

HISTORY & GOVERNMENT

FORM 2 SIMPLIFIED NOTES

QUICK REVISION NOTES

*An Updated Well-Organized Detailed Revision Notes for the
Current Form 2 Syllabus.*

SERIES 1

THIS IS A FREE SAMPLE OF THE
ORIGINAL NOTES

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TOPIC 1: TRADE

Definition of trade

Trade is the exchange of goods or services for money or other commodities for mutual benefits.

Methods of trade

2007 P2 QN 7. Identify the main method of trade in Africa during the pre- colonial period.(1mk)

- i. Barter trade

Name two methods of trade

- i. Barter trade
- ii. Currency trade

1999 p2 qn 7. Distinguish between barter and currency systems of trade (2 mks)

- i. Barter system of trade involves exchange of goods with other goods whereas currency system of trade involves the use of money to purchase commodities

2000 p2 qn 7. What is the difference between barter trade and trade in which currency is used as the medium of exchange? (2 mks)

- i. Barter trade refers to the exchange of one commodity for another whereas trade in which currency is used in the exchange of goods for money

Barter trade

1996 p2 qn 7a) What is barter trade? (1mk)

- i. Barter trade is the exchange of goods for other goods/trade in kind (1mk)

Advantages

2003 p2 qn 4. Identify one advantage of barter as a method of exchange in the Trans- Saharan trade. (1 mk)

- (i) It facilitated trade between communities
- (ii) It enabled people to acquire the commodities that they needed
- (iii) It enable some people to determine the value of their commodities

Any 1x1=1mk

- There was direct exchange of goods or services for goods.
- It encouraged people who were exchanging goods for goods to get involved in actual production of the items. This kept the communities busy.
- Barter trade enabled people who had no goods for exchange to acquire goods they wanted by merely rendering services to those who had.
- It enabled people to acquire the goods they did not produce themselves.

Disadvantages

1996 p2 qn 7b) Identify one limitation of using barter as a method of trade. (1mk)

- i. Some commodities are bulky/ heavy and are difficultly to transport
- ii. It may not be easy to establish the exchange rate of commodities
- iii. Perishable goods are likely to go to waste if negotiations are not done in time (1mk)
- iv. It requires double coincidence of demands (1mk)
- v. Indivisibility of some commodities (1mk)

2002 p2 qn 3. State one main limitation of barter trade during the Trans- Saharan Trade.(1 mk)

- i. Some commodities were bulky/difficult to transport e.g. salt, kola nut
- ii. It was difficult to qualify the value of some goods
- iii. Some goods were perishable
- iv. It was difficult to ensure security of trade goods
- v. No common/lack of common language of communication

2008 p2 qn 7. State two problems faced by traders when using the barter system.(2 mks)

- i. It's cumbersome to transport bulky goods
- ii. There is a problem of storing the goods
- iii. The difficulty to determine the exact values of some goods
- iv. There is frequent lack of double coincidence of wants
- v. Some goods may not be divided into smaller quantities(2 mks)

- Barter trade was not very convenient because sometimes people could not acquire the commodities they intended to exchange their goods for. For example one may have intended to exchange a bag of maize with a bag of millet just to find that there was no millet in the market.
- The method was tiresome because all those who wanted to exchange goods had to carry those goods to the market sometimes for long distances.
- Since in normal trade there is a buyer and a seller, it became difficult to specify who the buyer or seller was because both were just exchanging items and there was no specific buyer or seller.
- It was difficult to transport bulky goods to the market.
- It was difficult to value goods being exchanged to ensure that the deal was fair for both parties exchanging items.
- Barter trade was not very successful where the people exchanging goods had no common language to ease communication.
- It was not easy to exchange certain items such as a bull or a donkey because if the other party did not have sufficient goods for exchange, a bull or a donkey could not be split into smaller units to match with the goods available.

Currency trade

Refers to the use of a medium of exchange to purchase commodities or pay for services.

2010 p2 qn 4. Name two metals that were used as currency in pre-colonial Africa.

- i) Iron
- ii) Gold
- iii) Copper
- iv) Silver
- v) Bronze

The major world currencies are:

- US Dollar
- German Deutsche Mark
- British Sterling Pound
- French Franc
- Canadian Dollar
- Mexican Peso
- Japanese Yen
- European Union Euro

Characteristics

- It should be accepted by society
- It should be stable and retain steady value without depreciating
- It should be durable and quality to be kept for a long time.
- It should be divisible to smaller units
- It should be convertible to other currencies
- It should be portable to allow easy transportation from one place to another.

Advantages

2009 p2 qn 8. State two advantages of the use of money over barter as a medium of exchange(2 mks)

- (i) Money is lighter to transport than goods
- (ii) Money is easily divisible into smaller units than the actual goods
- (iii) Money is convertible into electronic devices for payment unlike goods
- (iv) In barter trade, one cannot determine the actual value of the goods transacted
- (v) Money can be stored in a longer period

Disadvantages

- Currency can easily lose value (purchasing power) as it happened in Uganda during the era of President Idi Amin. / A country's currency may fluctuate depending on the strength of a country's economy.

- If there are no goods available for buying, money becomes useless. Many a times people have starved almost to death during famine due to shortage of food to buy with the money they have.
- Use of currency in business has encouraged robbery, pickpocketing and many other forms of crime.

Types of trade

2007 p2 qn 19.a) Identify the three types of trade. (3mks)

- i.** Local trade
- ii.** Regional trade
- iii.** International trade.

Local trade

- Local trade is the exchange of goods within the same community at the village level or within one geographical region.
- It may also involve the neighbouring communities or people who share a common boundary.
- People who conducted local trade established markets on the community boundaries or in a central place where people from a number of villages met to exchange goods. People exchanged goods they had for the things they did not have. This type of trade exists in Kenya even today where local county councils have established markets in certain trading centres. Local trade covers a small area.

The origin of local trade

Local trade originated from the time early man began a settled lifestyle. It was facilitated by the need to acquire what one did not have from those who had.

Factors for the rise

- Diverse climatic and environmental condition. Hence all the people requirements are not found within the same locality and could be obtained through trade.
- Uneven distribution of resources hence other resource like salt could be obtained through trade.
- Specialisation/ diverse economic activities hence need to exchange these goods.
- Surplus production. Hence exchange of what they had in excess.

The development of local trade

- Local trade developed as human population increased. The increase in population led to demand for various items such as food, clothing, pots and ornaments. Some people became specialised in making iron tools, others in making items such as pots, baskets and bark-cloth while others became pastoralists and kept cattle, sheep and goats.
- The blacksmith obtained meat from the pastoralists and grains from the cultivators. The pastoralists needed knives and spears from the blacksmiths. The cultivators needed iron hoes; knives for harvesting; millet, sorghum and axes for clearing fields for cultivation. The demand for goods

therefore encouraged local trade to develop and markets were established where people met to buy and sell things.

The organisation of local trade

- People established markets at the most convenient places for all. They set market days when they would meet to exchange goods. At the beginning, the form of trade was mainly barter. Later there was introduction of money (currency) which acted as a medium of exchange.
- During this trade, people transported their commodities on their heads and backs. Some communities such as the Maasai used donkeys to carry their goods to the markets while the Somali and the Boran used camels.
- People who traded were provided with security by local leaders.
- Some established local merchants bought the items and resold them to other traders far away beyond the local boundaries. For example ivory was sometimes bought from the local markets in Samburu and Baringo and then transported to the coast where it was bought and shipped to Asia.

Characteristics of local trade

- The trade was carried out within a small area like a village.
- The range of goods was limited to available resources within a particular village.
- It was the basis of regional and international trade.
- It was done by small scale traders and not professional merchants.

The impact of the local trade

- Local trade led to **intermarriages** between people of different villages and people of neighbouring communities.
- **Peaceful co-existence.** It contributed to the unity of family members who constituted a community. This is because the interaction of people in the markets united them. Local trade enabled people to acquire what they did not have from those who had.
- It laid the basis for other types of trade such as the **regional and the international trade** because some of the goods sold at regional and international levels were bought from local markets by the traders and eventually sold far away from the sources.
- **Wealthy merchants.** Local trade enabled some people such as Chief Kivoi of Ukambani to acquire skills in trade thereafter becoming experienced long distance traders. Where members of one community traded with members of another community there was development of languages through word borrowing as well as cultural exchange.
- **Cultural and language exchange.** In this case members of each community would borrow some cultural practices which became known to them as they interacted in the markets.
- **Urbanisation.** Trading centres developed into towns.
- **Early/cottage industries.** Early industries were established to produce trade items e.g. iron working and basketry.
- **Chiefdoms.** Chiefdoms emerged as a result of levies and tributes paid by traders.

Regional trade

Definition

Regional trade is the exchange of goods within a specified part of a continent or between one or more regions e.g. Trans-Saharan trade and long distance trade to the East Coast of Africa.

Trans-Saharan trade

Definition

2011 p2 qn 5. Why was 'silent trade' practised by Trans-Saharan traders?

i. Due to language barrier/ lack of common language.

2010 p2 qn 5. Give the two main items of the Trans-Saharan trade.

- i. Gold
- ii. Salt

Factors for origin and development

The Trans-Saharan trade developed due to the following reasons:

- Availability of trade goods. The trade commodities which the traders from both sides demanded were available. The trade goods themselves were in great demand. For instance the people of West Africa demanded salt while the people of North Africa demanded gold.
- Kingdoms. The West African rulers provided the traders with security.
- Tuaregs. The desert Tuaregs guided traders; provided them with water, food and accommodation; showed traders direction; acted as interpreters; provided traders with security while crossing the desert and cared for the oasis where traders obtained water.
- There were established trade routes in the desert which provided considerable transport and communication services to traders.
- Wealthy merchants. There were enterprising professional merchants who conducted trade across the desert.
- Camel. There was means of transport provided by use of camels, horses and donkeys.
- There was sufficient capital to finance trade.
- The local trade which existed in North Africa and West Africa laid the basis for the Trans-Saharan trade.

1999 p2 qn 8. (a) State the role played by the Tuaregs in the Trans- Saharan trade (1 mk)

- i. They acted as guides to traders across the desert/ they guided traders along the trade routes across the Sahara desert.
- ii. Provided security to traders/ acted as guards
- iii. Acted as interpreters
- iv. They maintained the oasis/ water/ wells
- v. Provided food/ accommodation

2004 p2 qn 21 (a) What was the role of the Tuaregs in the trans- Saharan trade? (3 mks)

- i. They provided accommodation to the traders
- ii. They guided the traders across the desert
- iii. They provided food and water to the caravans
- iv. They guarded the traders security
- v. They maintained the oasis.

Note: Not protected.

Any 3x1= 3mks

Organisation

2001 p2 qn 18.a) Describe how the Trans-Saharan trade was organized.

- i. The trade was between people of the Western Sudan and Arabs from North Africa.
- ii. Traders crossed the desert using camels
- iii. The traders travelled in large caravans to enhance their security
- iv. The Tuaregs/Berbers acted as guides to the traders through the desert
- v. Tuaregs provided with security
- vi. The traders made stops at the oases to refresh themselves and let their camels drink water.
- vii. The Tuaregs acted as interpreters at times.
- viii. The trade was conducted in barter/it involved exchanging one good for another/ silent trade.
- ix. The rulers of the western Sudan controlled trade/regulated amount of gold to be sold.
- x. The traders paid taxes to the kings of the Western Sudan
- xi. The item of trade were gold and salt – items of trade from the west were gold, ivory, slaves, ostrich feathers, leather Kola nuts & pepper. Items from N. Africa, salt, horses, weapons, iron implements, clothe, silk, beads & onions.
- xii. The traders followed fairly defined route
- xiii. Americans Arabs & Berbers financed the trade
- xiv. Rulers of Western Sudan offered service to the trader while they were in the territory.
- xv. Traders dealt with agents who usually gave goods on credit/middlemen

(Any 8 points, 2 marks (8mks))

Trade routes

1999 p2 qn 8. (b) Identify two trade routes which connected trading centres in the Western Sudan and North Africa during the Trans-Saharan trade. (2 mks)

- i. Fez- Marrakech- Wadan - Walata
- ii. From Sijilmosa in Morocco through Tuat, Gao to Timbuktu
- iii. From Tunisia through Ghadames and Agades to Hausaland
- iv. From Tripoli through Fezzan to Bornu
- v. From Cairo through Murzuk – Bilma -Kano

Problems encountered by traders

2001 p2 qn 18. (b) What problems did the Trans-Saharan trade face?

- i.** Long and tiresome journeys across the desert
- ii.** Inadequate water and food
- iii.** Extreme weather conditions of the desert- very cold at night and very hot during the day.
- iv.** Attacks by dangerous desert creatures such as scorpions, snakes
- v.** Insecurity because of declining and falling of kingdoms
- vi.** Exhaustion of trade goods especially gold.
- vii.** Frequent shifts of trade routes
- viii.** They were robbed by desert people

(Any 7 points, 1 mark (7mks))

Decline of the trade

- The gold mines in western Sudan got exhausted. This discouraged traders from coming to West Africa because the main trading commodity was not available.
- The Morrocans invaded West Africa in the 16th century. This undermined the trade because it created anarchy and insecurity in the region. The Morrocans wanted to capture this prosperous trade.
- The political instability in West Africa together with the decline of empires such as Mali and Songhai increased anarchy and insecurity in the region.
- West Africa was invaded by the Almoravids and the Tuaregs. This further increased insecurity along the major trade routes.
- The Tuaregs who guided the traders changed their roles from that of guides to that of robbers.
- The emergence of the Trans-Atlantic trade attracted the West African traders who were formerly involved in the Trans-Saharan trade. This led to reduction of the volume of goods and traders who participated in the Trans-Saharan trade.
- The Turks invaded North Africa creating insecurity along the caravan routes.
- The colonisation of West Africa by the Europeans reduced regional links and encouraged European exploitation of West African resources therefore undermining the Trans-Saharan trade.
- The British anti-slave trade pressure and eventual abolition of slave trade led to decline of the Trans-Saharan trade.
- Rivalry between caravans and the stiff competition of the traders sometimes resulted to wars which scared traders.
- Moroccan ports along the Mediterranean Sea were invaded by the Spanish and Portuguese soldiers in the late 15th century and early 16th century. This disrupted trade.
- European merchants began penetrating into the interior of West Africa for trade. They diverted the flow of goods such that goods were later taken to the West African coastal town such as Port Elmina and Accra.

Impacts

2004 p2 qn 21 (b) Explain six effects of the trans-Saharan trade on the people of Western Sudan. (12 mks)

- i. Towns/cities developed along the trade routes
- ii. The wealth acquired from the trade was used to expand states such as Ghana and Mali.
- iii. Strong armies were formed due to the use of the horse as a means of transport.
- iv. A wealth class of merchants developed due to their involvement in the trade.
- v. Berbers and Arabs from North African settled in Western Sudan and inter-married with the local people.
- vi. The people of Western Sudan became Muslims/adopted Islamic culture.
- vii. School, libraries and Universities were established by Muslims scholars thus many people received formal education.
- viii. Arabic architectural designs were introduced in Western Sudan
- ix. Islamic Law /sharia was introduced in administration
- x. Slave trading was encouraged
- xi. The introduction of foreign goods led to decline in locally manufactured goods
- xii. The Western Sudan was opened up to the rest of the world.

Any 6x2= 12 mks

International trade

Definition

Refers to trade between countries outside geographical regions or across continents/ across oceans

Examples

- Trans-Atlantic trade
- Indian Ocean trade

Trans-Atlantic trade/ triangular slave trade

Definition

- Refers to trade conducted across the Atlantic Ocean hence trans-Atlantic trade.
- It is referred to as triangular trade because it was conducted between Africa, Europe and Americas

2012 p2 qn 5. Name two groups of people that were involved in the Trans-Atlantic Trade. (2 marks)

- i. The Europeans
- ii. The Africans
- iii. The Americans

(2x1=2mrks)

Origins and development

Why African slaves were preferred to other races

- There supply was high.
- They were cheaper to acquire.
- They were stronger than European and red Indians labourers
- They were regarded as immune to tropical diseases
- Their complexion prevented them from escaping easily.

Factors for the development of the trade

2011 p2 qn 20 (a) State three factors that contributed to the development of the Trans-Atlantic trade. (3 marks)

- i. Availability of trade items
 - ii. Demand for slaves in the New World/ plantations and mines demanded slaves
 - iii. Availability of sailing ships
 - iv. The discovery of the compass
 - v. Availability of fire arms
 - vi. Existence of trade routes/links
- (3x1 = 3 marks)

The Trans-Atlantic trade developed and grew rapidly due to the following factors:

- **European goods.** The commodities which were required by the Africans as well as the Europeans and Americans, were available in the three continents that took part in trade.
- **Raw materials/ industrial revolution.** The goods were also in great demand in the continents especially during the industrial revolution.
- The West African coast had natural harbours where ships anchored.
- The West African rulers provided foreign traders with security.
- **Merchants.** There existed enterprising merchants in America, Europe and West Africa who engaged in trade.
- **Ship building technology.** The steamships provided efficient transport and communication means between the three continents.
- The acquisition of new knowledge of navigation enabled sailors to sail across the deep and stormy seas and oceans.
- The **decline of the Trans-Saharan trade** enabled a big volume of goods to be taken to the West African coastal markets.

Organisation

The Trans-Atlantic trade was well organised in form of a triangle which connected Europe, Africa and America. It involved European traders, African middlemen and American plantation owners.

Ships loaded with European manufactured goods such as fire arms, cloth, wines and spirits, cigarettes, iron bars, utensils, glassware, ornaments and sweets left Europe and anchored along the West

African coast. Slaves captured in the interior of West Africa were marched along the coast. There were established places where the slaves were kept while awaiting shipment.

The ships from Europe were unloaded and the European manufactured goods exchanged for slaves, kola nuts, precious stones, hides and skins. The ships were once more loaded with the West African commodities which were shipped across the Atlantic ocean to Americas.

In Americas, the slaves were sold through auction. The ships were then filled with indigo, cotton, tobacco, rum, sugar, rice, timber and the precious stones like gold and silver. They were then shipped to European markets.

1997 p2 qn 7. State two ways through which slaves were obtained in West Africa during the Trans- Atlantic trade. (2 mks)

- i. Criminal of social misfit were sold by chiefs
- ii. Capture of war
- iii. Frictions
- iv. Kidnapping

2002 p2 qn 18 (a) Describe three ways through which slaves were obtained during the Trans- Atlantic slave trade

- i. Through exchange of slaves for European manufactured goods-exchange of slaves
- ii. By selling prisoners of war to slave dealers-selling prisoners
- iii. Lonely travellers and weak subjects were kidnapped and sold to slave-kidnapping
- iv. Some rulers sold their subjects/criminals to slave dealers.
- v. By enticing people/children using desirable goods such as cloth and sweets- enticing people.
- vi. Through raiding-villages were attacked and captives sold to slave dealers.
- vii. Weak subjects were sold.
- viii. Parrying- (selling of debtors)

2008 p2 qn 19.(a) Give three methods used to acquire slaves from West Africa during the Trans-Atlantic trade. (3 mks)

- i. The slaves were exchanged for European manufactured goods
 - ii. Prisoners of war who had been captured during local wars were sold to the slave dealers
 - iii. Slave traders kidnapped lonely travellers
 - iv. Some local rulers sold their own subjects to the slave dealers
 - v. Slaves were obtained through raids
 - vi. Some people were enticed and eventually sold into slavery/trencher/use of trick
 - vii. Debtors were sold to slave traders/panyaring
- (any 3 x1 = 3 mks)

Decline of the trade

2002 p2 qn 18 (b) Explain six factors that led to the decline of the Trans- Atlantic trade

- i. The development of Industrial Revolution in Europe shifted the demand from slaves to agricultural produce e.g. Palm oil.
- ii. The need to retain Africans in their homelands to produce raw materials for export to Europe.
- iii. The attainment of independence by the USA left Britain without colonies where she would talk the slaves to work.
- iv. The rise of Humanitarians in Britain made up missionaries and some parliamentarians pressurized the British government to abolish the slave trade and slavery.
- v. The development of the legitimate trade which was more profitable and less costly replaced slave trade and slavery.
- vi. Britain influenced other European countries to stop slavery and slave trade by signing anti slave trade treaties.
- vii. Use of machines in farms/industries rendered slave labour unnecessary.
- viii. Lending Economist e.g. Adams smiths argued that free people were more productive than slaves.
- ix. French Rev. of 1789 spread ideas of Liberty qualifying brotherhood to all mankind
- x. Closure of American slave market after the defeat of S. American stated at the civil war.

2008 p2 qn 19. (b) Explain six factors that led to the decline of the Trans-Atlantic trade.

- i. The industrial revolution led to the replacement of human labour with machines which were more efficient/retention of Africans to provide raw materials for industries.
- ii. The leading economists were against slave labour and argued that free labour was more productive than slave labour
- iii. Philanthropists/Christian missionaries strongly campaigned against slave trade thus leading to its decline
- iv. America attained political independence and abolished slavery and slave trade leaving Britain with no colonies where she would take slaves to work/ closure of slave markets in the U.S.A
- v. The development of legitimate trade which subsequently replaced slave trade
- vi. Britain abolished slave trade and influenced other European nations to stop the practice by signing anti-slave trade treaties
- vii. The French revolution of 1/89 impacted negatively on slave trade as the ideas of liberty and equality of all people were spread.

Any 6 x 2= 12 mks)

Impacts of the trade

2011 p2 qn 20 (b) Explain six negative effects on Trans-Atlantic trade on African Communities.(12 marks)

- i. There was increased instability/conflicts among communities as traders raided for slaves

- ii. Many Africans lost their lives during the slave raids
- iii. Traditional industries declined as Africans acquired a taste of European goods
- iv. There was increased suffering among families as their loved ones were separated/sold to slavery
- v. Some kingdom declined due to continuous attacks from their neighbours in search of trading items
- vi. There was destruction of property as communities raided each other for trade items
- vii. It contributed to the decline of the Trans-Sahara trade as many people found it more profitable
- viii. There was a decline in agricultural production as the able-bodied people were taken away into slavery.
- ix. There was serious depopulation in west and parts of Central Africa due to slave trade.
- x. Africans lost confidence in those who sold them to slave dealers
- xi. The trade exposed West Africa to new diseases
- xii. There was fear and insecurity due to frequent raids on African settlements
- xiii. Weakened African communities could not resist colonial

(any 6x2 = 12 marks)

Positive impacts

- **Wealthy merchants** like Jaja of Opobo emerged in West Africa who used their wealth to gain political influence.
- **Sierra Leone and Liberia** were created as homes for freed slaves.
- **Urbanisation** – slave markets developed into urban centres e.g. Lagos and Elmina
- **Trade links**- long lasting trade links were established between west Africa, Europe and America.
- **Strong kingdoms** emerged from the trade profit and fire arms.

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TOPIC 2: DEVELOPMENT OF TRANSPORT AND COMMUNICATION

Definition of transport

What is Transport?

- Transport is movement of goods and people from one place to another over some distance.

TRADITIONAL FORMS OF TRANSPORT

Identify/outline early forms of transport.

These were:

- Land transport I.E. human and animal transport.
- Water transport, which involved use of canoes, rafts and oar-driven boats.

Human portage

2004 p2 qn 5. Give two disadvantages of human transport. (1 mk)

- It is slow/ time consuming
- It is tiring/tiresome
- It cannot be used to carry bulky goods Any 1x1=1mk

ANIMAL TRANSPORT

2012 p2 qn 4. Give the main form of transport used in the Trans-Saharan Trade. (1 mk)

- Animal transport/camel/horse (1mark)

Name any four Pack animals.

Animal transport involved Pack animals traditionally used by human beings such as the donkey, Ox, Horse, Mule, Camel, Dog, Llama, Alpaca, Elephant, Water-buffalo and Reindeer.

What are the advantages of animal transport?

- Animals can carry heavier weights than human beings.
- They can be used in inaccessible areas.
- They are cheap to maintain.
- They are safe as accidents are rare.
- They help maintain the ecological balance.
- Some animals are capable of sensing danger.

2011 p2 qn 4. State two limitations of using animal transport. (2 mks)

- i. Animal are affected by poor health/injuries/attacked by wild animals
- ii. Rugged terrain/extreme weather conditions hampers the movement of animals
- iii. Animal transport has limited carrying capacity
- iv. Animal transport is time consuming/slow
- v. Animal transport is cumbersome. Some animals are stubborn
- vi. Animal transport is limited to day-time and not right time Land transport

Describe three wheelless vehicles.

Though crude, cumbersome and slow in movement, wheel less vehicles were another important step in the development of transport. They include:

- The sleigh (Sledge), which was commonly used in the snowy terrains of northern Europe and North America.
- The Travois, which was used in treeless and dry flat-terrained North America.
- The Sedan Chair, which was mainly used in European cities from the 17th century.

DEVELOPMENT OF THE WHEEL

Identify communities of early users of the wheel.

(Analyse the development of wheeled transport. Or:

Explain how wheeled transport developed.)

- The wheel was invented by the Sumerians in 3000BC.
- It was also used in the Indus valley.
- It eventually reached/spread to Central Asia shortly before 2500BC.
- In 2000BC, the spoked wheel was invented. It matched the speed of the horse and was used in war-chariots by Indo-European communities like the Persians, Greeks and Romans against Egyptians and Middle Eastern civilizations. It was further improved by adding a rubber strip on its outer rim. Up to the 19th century, the spoked wheel was not superseded by any other.
- In Africa, use of the wheel was first introduced in Egypt in 1800BC when Egypt was invaded by the Hyksos from south-east Asia. Apart from Shadoofs in irrigation, the Egyptians used the wheel to make their own carts.
- By 1227BC, the Berbers in present day Libya were using wheeled transport. By 600BC, four-wheeled chariots had reached the area to the north of the Niger River.
- In Europe, the Greeks were the first to use the wheel, with which they made military chariots and wheeled carriages.
- Having learnt the use of the wheel from the Greeks, the Romans made two-wheeled carts for sports, postal services and warfare. They made the Carpentum, which was the first covered vehicle for carrying passengers. Initially, the vehicle body rested on the axle, which made the ride uncomfortable, especially on rough roads. Leather strips were first used for suspension. This was improved with introduction of spring suspensions in the 18th century.

- In the 18th century, John Hansom designed the hansom Cab to carry passengers over short distances in London and other towns. Stage Coaches were used for intercity transportation.

Explain the impact of wheeled transport.

(What were the results of development/invention of the wheel?)

Wheeled transport had the following impact:

- Man could travel longer distances on land.
- Man could carry more and heavier loads.
- Transport was now faster, particularly after the engine was invented.
- Migration increased, E.G. the 1194BC Egyptian Border migration.
- The wheel was used in pottery I.E. wet clay was fed onto a turning wheel as the potter shaped it to produce high-quality pots.
- It was used in Shadoofs: a pulley system, with which farms were irrigated.
- Wheels of various sizes are fitted into and used for proper functioning of electronic and other equipment such as video decks, clocks, tape-recorders, etc.

DEVELOPMENT OF THE BICYCLE

- The Bicycle was invented in 1790AD when De Divrac from France made the Walk along. Unlike earlier animal-driven vehicles, the bicycle was driven by the rider on its two wheels, which were placed one in front of the other on a framework rather than side by side on a single axle.

Identify any two types of Bicycle.

(Identify the processes and improvements that the Bicycle has undergone since its invention. Or: Name the engineers who contributed to the development of the Bicycle.)

Since its invention, the Bicycle has undergone various processes and improvements, resulting in its various kinds and models. Various engineers contributed to the development of the bicycle as follows:

- Baron Karl Drais from Germany invented a walk along named Draisine.
- Ernest Michaux from France invented the bicycle in 1860.
- Pierre Aliment from France invented the Boneshaker in 1866.
- Kirkpatrick Macmillan from Scotland made the first bicycle in Britain.
- J.K Stanley from England invented a chain-gearing that consisted of two sprocket-wheels linked by chain, which transferred power to the hind wheel.
- James Stanley invented the bicycle with spoked wheels in 1870.
- John b. Dunlop invented the pneumatic tyres, which replaced the uncomfortable iron and solid rubber ones.
- Later, the Free Wheel mechanism was invented, by which the hind wheel rotates even without pedaling.

- The Velocipede (Hobby Horse) was first used in 1820, the Penny farthing from around 1855 and the safety Bicycle, which was safer than previous models was developed in 1884.

THE MOTORCYCLE

The first motorized bicycle was made by Gotlieb Daimler from Germany in 1855. The framework was made stronger and wheels wider, with an engine and gearbox added to ease riding. Instead of pedaling, the rider used engine-power to move the motorbike. It was faster than a bicycle and cheaper than a motor vehicle and could access rough terrain. It carried only one passenger or a small load.

2001 p2 qn 4. Identify one way in which invention of the wheel promoted early transport. (1 mk)

- (i) It facilitated travel over long distances
- (ii) It eased transportation of heavy loads
- (iii) It facilitated speedy transportation of people/goods
- (iv) It enhanced the movement of soldiers during battles.

(Any 1 point, 1mk (1mk))

2008 p2 qn 18. (a) Give three ways in which the invention of the wheel revolutionized transport in Europe before the 19th century. (3 mks)

- i) People could travel faster than before
- ii) They could cover long distances
- iii) The chariots/wheel carts made travel comfortable
- iv) Heavy loads could be carried over long distances
- v) Traveling became more secure

Water transport

- As people settled near water masses, they discovered that water offered an easier and more rapid means of transport by providing ready and natural roadways, unlike land-travel, which involved construction of roads and the circumvention of hills, mountains, swamps and other obstacles.
- The first use of water transport was just a log to which a man could cling, remain afloat and be transported. By then, man could only afford downstream travel.
- Around 400BC, oars were devised to provide propulsion and steering. This led to construction of artificial vessels out of logs, reeds and sewn or inflated animal skins.

Identify traditional (early) forms of water transport.

Early forms of water transport include:

- Rafts I.E. simple floating material such as logs, with a long pole used to propel or steer.
- Canoes, some of which were dug-out or made of tree-bark or wooden frames covered with animal skin.

- Oar-driven boats, which used oars for pushing in water.
- Sailing ships, which used the sail. Some sailing ships had oars for propulsion when there was no wind.

2009 P2 QN 7. Give two means of water transport used during the ancient time

- i. Sailing boats/ oar driven boats
- ii. Rafts/ logs
- iii. Canoes
- iv. Sailing ships

Development of modern means of transport

Modern means of transport include:

- ❖ Bicycles,
- ❖ Motor vehicles,
- ❖ Motorcycles,
- ❖ Trains,
- ❖ Steamships,
- ❖ Motorboats,
- ❖ Ships,
- ❖ Passenger liners,
- ❖ Ferries,
- ❖ Freight vessels,
- ❖ Military vessels,
- ❖ Hydrofoils and Hovercraft,
- ❖ Aeroplanes,
- ❖ Helicopters,
- ❖ Hot-Air balloons.

Road transport

- Early man moved through tracks cleared by animals going to water-holes for a drink and those trodden by nomadic herdsman and their animals to new feeding grounds.
- Around 3000BC, man began to build rough roads of stone, tree-trunks and other materials. Places with early road networks include China, Mesopotamia, Persia, Egypt and Europe.

ROMAN ROADS

The Romans were the first great road-builders. From about 312BC, the Roman Empire had a vast network of good roads built by Roman soldiers and local gangs of forced labour, supervised by engineers. Bridges and tunnels were built across rivers and through hills.

What are the characteristics of Roman roads?

- They had foundations of up to one and a half kilometers deep.
- They were made with whatever local material was available such as heavy rocks, small stones, and rubble and stone blocks.
- They were raised high above the land on both sides to prevent flooding in wet weather.
- Deep trenches were dug on both sides for drainage of water, especially during rainy season.
- There were kerbstones on the road-sides to prevent the surface from sliding outwards.
- At regular intervals were milestones marked with the name of the Emperor during whose reign the road was built.
- After the fall of the Roman Empire in 407AD, no attention was paid to road construction or repair until the 18th and 19th century when modern road-building started in Britain.

Name the engineers who improved Road transport.

Road transport was improved by various engineers such as:

- ❖ George Wade,
- ❖ John Metcalfe,
- ❖ Thomas Telford
- ❖ John Macadam.

George wade and John Metcalfe based their roads on roman methods, which were very expensive.

- Thomas Telford built his roads on solid foundation, with big stones carefully laid and firmly packed at the bottom, followed by several layers of small broken stones. The surface was made of gravel. He built over 920 miles of well-cambered roads, with over 120 bridges.

MACADAM ROADS

Analyse the process of construction of Macadam (Tarmac) roads.

- John Macadam introduced the Flexible Road, whose construction was easier and faster than previous ones. On realizing that ordinary ground could still be used to make good roads if kept dry, Macadam removed only the top soil, leveled it with a layer of gravel and spread a thick layer of small chipped stones for the foundation, after which a second layer of gravel was added. The weight of the vehicles pressed the gravel together. Stones ground by the wheels formed a kind of cement which, when wetted, filled cracks and made the road strong. The surface was curved to allow the water to run off into ditches on the sides. The soil underneath remained dry, making the road durable. Later, tar was added to the mixture of fine stones. This was when the road became known as Tar-macadam (now Tarmac).
- By 1830, most of Britain's main roads were tarmacked, with improved bridge construction. Macadam's method was accepted all over the world as one of the major forms of road construction.
- New Trunk-roads were built, followed by the Motorway, which was exclusively meant for vehicles and on which pedestrians, cyclists and learner-drivers were not allowed. The Motorway

completely fenced off except at the terminals and junctions where motorists entered or left the road.

- “Fly-over” bridges and “under-passes” carried the cross-roads while Cattle-creeps ran under the road linking the farmlands on either side of the Motorway.
- The world’s first motorway was built in the USA in the 1930s. Germany built the Autobahn, Italy had the Austorate, while Britain opened the M1 in 1959.

Identify the results of the development of road transport.

- ❖ Promotion of trade within countries.
- ❖ Advancement of industrialization due to efficiency in transportation of raw materials and goods.
- ❖ Emergence of urban centres.
- ❖ A lot of foreign exchange, particularly to world industrial powers due to manufacture and sale of motor vehicles.
- ❖ Creation of job opportunities.
- ❖ Development of the tourist industry.
- ❖ Road accidents, which claim many lives.

What are the advantages of Road transport?

- ❖ Reduced cost of movement of goods and people as it is the most common means of transport.
- ❖ It is cheaper compared to other forms of transport.
- ❖ It is faster than water and railway transport, except where electric trains are used
- ❖ Road can easily link with Rail, Air and Water transport.

Identify the limitations of Road transport.

- ❖ Road accidents, which lead to loss of life.
- ❖ Air pollution, particularly by motor vehicles.
- ❖ Traffic congestion on roads.
- ❖ Construction of all-weather roads is expensive.
- ❖ The use of roads is limited to specific areas.
- ❖ Roads cannot go beyond land.
- ❖ Some roads become impassable during rains as others are too dusty during dry seasons.
- ❖ Roads cannot be used for transporting very bulky goods.

THE MOTOR VEHICLE

Name the engineers who contributed to invention and development of the Motor Vehicle.

(Outline the inventions that took place in the Motor industry.)

The motor vehicle was the work of many inventors over many years as follows:

- In 1769, Nicholas Joseph Cugnot from France built a three-wheeled steam-driven vehicle.
- In 1885, Gottlieb Daimler from Germany invented a high-speed petrol engine.

- In 1885, Karl Benz from Germany fitted Daimler's petrol engine to a Tricycle and made the first petrol-driven car.
- In 1891, a French company, which had bought the right to use Daimler's engine, produced its first car: the Panhard Levassor. The company regularly built cars, which it sold to the public, which gave rise to the motor industry.
- In 1903, Henry Ford from the USA began to manufacture motor vehicles en masse.

What are the advantages of the Motor vehicle?

- It did not run over a track or railway.
- The weight of the fuel it required was minimal.
- It could be owned by any individual and could be driven almost anywhere any time.
- It could be driven almost over any terrain and was easily adaptable.
- It could transport passengers and goods to an exact destination.
- The earliest motor vehicle engine consumed a lot of fuel. The modern trend is towards lower consumption but with greater efficiency.

1996 p2 qn 17.a) Explain three ways in which Macadamised roads are an improvement to road transport. (3mks)

- i) They are all weather roads.
- ii) They are durable
- iii) Water drain off easily
- iv) They provide a good motoring surface. (3mks)

2003 p2 qn 18. a) Give three developments that have taken place in road transport systems since 1750. (3 mks)

- i. Tarmac roads which are durable have been constructed
- ii. Bridges have been constructed to facilitate travel on roads
- iii. Roads have been straightened and widened to cater for the increasing volume of traffic
- iv. Dual carriage ways have been constructed to ease traffic congestion
- v. Motorways have been constructed in developed countries for the exclusive use of wheels.
- vi. Construction of macadamised roads

Any 3 points 1 mark = 3mks

2012 p2 qn 6. State two negative-effects of the development of motor vehicle transport (2 marks)

- i. It causes traffic jam especially in urban areas;
- ii. It contributes to environmental pollution
- iii. It damages roads
- iv. It causes accidents leading to loss of lives/injustices (2x1=2marks)

2010 p2 qn 5. State one advantage of using the pipeline over vehicles in transporting oil.

- i. The pipeline delivers oil faster than vehicles.
- ii. It is safer to transport oil by pipeline than vehicles
- iii. The pipeline ensures regular/continuous supply of oil to required areas/depots.
- iv. It is easier to maintain the pipeline than vehicles. 1 x 1 = 1 mark

Railway transport

- Railway transport was developed from the idea of vehicles moving along a fixed track developed from the ruts made on mud roads by the wheels of vehicles to prevent them from skidding off the road. Therefore, the earliest paved roads had stone ruts built into them.
- The first railways were used in Germany from the 16th century AD by coal miners, who pushed ore in carts along wooden ruts.

THE STEAM ENGINE

Identify the engineers who invented the steam engine and locomotives.

Development of the steam engine and locomotives was the work of many inventors as follows:

- In late 17th and early 18th century, British engineers: Thomas Savery and Thomas Newcomer developed the steam-driven pump to pump water out of coal-mines.
- In 1780, Scottish engineer: James Watt developed a steam-engine that was adapted to drive a winch that hauled wagons along a railway in a coal mine.
- In 1804, Richard Trevithick developed the first steam engine to run on rails.
- In 1812, Fenton, Murray and Wood of Leeds; Britain, built the “John Blenkinsons” locomotive.
- In 1813, Christopher Blackett and William Hedley built the “puffing Billy”, which was the first steam locomotive to pull a passenger train along a public railway. Trains were initially horse-drawn.
- In 1814, British engineer: George Stephenson invented the “Blucher”, which pulled eight laden wagons.
- In 1825, Colonel John Stephens built a tiny experimental locomotive in the USA.
- In 1892, German engineer: Rudolf Diesel invented the Diesel engines, which replaced the steam locomotives. These engines were designed to work on a compression Ignition system.
- In 1883, John Hopkins and the Siemens brothers built the first electric locomotive, which was used on the Portrush railway and the south London line.

Explain how the invention of the railway speeded up industrialization in Europe.

IN EUROPE

- It facilitated transportation of bulky raw materials to industries.
- It eased and speeded up transportation of bulky manufactured goods to markets.
- It facilitated the transportation of fuel (especially coal and firewood, to the industries.

- It provided reliable and cheaper means of transport for workers to the industries, which enhanced their performance.
- It facilitated interaction between towns and business people and promoted investment in industries.
- It facilitated the migration and settlement of people into new lands, which were sources of raw materials.
- It opened up mining and farming in the interior of most countries.
- It facilitated the transport of heavy machinery for installation in industries.
- Revenue from the railways was used in setting up industries.

2005 p2 qn 2. Give two advantages of using the steam engine in the transport industry in the 19th Century (2 mks)

- i. It did not pollinate the air
- ii. It was cheap
- iii. It increased the speed of locomotives (Any 2 x 1 = 2 mks)

What were the results of the development of railway transport?

1996 p2 qn 17.b) What were the results of the development of railway transport in Europe up the end of the Nineteenth century? (12mks)

- i. Railway transport led to expansion of trade in Europe as goods were quickly transported from one point to another.
- ii. Facilitated the movement of people from one place to another thus promoted greater interaction among people.
- iii. Railway transport promoted agricultural growth as it assured farmers of means of transporting their goods.
- iv. The railway transport provided employment opportunities
- v. The development of railway transported led to growth of expansion of urban centres.
- vi. It facilitated the development of industries in Europe by providing quick means of transporting raw material, finished materials and industrial workers.
- vii. It led to environmental pollution through emission of large amounts of carbon dioxide/ smoke into the atmospheres.

1998 p2 qn 20.a) Describe the results of the development of railway transport during the nineteenth century (5 mks)

- i) Railways facilitated transportation of bulky goods especially industrial products and raw materials for the industry.
- ii) It facilitated transportation industrial workers/ labour.
- iii) It facilitated the spread of ideas/ Reasons / political.
- iv) It led to widespread migrations and settlement of people.

- v) It promoted the development of trade.
- vi) It opened up remote areas for economic exploitation e.g. mining fishing and farming boosting agricultural.
- vii) It strengthened European pacification of their overseas colonies/Administration of colonies.
- viii) It led to the development of towns / urban centres.
- ix) Promoted social interaction.
- x) Created employment opportunities.
- xi) It supplemented either forms of transportation
- xii) Sources of revenue.

Any 5 points 1 mark each

(5marks)

2002 p2 qn 11. State two effects of the development of railway transport in the nineteenth century

- (i) It facilitated transportation of bulky goods
- (ii) It led to growth of towns
- (iii) It led to growth of towns
- (iv) It facilitated in the entrenchment of colonial administration/movement of soldiers.
- (v) It facilitated in the entrenchment of colonial administration/movement of soldiers
- (vi) It facilitated the spread of Christ unity
- (vii) Created employment opportunities

2003 p2 qn 18. b) Explain six ways through which the invention of the railway speeded up industrialization in Europe. (12 mks)

- i. The invention of the railway facilitated transport of bulky and heavy raw materials to industries.
- ii. It eased and speeded up transportation of bulky manufactured goods to various markets in different parts of Europe
- iii. It facilitated the transportation of heavy industrial sources of energy to the industries, especially coal and firewood
- iv. It provided reliable and cheaper means of transport for workers to the industries and thus enhanced their performance.
- v. It facilitated interaction between towns and business people and thus promoted investment in industries
- vi. It facilitated the migration and settlement of people to new lands which became sources of raw materials
- vii. It opened up mining and farming in the interior of most countries
- viii. Facilitated transport of heavy machinery for installation in industries
- ix. Revenue from the railway in setting up industries

1997 p2 qn 5. Name two ways in which the railway transport contributed to the Agrarian revolution in Western Europe.(2mks)

- ii. Railway provided efficient and reliable means of transport for agricultural products.
- iii. Provided efficient transport for farm machinery and labour and farm implements.
- iv. Provided efficient transport of farm tiling.

State the disadvantages of railway transport.

- It is expensive to establish the railway infrastructure such as the lines and to purchase locomotive engines.
- Trains cause a lot of air pollution.
- Railway transport is prone to hazardous accidents, especially when the trains collide or derail.
- Railway transport requires to be supplemented by other forms of transport e.g. road transport.
- Tunnels have to be dug in areas with ragged terrain since trains are inflexible.

Water transport

In the early years of the industrial Revolution, heavy goods could only be transported by water.

Identify the water vessels developed since the 18th century.

Various water vessels were developed since the 18th century. These include:

- ✓ Steam-ships,
- ✓ Motor-driven ships,
- ✓ Modern passenger liners,
- ✓ Freight vessels,
- ✓ Military vessels,
- ✓ Motor boats,
- ✓ Ferries,
- ✓ Hydrofoils,
- ✓ Hovercraft.

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STEAMSHIPS

Since the speed and ability of sailing ships depended on the wind, their use was limited.

In what ways did discovery and use of steam power boost water transport?

The discovery and use of steam power in driving machines from the 18th century greatly contributed to water transport in the following ways:

- In 1736, Jonathan hulls from England built a steam-driven boat.

- In 1783, Marquis de Jeffrey from France built the first successful steam boat. It was driven by paddle wheels.
- In 1787 and 1790, American engineer: John Fitch built two steam-boats and began services on the Delaware River between Philadelphia and Trenton.
- Scottish engineer: William Symington built the first modern steamship. It was driven by a paddle wheel.
- American engineer: Robert Fulton built the Clermont with which he began passenger services on the Hudson River between Albany and New York in 1807.
- In 1819, the Savanna: a ship that used both steam and sail, crossed the Atlantic Ocean.
- In 1838, The Great western: a ship that used steam without sails crossed the Atlantic Ocean. Two years later, a trans-Atlantic steamship service was started by Cunard Line.
- The first propelled steamer (The Archimedes) was built in 1838.
- In 1854, John Elder invented a two-cylinder compound engine that cut fuel consumption by about 60%.
- In 1932, the first turbo-electric power ship (a French liner called Nomadic) was made.
- In 1956, an American submarine (the Nautilus) was the first to use nuclear power.
- In 1961, an American ship (The Savanna) was the first merchant or civilian vessel to use nuclear power. It was fuelled with Uranium Oxide, which enabled it to operate for three and a half years without refueling.

Identify three main advantages of using iron and steel in place of wood to construct the hull of ships.

- Use of iron and steel in place of wood to construct the hull of ships had three main advantages:
- Iron and steel ships were lighter and much bigger than wooden ones.
- Iron and steel ships carried more cargo compared to wooden ones.
- With iron and steel ships, pressure on forest resources reduced tremendously.
- Iron and steel ships are durable. They last longer than wooden ones.

CANALS

What is a Canal?

- A canal is a manmade water channel, usually dug on a straight course. The first canals were in Europe, designed for use by barges, which were towed by horses. They were shallow, for horses to wade through as the barges they pulled floated to their respective destinations. Modern ship canals such as the Suez and Panama Canal are deeper and can be used by ocean-going vessels.

Why were canals built?

- The first canals were built to link the existing rivers and lakes for quicker, easier and cheaper transportation of raw materials and manufactured goods between ports and towns.
- Elsewhere, canals shortened existing trade-routes.

- Canal building began during the industrial revolution in mid 18th century. It saved costs and increased industrial productivity.

Name three main modern canals.

Major canals include:

- ❖ The Manchester-Liverpool canal, which was constructed to link the industrial centre of Manchester to the port of Liverpool so that ships could travel directly and much faster, ferrying industrial and other goods.
- ❖ The Suez Canal, whose building from 1859-1869 was spearheaded by French engineer: Ferdinand de Lesseps to link the Red and Mediterranean seas and shorten the sea-route between Europe and the East.
- ❖ The Panama Canal, constructed from 1904-1914, still by Ferdinand de Lesseps, but this time with US engineers to link the Atlantic and Pacific oceans across Central America.

What were the results of the building of the Suez Canal?

- The journey between Europe and Asia was shortened.
- There was a direct link between Europe and Asia.
- There was increased international trade.
- Growth of European interest in Africa and the Far East.
- Eventual European colonization of Africa and Asia.

Development of modern ships

Air transport

Discuss the development in air transport from 1780-1903.

(Name the engineers who contributed to development of air transport).

- In 1783, two French brothers: Jacques and Joseph Montgolfiers, launched a Hot-air balloon that covered eight kilometers and lasted twenty minutes in the air.
- In 1783, French engineer: Jacques A.C Charles made a successful trial flight in a Hydrogen-filled balloon.
- Sir George Cayley from England and Otto Lienthal from Germany each built and made several test-flights in gliders in the 19th century.
- Around 1850, English engineer: John String designed and built power-driven planes.
- In 1898, Brazilian inventor: Alberto Santos Dumont developed the first airship I.E. a balloon powered by an engine that could be steered.
- In December 1903, two American brothers: Orville and Wilbur Wright (popularly known as the Wright brothers) made the first successful heavier-than-air flight by mounting a home-made engine from a plane, which they modified to fly.

What are the benefits of air transport?

- It provides the fastest means of transport for passengers and goods.
- It has promoted international trade and other business activities, especially those that involve handling of urgent documents and messages.
- It provides employment to many people.
- It has facilitated agriculture as it helps in monitoring large farms and in the spraying of crops.
- It helps in fighting fires.
- Aeroplanes are used in photography and cartography.
- It has facilitated better management of wildlife.
- It has helped in the promotion of tourism as tourists are able to reach their destinations easily and faster.
- It has revolutionized warfare. For instance, during the First and second World wars, aircraft were used to transport soldiers, food and equipment.
- Inaccessible areas where other means of transport have failed are now within easy reach, E.g. mountain-tops and flooded areas.
- Medical and other cases of emergency in distant places can now be attended to.
- Perishable goods like flowers, vegetables and fruits can reach their destinations without going bad.

1999 p2 qn 6. Give two ways in which air transport has improved trade between nations (2 mks)

- i. It has improved speed with which trade goods between nations/ organizations/ individuals are moved.
- ii. It has improved transportation of urgent documents and messages relating to trade.

2007 p2 qn 6. State the main advantage of using air transport. (1mk)

- i. It is the quickest in terms of speed.

Explain the limitations of air transport.

2008 p2 qn 18. (b) What are the disadvantages of using air transport? (12 mks)

- i. It is expensive to procure/maintain an aircraft
- ii. Construction of airstrips requires a lot of resources
- iii. The aircrafts can only land and take off in specific/designated areas thus inconveniencing the users
- iv. Aircrafts cannot carry bulky/heavy goods as compared to other means of transport/expensive
- v. Air transport can only be used by the well to do members of the society thus making it inaccessible to many
- vi. Its operations are affected by unfavourable weather conditions.
- vii. Aircrafts emit gases which contribute to the pollution of the atmosphere.
- viii. Travelling by air has facilitated international terrorism/drug trafficking

- ix. The use of air crafts in military warfare has resulted to destruction of property
- x. Accidents by the air crafts are fatal/chances of survival are minimal
- xi. It requires a lot of expertise skilled personnel to manage its operations.

Space exploration

Identify the developments in space exploration since the 19th century.

(Name the inventors who contributed to development of space exploration).

The following developments have contributed to the success of space exploration:

- In 1610, Galileo Galilei discovered the telescope, through which astronomers began to study the moon.
- Around 1000AD, the Chinese invented and used rockets as weapons. Today, rockets are mostly used in space exploration.
- In 1957, the USSR built and launched the first artificial satellite (the Sputnik i) into space.
- In 1958, the USA launched their own (Explorer i) satellite, which made the first discovery of the Space age and the existence of two intense belts of radiation around the earth.
- In 1961, Yuri Gagarin from the USSR became the first human being to go into space.
- In 1961, John Glenn from the USA became the first American to venture into space.
- In 1962, the first international communication satellite in the world (Telstar) was launched.
- In 1969, American astronauts: Neil Armstrong and Edwin Aldrin became the first human beings to land on the moon, where they reached aboard “Apollo 11” space-craft.
- In 1981, the USA launched the first re-usable space-craft (Columbia), which reduced the cost of space exploration.
- In 1983, Sally K Ride became the first woman to go into space. This she did aboard the “Challenger”.
- By 1988, there were three hundred satellites orbiting the earth while another 1200 were nonfunctional.

Identify the challenges encountered in space exploration.

- The natural environment in space is not suitable to human life.
- Space operations are extremely expensive.
- Space craft are prone to accidents.
- At times, space craft disappear in space and do not bring back the required information.

What were the results of development in space exploration?

(State the results of Space Exploration.)

- Scientific and technological development through invention of space-craft and other equipment.
- Discoveries that have enhanced human understanding of the universe. For instance, a new planetoid was recently identified.
- Development of advanced air force weapons.
- It has promoted scientific research.

Advantages of space exploration

- Enhanced human understanding of the universe.
- Led to advanced air defence systems
- Enhanced effective mapping of the earth through Global Positioning system (GPS)
- Encouraged space tourism.

Disadvantages of space exploration

- Accidents are rare but fatal
- It is very expensive and a preserve of only rich nations.
- It contributes to the degradation of the ozone layer i.e. environmental degradation.

Discuss the impact of modern forms of transport on humankind.

- (Look at the impact with regard to: Social, economic, political and negative effects).

SOCIAL EFFECTS

- Increased rural-urban migration.
- Accelerated diffusion of ideas in science, religion and culture.
- Promotion of the Global Village Scenario as different parts of the world are easily accessible.
- Improved access to education and health facilities.
- Humanitarian assistance I.E. food, medicine and other supplies can easily be sent to deserving areas.

ECONOMIC EFFECTS

- Improvement of both local and international trade as perishable goods can get to their destinations without going bad.
- Farmers acquire agricultural inputs in time and send their produce to the markets efficiently.
- Raw materials and manufactured goods are easily transported.
- Governments levy toll charges and other fees on the various means of transport, which improve economies.
- Expansion of urban centres.
- Creation of new employment opportunities.
- Expansion of the Service sector E.G. banking and health.

POLITICAL EFFECTS

- Enhancement of political stability as the armed forces and the police are easily taken to trouble spots.
- Easy access of politicians to the people, particularly during campaigns.
- Administration is easier as places can be accessed fast.

NEGATIVE EFFECTS

- Colonization of Africa and Asia by Western powers due to improvement in water and land transport.
- The world wars were made more disastrous by the use of air transport and ships to bomb enemy bases, which led to heavy loss of life and destruction of property.
- Many deaths due to accidents. For example, 257 people died in a ferry accident at Mtongwe in 1994.
- Environmental pollution has been accelerated.
- Increased international terrorism.
- Many more diseases, epidemics and pests, which spread quickly and easily as more people travel and interact in places far and wide.
- Serious traffic jams and congestion in many cities as the number of vehicles keeps increasing, with shortage of parking space in many towns.

2001 p2 qn 14. State two ways in which poor transport systems have contributed to food shortages in Africa. (2mks)

- i) Poor transport has led to high transportation costs, leading to high prices of food.
- ii) Poor transport has led to poor distribution of food.
- iii) Poor transport systems have led to delays in the transportation of food leading to waste and losses.
- iv) Poor transport systems discourage/demoralizes farmers and this in turn leads to officers.
- v) Poor transport system undermines effectiveness of agricultural extension officers.
- vi) Agricultural inputs do not readily/reach/ leading to poor products.

(Any 2 points, 1 mark (2 mks))

Communication

1996 P2 qn 5. List two forms of communication used to send messages to distant places in the shortest possible time. (2mks)

- a. Telephone
- b. Telegram
- c. Telex
- d. Fax
- e. E-mail
- f. Television
- g. Radio

1998 p2 qn 20 b) Discuss ways through which the modern society has benefited from the development in telecommunications (10 mks)

- i) The use of telecommunications has facilitated storage of information more conveniently through the use of computer.
- ii) It has provided improved entertainment e.g. live transmissions of music and sports.

- iii) It has promoted fast transmission of ideas/ propaganda / message.\
 - iv) It has speeded up business transactions by enabling a few people to handle a lot of workload.
 - v) It has reduced costs business transactions by enabling individual countries.
 - vi) It has enabled organizations / individuals to access information / programmes at their own convenience.
 - vii) It has enhanced safe traveling by air and water through radar connections.
 - viii) It has facilitated the study of weather.
- Any 5 points, 1 mark each (5marks)

2000 p2 qn 5. Give one advantage of drum beating as a form of communication over the use of smoke signals in Africa during the pre- colonial period (1 mk)

- i. In most cases, drums could be used at any time both day and night whereas smoke signals could only be used during the day
- ii. Drumbeats unlike smoke signals relayed specific message
- iii. Drumbeats could be used during all seasons whereas smoke signals could not be used during some seasons e.g. when raining

2004 p2 qn 7 State one advantage of the telephones as a means of communication. (1 mk)

- (v) The message is spoken/personal contact/feedback
- (vi) The message is direct/cannot be distorted
- (vii) It is fast

Any 1x1=1mk

2006 p2 qn 19 a) Give three factors which should be considered when sending a message.

- i. The message are conveyed over long distances/ shorten distances
- ii. It has led to spread of ideas to different parts of the world/ the world has become a global village/ sharing of ideas
- iii. Television, videos, computers and cinemas transmit entertainment through pictures
- iv. Telecommunication systems are medium of transmitting education programmes all over the world
- v. Weather forecasting navigation and space exploration have been made easy by use of satellites.
- vi. Information can be relayed through radio, television or cell phone remote places easily

(3mks)

2006 p2 qn 19 b) Explain the effects of Telecommunications on modern society. (12mks)

- i. It has promoted trade through advertisement on radio, television and computers
- ii. Security has improved through camera/ close circuit TV
- iii. Modern weapons have telecommunication services which are efficient
- iv. Various job opportunities employment has been created
- v. Communication devices have made tax collection/ revenue collection easier for the government e.g. electronic tax registered

- vi. Management/ storage of information has been made easier through the use of computer/ internet
- vii. The urgency of the message/ speed
- viii. The complexity of the message/ simplicity/ clarity
- ix. The distance between the sender and receiver of the message
- x. The availability of communication facilities/ methods/ mean

2008 p2 qn 6. State two disadvantages of using fire and smoke signals as a means of communication. (2 mks)

- v) It's effectiveness depends on weather
- vi) The message could be missed if no one is on the lookout/limited to sighted pedals
- vii) It can only be used to cover short distances
- viii) There is frequent lack of double coincidence of wants
- ix) Some goods may not be divided into smaller quantities (any $2 \times 1 = 2$ mks)

2007 P2 QN 5.State one disadvantage of using a messenger to pass on information (1mk)

Definition of communication

What is Communication?

Communication is the process by which information is passed from one point or person to another.

Traditional means of communication

Identify the traditional (early) forms of communication.

Early forms of communication include:

- Verbal communication I.E. talking, story telling and singing.
- Gestures I.E. signals or body movements that pass a message.
- Signals I.E. simple corded messages, usually in picture and sound.
- Drum-beat.
- Use of messengers or runners.
- Horn blowing.
- Written messages E.G. scrolls and stone tablets.

MESSENGERS

NOTE!

This is a Sample of the Well Organized Detailed Simplified Notes Available.

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- ✓ **KCSE PREMOCKS**
- ✓ **TOP SCHOOLS PREMOCKS**
- ✓ **JOINT PREMOCKS**
- ✓ **KCSE MOCKS**
- ✓ **TOP SCHOOLS MOCKS**
- ✓ **JOINT MOCKS**
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