunication systems like television bring reality to the viewers by transmitting live pictures.
- e) Telecommunication devices enhance cultural exchange and understanding through showing programmes from other countries. This helps people to appreciate other people's culture and even enrich their own.
- f) Telecommunication systems have promoted water and air transport. Ships at sea and airplanes use these devices to send signals to guide captains and pilots.
- g) Telecommunication systems have made world trade and businesses more effective and efficient. People can quickly place orders for goods and get news of world markets and commodity prices.
- h) Telecommunications has enabled organizations, government institutions and individuals to access information and programmes at their convenience. This has led to effective management and good governance.
- i) Countries have also improved their security systems by using radio and radio calls and mobile tracking systems to combat crimes.
- j) Modern war fare has been revolutionized. Modern weapons depend on telecommunication services that provide accurate and reliable information. For example, satellites are used to guide missiles.
- k) Remote areas are no longer inaccessible thanks to telecommunications. People can communicate using cellphones even from the most remote areas of a country.
- l) Telecommunication systems have promoted space exploration. Man has been able to send spacecraft to the moon, mars and Venus using communication satellites.
- m) Telecommunication is a source of employment in many countries. Many people offer services, operate systems and maintain them.

- n) Governments earn revenue from telecommunication systems. This revenue promotes economic development. For example taxes collected from licensing of service operators, manufacturers of telecommunication systems etc.

Negative attributes to telecommunication.

- a) Telecommunication has promoted international social crimes such as fraud, drug trafficking and terrorism.
- b) Some forms of telecommunication promote immorality among children and the youth in the world through watching of pornographic materials.
- c) Some telecommunication devices cannot be accessed by many people due to the expense of acquisition and installation.
- d) Telecommunication devices have an addictive effect for many users. This affects speed of development in developing countries AS people sit for long hours watching television instead of engaging in productive activities.
- e) Mobile phone users risk suffering from effects of the constant exposure to radioactive rays which may cause certain types of cancer.

Print media.

This refers to all that is printed or written down and published. For example, journals, books, newspapers, magazines etc.

Newspapers.

It is an unbound publication produced at regular intervals and devoted primarily to current events and advertisements

Before printing was invented, the oldest newspaper, *The Siloam Inscription*, (a stone on which news were recorded) was in circulation among the people of Mesopotamia at around 700 BC. The Chinese court journal, *Tsing Pao*, published in Peking in AD 500 was another early form of newspaper.

The Roman Bulletin, *Acta Diurna*, used by Emperor Julius Ceaser from 60BC to post government daily announcements was also an early form of newspaper.

Printing was invented by a german, Johannes Gutenberg, in the 15th century. The first publication, *Strasbourg Relations*, was published in 1609

The London Daily Post also known as the Public Advertiser was published by Henry Woodfall and his son Sampson Woodfall in 18th c.

The London Times was first published as the Daily Universal Register by John Walter in 1785. It changed its name to Times in 1788.

In 1900, C Arthur founded the Daily Express.

The first newspaper in Kenya was the African Standard founded by Alibhai Mallas Jeevanjee, in Mombasa in 1902. It later changed its name to the east African standard in 1905. And moved its operations from Mombasa to Nairobi in 1910. in 1928, Jomo Kenyatta published a local newspaper in Kikuyu, Muigwithania aimed at spreading the views of the Kikuyu central Association and promote kikuyu culture.

The Daily Nation was established by the Aga Khan in 1960

In 1983, the Kenya Times was founded by Hilary Ngweno and later bought by KANU and owned

jointly with a Briton Robert Maxwell

Types of Newspapers.

Daily Newspapers

These print at least one edition every weekday. Some print morning and evening edition when necessary. Examples of daily newspapers include *the Daily Nation, The standard, the Toronto Star and The Los Angeles Times.*

Weekly Newspapers.

These are published once a week. They contain news of interest to people in a smaller area, maybe a city or a neighbourhood. For example the east African in Kenya and the weekly Telegraph in Britain.

Special interest Newspapers.

They concentrate on news of special interest to a particular group for example an ethnic community, a corporation or a trade organization. They can be daily, weekly or monthly.

Periodicals.

These are publications released at regular intervals and containing news, feature articles, poems, fictional stories etc. they also contain photographs and drawings. Periodicals aimed at general audience are called magazines

Periodicals differ from newspapers in that whereas newspapers deal with sometimes daily news and are unbound, periodicals like magazines and journals focus on more specialized material and deal with news in form of summaries or commentaries. They are printed on finer paper with smaller bound pages and issued at a longer interval than a day when compared to newspapers.

Magazines

These are periodical publications with specialized information on particular issues. They are published fortnightly, weekly or monthly

The oldest magazine is Eileen's Oxford Gazette published in 1665, later became the London Gazette.

The first periodical to use the word magazine in its title was the Gentleman Magazine published in 1731 in Britain.

The oldest magazine in Kenya is the Kenya Official Gazette (1900-1963), renamed the Kenya Gazette after independence. Other were the Leader of the British East African Company, Wathimo Mukinyu by Consolata Catholic Missionaries in Nyeri, Tangaza by Harry Thuku, the East African Chronicles and the Colonial times by the Asians

Journals

These are periodicals with a narrower target audience such as scholarly publication. They specialize in particular themes or professions. For example the Review of Political Economy, Canadian Journal of African Affairs, the East African Journal of Social Sciences and the East African Medical Journal.

DEVELOPMENT OF INDUSTRIES

Industry is defined as the skill of making other products from raw materials. It involves extraction and processing into finished products of raw materials

Early Sources of Energy.

Energy is the ability to do work. The following are the early sources of energy that can be identified.

Wood.

Wood developed as a source of energy after the discovery of fire. It was used as follows;

- a) Making fire which provides heat to warm people during cold seasons lighting, to cook roots and roast meat, for hunting(bushfires), tool-making to harden tips, means of communication, food preservation
- b) Charcoal made from wood fuel provided heat that was used for steaming water to provide steam power for steam engines during the industrial revolution.

This is a form of energy still in use today since it is cheaper and easily available.

Wind.

Wind was used to drive sailing ships during the trade between East African Coast and the Far East

Windmills were used in China to grind grain and process foods

They were also used to pump water from polders in Netherlands

Windmills are also used to generate electricity

Windmills are mainly used in areas with fewer trees like in Isiolo, Garissa, Wajir and Mandera

However the use of wind as a source of energy is disadvantaged by its being irregular and inconsistent in direction and strength.

Water.

Water has been harnessed to produce HEP

Water was used to turn wooden propellers (water wheels) which in turn turned grindstones to grind grains into flour.

In England, it was used in the Textile and paper industry to turn spinning machines

In Italy water-powered machines were used to make copper pots, weapons of war, to spin silk and to sharpen various tools

Water also is not reliable as a source of energy since the levels may be too low during dry weather for HEP production.

Uses of metals in Africa

The age of metals in Africa is divided into the Bronze and Iron Age.

Man moved from the Stone Age to the age of metals because metals had the following advantages;

- a) Metallic tools were more durable. They could not break easily.
- b) Cutting edges of metals could be sharpened.
- c) Malleable Metals could be heated and reworked into different usable designs when need arose
- d) Metals are not prone to waste. Broken pieces can be smelted and reworked into useful items. For example a broken spear into an arrow.

The following are examples of metals that were used in Africa.

Gold.

This was the first metal to be used by humankind. It was used in Meroe, Egypt, Wangara in Ghana and in Central Africa.

Gold is malleable and therefore it could be easily moulded into the desired shape without smelting it. Its softness however implied that tools made from gold could bend easily. It was also heavy and could not be found everywhere.

Uses of Gold.

- a) It was used to make ornaments and decorations. In Egypt, it was used to make jewellery like rings, bangles and bracelets.
- b) It was used to make utensils, such as plates, vases and drinking vessels.
- c) It was used to make swords and flint knife handles among the rich in Egypt.
- d) It was used to make coins in Egypt.
- e) It was used as a trade item in East, central and west Africa
- f) It was used to make weapons such as sword and knife blades.
- g) Gold was also a measure of wealth in Egypt.

Copper.

Though quite soft, copper is harder than Gold and could make better tools. The Egyptians were the earliest people to use copper by 3000 BC.

The metal could further be hardened by mixing it with other metals to form alloys during smelting.

Uses of copper.

- a) Making utensils and containers such as pots and pans.
- b) The Egyptians used copper to make axes, tools, Chisels, Pins and fish hooks.
- c) It was used to make ornamental bangles, rings, helmets, needles, wire chains and statues.
- d) It was used as a medium of exchange in the form of copper bars.
- e) It was used to make daggers (weapons).
- f) It was used as a trade commodity. Those with copper exchanged it with other goods that they did not have.
- g) It was used to make alloys like Bronze and Brass.

Bronze.

Bronze is a mixture of copper and tin which makes it harder than copper. It was used during the Bronze Age.

In Africa Bronze was used among the Yoruba, Dahomey and Asante in Nigeria and in Benin. And also in Egypt. Benin was the centre of Bronze.

Uses of Bronze.

- a) Making stronger weapons such as shields, spears, arrowheads, swords and daggers.
- b) Making sculptures and decorations. For example, in Benin it was used to make objects for religious ceremonies, masks and decorating the king's palace. It decorated temples, palaces and pyramids in Egypt.
- c) Making knives, containers, pans and vases.
- d) It was a store of wealth.
- e) It was used to make tools, shields and chariots.

Disadvantages of Bronze.

- a) The tools lost their sharpness and became blunt quickly since the metal was relatively soft.

They required constant sharpening.

- b) Bronze was not cheap. The mixture of copper and tin had to be acquired through trade thus making bronze expensive.
- c) It was difficult to get an appropriate proportion of each of the two metals.

Iron.

Two theories that explain the origin and spread of iron working in Africa are;

- 1) It was first introduced in North Africa from the Middle East by the Phoenicians and the Assyrians, and then spread to west, East Central and South Africa.
- 2) The art of iron working probably developed independently in Africa as evidenced by the Archaeological evidence in Buhaya (the oldest iron age site that existed between 5th and 6th C AD), North-West of Tanzania. The Buhaya iron is associated with the pottery style known as Urewe-ware

The Hittites were the first people to smelt and use iron in around 1500BC. The skill then spread to the Assyrians. The idea then spread to Africa between 400 and 500 BC and became widespread in the Nile Valley.

By 5th c it had spread upto Meroe (the Birmingham of Africa) then to Ethiopia. From Carthage and Tunisia, it spread to West Africa, at Taruga in Nigeria's Jos plateau at around 580BC, then to Lake Chad by 500 AD

Ways in which the iron culture spread in Africa.

- 1) Through wars of conquest e.g. Egypt versus Assyrians where the Assyrians forced the Egyptians to learn to use iron from Meroe to make strong weapons.
- 2) Trade e.g. the Mesopotamians traded with Africans. The North African then traded with the West Africans, thus spreading the iron smelting technology across the Sahara.
- 3) Inter-marriages e.g. Arabs and Africans intermarried and hence a new iron culture and technology developed.
- 4) Through learning and acquiring the technology from neighbors.
- 5) Increased demand for iron tools for agriculture, weapons and iron products increased trade in iron.
- 6) Migrations. E.g. in east Africa where the Bantus and Nilotes arrived from West African region with the iron culture which they introduced to east Africa.
- 7) Travelers and messengers who gave out and received the gifts of iron

Uses of Iron

- a) It was used as medium of exchange. Iron bars were used as currency.
- b) To make agricultural tools such as hoes and pangas this increased food production.
- c) Weapons such as spears and arrows were made of iron, which strengthened some communities while others who lacked the same were easily defeated.
- d) Iron was used as a trade item where those who did not have it acquired it through barter trade.
- e) It was used for storing wealth. Smiths used iron bars as a measure of value.

Effects of iron working.

- a) It promoted empire building. Many kingdoms and empires relied on strong iron, weapons to fight expansionist wars e.g. Egypt, Benin and Mwene Mutapa empires.
- b) It led to migrations especially of the Bantus who were able to protect themselves during the

journeys using iron weapons.

- c) It promoted agriculture since large tracts of land could now be used to produce more food using stronger tools.
- d) Adequate food resulted in population increase and later migration to areas with sparse population.
- e) It resulted in specialization and division of labour as some people became iron smelters while others engaged in other activities like trade.
- f) It stimulated construction and building works using stronger metals like iron. Better houses, temples and bridges were built.
- g) Metal technology also had an impact on religion in that metals began to be used when performing religious rites and in royal palaces e.g. the golden stool among the Asante.
- h) Trading and industrial towns developed within and around the major mining centres like Meroe Axum, in Ghana, in Zimbabwe and in Benin.
- i) Trade was promoted in that sometimes iron was used as currency and others became important items of long distance and regional trade.

INDUSTRIAL REVOLUTION IN EUROPE.

The **Industrial Revolution** was a period from 1750 to 1850 where changes in agriculture, manufacturing, mining, transportation, and technology had a profound effect on the social, economic and cultural conditions of the times. It began in the United Kingdom, and then subsequently spread throughout Western Europe, Northern America, Japan, and eventually the rest of the world.

The industrial revolution in Europe occurred in two phases;

The old phase was from 175-1850 and began in Britain and spread to other European countries like France (1825), Germany (1840), Belgium (1870) and Russia (1890). In USA, it began after the American civil war of 1861 to 1865. In Japan it began in 1900. In Kenya, it is hoped to be done by 2030.

Characteristics of industrial revolution in Europe.

- a) The use of machines to replace human and animal labour.
- b) The use of steam power as a new source of energy to replace water, wind and animal power.
- c) Increased exploitation and use of coal, iron and steel.
- d) The rise of the factory system in towns instead of the cottage industries in homes.
- e) The development of better forms of transport including the use of railways, roads and water.
- f) Improved living standards and an increase in the human population who required more manufactured goods.
- g) The production of goods on large scale. Machines worked faster than human labour.
- h) The development of science and the application of scientific knowledge in production.
- i) There was development of trade as manufactured goods were sold locally and abroad.
- j) The rise of modern capitalism that provided enough wealth which was then invested back into industry.
- k) The growth of trade Union Movements to cater for the rights of industrial workers.

Uses of Various Sources of Energy.

Coal.

This is a compact black or dark brown, carbonaceous rock which is a fuel and source of coke, coal gas and coal tar.

Abraham Darby invented the process by which coal was turned into coke in 1709 thus discovered that coal produced immense heat. Coke was used to smelt iron.

Uses of coal.

- a) To heat water to high temperatures so as to produce steam.
- b) To provide lighting.
- c) To drive steam engines in factories. Some generators depended on coal heat to produce steam.
- d) To drive locomotives. This promoted transport.
- e) It was a raw material in the manufacturing of dye and pharmaceutical products.

Disadvantages of Coal.

- a) It is bulky and transporting it is difficult.
- b) It produced too much smoke when used in locomotives. Also gases released during the burning of coal e.g sulphur dioxide polluted the air and caused acid rain.
- c) Coal was expensive to mine and to transport to the required destination.
- d) Coal mining was risky to miners who often lost their lives when mines collapsed and buried them.

Petroleum.(often referred to as oil)

Before 1850, oil was known to American farmers as a substance that affected food production in farms. It was an American Don, Bissel who carried out an analysis of oil samples at a university lab and established that oil was both a fuel and lubricant.

The use of oil became widespread with the invention of the internal combustion engine by Gotlieb Daimler.

Uses of oil.

- a) To power vehicles, aeroplanes and ships
- b) To generate electricity used in lighting and cooking.
- c) To run engines in industries
- d) Tar (Bitumen), a by-product of petroleum is used to tarmac roads.
- e) Greasing of metals in industries was also done by petroleum by-products such as grease.
- f) Certain petroleum chemicals are used in making of drugs, fertilizers, synthetic fibre and plastics.

Disadvantages of oil

- a) For countries importing oil, it is expensive to transport.
- b) Prospecting for oil is quite expensive.
- c) Oil may also affect the environment, since extracting large quantities of petroleum may cause land to sink.

Steam.

Steam is boiling water turned into gas. It was used for first time around 100 AD in a steam-powered engine developed by a Greek scientist called Hero.

In the 16th century, Thomas Savery, a Briton, built a steam engine which could pump water out

of a coal mine.

In 1712, Thomas Newcomen improved Savery's design, though his design was still ineffective.

In 1764, James Watt improved on Newcomen's engine to make it more effective and by 1800, 320 of Watt's engines were in use in Britain.

In 1801, Richard Trevithick installed one of Watt's engines in a road vehicle. Three years later, he produced a steam-driven locomotive that ran on rails.

In 1830, George Stephenson improved on Trevithick's work and invented the first steam locomotive, the rocket.

In all these engines, coal was used to produce steam.

Uses of steam.

- a) It was used to drive heavy machinery in factories and to turn turbines that generated power for industrial use, e.g. driving, spinning and weaving machines.
- b) It was used for pumping water out of coal mines.
- c) It was used in steam-powered locomotives and ships.
- d) The massive temple doors in Egypt were only opened using steam.

Electricity.

Electricity was discovered by an English Scientist called Michael Faraday (1791-1861) in 1831 when he invented the electric Dynamo.

His principle of electromagnetic induction was the beginning of both the dynamo and the electric Motor. The energy used energy from coal, oil, steam or water to produce electricity. The use of electricity became widespread from 1900.

Uses of electricity.

- a) Lighting.
- b) Heating and cooking.
- c) Powering machines in factories.
- d) Communication. Electric signals are used in communication gadgets.
- e) Powering transport vehicles such as electric trains and electric cars.

Disadvantages of electricity.

- a) It can be dangerous if not properly installed or used.
- b) The generation and distribution of electricity is very expensive thus making its use limited to fewer people in developing countries.

Other sources of energy.

Atomic energy.

In 1896, A French physicist, Antoine Henri Becquerel (1852-1903), discovered that uranium produces radiation or energy in waves. (Radioactivity). This was the birth of the development of Atomic energy.

In 1938, Hahn and Strassman discovered the process of Atomic fusion which leads to production of Atomic energy.

In 1942, a group of scientists led by Enrico-Fermi at the university of Chicago, USA, built the first Nuclear research Station which resulted in the invention of the nuclear reactor and later the discovery of an Atomic Bomb like one which was used Hiroshima and Nagasaki in 1945.

In Belgium and France, 60% of the electricity is produced from atomic power

However, atomic energy when used in war can be very fatal
Radioactivity also endangers both animal and plant life.

Polluted air, where radioactivity has taken place causes fever, diarrhea and death. For example the radioaction accident in 1985 at Three Mile Island in the USA and at Chernobyl near Kiev in Ukraine in 1986 had fatal consequences.

Solar Energy.

It is obtained directly from the sun and is used to dry firewood, clothes and to cook food.

In 1714, Antoine Lavoisier made a solar furnace which could melt metals.

An engine using solar power was used to run a printing press in Paris in 1880.

The use of solar water heaters was widespread in USA by 1900.

In 1954, the first solar cell which turned sunlight into electricity was made. The energy was then used to heat water and generate electricity.

Uses of Solar energy.

- a) Drying agricultural products.
- b) Distilling of salty water to get salt crystals.
- c) Heating water in homes and industry
- d) Heating and lighting buildings
- e) Cooking using solar cookers
- f) Irrigating using solar water pumps,
- g) Powering satellites in space.

Advantages of solar energy.

- a) It is clean and is available in places where sunlight is readily available.
- b) It is natural and therefore free, non-pollutant and inexhaustible source of energy.

Iron and steel

Iron was not really a source of energy but the industrial revolution was dependant on the availability of iron

Uses of iron.

- a) Production of machines for textile industry. Water pipes and ploughs were made of iron.
- b) Production of steam engines.
- c) Building of trains, railway lines ships, wheels, bridges and coach frames.

In an attempt to overcome the disadvantages of iron (it was too heavy and could rust easily), in 1856, an Englishman, Henry Bessemer produced steel out of Iron and Carbon. (Steel is an alloy of iron and Carbon and is lighter, flexible, stronger and harder than iron)

Stainless steel, commonly used in cutlery is an alloy of Steel and Chromium.

Uses of steel.

- a) The construction of rail lines, bridges, cars and ships.
- b) The manufacturing of machinery especially in the agricultural and industrial sector.
- c) Reinforcement of concrete in buildings and roofing houses.
- d) Making of containers and utensils.

INDUSTRIALIZATION IN BRITAIN.

This change, which occurred between 1750 and 1830, happened because conditions were perfect in Britain for the Industrial Revolution. The transformation was facilitated by the following factors;

- a) Availability of coal and iron ore which served as a basis for heavy industries. Coal was a source of energy for use in the industries. Iron was used in the manufacture of machinery.
- b) The agrarian revolution ensured that important raw materials were available for the industries and also made food more available for the many factory centres
- c) Existence of a large population which provided steady internal market for the manufactured goods/domestic local markets. There was also Availability of external markets in her colonies for the industrial produce.
- d) Existence of cottage industries which acted as a base for industrial take-off in Britain. It was easier to turn to mass production of goods on the basis of the small scale production in cottage industries.
- e) Due to the enclosure act, many peasants became available to offer unskilled labour especially following their displacement from the rural areas.
- f) Political stability and strong leadership that existed at the time created a conducive environment for investments when compared to other European countries.
- g) Well developed transport and communication network e.g railway, canals, bridges, harbours and roads which promoted industrialization.
- h) Existence of good banking and insurance systems which gave financial help and security to the industries.
- i) Britain had a strong navy that guarded her trade routes thus protecting her merchants from foreign competition.
- j) Policy of free trade encouraged industrialization/ existence of the merchant and middle class who formed pressure groups that forced the government to adopt measures favoring their industries. Britain had no internal customs barrier to hurt her industrial growth.
- k) Availability of wealth/capital that stimulated industrial revolution. Britain had accumulated a lot of wealth from her trade with other countries and her colonies in America and Africa. e.g. The steam engine was made in Britain by a wealthy Briton.
- l) Availability of industrial raw materials in her vast colonies.

INDUSTRIALIZATION IN CONTINENTAL EUROPE.

The Industrial Revolution on Continental Europe came a little later than in Great Britain.

Reasons why other European countries delayed in the industrialization process.

- a) The political upheavals in France, Germany and Italy were responsible for the delay in the take-off of industrialization.
- b) The existence of a feudal economy in which the peasant farmers could not afford to buy industrial goods nor raise capital to invest in industry.
- c) The system of farming implied that inadequate raw materials came from the farms thus making it difficult for industrial development.
- d) Their system of transport was not developed.
- e) Unlike Britain, these countries did not have an enterprising class of people and scientists ready to take up the task of industrial investment and invention.

Factors that led to industrial development in continental Europe.

- a) Political stability and strong leadership that followed the unification of Italy and Germany and end of Napoleonic rule in France created a conducive environment for investments when compared to other European countries. Feudalism was also abolished.

- b) The agrarian revolution that had taken place in continental Europe ensured that the countries had raw materials for their industries. Other strategic raw materials like coal and iron were readily available.
- c) There was adequate capital from the rich traders who willingly invested in industry. Britain also gave loans to the European countries to industrialize.
- d) Existence of good banking and insurance systems which gave financial help and security to the industries.
- e) Existence of a large population which provided both skilled and unskilled labour required by the industries.
- f) The European governments supported the industrial ventures that were aimed at enhancing economic development. French and Germany governments gave tax concessions and subsidies to encourage industrialization.
- g) Existence of a steady internal and external market for the manufactured goods/there was a high European population that consumed most goods locally.
- h) Well developed transport and communication network e.g better roads, railway and water transport which meant that industrial workers, raw materials and finished goods could be transported easily.
- i) Countries in continental Europe had vast sources of energy such as coal, steam power and electricity which enhanced industrial development.
- j) The development of new skills in science and technology facilitated industrial growth. Some European countries like France and Germany sent their people to Britain to acquire skills and ideas in science and also invited English technicians to their countries.

Effects of the industrial revolution in Europe.

- a) *Creation of employment opportunities.* Ordinary working people found increased opportunities for employment in the new mills and factories.
- b) *Emergence of Factories and urbanization.* Industrialization led to the creation of the factory system was largely responsible for the rise of the modern city, as large numbers of workers migrated into the cities in search of employment in the factories.
- c) *Improved Standards of living.* Living conditions and health care improved during the 19th century. The famines that troubled rural areas did not happen in industrial areas.
- d) *Population increase.* As living conditions and health care improved during the 19th century, Europe's population doubled every 50 years. Infant mortality reduced.
- e) *Local and international trade developed.* Manufactured goods were sold locally while others were exported to America. The industries also created market for raw materials from Africa and Asia.
- f) *European economies became diversified as a result of industrial growth.* This led to specialization e.g. traders, bankers, mechanics and agriculturalists.
- g) Development and use of machinery in agriculture led to increased production
- h) *Improvement in Transportation and technology.* The expansion of business and factories expanded Canals, highways and railways were expanded.
- i) Large scale production of a wide range of goods. new methods of farming , such as the use of fertilizers and new crop breeds were developed

- j) *The industrial revolution promoted development of science and technology.* There was increased utilization of knowledge in production of goods as well as scientific inventions such as invention of electricity.
- k) *The emergence of trade union movement.* The Industrial Revolution concentrated labour into mills, factories and mines, thus facilitating the organization of *combinations* or trade unions to help advance the interests of working people.
- l) Eventually *effective political organization* for working people was achieved through the trades unions who began to support socialist political parties that later merged to become the British Labour Party.
- m) It led to Political corruption - the amount of money generated by the Industrial Revolution created a class of super rich who could buy any politician or process.
- n) *Environmental damage* - there were few if any rules regarding how resources could be removed and used. The air was horribly polluted from factories, as was the soil and rivers.
- o) There was increased exploitation of natural resources in Europe during the revolution. Iron, coal and steel production increased.
- p) *Industrial revolution was accompanied with economic Exploitation of people.* While jobs were created, sometimes the jobs were dangerous and people died. Harsh working conditions, Child labour, dirty living conditions, and long working hours were prevalent.
- q) *Rise of unemployment.* The rapid industrialization cost many craft workers their jobs. Many weavers found themselves suddenly unemployed since they could no longer compete with machines to produce cloth.
- r) The industrial revolution was responsible for the scramble and partition of Africa. The colonies produced raw materials for industries in Europe and also acted as markets for goods processed in Europe. For this reason, many European nations sought to have as many colonies as possible.

The scientific Revolution.

Science is the systematic study of the nature and behaviour of the material and physical universe based on observation

The **scientific revolution** refers to the history of science in the early modern period, where sudden development in mathematics, physics, astronomy, biology, medicine and chemistry transformed views of society and nature.

Causes of scientific revolution.

- a) *Discovery of the New World.* Exploration/conquest leading to discovery of new plant/animal life. Traditional link between navigation and astronomy + great advances made by Portuguese navigators fueled an interest in learning more about the stars
- b) *Invention of the Printing Press.* Allowed for rapid dissemination of scientific knowledge. Numerous books and newsletters were in circulation keeping people informed of science
- c) *Rivalry among Nation-States.* Constant warfare among nation-states pushed for scientific development by placing an importance on technology, or applied science. Powerful leaders of nation-states funded scientific development.
- d) *Renaissance / birth of knowledge.* During this period, Human interest in the classical world increased. Renaissance time made people to develop interest in research/ learning.

- e) The need to solve their daily life problems like shortages, disease etc. necessity is the mother of all inventions.
- f) *Financial support for governments and individuals.* Governments and individuals financed scientific research.
- g) Religion failed to answer all questions. This sometimes betrayed man's belief in supernatural power thus emphasizing research.

Scientific inventions.

Scientific inventions have roots in the ancient civilization in Egypt, Mesopotamia, Greece, China and India. Early inventions were witnessed in the field of medicine, astronomy, agriculture, medicine and mathematics as follows;

- a) The Egyptians discovered geometry which they used on farms. They discovered dead body preservation method (mummification). Build pyramids for their pharaohs using knowledge in mathematics.
- b) Greeks like Pythagoras contributed to mathematics, especially the right angled triangle as early as 200BC, Euclid did some work in geometry. Archimedes discovered how the lever works. Ptolemy is remembered for geographical work especially production of the Atlas.
- c) The Chinese made cloth from silk and developed acupuncture skills. They invented paper making in 70 AD. They made gunpowder and the calendar.
- d) The Indians invented the decimal system in mathematics.
- e) The Muslim Arabs developed the art of architecture as evidenced by the construction of unique mosques.

| Period | Inventor and invention |
|------------------|--|
| 1473-1543 | Nicolas Copernicus a polish astronomer. He discovered that Celestial bodies possess uniform, circular motion around a central point. |
| 1564 - 1642 | Galileo Galilei. In 1609 the Italian mathematician invented the telescope and observed the universe. He accepted Copernican astronomy and the implicit necessity of a 'new' physics to replace Aristotelian mechanics. |
| 1571 - 1630 | Johannes Kepler. Used Brahe's data to confirm that the sun was the center of the universe and the earth and other planets revolved around it. |
| 1642 - 1727 | Sir Isaac Newton). He explained theories of motion and inertia with the force of gravity. Newton also described the composition of light. |
| 1743-1794 | Antoine Lavoisier, a Frenchman. He showed that air was made of hydrogen and oxygen elements. He stated that chemical substances comprised different elements. |
| 1766-1844 | John Dalton, an English Teacher was the founder of modern chemistry and is famous for the atomic theory <i>"all matter is made up of tiny particles called atoms."</i> |
| 1706-1790 | Benjamin Franklin (USA) he stated that lightning was a form of electricity. He came up with the theory of electricity and invented the lightning rod. |
| 1791 - 1867 | Michael Faraday creates the electric motor, and develops an understanding of electromagnetic induction, which provides evidence that electricity and magnetism are related. In 1831, he invented the electric dynamo, a machine which produced electricity from a magnet. |
| 1799 - 1878 | Joseph Henry's research on electromagnetic induction is performed at the same time as Faraday's. He constructs the first motor; his work with electromagnets leads directly to the development of the telegraph. |

| | |
|--------------------|--|
| 1831-1979 | James Clerk Maxwell pointed out that acceleration of electric charges emitted electromagnetic radiation. The ideas underlying Maxwell's theories of electromagnetism describe the propagation of light waves in a vacuum. |
| 1787-1854 | . In 1827, George Simon Ohm determined that the current that flows through a wire is proportional to its cross sectional area and inversely proportional to its length or Ohm's law. |
| 1876 | Nicolaus Otto , A German traveling salesman named constructed the first practical internal combustion engine; it used a four stroke cycle of a piston to draw a fuel-air mixture into a cylinder, compress it, mechanically capture energy after ignition, and expel the exhaust before beginning the cycle anew. |
| 1847-1869 | Alexander Graham Bell, In 1876, at the age of 29, invented his telephone. |
| 1701 | Tull, Jethro invented a horse-drawn seed drill. |
| 1764 | Water frame invented by Richard Arkwright - the first powered textile machine. |
| 1888-1946 | John Logie Baird is remembered as the inventor of mechanical television (an earlier version of television). Baird also patented inventions related to radar and fiber optics. |
| 1755 | Robert Bakewell produces Leicester sheep through selective breeding methods. In 1769, Bakewell breeds Longhorn cattle through selective breeding |
| 1786 | Andrew Meikle, a Scottish engineer, develops threshing machine |
| 1831 | Cyrus McCormick invents the first commercially successful horse-drawn reaper for harvesting wheat |
| 1837 | John Deere develops and manufactures the first commercially successful cast-steel plough |
| 1831 – 1860s | John Fowler pioneers the use of engines for ploughing and drainage channels |
| 1879 | Anna Baldwin patents a milking machine—a vacuum device connected to a hand pump—to replace hand milking. Invention receives a patent but not commercially successful. |
| 1842 | The first grain elevator is built by Joseph Dart in the U.S. |
| 1850 | Edward Quincy invents the corn picker |
| 1764 | Spinning jenny invented by James Hargreaves - the first machine to improve upon the spinning wheel. |
| 1733 | Flying shuttle invented by John Kay - an improvement to looms that enabled weavers to weave faster. |
| 1779 | Crompton invented the spinning mule that allowed for greater control over the weaving process. |
| 1785 | Cartwright patented the power loom. It was improved upon by William Horrocks, known for his invention of the variable speed batton in 1813. |
| 1847 -1931 | Thomas Alva Edison is Most famous for his invention of the electric incandescent light bulb. |
| 1853 - 1937 | Elihu Thomson . His experiments eventually led to the adoption of alternating current technology. |
| 1913 | Robert Adler . He is Most famous for his invention of the wireless TV remote control. |
| 1856 -1943 | Nikola Tesla is Recognized as one of the outstanding pioneers in the electric power field |
| 1765-1825 | Eli Whitney invented the cotton gin in 1794. The cotton gin is a machine that separates seeds, hulls and other unwanted materials from cotton after it has been picked. |
| 1895 | Wilhelm Röntgen discovers x rays. |
| 1898 | Marie and Pierre Curie separate radioactive elements. |
| 1898 | Joseph Thompson measures the electron, and puts forth his "plum-pudding" model of the atom - that the atom is a slightly positive sphere with small, raisin-like negative electrons inside. |

Impact of scientific inventions

Impact of scientific inventions on agriculture

a) Food production has been increased thanks to the use of farm machinery, fertilizers, pest

and control methods and scientific breeding. Hybrid seeds have been developed together with new animal breeds.

- b) Scientific inventions have stimulated scientific research in the field of agriculture. This is done in schools, agricultural institutes and colleges.
- c) Farming of perishable foods has been made possible due to invention of preservation methods for foods like canning and refrigeration.
- d) Increased food production has led to increase in population. There is increased food security. There is also increased trade.
- e) Biotechnology has contributed to diversification of agriculture leading to greater crop and animal production.
- f) Farming has been revolutionized from small-scale subsistence farming to large –scale economic activity due to mechanization on farms

Negative impacts of scientific inventions on agriculture.

- a) The consumption of chemically –treated and stored food has raised concern for food related disease such as cancer and heart diseases
- b) Use of pesticides and fertilizers sometimes poses the challenges of cost. Some pesticides are toxic and therefore harmful to humans and animals.
- c) Consistence use of fertilizers impoverishes the soil fertility. The more the fertilizer is used the more the soil becomes infertile.
- d) Traditional crops are being threatened by biotechnology and development of hybrids.

Impact of scientific inventions on industry.

- a) Large quantities of goods can be produced due to scientific inventions. This has led to enjoyment of economies of scale.
- b) Efficient sources of energy necessary for industrial production have been developed. New forms of energy such as nuclear, solar and electricity have been invented.
- c) Improvements in transport and communication have stimulated industrial development. Movement of labour, raw materials and manufactured goods is efficient.
- d) There has been increased exploitation of resources like factories, fisheries, minerals etc as factories yearn for raw materials due to increased production.
- e) The large scale manufacture of goods has led to growth of trade. This in turn has created wealth for industrialized nations.
- f) Space exploration has been enhanced through science. Satellites are used in photographing of the earth’s surface and in weather research.
- g) Science has revolutionized military technology. Dangerous weapons have been manufactured.
- h) There is faster dissemination and spread of ideas or knowledge and skills due to development of printing press, and internet development.
- i) Industries have created job opportunities. Exploitation of mineral deposits has created employment.

Negative impact of scientific inventions on industry.

- a) Scientific inventions in industry have led to industrial wastes and pollutants that contribute to environmental pollution. Smoke pollutes the air, machines cause noise pollution etc.

- b) Human life has suffered unnecessarily due to development of war weapons and accidents on roads and aeroplanes.
- c) Many people have been rendered unemployed due to development of machines.

Impact of scientific inventions on medicine

- a) Discovery of various medicines to treat both animals and human diseases has boosted both curative and preventive measures in promoting health.
- b) Improved nutrition has reduced the number of disease that kills man. Population has there increased as a result of reduced death rate.
- c) Proper diagnosis of disease is now possible with the use of x-rays and other modern scientific methods. With accurate diagnosis, proper treatment can be given.
- d) The manufacture of various drugs has been facilitated by scientific discoveries. Many companies produce drugs that prevent and cure diseases.

Factors undermining scientific revolution in third world countries.

- a) Lack of enough funds for scientific research.
- b) High level of ignorance and illiteracy.
- c) The educational systems do not allow for development of inquisitive mind and development of interest in science. The system is not science oriented.
- d) The brain –drain; the few specialized scientists have migrated to areas with greener pastures like Europe and America.
- e) There is too much dependence on developed countries for nearly everything manufactured or scientifically produced.
- f) Lack of adequate support from the government. This is clear in the type of budgetary allocations to scientific research.

Measures that can be undertaken to promote scientific research in third world countries.

- a) Putting emphasis on the teaching of sciences in schools.
- b) Making available financial resources for scientific research.
- c) Emphasizing on competitions and congresses in schools and colleges.
- d) The government of Kenya has set up research institutions and centres of science and technology.
- e) Scientists have been trained locally and abroad on new knowledge in science and technology.
- f) International cooperation conferences in science, which bring scientists together, are organized and attended by Kenyan scientists.

Emergence of selected world industrial powers

United States of America.

This is the third largest nation in the world after Canada and China

Industrialization of the USA began in the mid 19th c and she had emerged as a major industrial power by mid 20th c. USA remains the only superpower in the world after collapse of USSR in 1990.

Factors influencing the industrialization of USA.

- a) Abundance of natural resources like iron ore, oil from the oilfields of Texas, copper and coal. There were also agricultural raw materials like cotton, corn, wheat and Tobacco plus

forest resources which boosted industrial development.

- b) Good transport and communication. The USA government developed transport systems in the country. For example railway (opened in 1869), roads, and water transport. Electronic communication was also developed.
- c) Availability of both skilled and unskilled labour some of which came from the immigrant population. The American system of education gave room for acquisition of necessary skills.
- d) There were scientific and technological advances to support the industrial process especially by the Europeans who moved to USA. The education system also promoted research which further boosted industrialization.
- e) Foreign investments in the 19th c from countries like Britain led to industrial development.
- f) The high American population was a source of domestic market for her industrial products. Her high quality products were also on high demand outside America.
- g) Enterprising citizens. The Americans were ready to venture into business. Some had good managerial skills. For example John Rockefeller ventured in the petroleum sector, Andrew Carnegie and James Hill in the steel and iron industry. Henry Ford in the mass production of cars.
- h) Long periods of political stability since her independence assured investors of security and thus paving way for industrialization.
- i) Availability of sources of energy like coal, petroleum, gas and HEP and later Atomic energy.
- j) The capitalism policy encouraged both local and external investors since it allowed private ownership of property.
- k) Government support. President Franklin Delano Roosevelt (1933-1945) and Woodrow Wilson (1913-1921) provided capital to develop transport systems.
- l) The 1st and 2nd World wars. During the war period, European nations were unable to produce goods since they were busy fighting. This enabled USA to expand her market as she initially kept away from the war.

Germany.

The unification of Germany took place in 1871 after which she began to emerge as an industrial power.

Emergence of Germany as an industrial power was aided as by the following factors.

- a) Establishment of the customs union, Zollverein. This linked the German states and removed trade barriers hence leading to free trade and economic growth in Germany. Transportation of goods and communication was eased by the customs union.
- b) Germany was rich in coal which was an important source of energy for the industries. HEP and Atomic energy was also produced to boost industrialization.
- c) Abundance of natural resources like water and minerals like iron ore from Alsace and Lorraine, coal, oil and copper which were vital industrial raw materials.
- d) The large German population was a source of both skilled and unskilled labour. The system of education also ensured availability of skilled labourers.
- e) There was also a large domestic market from the large population. Her products were also on high demand from the rest of Europe. For example, her vehicles (Volkswagen, BMW and Mercedes Benz)

- f) Existence of good transport and communication networks of roads, railway and waterways. This ensured easy transportation of raw materials to factories and finished goods from industries to the market.
- g) Existence of long periods of political instability in Germany after unification in 1871 under the leadership of Otto Von Bismarck which ensured investor security.
- h) The availability of finance for industrial growth from the rich German citizens and from loans granted by USA in 1924. The Marshall Plan after 1945 was another source of finance.
- i) The existence of a hard working and enterprising people in Germany. For example, Krupp Meyer Thyssen who promoted the development of industries in steel. Egells and Harkoft Borsig made great contributions in the field of machinery.

Germany's industrialization was however interrupted during the two world war periods. At the end of world war Germany was able to recover and progress in industrial development. Factors which enabled Germany to recover after world war two.

- a) West Germany still had a high population which was an important resource in terms of labour. There were also a high number of immigrants from European countries like Turkey and Italy.
- b) The USA Marshall Plan ensured that the required finance was available to assist her industries.
- c) Germany industries were not totally destroyed by the two wars.
- d) Industrial unrests were not very common in Germany, and therefore, industrialization was not interrupted.
- e) Good leadership accelerated the industrialization process. Between 1949 and 1955, Germany Chancellor Konrad Adenauer proved to be an able leader who encouraged industrial growth.

Japan.

Japan is a nation that has achieved a great deal in industrialization. In the 18th c, Japan was faced with civil wars. Later she made contacts with the west, through which her leaders realized that industrialization could strengthen Japan as a nation. Great strides towards industrialization were made during the reign of Emperor Meiji from 1896.

Factors that enabled Japan to emerge as an industrial power.

1. She had enterprising citizens who were hard working and determined. They are always ready to undertake risks in business. The national motto 'just in time' confirms their efficiency.
2. The Long period of political stability especially after World War II has promoted industrialization.
3. The role played by America in financing the industrialization process in Japan as a means of preventing her from falling under the influence of communists after world war II. This enabled Japan to build many industries in the post war period.
4. Japan is a country whose industrial growth has never been slowed down by industrial disputes. The Japanese work for life. When one is employed in Japan, they put the interest of the employer first. This therefore reduces industrial disputes.
5. The Japanese goods are always of high quality and affordable. For example the vehicles,

thus ensuring a steady market both local and international.

6. The Japanese education system is technically oriented ensuring production of skilled. Unskilled manpower has been made availability thanks to the abolition of the policy of feudalism that enabled labourers to move from the farms to the industries.
7. Japan has a well developed transport and communication network of railway, roads, water transport, large airports and electric trains. This has enabled improved transportation of raw materials to factories and manufactured goods to markets
8. Existence of an industrial base. Before World War II, Japan had already attained a certain level of industrial development. Many industries were not completely destroyed during the war period. The industries were repaired after the war.
9. Japan has a highly developed renewable hydro-electric power given the existence of large and fast flowing rivers.
10. The government invited expatriates and deployed them to local industries. In 1870, a group of 100 Japanese were sent out to western European factories to learn.
11. Geographical factors. The country's terrain did not favour agriculture thus making industrialization the best option to improve her economy.
12. The open investment policy encouraged the west to invest in her industrialization. The government encouraged foreign industrialists to plough back their capital and resources into the Japanese economy.

Industrialization in the third world countries.

The term 'Third world' refers to developing nations of Africa, Asia and South America.

Most of them are former colonies of European powers and their resources were used to develop the mother countries during the colonial period.

Reasons why many developing countries have lagged behind in industrialization.

- a) Long periods of colonization relegated them to the role of suppliers of raw materials and as markets for industrial goods from developed nations at the expense of their own industries.
- b) Poor transport and communication systems has undermined industrialization since raw materials and manufactured goods cannot be transported to their various destinations.
- c) Inadequate capital. Most of the third world countries have poor agricultural-based economies which cannot support meaningful industrialization.
- d) Poor technology. The use of appropriate technology in third world countries is lagging behind and this hampers exploitation of natural resources and manufacturing of goods.
- e) Many developing countries face stiff competition from the industrialized nations that produce high quality products and have an advanced marketing system for their goods.
- f) High levels of illiteracy among majority of the population in developing countries leads to lack of technical and scientific skills necessary for industrial take –off.
- g) The protectionist policies adopted by developing countries have discouraged private enterprises and foreign investment. Policies like nationalization and imposition of import duties discourage investors in many countries.
- h) High levels of poverty in third world countries mean low domestic market. Governments also spent most of their resources to provide for the basic needs of their citizens at the expense of industrialization.
- i) Many third world countries have been faced with political instability problem. This has

hampered industrialization. There are numerous civil wars or cross-border conflicts in many countries.

- j) Third world countries often poor disaster management strategies. The devastating effects of natural disasters affect industrialization.
- k) Lack of skilled personnel. Many well trained people migrate to the developed nations in search of well paying jobs.

Since independence however, some have made tremendous effort to industrialize. For example South Africa, Brazil and India.

Brazil.

The fourth largest nation in the world after Canada, China and USA, she was colonized by Portugal and attained her independence in 1882

In the last 25 years, she has been able to expand and diversify production of manufactured goods.

Her industrialization has been in four main sectors namely;

1. *Petroleum and petrochemical industries.* She has petrochemical complexes based in the states of Balica, Rio Grande, Dosul and Sao Paulo.
2. *Motor vehicle industry.* The country has earned a lot of forex through the massive manufacture and sale of motor vehicles since 1997.
3. *Aircraft and aerospace industry.* The Brazilian Space Agency (AEB) and the National Institute of Space Research (NPE) have been involved in the Brazilian space programme which comprises the construction of satellites and launching of space craft.
4. *Electricity generation industry.* The main source of Brazilian electric energy is water. In 1996, 92 % of all her electricity power generation was HEP.

Factors that have facilitated industrialization in Brazil.

- a) Availability of Cheap and both skilled and unskilled labour from the country's large population especially after the abolition of slave trade.
- b) Plentiful natural resources. For example mineral supplies like gold, coal, iron ore, uranium, manganese etc, agricultural raw materials like coffee, sugarcane, cocoa and maize and forest resources are a great boost to industrialization
- c) Availability of hydro-electricity as early as 1905 to boost industrialization. Coal is also available.
- d) Foreign capital. There was heavy influx of foreign capital from countries such as the USA, Canada, Britain, Portugal and France which led to establishment of industries in the country.
- e) Improved transport and communication. Railway lines were constructed in most parts of Brazil thus opening the interior areas for the exploitation of natural resources and transportation of manufactured goods.
- f) Good economic policies adopted by President Getulio Vargas (1930-1945) have contributed to industrialization in Brazil. He encouraged the development of transport and communication. He encouraged the harnessing of HEP. He Provided loans and subsidies to certain industries. Adopted protectionist policies of imposing heavy duties on imports. He encouraged exploitation of oil.
- g) Development of banking in major Brazilian cities such as Manaus, Salvador, Brasilia and Sao

Paulo facilitated provision of loans to individuals who wanted to venture in business.

- h) Large Internal and external markets. Increased Trade between Brazil and other countries has led to growth of external market to supplement the available market locally.
- i) The World War II which made it hard for her to import goods from Europe thus compelling her to manufacture her own goods.

Obstacles to industrialization in Brazil.

- a) High levels of poverty (*more than 40% of the population is poor*) meaning low purchasing power. Governments also spent most of their resources to subsidize the basic needs of their citizens at the expense of industrialization.
- b) Inability to fully exploit her natural resources especially those found in low population zones like the south where labour for exploitation is lacking.
- c) Huge foreign debt. A lot of money is being used to service these debts at the expense of industrialization.
- d) Poor technology. The use of appropriate technology for exploitation of natural resources and manufacturing of goods is still lagging behind in Brazil.
- e) Stiff competition from the industrialized nations like USA and Western Europe that produce high quality products and have an advanced marketing system for their goods.
- f) The resources of Brazil are monopolized by the multinational companies that are based there. The government therefore has no freedom to exploit them for use in industries.

SOUTH AFRICA.

She attained majority rule in 1994 after a long struggle against the apartheid regime. The country has achieved great strides in industrialization with many industries including iron and steel industries, engineering, locomotive, chemical, textile, cement, light industries and tourism

Factors influencing industrialization in South Africa.

- a) The country is endowed with mineral resources such as gold, diamonds. Iron etc.
- b) Availability of Cheap and both skilled and unskilled labour from the country's large population.
- c) Availability of natural resources. For example mineral supplies like gold, lead, iron ore, uranium, manganese, Zinc, Bauxite, Tin, Chromium, Tungsten, Phosphate etc. some of these resources are in plenty and are exported to earn forex.
- d) Development of hydro-electricity has boosted industrialization. Coal is also available from the Witwatersrand.
- e) Development of transport and communication. Railway lines, water and road network have been improved thus opening the resources for the exploitation and for transportation of manufactured goods. Air transport is also well developed thus enhancing business operations.
- f) Availability of capital from her trade in other materials.
- g) Government support. The government has adopted sound economic policies that promote industrialization. For example imposing heavy tariffs on the imported commodities as a means of protecting local industries, encouraging foreign entrepreneurs to invest in the country and encouraging local investors.
- h) South Africa is endowed with a variety of tourist attractions like wildlife which boost the tourism industry.

- i) Large Internal and external markets. Increased Trade between South Africa and other countries especially after end of the apartheid rule has led to growth of external market to supplement the available market locally.

Challenges facing industrialization in South Africa.

- a) Long periods of apartheid rule was accompanied with sometimes violent resistance and struggle for majority rule which created an atmosphere not conducive for investment
- b) The country suffered long periods of economic sanctions imposed by the United Nations between 1948 and 1994 which affected her manufactured goods that could not access external markets.
- c) There were rampant industrial strikes in the country, during the apartheid regime which affected industrialization.
- d) The HIV and AIDS scourge has ravaged the country's labour force thus seriously undermining the industrial efforts.
- e) There is stiff competition from the industrialized nations in Western Europe that produce high quality products and have an advanced marketing system for their goods.
- f) High levels of insecurity which, at times, discourages would-be foreign investors.
- g) High levels of poverty in South Africa mean low purchasing power. Manufactured goods perform poorly locally.

India.

Since India's independence from Britain in 1947, the country has continued to experience extensive industrialization

Factors that facilitated India's industrialization.

- a) Existence of good industrial base from the textile and leather industries. The British governor Lord Dalhousie also laid a good foundation for industrialization by promoting road construction and cotton growing.
- b) Also cottage industries like smithing and textiles existed in India long before colonialism. This formed the basis for modern industries
- c) Availability of Cheap and both skilled and unskilled labour from the country's large population which is almost at a billion mark
- d) Existence of raw materials. For example mineral supplies like iron ore, manganese and coal allowed development of heavy industries. Cotton was also available as a textile industry raw material
- e) Development of energy sources like coal and hydro-electricity has boosted industrialization. Other sources of energy include oil, natural gas and nuclear energy..
- f) Development of transport and communication. The great trunk road from Calcutta to Punjab and sea transport development has led to resource exploitation and transportation of manufactured goods. Communication services have also been greatly improved.
- g) Good technical and scientific education available in India has produced experts who are in great demand in industry and agriculture.
- h) Availability of capital from her trading contacts with European countries like Portugal, Britain, France and Holland.

- i) Good national development plans. In the first five-year development plan of 1951, the government adopted sound economic policies that prioritized agriculture especially modern farming. The second phase emphasized industrialization, especially decentralization of industries to high population areas where labour and market existed.
- j) The government has imposed protective tariffs on the imported commodities as a means of protecting local industries.
- k) Political stability. India has enjoyed a long period of political stability since her independence thus giving investors' confidence.
- l) Development of banking in India has enabled farmers and industrialists to access credit facilities.

Challenges facing industrialization in India.

- a) Competition from goods manufactured in the developed countries; the developed nations produce goods of high quality than those manufactured by the Indian industries.
- b) High population in India requires that the government spare enough capital to feed the people. The government spends a lot of revenue in developing agriculture to feed her people.
- c) High poverty levels i.e. majority of the Indian population is poor and do not have adequate purchasing power for her manufactured goods/ the local market is therefore limited.
- d) Lack of efficient communication and transportation infrastructure hence poor movement of goods and labour.
- e) Natural calamities e.g. drought and floods that destroy raw materials for industries.
- f) Political conflicts e.g. with neighboring Pakistan, and the civil unrest hinders industrial development.

URBANIZATION

This is the process by which people are attracted to live in towns or large settlements.

An urban centre is any area with a human population of 20,000 people or more.

Early Urbanization.

Some of the early urban centres in Africa included Cairo, Meroe/Merowe and Kilwa.

Factors that influenced development of urban centres in Africa.

- a) Existence of transport routes-Meroe/Merowe located at an intersection of transport routes.
- b) Availability of water for irrigation which increased food production and influenced growth of towns e.g. Cairo.
- c) Industrial development –areas of industries grew up as towns since they attracted laborers e.g. Cairo.
- d) Commercial activities like trade-location along trade routes.
- e) Strategic location which ensured security and thus ample growth e.g. Kilwa.
- f) Growth of religion –some grew rapidly because they were religious centres.
- g) Mining –led to development of towns’ e.g. Meroe, Johannesburg.

Cairo.

This is the capital city of Egypt. The city was founded in 969 AD when the conquerors from Tunisia, ‘The Fatimid Dynasty’ invaded and conquered Egypt

Factors for the growth of Cairo.

- a) The Nile River provided water for domestic use and was also a means of transport. This enabled Cairo to grow.
- b) Availability of water for irrigation which increased food production and influenced growth of Cairo.
- c) Industrial development –various industries developed in Cairo. Food processing industries and construction works. The industries attracted migrants from rural areas.
- d) Fertile Nile Valley. the Valley had adequate rainfall and the river always carried silt which it deposited downstream to provide
- e) The Suez Canal which was opened in 1869 opened a new trade route which encouraged the arrival of thousands of Europeans. Commercial, administrative and public buildings were constructed during this time.
- f) Commercial activities like trade-location along trade routes. The Strategic location along the Nile attracted caravans which would pass through Cairo from North, west and Central Africa
- g) The opening of the Aswan High Dam in 1902 enhanced food production through irrigation thus influencing Cairo’s growth.
- h) The effects of the two world wars which disrupted Egypt’s trade with other countries thus compelling her to find ways of substituting imports. This boosted industrialization
- i) Cairo is a cultural centre being home to treasures preserved from the early Egyptian civilization and Islamic culture in their museums. ‘The city of a thousand Minarets’.
- j) Cairo also grew as a centre of education and medicine. Several institutions of higher learning such as the University of Cairo, American University and Azar University contributed to this.

Functions of Cairo.

- a) It was a national capital and a political centre of the Arab world.
- b) It serves as the transport and commercial centre of North Africa and the Middle East.
- c) It is a recreational centre housing many recreational facilities like stadiums and entertainment halls
- d) Cairo has been a historical centre being the house to the Egyptian civilization for over 5000 years
- e) Cairo serves as an industrial centre. Many of these developed during the industrialization process. For example, textile, vehicle and communication equipment assembly plants.

Cairo faces the following problems today;

- a) High population. Cairo is the largest city in Africa and the Middle East. One fifth of Egypt's population stays in Cairo. In 1988, her population was 11 million.
- b) Scarcity of food. The high population in the city has caused food shortage.
- c) Unemployment. The number of unemployed people in Cairo is increasing every year mainly due to the high rate of migration to the city and the natural population increase.
- d) Housing problems. Between the Nile and the main airport, between 250,000 to 900,000 poor people have put up shanties. This area is commonly referred to as the 'city of Death'.
- e) Traffic jams.
- f) Pollution from the industries, vehicle exhaust, desert storms and garbage burning.
- g) High crime rate. This is mostly due to the high unemployment level

Solutions to the problems facing Cairo.

- a) The food shortage problem is being tackled through reclaiming land for agriculture. The Aswan high Dam provides water for irrigation.
- b) The housing problem is being addressed by constructing industries in the suburbs to reduce the population in the city.
- c) Traffic jams have been eased through the launching of the Cairo Metro in 1987, which was Africa's first subway system, which serves the Ramses station to the north and Helwan area to the south. It conveys 60,000 passengers per hour.

Meroe/Merowe.

This was the second capital of the kingdom of Kush and emerged as a city in 650 BC. It rose to become an important industrial centre and specifically iron working producing weapons, hunting and farming tools.

Factors for growth of Meroe.

- a) Existence of transport routes-Meroe/Merowe was located at an intersection of transport routes (from east via the red sea and from north via Egypt). This promoted trade with other parts of the world.
- b) Abundance of wood fuel, from the heavily forested Blue Nile / white Nile intersection area, which was a key to the prosperity of the iron-working industry.
- c) Mining –Merowe was located in a region endowed with a lot of iron.

Social effects of the growth of Merowe.

- a) The Merotic language developed to replace the Egyptian language previously used by the Nubian founders of Merowe.
- b) New architectural developments took place in the region. These were characterized by tombs where rulers were buried after death, ruins of temples, palaces and homes.

- c) Other industries developed besides the iron working industry. For example, weaving of cotton, cloth and pottery

Functions of Meroe during the colonial period.

- a) Meroe was a centre of iron working hence an early industrial centre.
- b) A mining centre since Meroe had iron ore, which it mined.
- c) A religious function since it had many temples where people worshipped their gods. The priests who headed the Meroe church had their headquarters in Meroe.
- d) It was a centre of trade.
- e) It was an administrative and political centre.
- f) Transport centre-major trade routes converged and radiated from Meroe.

Factors that led to decline of Merowe.

- a) The rise of Axum kingdom of Ethiopia which denied her access to the red sea.
 - b) The increasing desertification of the region, perhaps due to the rapid deforestation.
- The city began declining in 350 BC.

Kilwa.

The town is among the city states that developed along the east African coast. Her greatness was due to the Persian influence. One of its Shirazi rulers from Banadir Coast in Persia, Ali Ibn Hassan, transformed the town into a large city.

The sultan erected a stone citadel to protect the island from external enemies. He also forced other conquered city-states to pay tribute to Kilwa.

Later on Sultan al-Hassan Ibn Sulaiman I built the Great mosque of Kilwa in 1270 AD and a luxurious palace referred to by historians as Husuni Kubwa.

Factors influencing the growth of Kilwa.

- a) Exemplary leadership provided by the Shirazi Leaders who kept enemies off and forced the neighbouring city-states to pay tribute to Kilwa.
- b) The strategic location of Kilwa enabled her to attract merchants as it was a convenient stopping place.
- c) Monopoly of the Sofala Gold Trade. The control of the Sofala Gold trade had fallen in the hands of Kilwa by 1300 AD
- d) The gleaming buildings of Kilwa such as the great Mosque and palace made her the Jewel of the Zenj Coast, minting her own coins to add to her prosperity.. the mosque became a tourist attraction later own

Functions of Kilwa.

- a) It was a major trading centre flourishing mainly due to the gold trade.
- b) It was a major defence centre since it was heavily fortified against external aggression by a stone citadel.
- c) It was a religious centre. Mosques for Islamic worship were located at Kilwa e.g the great mosque.
- d) It was an administrative centre which housed palaces for the rulers and other rich people. However 14th C AD, Kilwa's prosperity began to decline due to the following reasons.

Factors that led to the decline of Kilwa.

- a) Disruption of the Gold trade/ civil wars among communities.
- b) Dynastic rivalries/ family feuds.

- c) Series of rebellions among some of the towns.
- d) Conquest by the Portuguese who even burnt the towns.

Factors that led to the collapse of early urban centres in pre-colonial Africa

- a) Collapse of state system and kingdoms for example Kush collapse and the coastal city states.
- b) Collapse of trade and their economic systems e.g. the trans-Saharan trade and long distance trade.
- c) Collapse of Arab influence in east Africa and east Africa.
- d) Impact of Portuguese conquest leading to destruction of towns like manda and decline of others.
- e) Introduction of new types of trade e.g. legitimate trade which replaced slave trade.
- f) European colonization brought in a new social political and economic order.
- g) Exhaustion of mineral resources e.g. gold as in case of Sofala and Kilwa as well as Meroe. Some minerals lost value.
- h) Changes in transport routes as new roads by-passed some towns thus diverting trade to other centres e.g. Timbuktu
- i) As a result of stiff competition, some towns dwindled as others expanded.

Early urban centres in Europe

Athens.

This is one of the early states in ancient Greece that flourished after the Persian wars of between 490-480 BC.

Athens developed from a farming settlement situated in a defensive site. It had many beautiful buildings such as the Parthenon (a large temple built between 460 and 430 BC in honour of Athena, the goddess of Athens). The acropolis was the highest part of the town.

Athens had narrow streets and some of its houses were made of unbaked bricks or mud and thatched roofs.

There were frequent outbreaks of diseases due to poor sanitation.

The concept of democracy first developed in Athens. At the centre of the city was a market, Agora, which was used as an assembly hall for debates.

Athenians were divided into four classes.

- a) First class –the richest that were the most heavily taxed.
- b) Second class- provided the cavalry for the army.
- c) Third class- provided the soldiers for the infantry.
- d) The fourth class- the poorest and who paid no taxes.

Athens began to decline due to the Peloponnesian wars (431-404 BC). It was finally crushed in 338 BC by Phillip of Macedonia.

Currently Athens is the capital of Greece with a population of 4 million.

Factors that led to growth of Athens.

- a) Trade and commerce. Their soils of the surrounding areas were infertile and, therefore could not support agriculture. The Athenians therefore resorted to trade to obtain foods in exchange for wine, wool and olive oil.
- b) Security. Athens was located in an easily defensible place. The town was surrounded by water, valleys and highlands making it difficult for an external enemy to attack.

- c) Religious activities. The area was a worship centre. People coming to the Parthenon temple contributed to the growth of the town.
- d) Accessibility and communication network. The port of Athens was located about six kilometres from the city thus making Athens a transport centre.
- e) Availability of water.

Functions of Athens.

- a) It was a cultural centre. The Greeks loved to watch play. In Athens, there was the great theatre of Epidaurus.
- b) An educational centre. In Athens, every person was taught how to read and write. Athens became a centre of scholarly work producing great thinkers like Socrates, Plato, Pythagoras, Archimedes and Aristotle.
- c) Athens was a sports centre. There were Gymnasiums where boys were taught games which were developed into what came to be known as Olympics.
- d) Religious centre. The Parthenon temple was a great manifestation of this function. People coming to the Parthenon temple contributed to the growth of the town.

London.

The capital city of England, it is situated on the estuary of the river Thames. Its name is derived from the name Llyn Dun which means 'Celtic Lake Fort'. The town developed during the Roman rule in Britain in A.D 43.

By 314 AD London had become an early centre of Christianity.

In 1381, the city was adversely affected by a serious peasant, revolt that led to massive destruction of property.

By 18th c, London had emerged as an elegant city though however also with numerous urban related problems. In 1890, it hosted the world's first electric train.

Factors influencing growth of London.

- a) Trade-money obtained from trading was used to build the city.
- b) Industrialization-industry such as textile, ship building, metal works, etc led to the growth of London.
- c) Improved transport –London is well served by a network of railway and roads. This facilitated the movement of goods and people.
- d) Shipping activities-there are many harbours in London enabling expanded loading and unloading activities
- e) Population growth.
- f) London was the seat of government for a very long time.

Functions of London.

- a) It was a transport and communication centre. The city was inter-connected with roads which served various parts of Britain. The city houses the main international airports on UK. E.g Heathrow- the busiest airport in the world.
- b) It is a political and administrative capital with offices for the Prime Minister and cabinet. The Monarchical offices are also located here.
- c) It is a commercial centre. Many financial institutions such as banks and other commercial and trading activities attract a lot of traders.

- d) An industrial centre. London was an early centre of the textile industry. There are light service industries in the city.
- e) It is an educational centre, housing institutions like the Oxford University, the University of London, founded in 1836, etc.
- f) London is a historical centre. The city has theatres for the performance of cultural activities and museums which display artefacts of historical importance.

Problems of London.

Like many large cities worldwide, London has its share of problems:

- a) overcrowding,
- b) Unemployment has continued to increase with the growing population. In 1988, for example, nearly 1 in 8 people were unemployed throughout London and the situation in the inner city was worst
- c) Poor housing and homelessness. This has led to development of slums.
- d) Transportation is another problem. However, an excellent public system has helped to alleviate this.
- e) Air pollution continues to be a major challenge.
- f) Rural-urban migration by the job seekers causing overcrowding in the city.
- g) Poverty. This was a greater problem in London in the initial stages.

Modern cities in Africa.

Nairobi.

Nairobi developed as a depot and camp for the railway workers during the construction of the Kenya-Uganda railway

Factors influencing the growth of Nairobi

- a) Excellent location in an area almost midway between Mombasa and Lake Victoria.
- b) There was adequate supply of water.
- c) The land was suitable for construction of workshops as it was flat.
- d) The climate was suitable for Europeans. Cool temperatures at an altitude of 1700m.
- e) It was surrounded by a fertile countryside producing adequate foods.
- f) Transfer of the seat of the colonial government in 1907.

Functions of Nairobi.

- g) It was a transport and communication centre. The city is inter-connected with roads which served various parts of the country. The city houses the main international airport- JKIA.
- h) It is an administrative capital with offices for the head of state, cabinet, parliament and department of defence.
- i) It is a regional headquarter of various international bodies like UN, ILO etc.
- j) It is a commercial and financial centre. Many financial institutions such as banks and other commercial and trading activities attract a lot of traders.
- k) An industrial centre. Nairobi's industrial area hosts many key industries in Kenya and east Africa.
- l) It is an educational centre, housing institutions like the University of Nairobi, Kenya Polytechnic and other key institutions
- m) It is a tourist centre. The town boasts of various tourist attractions such as the Nairobi National Park, National Museums etc.

Problems facing Nairobi

- a) Rural-urban migration by the job seekers causing overcrowding in the city.
- b) Unemployment has continued to increase with the growing population.
- c) Poor housing. The population growth in Nairobi to 3 million has not corresponded to the development of housing.
- d) Inadequate social services including health services and educational facilities.
- e) Congestion on roads caused by an increase in the number of vehicles on the roads while the road network is not expanding.
- f) Poor town planning has led to poor drainage, especially during heavy rains when a lot of flooding occurs
- g) Pollution continues to be a major challenge in Nairobi. The factories located in the city are a cause of air and noise pollution.
- h) Water shortage caused by the high rate of expansion in the town and the depletion of water reservoirs.
- i) The rate of HIV/AIDS infection is very high.

Solutions to these problems.

- a) New housing projects are being developed. For example the Mathare slums upgrading project.
- b) The education and other social services are being provided through a cost-sharing scheme between the government and the town dwellers.
- c) The government is addressing the transport/congestion problem through the upgrading of the Thika superhighway to an eight lane highway; the Nairobi Syokimau Railway service was commissioned by president Kibaki I November 2012 to de-congest jogoo road. Etc.
- d) The government is encouraging the expansion of the informal sector as an alternative source of employment.
- e) The government is rehabilitating street families by taking them to schools to acquire relevant skills to make them useful to the nation.
- f) New water projects have been put in place. For example, the third Nairobi water Project from River Chania.
- g) The government is sensitizing, through NGOs and GOs, civilians about responsible sex as a measure to curb the spread of HIV/AIDS.

Johannesburg.

The city started as a mining camp in 1886 after the discovery of gold in the Witwatersrand. This attracted thousands of people coming to prospect for minerals and seek for employment. By the end of 19th c, the population of Johannesburg had risen to 166,000 people.

Factors which contributed to the growth of Johannesburg

- a) Existence of minerals/discovery of gold in the Witwatersrand which resulted in a rush of people to the area.
- b) Availability of energy i.e. coal which was an important source of energy to the mines, industries and homes.
- c) Excellent location in the veldt/plain making construction work easy.
- d) Its proximity to Vaal River which supplied plenty of water to industries and domestic use.
- e) Area around Johannesburg is fertile and therefore agriculturally productive ensuring steady

supply of food.

- f) The organization of the city council which has ensured that financial control and revenue collection is effectively and the city able to manage its growth problems.
- g) Government policy of supporting industrial development. This has favored its growth.

Functions of Johannesburg.

- a) It was a transport and communication centre. The city has a highly developed network of transport lines since it served the mining industry. In June 2010, it became the first city in Africa to house an electric train service.
- b) An industrial centre. Its manufacturing functions include mining, metalwork, engineering, diamond cutting, jewellery manufacturing and food processing.
- c) It is a commercial and financial centre. Many financial institutions such as banks and other commercial and trading activities attract a lot of traders. It is also a major shopping centre in South Africa.
- d) It is an educational centre, housing institutions like the University of Witwatersrand, teacher training colleges and other key institutions.

Problems facing Johannesburg.

- a) The problem of racial segregation. The black Africans who work around Johannesburg were often treated almost as slaves though they were the majority in the country.
- b) Poor housing. Most of the workers who work in and around Johannesburg live in shanties , mainly because of underpayment
- c) Unemployment has continued to increase with the growing population. Though the city is an industrial town, her industries have failed to provide sufficient employment for all people in the town.
- d) Rural-urban migration by the job seekers causing overcrowding in the city.
- e) A large gap between the affluent class, especially the Europeans and the poor people who majorly are African
- f) Congestion on roads caused by an increase in the number of vehicles on the roads while the road network is not expanding.
- g) The city has the highest crime rate in the world.
- h) Inadequate social services including health services and educational facilities.
- i) Water shortage caused by the high rate of expansion in the town and the depletion of water reservoirs.
- j) The rate of HIV/AIDS infection is very high.

Solutions to the problems.

- a) The apartheid regime was ended in 1994 thus ending the problem of racial segregation.
- b) The new government of South Africa is trying to come up with better housing estates.
- c) Crime has been contained by creating more job opportunities.
- d) The government is sensitizing, through NGOs and GOs, civilians about responsible sex as a measure to curb the spread of HIV/AIDS

impact of agrarian development on urbanization in Africa.

- a) The practice of agriculture forced people to adopt a sedentary lifestyle. Such settlement formed the basis of the earliest urban centres.
- b) Early agriculture led to specialization. The areas where the potters, iron smelters weavers

and fishermen did their work grew up into urban centres

- c) From the agrarian revolution, there was adequate food for town dwellers.

On urbanization in Europe

- a) The revolution in Europe led to a landless society who moved to urban centres seeking employment. This promoted urban growth.
- b) Increased agricultural production ensured steady supply of raw materials to the new industries hence further growth of the industries.
- c) Agricultural expansion meant the big farmers had to borrow loans hence the expansion of banking facilities in towns leading to further growth.
- d) Agricultural produce entering and leaving countries had to be handled in ports hence towns near coasts grew.

Impacts of industrial revolution on urbanization in the world.

- a) The establishment of many factories drew many people to towns in search of employment the mining industry attracted many people to work in the mines. The mining camps soon grew up into towns.
- b) Industrial revolution stimulated innovations in transport and communication ensuring faster movement of people to further expansion of trading towns.
- c) The growth of industry has led to expansion of port towns to handle increased manufactured goods for export and raw material for factories e.g. growth of London, Budapest, Marseilles, Lagos and Cairo.
- d) The use of machines replaced human labour and caused layoffs. Those who lost their jobs sometimes became a security risk hence an increase in crime.
- e) The many inefficient factories that came up after the revolution have caused massive air and water pollution.
- f) Rural urban migration has exerted pressure on the limited resources and services the towns can offer.

Consequences of urbanization on European communities during the 19th c.

- a) Rural –urban migration by Africans looking for better opportunities led to increased crime levels and insecurity for the Europeans.
- b) Air pollution which also affected them.
- c) Creation of employment for the Europeans in the developing industries.
- d) Creation of markets for agricultural produce due to increased urban population.
- e) Europeans were deprived of cheap African labour as most of them moved to urban areas.

ORGANIZATION OF AFRICAN SOCIETIES.

Despite the high amount of decentralization of African communities in the 19th c , there existed a few who were centralized. For example, Buganda, Ethiopia, Buganda, Asante, Mandinka, Ndebele and shona among others.

The Baganda.

These were a Bantu speaking people of the Buganda kingdom in Uganda. The Buganda Chiefdom had emerged as early as 140 AD as a subject state of Bunyoro- Kitara Kingdom
Origin of Buganda kingdom.

The kingdom was crystallized around the counties of busiro, kyadondo and mawakota. Traditions also state that the first king and creator of Buganda kingdom was Kintu who came from the east around Mount Elgon region. It is believed he entered Buganda with 13 clans. Other theories attribute Buganda's origin to the Luo. That Kimera Kato, a brother of Isingoma Rukidi Mpunga the founder of the luo-babito dynasty in Bunyoro was the founder of Buganda. It is also probable that Buganda might have been one of the many kingdoms founded by the bachwezi- the demi-gods.

Other clans of Buganda are believed to have come from the ssese islands.

Factors that led to the growth of a strong Buganda Kingdom.

- a) Good strong and able leaders like Kkyabagu, junju and Suna etc. who propelled it to prosperity by uniting the people and restructuring the existing administration system.
- b) Buganda Was small and a compact kingdom and therefore easy to manage. Other kingdoms like Bunyoro-Kitara were too large with a class system.
- c) Its strategic location in a defensible position in the lake region was of great advantage over her rivals Toro and Bunyoro. She lay next to Lake Victoria giving her defence, communication and transport advantage. On the east were small states of Toro and Ankole who posed no threat.
- d) Good climate and fertile soils in the region. This enabled successful growing of Bananas, their staple crop.
- e) The contacts with the Waswahili enabled her to gain riches and weapons/guns.
- f) The kingdom had a strong loyal army to defend it from her warring neighbors. The Kabaka even possessed a royal navy that kept guard over Lake Victoria.
- g) Existence of a centralized government making the kingdom cohesive.
- h) The ganda traditions allowing the kabaka to marry from every clan as means of ensuring unity.
- i) System of labour organization. The tradition demanded that farming be done by women while the men were involved in other activities such as politics, carpentry, war, bark cloth making and smithing
- j) The wars of conquest which finally led to her expansion.

How Buganda kingdom was governed.

Buganda kingdom had a highly centralized monarchy under the kabaka who enjoyed absolute powers. His position was hereditary.

The Kabaka's Court was the nerve centre of the Baganda community. All symbols of Royal authority were kept in the court. E.g. the throne (Namulondo), royal Drums, spears and stools.

The kabaka was the political leader of the Baganda kingdom. He was the Head of the traditional religion –*lubale*/ he was the chief priest. He was the judicial head and the final court of appeal/he was the supreme judge. He was the commander-in- chief of the armed forces. He appointed senior government officials and dismissed them when need arose. He controlled trade.

The capital of the kingdom was at Mengo, where the palace, *Lubiri*, was situated.

The kabaka appointed senior government officials and dismissed them when need arose. For example, he appointed the *katikiro*, *omulamuzi* and *omuwaniika* i.e. prime minister, chief justice and treasurer respectively who assisted him in administration. He also appointed *mugema* (the senior most chief among the Bataka), *Musenero* (the chief Butler) and *Mfumbiro* (the chief baker)

The *katikiro* was in charge of organizing tax collecting and public works. He planned wars in the Kabaka's name. He had to protect the kabaka during war. He was responsible of informing the kabaka of the decisions he made on court issues.

Below him were *omulamuzi* (chief justice) and *omuwaniika* (treasurer) who were directly responsible to the kabaka.

The *Bataka* were minor chiefs in charge of clans, guarded land, collected taxes, carried out conscription to the army and presented the page boys to the kabaka.

Peasants served under chief and were to fight in wars. Slaves (*badus*) served the king chiefs in their homesteads. Pages and *bagalagala* (sons of chiefs and other nobles) served the kabaka too.

To ensure unity the kabaka married from principal clans.

There was a *Lukiko* which advised the kabaka and was the final court. It comprised 69 members who were nominated by the kabaka (positions were not hereditary). It made laws and debated issues concerning the kingdom. It also directed tax collection and planned expenditure, it acted as the final court of appeal, and it represented the needs of the people to the kabaka. It helped the kabaka in general administration. It checked the activities of government.

Political organization.

The kingdom was divided into counties (*Ssaza*) and sub-counties. Each county was under *Ssaza* chiefs whose position was hereditary initially before the kabaka began to appoint them as a means of making them accountable. Each *Ssaza* was divided into a *gombolola* headed by a *gombolola* chief, who maintained law and order and collected taxes.

The *gombololas* were further divided into smaller sub-divisions called *miluka* each under a *miluka* chief. The *miluka* was divided into *kisoko*.

The smallest administrative unit among the Baganda was the village council

The *Abatongole* appointed by the kabaka, governed the vassal states

Social organization of the Baganda.

The kingdom was divided in social classes with the royal family occupying the top of the hierarchy, then ruling class, the chiefs who ruled over the peasants or commoners known as *bakopi*.

At the bottom of the social class were the slaves (*Badu*) who were acquired mainly through raids on neighbouring communities such as Busoga, Toro and Bunyoro.

The Baganda believed in the existence of many gods some of whom included;

- a) *Katonda*, God the creator whose home was in heaven. The prayers to him were done every morning and were conducted by the head of the homestead.
- b) *Kibuuka*, God of war and thunder.
- c) *Mukasa*, goddess of fertility who was worshipped in order to bless the nation with more children, livestock and a bumper harvest.
- d) *Kiwanuka*, god of lightning.
- e) *Nawagenyi*, goddess of Drought.

The community also believed in the existence of ancestral spirits whose main responsibility was to maintain discipline in the clans since the spirits were believed to restrict their influence to close relatives. *Balubaale* were the spirits of people who had supernatural powers and were consulted through prophets or mediums.

The Baganda had religious leaders, led by the kabaka, then the mediums, prophets, and medicine people.

There also existed sorcerers called Balopo who were feared since they could cause harm to people.

The Baganda religion however was greatly undermined by the influx of the Waswahili and Arab Muslims into the community in the 19th c.

The Baganda society was polygamous. For example, the kabaka was required to marry from all clans to maintain links in the society.

There was division of labour according to sex. Women tilled the land while men engaged in warfare, built houses, and made clothes from bark-cloth.

As a form of rite of passage, the Baganda went through formal education that trained them in their rites.

Economic organization.

- a) Buganda's economy was based on agriculture and the production of the staple food bananas (matoke).
- b) The baganda also kept large herds of livestock. The bahima herded Kabaka's herds. From the livestock, they obtained milk and meat to supplement their diet.
- c) The baganda conducted raids on their neighbours like the Buddu, Busoga and Kyaggwe through which they acquired slaves, livestock and ivory.
- d) There was division of labour, women worked in fields while men were involved in construction of roads, bark cloth making, smithing and war.
- e) The kingdom was deeply involved in local, regional and international trade. They exchanged bark cloth and beans for cattle from their neighbours. She exchanged slaves and hides for guns, glassware and cotton cloth from coastal traders.
- f) The baganda practiced iron working, producing hoes for cultivation and weapons for defence. Some of these items formed their trade items. Rich iron deposits were also acquired by waging wars against their neighbours.
- g) Handcraft was an important activity and included basketry and pottery.
- h) The textile industry consisted of bark cloth manufacture.
- i) Salt mining was an important activity.
- j) Fishing on lake Victoria
- k) The baganda also engaged in some hunting activities to acquire ivory.

SHONA.

The Shona were a Bantu-speaking people who comprised the Rozwi, Kore kore, Zezuru and Manyika sub-groups. The first stone buildings in Zimbabwe are believed to have been the work of the Shona. Their capital was at Mapungubwe, south of the confluence of the Limpopo and Shashi rivers.

About 1450 AD, the Rozwi Groups gained dominance and established a centralized political system. They established the Mwene Mutapa Empire which ruled until the time of the Ngoni invasion in the 1830s.

Political organization of the Mwene Mutapa Empire.

The emperor was the head of the state and government. Succession of authority was hereditary. Important emperors included Chikura, Nyatsimba, Mutota and Matope. Religion played a role in government and united people. The emperor was a semi-divine religious leader, a military leader and the chief priest. He was the only one who could communicate with the spirits of the ancestors. It was believed that when Mwene Mutapa died, he became a Mudzimu and automatically qualified to be worshipped as a national ancestral spirit.

The ancestral spirits (Vadzimu) communicated people's problems to god.

Religion also influenced laws.

The priests were used as spies and link between the emperor and the people.

Another unifying factor in the kingdom was the royal fire. It was from the continuous fire that each vassal chief carried a flame to his chiefdom that he kept burning as a symbol of national unity.

The empire was divided into provinces namely Guruhaswa, Mbire, Utere, Banua, and Manyika each headed by a lesser chief. The most important chiefs in the empire sent their sons, with tribute in form of cattle, gold, slaves and ivory, each year to pay homage to the Mwene Mutapa as goodwill ambassadors

There was a standing army of warriors which was used for defence and expansion of the kingdom. Revenue from trade was used to run the army and sustain the empire.

The position of importance held by Mwene Mutapa led to the creation of a complex Style of administration around him.

The government officials included the court steward, treasurer, commander-in-chief of the army and Mbokurumme (king's sister-in-law). Others were the queen mother, the emperor's sister and nine principal wives, the doorkeeper and the chief cook and head drummer. At the lower level were the lesser chiefs who paid tribute to the king by providing cattle, labour and agricultural produce.

Economic organization of the Shona.

The Shona country enjoyed ample rainfall with fertile soils thus enabling them to engage in the following economic activities;

- a) The Shona were mixed farmers who cultivated crops and reared animals. Among the agricultural produce were corn, millet, ground nuts, beans, watermelons, tomatoes, fruits and cabbages.
- b) The Shona practiced trade, specifically long distance trade between them and the Arabs and Waswahili at Sofala. They gave Gold and ivory for cotton cloths, glassware, copper items,

guns, daggers and knives.

- c) They were skillful hunters. They hunted elephants for their ivory which was in great demand. They also gathered wild honey and wild fruits to supplement their diet.
- d) The shona were skilled craftsmen who made articles like spears, hoes and knives. Others were goldsmiths who used gold to decorate. They also practiced cloth making from wild cotton and bark fibres.

Social organization of the Shona.

Among the shona, Mwene Mutapa was regarded as a divine king and was therefore venerated. When he was well, the nation was also well.

The shona religion was based on the Mwari cult. They believed in the all powerful God, Mwari/Murungu. His worship was done through several priests who were mainly produced by the Rozwi clan.

The priests presided over religious functions in sacred places of worship, shrines where sacrifices were offered.

The shona believed in ancestral spirits. They had two kinds of spirits, *Vadzimu* or family spirits and *Mhondoro* or clan spirits. The spirits communicated through an intermediary, *Svikiro*, a departed family or clan spirit

The shona had a national spirit *Chamiruka* who settled clan disputes and also protected the people against injustice in the government.

The shona had a kinship system which was patrilineal (inheritance through the father)

The shona were divided into clans whose names were coined from animals like leopard, monkey, elephant etc. it was a taboo to consume meat from such animals.

They were a polygamous community which was viewed as a means to enable the family to have enough members to provide labour.

The shona lived in stone buildings. Their skill in masonry is associated with the ruins of Mapungubwe found in Zimbabwe.

The Asante

The Asante are one of the Akan-speaking peoples who occupy the southern part of Ghana, west Africa. By the middle 18th c, the Asante/Ashanti had established the most dominant state in modern Ghana.

Origin of the Asante Kingdom

The empire Developed in the 1670's. It was formed as a result of competition for gold fields in the Akan forestland. In the 1500's: Akan peoples came into contact with Portuguese traders. Wealthy owners of the Akan gold mines begin to trade gold for Benin slaves with the Portuguese.

In the 1670's, Osei Tutu was a military leader and head of the Oyoko clan of the Akan peoples Took control over a trade center near Kumasi and established this as his capital city. This happened after his maternal uncle Obiri Yeboa, the leader of the Oyoko clan was killed during war.

A company of Akwamu troops are believed to have been instrumental in facilitating Osei Tutu's rise to power. He conquered the neighboring chiefdoms and took control of their trade. He took the title of ASANTEHENE. He Collected taxes from the chiefdoms on profits from the gold

mines. He built a standing army by demanding that chiefdoms provide soldiers. He sought the support of religious leaders throughout the region. For example, a priest of the shrine of the war god (Otutu0 called *Anokye* in Akwapim played a role in ensuring that Osei Tutu became the Asantehene.). He established the “GOLDEN STOOL” as a symbol of his rightful rule.



The Golden Stool

Akan peoples become Asante (Ashanti)

By 1700, Osei Tutu controlled most of the gold fields of the Akan forestland

Osei Tutu was succeeded by Opoku Ware (1717-1750). During his rule, he will extend the Asante kingdom to include most of what is today present-day Ghana. The new city-states now included Kumasi, Juaben, Bekmai, Mampon, Kokofu and Nsula.

Opuku Ware will participate in the slave trade with the Europeans, selling war captives and growing very wealthy.

Asante were one of the last great kingdoms to fall to the Europeans in the late 19th century.

Factors that led to the rise and growth of the Asante Empire.

- a) The Asante had a strong economy based on agriculture. Both food and cash crops like Kola nuts were cultivated. This helped to increase the population.
- b) The Asante had capable political leaders they included Obiri Yeboa (1670-1678), Osei Tutu (1680-1717) who unified the people through the Golden stool that he created and Opuku Ware (1720- 1750).
- c) The several city-states that emerged around Kumasi supported each other. Most of them were related by the fact that they originated from the same Oyoko clan.
- d) The growth of the Trans- Atlantic slave trade brought a lot of wealth to the Asante people. The wealth was instrumental in the prosperity of the Kingdom.
- e) The centralized political system under the Asantehene provided stability.
- f) The Odwira festival that was held annually helped to make the state more cohesive.
- g) The Asante were brave and proud people, and the need to free themselves from the oppressive rule of Denkyira, their former masters, motivated them to create a strong state.

Political organization.

The Asante had a centralized political system. The Nucleus of the Asante Empire was five city-states of Kumasi, Dwaben, Bekwai, Kokofu and Nsula.

The empire comprised of three parts, namely Kumasi (Metropolitan Asante), Amattoo states and Provincial Asante. Each part had its own system of administration though the three cooperated in some areas. Kumasi was directly ruled by the Asantehene and was recognized as

Kumasihene.

Metropolitan Asante.

These were the five states that lay 35 miles around Kumasi and which recognized the Asantehene as the supreme authority. The government of the metropolitan Asante consisted the confederacy council made of the Kings (*Omanhene*) of the various states and presided over by the Asantehene. The Asante Union provides a good example of a federal system of government. All the states within the metropolitan Asante paid tax to the Asantehene which was used to pay for the administration and form an army.

Each of the five states had its own state council that made important decisions. Each also had its own Black stool that symbolized their power over the state.

The omanhenes were expected to give the right of declaring war on another Omanhene, attended the annual Odwira festival (to pay allegiance to Asantehene, settle disputes and honor the dead), grant own subjects the right to appeal to the high court set up for the union of the capital and recognize the right of Asantehene to impose national levies.

Neither the Asantehene nor the Omanhene enjoyed dictatorial powers.

The kingdom had an army that was divided into several wings. Though overall leadership of the army was provided by the Asantehene, each Omanhene command his own forces. The Asantehene was deputized by *Mamphohene* who automatically take over army leadership whenever the Asantehene was unavailable.

Among the Asante, there was compulsory military service for all able-bodied men in the empire (a system borrowed from the Akwamu).

The Asantehene established a national festival called the *Odwira festival* during which all The Omanhene assembled in Kumasi to show their loyalty to the Asantehene, to honor the dead and to solve disputes amongst themselves. It also enhanced unity amongst the Asante states. The golden stool, an idea invented by a priest called Okomfo Anokye (he claimed it came from the sky in 1695) during the reign of Osei Tutu, made the office of the Asantehene acceptable. It was a source of unity as it bound together the Asante states since they all recognized its sacredness.

Provincial Asante

It comprised all the states conquered by the Asante in the 18th century (subject states). Such people were represented in the army and paid taxes to the Asantehene. Osei Tutu appointed two consuls who resided in each subject state to supervise their affairs. An efficient bureaucracy was established in each o the provincial Asante states with the Asantehene appointing senior officials directly himself

Social organization.

The Kingdom was composed of many communities who spoke the Akan language. The clans that made up the Akan speakers included the Akyem, Kwahu, the Fante, the Wassa, the Assin and the Akwapem. all these communities shared the same social institutions like the forty-day calendar, same marriage and naming rites

The basic social unit was the clan

They had a matrilineal system of inheritance. The birthright of each family passed through the mother from one generation to the other.

The practiced polygamy marriage due to wealth and comfort in society and prohibited inter clan (paternal and maternal clans) marriages

The Odwira festival helped unite the society besides the golden stool.

The Asante was socially stratified into social classes e.g. the rulers, rich, peasant farmers and slaves. The Asantehene and his family comprised the royal family together with the Omanhene.

The slaves among the Asante were majorly war captives. Some of the female slaves could be elevated to concubines and later become entitled to some rights.

They believed in magic and superstition and also worshipped gods and goddesses i.e. they were polytheists. Their supreme creator was Nyame (Nyambe).

They believed in their ancestors as mediators between the people and God (gods). The Odwira festival was held annually to honour ancestors and solve my disputes. They offered sacrifices to their gods/ancestors including human sacrifices

The Asante hence was considered semi-divine being and highly regarded

Creative arts like dancing music, sculpture were highly respected in society.

Economic organization of the Asante

Being located in an area rich in terms of land fertility forest resources, mineral resources and rainfall, the Asante Empire thrived economically in the following ways.

- a) Being located at the point of convergence of the trans-Atlantic trade routes, the Asante people participated in the trade providing gold, slaves and ivory in exchange for cotton, cloth, guns and gunpowder. They also provided middlemen and porters during the trade.
- b) The Asante practiced agriculture, growing crops like yams, vegetables and fruits. They also kept livestock like cattle.
- c) The community practiced gathering of Kola nuts and hunting for game meat from the forest to supplement their diet.
- d) They practiced iron working and made crafts such as baskets and pots

The Asante community however became a victim of the same economic wars it waged against her neighbours especially the Fante and Denkyira. In 1873, the British came to the aid of the Fante thus greatly weakening the Asante power.

Reasons for the collapse of the Asante Empire.

- a) The type of political organization in the kingdom did not encourage cohesion. Some states in the provincial Asante had no attachment to the golden stool/were semi-independent/condition of a state within a state.
- b) Leadership struggle between the Asante and dwaben; a neighboring rival of Asante's state.
- c) Civil wars /Constant rebellions from the conquered states /wars with other tribes e.g. war with the afante.
- d) British interference in the Asante affairs through the 19th c. they had a burning desire to destroy the Asante empire and colonize the region.. they even supported dwaben in her war against Asantehene
- e) Periodic interference with trade and trade routes as a result of wars weakened the financial position of the empire i.e. Abolition of slave trade as a major source of income.
- f) The Anglo-Asante wars which the British won led to final destruction of the empire.

CONSTITUTIONS AND CONSTITUTION MAKING

The term 'constitution' refers to a set of agreed principles and rules which state the structure and powers of a government

The constitution of Kenya is a supreme law that binds all people and all state organs at national and county level. It outlines the structure of government, defines the powers and prerogatives of the head of state, states the compositions, functions and powers of parliament, states the compositions of the executives and outlines the duties and rights of the citizens.

Constitutions vary in various countries depending on different experiences and their form is determined by the following.

- a) The historical background of a country
- b) Geographical factors. For example the numerous islands of Japan must be catered for in their constitution
- c) Religious beliefs of the people. Some countries have the Islamic Sharia law in their constitution e.g Libya and Somali
- d) Race composition of a country. For example, in South Africa the apartheid racial policy had been included in their constitution.

Functions of a constitution

- a) The constitution provides the legal ground from which the laws of the country are made.
- b) It spells out the powers of government and its relationship to the governed.
- c) It spells out the rights and duties of all citizens. It also provides the options a citizen has, legally, if those rights and freedoms are violated.

Types of constitutions

1. *Written constitution.*

This is a constitution in which the basic principles concerning the organization of government, powers of its various agencies and rights of the subjects are consciously written down in one document.

The first country to adopt a written constitution was USA after she attained political independence from Britain on 4th July 1776. France adopted it in 1791 following the French revolution of 1789. The primary objective of these adoptions was to include the rights of the citizens to avoid abuse by those in power.

Other countries with written constitutions include many European, African, Latin American and Asian countries. Kenya also has a written constitution.

Characteristics of a written constitution.

- a) It acts as a standard of reference to which the acts of the government of the day may always be compared.
- b) It is a rigid document that cannot be altered easily.
- c) It is only amended through a clearly spelt out procedure which is followed to the letter.
- d) There must be a special body entrusted by the legislature with the work of drafting the constitution.
- e) Once drafted the constitution must get the approval of the legislature.

Advantages of a written constitution.

Key notes for the teacher and students- @Cheloti 2012-2013

- a) Since the procedures of amending a constitution are clearly spelled out, it is not easy for politicians or other interest groups in the society to alter it.
- b) In case of a crisis, the constitution provides very clear guidelines on the procedures to be followed, thus restoring stability in the country.
- c) Since a written constitution is rigid, it therefore recognizes that there are fundamentals in a state, e.g rights of citizens, powers and duties of the president, which should never be easily changed. Change can only be done after adequate consideration.
- d) It is fundamental to a newly formed nation so as to take off in an orderly and organized manner.
- e) A written constitution is important to ensure that the identity of the various groups are preserved and maintained in a country with diverse racial groupings, religion and ethnic composition.
- f) Since it is arrived at after thorough and careful consideration by all, it therefore unites the people in the nation as it would have acquired recognition and acceptance from the majority of the citizens.

Disadvantages of a written constitution.

- a) Due to its rigidity, it can fail to respond to changing circumstances and can therefore easily become obsolete.
- b) A written constitution tends to make the judiciary too powerful as it is the only body that interprets the document. Where the executive and the legislature control the judiciary, the constitution can easily be manipulated.
- c) Some written constitutions are too detailed and rarely understood by the ordinary citizens.
- d) The procedure for amending the constitution is slow and costly. This causes delays which could lead to civil disorder in a society.

2. Unwritten constitution

This is a constitution where the fundamental principles of the organization and powers of the government are not contained in one document but rather in several scattered documents to add to the customs of a country. For example, the British constitution.

Sources of British constitution.

- a) *Statutes.* This refers to an Act of Parliament. Examples of statutes that comprise the British constitution are;
 - ~ Act of Union with Scotland of 1707 that determined the territorial boundaries within which the United Kingdom's constitution operates.
 - ~ Parliament Act of 1911 that governs the relationship between the House of Commons and the House of Representatives
 - ~ The Reform Acts of 1832 and 1834 which determine succession to the throne.
- b) *Customs.* This refers to ancient or traditional practices or the common law. For example, the first born inheriting the throne.
- c) *Laws of precedents.* Past accepted principles may be applied to a new set of facts in a judgment and this may eventually become part of the law of the land.
- d) *Customs of parliament.* House procedures including standing orders and other regulations are part of the British constitution.

- e) *Historical documents.* The following two Important documents form part of the British constitution;
- ~ *The Magna Carta (1215AD)* that contained the promises by the England King that he would not levy taxes outside the three legal feudal taxes without the consent of the legal counsel.
 - ~ *The Petition of Right (1628)* in which King Charles I agreed not to levy taxes unless through the Act of Parliament.
- f) *The Conventions and Practices* that have become respected over the years are also part of the British constitution.

Advantages of unwritten constitution

- a) It is flexible and adaptable to changing circumstances in the society. This is especially valuable during periods of rapid socio-economic and political changes.
- b) It is indigenous and therefore suited for a state.
- c) It can be changed by ordinary legislative process.
- d) It provides continuity with the nation's traditions and is therefore accepted and respected by the people.

Disadvantages of an unwritten constitution.

- a) It gives the courts too much work in handling matters as they search for constitutional principles not only in judicial decisions but in different statutes and customs.
- b) Because of the nature of the unwritten constitution, it is not easy to protect the rights of people effectively as the fundamentals of the state are not recorded in a few or a single document.
- c) An unwritten constitution tends to be vague and indefinite as compared to the written constitution.
- d) An unwritten constitution presupposes that the people are politically conscious and alert and will ensure that their rights and liberties are respected.

Features/qualities of a good constitution.

- a) Definiteness; it must depict clear intelligence and one which facilitates thinking. It must define its content clearly.
- b) It should be comprehensive/ it must be short but inclusive of all the issues involved in government operation.
- c) Should be durable and elastic/ it should neither be too rigid to amend or change nor so flexible as to encourage interference of its basic principle.
- d) Should be able to protect fundamental rights and freedom of citizen/a bill of rights must be provided for in the constitution, showing the extent to which the government can interfere with individual rights.
- e) Amendment procedure must be stated clearly.
- f) The constitution must be representative of the diverse social and political spectrum of the people.
- g) It must exhibit supremacy of the people/ it must make the will of the people as the basis of government.
- h) It must stipulate the choice of government through free and fair elections
- i) Statement of national wealth. /It must have a clear statement on how resources are to be

managed and how wealth created is to be distributed.

Constitution making process in Kenya in pre-colonial, colonial and post colonial eras.

Pre- colonial era.

The rules and regulation that formed the constitutional basis of pre-colonial communities in Kenya were mainly formulated by the councils of elders and then handed down from generation to generation.

The constitution was unwritten constitution guiding only the political, economic and socio-cultural activities

Colonial Era (1885- 1960)

Kenya was under the British colonial rule after the Berlin Conference upto 1963. The constitutional developments in the country were greatly influenced by the settlement of immigrant communities like the white settlers, the Asians and Christian missionaries. These communities competed with the Africans for control of economic resources and political power.

The turning point in Kenya's pre-colonial constitutional developments was the outbreak of Mau Mau war and subsequent declaration of a State Of Emergency on 20th October 1952 by Sir Evelyn Barring.

When the colonial secretary Oliver Lyttelton visited Kenya in 1954, he proposed the following constitutional reforms.

- ~ Establishment of a multi-racial council of ministers representing the three races setting ground for two Indian and one African minister (B. A Ohanga became the first African Minister)
- ~ It Proposed direct representation of Africans in the LEGCO
- ~ Lifting the ban on African political parties/district associations.

In 1958, a new constitution was proposed by Lennox Boyd. The constitution led to increased number of elected Africans in the legislative council (from 8 to 14). It led to introduction of multi-racial representation in the legislative council. It led to the increase of the number of African ministers to two.

The African elected members demanded for a constitutional conference culminating into the independence constitution.

The independence constitution (1960-1962)

The first Lancaster House Conference (1960)

Attended by all members of Legco and two nominated members, the conference received the following demands;

- a) Africans demanded for true democracy, where one man would have one vote.
- b) The Arabs wanted to retain the ten-mile coastal strip, while Somalis wanted reunification with Somalia.
- c) Michael Blundell, representing a section of Europeans demanded for a multi-racial government while Captain Briggs representing the white extremists demanded for creation of provinces along racial lines.

All these proposal were moderated by the British government

The period after the first Lancaster House conference witnessed a lot of differences among Africans and among other races. Among the Africans, the differences culminated into the formation of KANU in March 1960 at Kiambu with James Gichuru as president and KADU in Ngong Town with Ronald Ngala as the president.

The main difference between KADU and KANU was that while KANU was advocating for a unitary government, KADU wanted a federal system

The second Lancaster House conference (1962).

When KANU refused to form government despite winning the elections, demanding for the release of Jomo Kenyatta, KADU formed a rather minority government that was heavily dominated by the colonial officials. Such a government was rejected by most people thus creating instability that led to the British Authorities calling for the second Lancaster House Conference.

The following important issues were discussed;

- a) The future of the coastal strip that belonged to the sultan prior to colonialism.
- b) The future of North Eastern Province (North Frontier District)
- c) Security of the minority.

The participants in the formulation of the independence constitution were representatives of various political parties: - Paul Ngei (APP), KADU and KANU. Others were representatives of the Asian and European communities.

The 1962 conference settled for a federal structure with a strong central government.

A coalition government was formed briefly but when the 1962 constitution was promulgated, it was followed by a general election in May 1963.

The third and final conference in 1963 resulted in the drafting and adoption of Kenya's first independent Constitution by the British Parliament

The 1963 constitution established a parliamentary system with executive powers vested in a cabinet headed by a Prime Minister,

The Queen of England remained Head of State.

Independence (1963)

Kanu won the May elections and Kenya Attained internal self-government with Jomo Kenyatta as the first Prime Minister on 1st June 1963. Kenya attained full independence on 12th

December 1963 when the Queen ceased to be the head of state.

Kenya has been using the *Independence Constitution* upto August 2010 though with so many amendments.

Main provisions of the independence constitution of Kenya.

- a) The independence constitution provided for a regional/majimbo government with each of the seven regions having a regional assembly and president. The boundaries of the regions were given protection in the constitution.
- b) It also provided for a bicameral parliament consisting of the senate and the house of representatives/upper house and lower house. The lower house comprised 117 elected members and 12 special members. The senate comprised 41 members representing the 41 administrative districts and one representing Nairobi city

Though the senate was subordinate to the House of Representatives, it had powers to authorize declaration of a state of emergency, 65% of the senators were required to approve the

amendment of constitution. Also all Bills required approval of both houses.

- c) The constitution stipulated that the Prime Minister (appointed by the governor) was to be head of Government and Queen the Head of State, represented by the Governor General. The powers of the governor were defence of the country, foreign affairs, internal security and approval of legislation.
- d) The constitution recommended a multiparty system of government and the party with the majority of seats forming the government.
- e) It contained the Bill of Rights, which protected the individual's rights. The Bill of rights was modeled on the European convention on Human Rights and Fundamental freedoms.
- f) The constitution provided for an elaborate scheme to protect the minority rights. The minorities in this case were the Europeans, Asians and some indigenous communities.
- g) Independent Electoral commission was set up consisting of the speakers of the two houses and a nominee of the Prime Minister. Also it comprised nominees representing the regions. This was to ensure impartiality and honesty in elections.
- h) The constitution provided for an independent and impartial judiciary to ensure justice and prevent corruption. Judges were accorded security of tenure which was extended to the Attorney General, the government's principal legal advisor.
- i) It provided for public service commission. The aim was insulate the civil service recruitment and promotions from abuse and corruption.
- j) An independent land board.

Post –colonial Era (1963-2010).

From independence to Multi-party democracy period (1963-1991)

Like many former British colonies, Kenya started off with a west Minister system of government.

The first Constitutional amendment in independent Kenya was in 1964. Kenya became a republic and the executive became presidential. The senate and regions were also abolished.

A Constitutional review in June 1982 officially transformed Kenya into a one-party state.

A parliamentary act in December 1991 repealed the one-party system provisions of the constitution and effectively established a multiparty system.

The period after 1992 was influenced by Global issues like the decline of the cold war, collapse of the Soviet Union in 1989 and the intensified struggle for democracy all over the world.

In 1997, the Inter Party Parliamentary Group (IPPG) was formed with membership from the Opposition and KANU mps. The aim was to come up with minimal constitutional reforms to level the ground before the 1997 general elections

The following reforms were approved;

- a) The KBC shall observe fairness in providing balanced all-inclusive political views in the news coverage.
- b) Membership of the Electoral Commission to be reviewed to accommodate the interest of the opposition.
- c) Registration of Parties would be done without unnecessary delay.
- d) The powers of the chiefs that would likely interfere with political activity at local level be contained.
- e) The police Act be amended to provide for politically impartial police force

- f) To repeal a number of laws restricting civil and political rights, and abolition of the offence of sedition

In 1997, a constitutional review commission, called the Constitution of Kenya Review Commission (CKRC), was established to provide civic education, seek public input and prepare a draft constitution.

In October 2000, parliament passed a Bill entrenching the CKRC into the independence constitution. It was now headed by Professor Yash Pal Ghai and comprised 15 commissioners. In June 2001, the CKRC was expanded to include other groups like the People's Commission following the amendment of the 1997 Constitution of Kenya Review Act.

The CKRC act specified a 2 year time frame for completion of the review process.

However, its activities were marred by controversy in 2002 and the ultimate dissolving of parliament in October 2002 by president Moi. He even attempted to dissolve the commission, thanks to its being entrenched in the independence constitution.

When the NARC government took over power in 2003, the review exercise was reviewed. The National Constitutional Conference was convened at Bomas of Kenya and came up with what came to be known as the **Bomas Draft** constitution. However the political elite did not support the Bomas Draft.

In 2005, Parliament amended the constitution of Kenya Review Act to allow the Attorney General to come up with the *Proposed New Constitution*, popularly known as the **Wako Draft**. The draft constitution was ultimately rejected by Kenyans at the constitutional referendum in 2005 because of disagreements amongst various stakeholders.

In December 2007, Kenyans participated in the general elections that were followed by Post Election Violence caused by the controversy that surrounded the results of the elections.

Steps towards realization of a new constitution in Kenya from 2008.

- a) On 28 February 2008 The National Accord and Reconciliation Act (NARA) was signed by President Kibaki and Prime Minister Raila Odinga. Agenda No 4 of this arrangement was a new process to finalize the long awaited constitution of Kenya

The main provisions of the National Accord were:

- ~ Establishment of a grand coalition government with two parties; PNU and ODM sharing power.
- ~ Raila Odinga was to become Kenya's second Prime minister after the position was created in the accord arrangement
- ~ Two deputy Prime Minister Positions would be filled by the PNU and ODM parties respectively.
- ~ Provision for An expanded cabinet with the two parties being accorded slots as per their proportion in the house.

- b) In 2008 the *Constitution of Kenya Review Act 2008* was passed and a Committee of Experts (CoE) was established as the main technical constitutional review organ to drive the process.

- c) The CoE was chaired by Nzamba Kitonga, the deputy chair was Ms Atsango Chesoni, other members were Ms Njoki Ndung'u, Mr Otiende Amolo, Mr Abdirashid Hussein, Mr Bobby Mkangi, Professor Christina Murray (South Africa), Dr Chaloka Beyani (Zambia) and Dr Frederick Ssempebwav (Uganda).

- d) 23 February 2009 Members of the CoE were appointed by the President were later on sworn in,
- e) On 17 November 2009 CoE released the draft to the public and invited views and comments on the draft constitution,
- f) By 23rd February 2010. CoE had submitted the final draft of constitution to the Parliamentary Select Committee.
- g) On 4th August 2010 Kenya held a Constitutional Referendum where the new constitution was overwhelmingly endorsed.
- h) On 28th August 2010, the new constitution was promulgated and became operational making Kenya the first independent African state to depart from the independence constitutions.

Stages in the constitution making process in Kenya since independence.

- 1) *Debate over contentious issues.* Issues like the entrenchment of section 2A in the independence constitution in 1981 raised concerns among various stake holders and groups. The issue of whether to include the position of Prime Minister or not has also been debated for many years.
- 2) *Collection of public views.* The Saitoti commission (the Constitution review commission established by Moi in 1990) had the objective of collecting views of Kenyans concerning how KANU was to operate in the best way possible. In June 2001, the CKRC, chaired by Yash Pal Ghai was mandated to collect views as part of the constitution review process.
- 3) *Civic education.* In 2001, the Ghai Commission was mandated and funded to provide civic education .
- 4) *Convening of constitutional conferences.* For example, The 2002 National Constitution Conference at Bomas of Kenya and other similar conferences.
- 5) *Drafting of the constitution.* This involved both local and international experts who drafted the constitution between 2000 and 2010. This was mainly the work of the Ghai led CKRC and the Committee of experts led by Nzamba Gitonga.
- 6) *The referendum.* During the 2005 referendum, the Wako Draft constitution was rejected. In August 2010, another referendum was held and the 2010 proposed New Constitution was approved.
- 7) *Promulgation of the constitution.* On 27th of August 2010, President Mwai Kibaki presided over the promulgation of the new constitution of Kenya.

Constitutional Changes in Kenya since independence upto 2010.

- 1) The 1963 independence constitution marked the end of colonial rule and transformed the colony into a dominion. It established a parliamentary system with executive powers vested in a cabinet headed by a Prime Minister, who is appointed by the Queen of England from the majority party in Parliament. The Queen of England remained Head of State as represented by the Governor General who was also the Commander-in-Chief
- 2) By the 1st amendment *Act 28 of 1964*, published in November 1964, Kenya became a republic and the executive became presidential. The amendment outlined the criteria to be met by a presidential candidate. It made provision of a Vice President who would be appointed by the president from among the members of parliament. Jaramogi Oginga Odinga became the first occupant of that office.

- 3) By The 2nd amendment Act 38 of 1964 published on 17th December 1964, the senate and regions were also abolished.
- 4) 3rd amendment Act 14 of 1965, published on 8th June 1965, altered parliamentary Majority required for approval of a state of emergency to only a simple majority from the previous 65%. The term 'region' was replaced with 'province.' The amendment altered the title of Supreme Court.
- 5) By the 4th amendment Act 16 of 1966, published on 12th April 1966, commonwealth citizens became eligible for Kenyan citizenship. Also any legislator jailed for six months or more or missed to attend eight consecutive parliamentary seatings without the speaker's permission had to forfeit his/her parliamentary seat.
- 6) On 28th April 1966, an amendment was passed, published on 30th April, to compel MPs who defected from sponsoring party, to resign from parliament and seek re-election. This amendment targeted Kenya People's Union (KPU) of Jaramogi Odinga that had been formed that year. The amendment was published, tabled, debated, passed and received presidential assent within 48 hours. (it was nicknamed 'the KPU amendment').
- 7) In May 1966, the Public Security Act was passed, published on 7th June 1966, empowering the president to detain a citizen without trial on grounds of being a threat to state security. The president also acquired power to control freedom of the press.
- 8) In 1966, a constitutional amendment abolished the Bicameral Legislature and replaced it with a Unicameral Legislature, chosen directly by the electorate. The Act was published on 4th January 1967. The voting majority to change the Constitution was lowered to two-thirds of the MPs.
- 9) In 1968, by the 9th amendment, published on 12th April 1968, the president was empowered to alter provincial and district boundaries. The act abolished the provincial councils and all representatives to the provincial and district boundaries. This marked the end of regionalism.
- 10) In 1968, by the 10th amendment, Act 45 published on 12th July 1968, the procedure for presidential elections and succession in the event of his death was laid down. Also, that all candidates for a general election should be nominated by a political party. The act also gave the president power to nominate 13 MPs to replace the 12 specially elected members of the House of Representatives.
- 11) In 1974, the age qualification for presidential candidates was also lowered to 35 from 40 years. The minimum voting age was altered from 21 to 18 years.
- 12) In 1975, an amendment of the constitution empowered the president to pardon any election offender at his own discretion. This was done to favour Paul Ngei who been found guilty of an election offence. It was named '*the Ngei Amendment*'. The bill went through all the stages in one afternoon and received presidential assent the following day.
- 13) In 1975, Kiswahili was declared the national language of the national assembly.
- 14) In 1977, the Kenya court of appeal was established after the breakup of the East African Community.
- 15) The 18th amendment Act passed in 1979 was the first one under president Moi. It provided that public officers had to resign six months in advance in order to qualify as candidates for parliamentary elections.

- 16) In 1979, both Kiswahili and English were declared languages of the national assembly.
- 17) By The 19th amendment Act of 1981 published in 1982, Kenya became a *de jure* one party state. KANU became the only lawful party in Kenya. The infamous section 2A was introduced in the constitution. (Kenya had been a *de facto* one party state between 1969 and 1982). The post of Chief Secretary was created to head the public service. The first occupant being Jeremiah Kiereini.
- 18) By the 1985 20th amendment Act, the High Court began acting as a Court of Appeal.
- 19) The 21st amendment Act passed in 1985 repealed Section 89 of the constitution which provided for the acquisition of Citizenship for anyone born in Kenya after December 11th 1963.
- 20) In 1987, the security of tenure of the Attorney General, Chief Secretary, The Comptroller and Auditor-General was removed. The president could now dismiss them at will. Office of chief secretary was abolished.
- 21) In 1988, the security of tenure of Puisine Judges and Chairman of Public Service Commission was removed. The removal of security of tenure of the above officers sparked a lot of condemnation from LSK and main stream churches.
- 22) In 1988, an amendment was passé that provided the police with powers to hold a suspect in custody for upto fourteen days before taking him/ her to court if the crime constituted a capital offence. This is what led to detaining of persons suspected of opposing the government in the dingy basement of Nyayo House where some were tortured to death.
- 23) 1990- Security of tenure of the offices of AG and Controller and Auditor –General was reinstated.
- 24) A parliamentary act in December 1991 repealed the one-party system provisions (section 2A) of the constitution and effectively established a multiparty system. Multiparty elections were held the following year in December.
- 25) In 1991, an amendment that was passed limited the tenure of the president to a maximum of two-five year terms.
- 26) After 1997 elections, Parliament, on the initiative of the government, passed the *Constitution of Kenya Review Act* that set the pace for comprehensive constitutional reforms.
- 27) A constitutional review commission, called the Constitution of Kenya Review Commission (CKRC), was established to provide civic education, seek public input and prepare a draft constitution.
- 28) In October 2000, parliament passed a Bill entrenching the Constitution of Kenya Review Commission (CKRC) headed by Professor Yash Pal Ghai into the independence constitution.
- 29) In 2005, Parliament amended the constitution of Kenya Review Act to allow the Attorney General to come up with the *Proposed New Constitution*, popularly known as the **Wako Draft**
- 30) The draft constitution was ultimately rejected by Kenyans at the constitutional referendum in 2005 because of disagreements amongst various stakeholders.
- 31) The rejection of the draft constitution by Kenyans in the referendum of 2005 meant that the 1963 constitution (as amended) remained the basic law of Kenya. .
- 32) **28 February 2008**The National Accord and Reconciliation Act (NARA) was signed by

President Kibaki and Prime Minister Raila Odinga to end violence that erupted after the December 2007 presidential elections. Agenda No 4 of this arrangement calls for a new process to finalize the long awaited constitution of Kenya

- 33) In 2008 the *Constitution of Kenya Review Act 2008* was passed and a Committee of Experts (CoE) was established as the main technical constitutional review organ to drive the process. The CoE was chaired by Nzamba Kitonga, the deputy chair was Ms Atsango Chesoni, other members were Ms Njoki Ndung'u, Mr Otiende Amolo, Mr Abdirashid Hussein, Mr Bobby Mkangi, Professor Christina Murray (South Africa), Dr Chaloka Beyani (Zambia) and Dr Frederick Ssempebwav (Uganda).
- 34) On 28th August 2010, the new constitution was promulgated and became operational making Kenya the first independent African state to depart from the independence constitution.

Key changes in the New Constitution.

- a) Reduction of president's executive powers.
- b) Devolution of power to regions (creation of county and national governments.)
- c) Creation of the senate and national assembly to constitute parliament.
- d) On Citizenship, Birth and registration are the only recognized ways of attaining Kenyan citizenship. Dual citizenship is now recognized by the constitution.
- e) Recognition of the Kadhi's courts as subordinate courts in the judicial court system.
- f) Expansion of the citizens' Bill of Rights to guarantee equal representation for either gender in all governance structures.

FEATURES OF THE NEW CONSTITUTION.

Why there was need to have a new constitution in Kenya.

- The need to meet the changing needs of the Kenyan society, e.g. due to population growth.
- The rise of gender sensitivity in Kenya/The need to address the rights of women which had not been adequately addressed in the outgoing constitution.
- The constant misuse of executive authority by the Moi and Kenyatta regime/ the need to give less or more power to the executive.
- The need to depart from the colonial policies that found their way into the outgoing constitution.
- The need to safeguard against social vices like corruption and land grabbing.
- The need to enhance unity and realize a liberal society due to political maturity.

Problems that Kenya faced in realization of a new constitutional dispensation.

- a) Party differences have been transferred to the constitution making process e.g. the NARC fallout, the ODM wrangles between Raila and Ruto. Etc.
- b) Sectarian interests based on tribe, religion, age, sex which is hard to satisfy. E.g in relation to creation of counties, Kadhis court and land laws.
- c) Attempts to project personality, individual or group interests rather than national interest into the process.
- d) Direct misinformation of the public and propaganda by politicians and other groups with selfish interests.
- e) Illiteracy and ignorance of the electorate and therefore easily misled.

- f) Tension and sometimes violence marred the whole review process.
- g) Limited financial resources and personnel
- h) Lack of unity of purpose and co-operation among existing political parties hence difficulty in hammering out compromise..
- i) Inadequate civic education/wrong civic education.
- j) Lack of consultation with all the interested stake holders.
- k) An attempt to tie the constitutional review process with election time-table, political programmes and interests.

Why Kenya's new constitution is regarded as supreme.

- a) The Constitution is the supreme law of the Republic and binds all persons and all State organs at both levels of government.
- b) No person may claim or exercise State authority except as authorized under the Constitution.
- c) The validity or legality of the Constitution is not subject to challenge by or before any court or other State organ.
- d) Any law, including customary law that is inconsistent with the Constitution is void to the extent of the inconsistency, and any act or omission in contravention of the Constitution is invalid.
- e) The general rules of international law shall form part of the law of Kenya.
- f) Any treaty or convention ratified by Kenya shall form part of the law of Kenya under this Constitution.

Functions of the Kenyan constitution.

- a) It is the fundamental law of Kenya.
- b) It has helped in establishing the philosophy, character and structure of the Kenyan government.
- c) It has laid down principles which determine government power and duties.
- d) It regulates, distributes and limits the functions of different institutions of the state.
- e) It spells out the basis of relationship between the Kenyans and the government and what rights should be in that relationship.

Role played by the Kenyan constitution in governing the country.

- a) It protects the interests of the weak in the society from those who would want to dominate them.
- b) It checks the powers of the dictatorial rulers.
- c) It defines how to rise to power hence preventing unnecessary power struggles.
- d) It provides for the separation of powers between the three arms of government.
- e) It defines the powers of those in authority hence preventing misuse of power.
- f) It defines relations with other countries
- g) It specifies on how a government is to be formed.

DEMOCRACY AND HUMAN RIGHTS

What is democracy?

The is derived from the Greek word *Democratia* (Demos meaning people and *Kratas* meaning 'rule or power').

It is a form of government where political decisions are directly in the hands of the citizens.

Key aspects of a real democracy.

- a) *Political aspect.* The consent of the governed (expressed directly or indirectly through their elected representatives) must be sought when making political decisions. Public opinion must be given priority in governance.
- b) *Social aspect.* Human dignity must be valued at all times. Every individual should be free to organize his own lifestyle, hold and express opinions, enjoy company of others and join associations.
- c) *Economic aspect.* All citizens must be provided with equal opportunities. Exploitation of humans by fellow humans should be eliminated. Means of production should be nationalized to reduce inequalities between the rich and the poor.

Types of democracy

- 1) *Pure or direct democracy.* This is where the people are directly involved and participate in decision-making. Such a democracy has an advantage in that the laws made are easily accepted by all the people since they feel they own the laws.
This is common form of democracy in smaller organizations and was also used in ancient Greece.
- 2) *Indirect democracy.* This is a type of democracy where citizens exercise their right in decision making not directly as individuals, but through their agreed representatives, elected by the citizens. Parliament acts as the basic institution in this type of democracy. The elected may make *Appointments* of persons to fill other positions like the Cabinet or carry out *Nomination* (hand-picking of additional representatives to join the elected ones).
- 3) *Constitutional Democracy.* This is where democracy is exercised but within the limits of the constitution. The minority rights are guaranteed (freedom of expression, association and worship)
It is also referred to as Liberal democracy and is a form of representative democracy.

Merits of democracy

- a) It is founded on the concept of the people and therefore leaders cannot ignore the people from whom they get authority to rule. It is most popular form of government.
- b) It recognizes equality among all the people without discrimination. It advocates equality before the law and anyone can rise to power regardless of one's background or environment.
- c) It promotes patriotism or national pride as it urges people to participate in their governance. This reduces chances of a revolution
- d) It promotes liberty and peace as it advocates for peaceful coexistence. People develop a sense of cooperation. It can also promote international cooperation when extended beyond the borders.
- e) Since it is based on moral and educative values, democracy helps individuals to develop their personality. It develops initiative of the people and their sense of responsibility.

f) Democracy balances the liberty of the individual with the power of the state.

Demerits of democracy.

- a) Democracy promotes dictatorship by the majority. The majority government by fulfilling the election pledges to please the supporting electorate ends up neglecting the political, social and economic interests of the minority who did not vote for it.
- b) Democracy encourages class struggle and corruption as only those that possess money can engage in intensive campaigns and get elected due to their influence. Then once elected, they pass laws that protect their interests.
- c) A democratic government is usually slow and wasteful since consultations have to be made when making a decision. Time and public resources are used in the process of seeking the views of the majority.
- d) The ethical value of democracy is questionable. It is not easy to find an honest, sincere man of good moral character being elected.
- e) Democracy may perpetuate incompetence since it is numbers which matter when choosing a leader not the leadership qualities. Where a majority of the electorate is ignorant, they may make poor decision during elections thus promoting incompetence.
- f) Although democracy is regarded as the rule of the majority, in essence, it is the elected minority who rule. Democracy is therefore as a form of dictatorship by the informed or elected minority.

Principles of democracy.

Principle-basic truth or general law.

- a) *Freedom of speech, debate and enquiry.* The basic healthy political culture among a group of people is based on open debate among citizens where they can express their views without fear.
- b) *People's participation as a whole in government.* Through free, fair and regular elections, the government should remain a servant of the people and not master. Democracy is based on consent which can be withdrawn if the government fails to satisfy peoples' expectations.
- c) *Open and accountable media.* The media must be open in their agenda and be held accountable to the public. Media monopolies should not be allowed to develop.
- d) *Economic democracy.* This implies the decentralization of economic power so that individuals and communities can be economically empowered to create and control their own wealth.
- e) *Equality before the law.* Judgment should be made in accordance with a written law, rather than in an arbitrary manner. Each citizen also has an equal ability to seek and receive justice.

Human rights

Human rights refers to the accepted principles of fairness and justice- or the universal moral rights that belong equally to all people in their capacity as human beings regardless of sex, race, and tribe, and language, place of origin, age or political beliefs.

Why human rights are important.

- a) Rights are necessary for human beings to achieve a dignified life, fulfill their potential and to

satisfy both their physical and spiritual needs.

- b) Rights are inherent to human beings. One has rights purely because they are human. They are not granted by the state.
- c) Rights empower citizens and residents by giving them control in decision making organs of the state.
- d) Rights justify special treatment of minorities and other special or disadvantaged groups or communities.
- e) Rights provide guidance to organs of state regarding the exercise of state power.
- f) Rights such as the right to vote, freedom of expression and of the press ensure the public access the necessary information necessary for the protection of democracy and ensure accountability of public authorities.
- g) Respect for human rights limits internal and external conflicts and strengthens national unity.

Classification of Human rights.

- a) *Social economic and cultural rights.* On the basis of these rights, the state is expected to pursue policies that enable individual, families or groups to earn a living and provide basic needs including education and medical care for themselves.
- b) *Solidarity rights.* These are rights that focus on the whole community. They require that the state to pursue policies which do not destroy natural resource or waste financial resources but instead create conditions for peaceful co-existence. These rights include the right to clean, healthy and sustainable environment, peace, and development.
- c) *Civil and political rights.* The rights include the right o vote, right to think and to have access to information. These rights ensure a secure space for the individual to pursue their values and interests.

Groups that monitor human rights in Kenya.

- a) Lawyers and Judges and other professionals including teachers.
- b) Religious groups
- c) Journalists (The media-print and electronic).
- d) The police force
- e) Association and special commissions, e.g business associations, women groups, the Kenya National Human Rights and Equality Commission (KNHREC), among others.
- f) pressure groups

Characteristics of human rights.

- a) *They are universal.* Human rights apply equally to everyone by virtue of being a human being.
- b) *They are indivisible.* One right cannot be applied if the other does not exist. They are inherent.
- c) *Incase circumstance demand they can be suspended.* For example during war, or during disease outbreak like Ebola or other contagious diseases, one may be denied the right to freedom of movement.
- d) *Human rights have limitations.* As people enjoy their rights, they should respect the rights of others.

United Nations Charter on human rights.

This is a document that contains the basic human rights to which every person by virtue of being a human being is entitled to. It also reaffirms the equality of the rights of all men and women.

The Universal Declaration of Human Rights was adopted by the United Nations General Assembly on 10th December 1948.. Member states that signed the document are supposed to publicize the declaration in their countries

The basic human rights contained in the Charter include;

1. All human beings are born free and equal.
2. Everyone is entitled to all rights and freedoms set forth in the declaration without discrimination on basis of sex, race, colour, sex, language, religion, political or other opinion, racial origin birth or any other status.
3. Everyone has a right to life, liberty and security.
4. No one should be held in servitude or slavery or perform forced labour.
5. Everyone has a right to recognition as a person before the law.
6. Every person is equal before the law and has the right to equal protection and equal benefit of the law.
7. Every person's dignity should be respected and protected.
8. Everyone has a right to nationality. One is free to change nationality.
9. No person will be subjected to physical or psychological torture, corporal punishment or cruel and inhuman treatment.
10. Everyone has a right to free movement and residence within the borders of each state.
11. Everyone has a right to ownership of property alone as well as in association with others. State cannot take away ones property without proper compensation.
12. Every citizen has a right to peaceful assembly and association.
13. Every citizen is free to make political choices, which includes the right to form, or participate in forming, a political party and to participate in the governing process of the country.
14. Every person has the right to the highest attainable standard of health, which includes the right to health care services, including reproductive health care.
15. Every person has the right to accessible and adequate housing, and to reasonable standards of sanitation.
16. Every person has the right to be free from hunger, and to have adequate food of acceptable quality.
17. Every person has the right to clean and safe water in adequate quantities.
18. Every person has the right to social security
19. Every person has the right to education. Elementary education shall be compulsory while technical and professional education should be made generally available.
20. Every person has the right to a clean and healthy environment. It is our duty to ensure that the environment is protected for the benefit of present and future generations.
21. Every person, whether individually or as a group, has freedom to manifest any religion or belief through worship.

22. An adult has the right to marry a person of the opposite sex, based on the free consent of the parties. Parties to such a union enjoy equal rights.
23. Every person should be subjected to an efficient, lawful, reasonable and procedurally fair administrative action.
24. Everyone has freedom of opinion and expression.
25. Everyone has a right to seek and enjoy, in other countries, asylum from persecution. The right is however enjoyed only for political reasons.
26. Everyone has a right to a fair and public hearing by an independent and impartial tribunal in the determination of one's rights and obligations.
27. Everyone has a right to protection of the law against interference or attacks against one's property, home or correspondence.
28. Everyone has a right to work, to free choice of employment, to just and favourable conditions of work and protection against unemployment.
29. Everyone has a right to leisure, which includes reasonable working hours and periodic holidays with pay. Right to freely participate in the cultural life of the community, to enjoy the arts e.g drama, music, dance etc.
30. However every person has various duties to the community in which they live.
31. Freedom from torture and cruel, inhuman or degrading treatment or punishment.

Importance of the UN Charter on human rights.

- a) Protection of human rights, which is the core thing in the UN Charter, is important for the Establishment and maintenance of peace and security. Where there is violation of human rights, it becomes difficult to prevent conflict and maintain peace.
- b) Respect for human rights is an important requirement for efficiency and effectiveness in governance. The principle of non-discrimination, principle of international human rights law, enables one to strive for more equitable societies even within the level of resources available.
- c) Respect for human rights promotes development. National development strategies can only lead to tangible improvement in the lives of people if they have as their key objectives realization of economic, social and political rights.
- d) The UN Declaration provides a guideline for collective action towards eradication of poverty.
- e) The UN human rights mechanisms have given utmost attention to countering of terrorism as a way of protecting human rights.
- f) A SOCIETY that observes respect for human rights reduces the chance of conflict outbreak.
- g) The UN Charter on human rights is the foundation on which peace-making (peace-building and peace-keeping) is built. Any strategy to achieve peace anywhere is accompanied by strategies to uphold human rights like was the case in Yugoslavia.
- h) In recognition of human rights, the UN has played a key role in giving humanitarian assistance to the people of different countries suffering from effects of natural disasters and other emergencies.
- i) The UN Charter on Human rights promotes the rights of women and their empowerment by affirming the equal rights for women and fighting discrimination based on gender

- j) The UN Charter champions the rights of vulnerable groups like the minority migrant workers, abused children, indigenous people and persons with disabilities.

The Kenyan Bill of Rights

This is a statement of human or civil rights in the constitution of Kenya. The Bill of Rights is covered in chapter four of the constitution of Kenya (2010).

Importance of the Kenyan Bill Of Rights.

- a) States that every individual has the right to life
- b) It guarantees liberty to all citizens by forbidding enslavement, detention without trial etc.
- c) It protects the individual from all forms of torture and inhuman treatment
- d) It guarantees the protection of private property and allows Kenyans to own property anywhere in the country.
- e) It protects individuals' freedom of conscience and religion.
- f) It guarantees the protection of the freedom of speech and expression
- g) It gives Kenyans the right to move freely throughout the country and to reside in any part of the country.
- h) It guarantees individuals against any form of discrimination on the basis of colour, creed, and gender.
- i) It protects individual against arbitrary search, arrest and entry into one's property without his/her consent

Rights and fundamental freedoms contained in the Kenyan Bill of Rights.

1. Right to life.

Life begins at conception and no child should be deprived of life deliberately. Abortion is not therefore permitted unless occasioned by the need for emergency treatment or life of the mother is in danger.

People who attempt to commit suicide are also punishable on the strength of their right

2. Equality and freedom from discrimination

Every person is equal before the law and has the right to equal protection and equal benefit of the law. This means that both men and women are equal before the law. Any form of discrimination is illegal and is prohibited in the constitution.

3. Human dignity

Every person's dignity should be respected and protected. One must not ridicule or embarrass other members of society.

4. Freedom and security of a person.

This right protects a person from being detained without a good reason and without trial. No person will be subjected to physical or psychological torture, corporal punishment or cruel and inhuman treatment.

5. Freedom from slavery, servitude and forced labour.

No one should be held in servitude or slavery or perform forced labour. Every employer should treat his or her employees with dignity and not to force them to work.

6. Right to privacy.

Every person has a right NOT to have him or herself, his or her property searched, or his or her possessions seized. Not revealing a person's family or private affairs unnecessarily or private communications interfered with.

7. Right to assembly, demonstration, picketing and petition.

Every citizen has a right to assemble and participate in peaceful demonstrations and even present petitions to public authorities.

8. Political rights

Every citizen is free to make political choices, which includes the right to form, or participate in forming, a political party and to participate in the activities of, a political party.

Every citizen has the right to free, fair and regular elections based on universal suffrage and the free` expression of the will of the electors for any elective public body or office

Every adult citizen has the right, without unreasonable restrictions, to be registered as a voter; to vote by secret ballot in any election or referendum and to be a candidate for public office, or office within a political party and, if elected, to hold office.

9. Freedom of movement and residence

Citizens have a right to free movement and ownership of property in any part of the country.

Anyone is also free to leave the country or enter and remain in the country

10. Economic and social rights

Every person has the right to the highest attainable standard of health, which includes the right to health care services, including reproductive health care.

Every person has the right to accessible and adequate housing, and to reasonable standards of sanitation.

Every person has the right to be free from hunger, and to have adequate food of acceptable quality.

Every person has the right to clean and safe water in adequate quantities.

Every person has the right to social security

Every person has the right to education.

A person shall not be denied emergency medical treatment.

The State must provide appropriate social security to persons who are unable to support themselves and their dependants.

11. Consumer rights

Consumers have the right to goods and services of reasonable quality.

Consumers have the right to the information necessary for them to gain full benefit from goods and services.

Consumers have the right to the protection of their health, safety, and economic interests.

Consumers have the right to compensation for loss or injury arising from defects in goods or services.

12. Right to fair labour practices.

Every worker has a right to fair labour practices like *fair remuneration, reasonable working conditions, the right to join or practice in trade union activities and the right to go on strike.*

Every employer has a right to join an employers' association and participate in its programmes and activities

Responsibility.

One must respect the right to fair labour practices of one's employees

Employees on the other hand must conduct themselves responsibly, even during strikes, to avoid causing physical injury to innocent people, or destroying property.

13. Right to clean and healthy environment.

Every person has the right to a clean and healthy environment. It is our duty to ensure that the environment is protected for the benefit of present and future generations.

14. Freedom of conscience, religion, belief and opinion.

Every person, whether individually or as a group, has freedom to manifest any religion or belief through worship, practice, teaching or observance, including observance of day of worship.

One cannot be denied employment or educational opportunity because of belonging to a particular religion or because of one's belief or religion.

A person cannot be forced to engage in any act that goes against his or her belief or religion.

15. Freedom of expression.

This guarantees all Kenyans the freedom to seek, receive or impart ideas or information. It also guarantees freedom of artistic creativity, academic freedom, and freedom to conduct scientific research.

16. Freedom of media.

The freedom and independence of the media is guaranteed. The state should not interfere with the media.

17. Access to information.

Every person has a right to access information held by the state, or by others, which may be required for the protection of any right or fundamental freedom. The state is expected to make public any important information affecting the nation.

Every person has a right to the correction or deletion of untrue or misleading information that affects the person.

18. Freedom of association.

Every person has the right to form, join and participate in the activities of an association of any kind, provided that the association is not engaged in illegal activities, such as stealing or killing.

19. Protection of the right to property.

Every person is entitled to own property either individually or as a group, in any part of the country. However the property has to be legally acquired.

This right provides all Kenyans a fair opportunity to invest in property and thus, prosper.

20. Right to language and culture.

Every person has the right to use a language, and embrace the culture of the person's choice.

Every person has the right to form or join cultural groups.

Every person is also protected from being forced to join any such group.

Each linguistic group is free to use their language, practice their culture, and form associations and other organs of the civil society.

It is unacceptable to force another person to perform, observe or undergo any cultural practice or rite.

21. Right to family.

An adult has the right to marry a person of the opposite sex, based on the free consent of the parties. Parties to such a union enjoy equal rights. Both parties have a responsibility to respect the rights of their spouses during marriage and even in the event of its dissolution.

It is wrong to deny one's spouse access to marital property after separation or divorce.

The constitution also recognizes marriages conducted under traditional, religious, personal or family law. Marrying of underage persons and forced marriages are outlawed in the constitution.

22. Fair administrative action.

Every person should be subjected to an efficient, lawful, reasonable and procedurally fair administrative action. This promotes efficient administration in public offices.

23. Access to justice.

Everybody should access justice and a reasonable fee will be charged to enhance this, if required. If this is not free, many people will not access justice which will continue to be a preserve of the rich people.

24. Right of arrested persons.

An arrested person has;

- a) The right to be informed promptly in a language that the person understands of the reason for arrest, the right to remain silent and he consequences of not remaining silent.
- b) The right to remain silent. – The right of a person to choose to talk or to remain silent.
- c) The right to communicate with an advocate and other persons whose assistance is necessary (freedom of speech with all those who will assist him or her in the case.)
- d) The right of not being compelled to make any confession or admission that could be used in evidence against the person.
- e) The right t be held separately from persons serving a sentence (should not be held in prisons alongside those already convicted)
- f) To be brought to court as soon as reasonably possible, as but not later than twenty four hours after being arrested.
- g) To be charged or be informed of the reason for the extension of detention or release, at the first court appearance.
- h) To be released on bond or bail, on reasonable conditions, pending a charge or trial, unless there are compelling reasons as to why one cannot be released.

25. Fair hearing.

Every person has the right to have any dispute that can be resolved through a court hearing be resolved in such a manner that will accord him or her fair and public hearing. An accused person has the following rights;

- a) To be presumed innocent until proven otherwise.
- b) To be informed of the charges.
- c) To have adequate time and facilities to prepare a defence.
- d) To a public trial before a court.
- e) To have the trial begin and be concluded with few delays.
- f) To be present when being tried.
- g) To be represented by an advocate and be informed of this right immediately. Depending on the circumstances, the accused may be assigned an advocate by the state and at the state's expense.
- h) To remain silent and not testify during the proceedings.
- i) To be informed in advance, of the evidence the prosecution intends to present, and to have reasonable access to that evidence.

- j) To challenge the evidence.
- k) To refuse to give self-incriminating evidence.
- l) To have the assistance of an interpreter if the accused person cannot understand the language used in the trial.
- m) If convicted, to appeal, or apply for review by a higher court.

26. Rights of persons detained, held in custody or imprisoned.

A person, who is detained, held in custody or imprisoned under the law, retains all rights and fundamental freedoms in the bill of rights. Except those that are impractical and inapplicable under the circumstances.

A person who is detained or held in custody is entitled for an order Habeas **Corpus**- This is a law that states that a person who has been arrested should not be kept in prison longer than a particular period of time unless a judge in a court has decided that it is right. It is the right of the person who is detained, held in custody or imprisoned to be treated in a humane manner.

Application of the Kenyan bill of rights to specific groups of people in Kenya.

Rights enjoyed by Children in Kenya.

A child refers to a young person from birth to full physical development. The term also refers to a person who has not attained the age of eighteen. The rights of children are contained in the United Nations Convention on the Rights of the Child, and International Agreement on the Rights of the Child put in place in 1990.

The rights include;

a) Survival rights

- ~ Every child has the right to a name and nationality from birth.
- ~ Every child has the right to basic nutrition, shelter and health care.

b) Development rights

- ~ Every child has the right to free and compulsory basic education.
- ~ Every child has the right to parental care and protection, which includes equal responsibility of the mother and father to provide for the child, whether they are married to each other or not.

c) Right of protection

- ~ Every child has the right to be protected from abuse, neglect, harmful cultural practices, all forms of violence, inhuman treatment and punishment, and hazardous or exploitative labour.
- ~ Every child has the right not to be detained, except as a measure of last resort, and when detained, to be held for the shortest appropriate period of time.
- ~ Every child has the right to separate from adults and in conditions that take account of the child's sex and age.
- ~ Every child has the right to a child's best interests are of paramount importance in every matter concerning the child.
- ~ Children should be protected from exploitation such as child labour.

Rights enjoyed by Persons with disabilities in Kenya.

- (a) A person with any disability is entitled to be treated with dignity and respect and to be addressed and referred to in a manner that is not demeaning. A person with any disability is

entitled

- (b) A person with any disability is entitled to access educational institutions and facilities for persons with disabilities that are integrated into society to the extent compatible with the interests of the person.
- (c) A person with any disability is entitled to reasonable access to all places, public transport and information.
- (d) A person with any disability is entitled to use Sign language, Braille or other appropriate means of communication.
- (e) A person with any disability is entitled to access materials and devices to overcome constraints arising from the person's disability.

Rights of the Youth in Kenya.

- (a) Right to access relevant education and training.
- (b) Right to have opportunities to associate, be represented and participate in political, social, economic and other spheres of life.
- (c) Right to access employment.
- (d) Youths are protected from harmful cultural practices and exploitation.

Rights of Minorities and marginalized groups in Kenya.

The constitution specifies a marginalized community as;

- ~ A community that because of its relatively small population has been unable to fully participate in the integrated social and economic life of Kenya as a whole.
- ~ A traditional community that, out of need or desire to preserve its unique culture and identity from assimilation, has remained outside the integrated social and economic life of Kenya.
- ~ An indigenous community that has retained maintained a traditional lifestyle and livelihood based on a hunter or gatherer economy.
- ~ Pastoral persons and communities, whether nomadic or settled and because of their relative geographical location, have experienced only marginal participation in the integrated social and economic life of Kenya as a whole.

Rights of Minorities and marginalized groups

- a) Minorities and marginalized groups have the right to participate and are represented in governance and other spheres of life.
- b) Minorities and marginalized groups have the right to be provided special opportunities in educational and economic fields.
- c) Minorities and marginalized groups have the right to be provided special opportunities for access to employment.
- d) Minorities and marginalized groups have the right to develop their cultural values, languages and practices.
- e) Minorities and marginalized groups have the right to reasonable access to water, health services and infrastructure.

Rights of older members of society in Kenya.

- a) Right to fully participate in the affairs of society.
- b) Right to pursue their personal development.
- c) Right to live in dignity and respect and be free from abuse.

d) Right to receive reasonable care and assistance from their family and the State.

The Kenya National Human Rights and Equality Commission.

This commission was entrenched in the Constitution of Kenya (2010) to replace the KNHRC. The commission constitutes at least three but not more than nine members appointed by the president with the approval of the national assembly.

Objectives;

- a) To protect the sovereignty of the people.
- b) To ensure secure observance by all state organs of democratic values and principles
- c) To promote constitutionalism

Functions of the Kenya National Human Rights and Equality Commission.

- a) It has a duty to promote respect for human rights and develop a culture of human rights in the republic.
- b) A duty to promote protection and observance of human rights in public and private institutions.
- c) It monitors, investigates and reports on the observance of human rights in all spheres of life in the republic, including observance by the national security organs.
- d) It receives and investigates complaints about alleged abuses of human rights and takes steps to secure appropriate redress where human rights have been violated.
- e) It acts as the principal organ of the state in ensuring compliance with obligations under treaties and conventions relating to human rights.
- f) It investigates any conduct in state affairs, or any act or omission in public administration in any sphere of government, which is alleged or suspected to be prejudicial or improper, or to result in any impropriety, or prejudice.
- g) It investigates complaints about abuse of power, unfair treatment, manifest injustice or unlawful, oppressive, unfair or unresponsive official conduct.

END