# K. C. S. E HISTORY & GOVERNMENT PAPER 1 2005

- 1.
- (i) Olorgesaille
- (ii) Kariandusi
- (iii) Fort Ternan
- (iv) Koobi For a/TURKANA
- (v) Hyrax Hill.
- (vi) RUSINGA ISLAND
- (vii) GAMBLES CAVE (NJORO)

# Any 2x1 = (2mks)

- Identify the main economic activity of the Plain Nilotes during the pre-colonial period.
   -pastoralism/livestock keeping
- 3. Name one community in Kenya which played a leading role in the long distance trade.
  - (i) Akamba
  - (ii) Agiriama (MIJIKENDA)

#### Any 1x1=(1mk)

- 4. Identify one community in Kenya which had a centralized system of government during the pre-colonial period Abangwa of the Abaluhyia 1x1=(1mk)
- 5. Give two evidences which show the Chinese traders reached the Kenyan coast before 1500 AD.
  - (i) Remains of Chinese coins
  - (ii) Fragments of Chinese pottery/Fossils/Artifacts
  - (iii) Information in the periplus of the Eritrean sea.

Any 2x1 = (2mks)

- 6. State the main reason for the coming of the Portuguese.
- 7. Identify two sources of government revenue in Kenya.
  - (i) Taxes/Custom duties
  - (ii) Loans

(v)

(v)

9.

- (iii) Donations/grants in aid
- (iv) Licences/fees/rates/rents

#### Any 2x1 = (2mks)

- 8. Name two officers of a municipal council who are appointed by the Public Service Commission. (2mks)
  - (i) The town clerk

Fines

- (ii) The Treasurer
- (iii) The Medical Officer of Health
- (iv) The Engineer

Municipal Educator OfficerAny 2x1=(2mks)

- What is the main function of the Civil Service in Kenya? (1mk)
- (i) To implement/carry out policies of the Government.

1x1 = (1mk)

- 10. Give one reason why parliament is regarded as supreme in Kenya (1mk)
  - (i) Has power to pass a vote of no-confidence on government.
  - (ii) Is the highest law-masking body
  - (iii) Can alter the amend Constitution.
  - (iv) Has power to declare War and a state of emergency
  - (v) General material Revenue and Expenditure

### Any 1x1=(1mk)

- 11. Give one way in which the constitution of Kenya guarantees the rule of law.
  - (i) Everybody is equal before the law.
  - (ii) A suspect is assumed innocent until proven guilty in a court of law.
  - (iii) A suspect is given opportunity to defend himself/herself in court of law.

# Any 1x1 = (1mk)

- 12. State two contributions of parastals to the economic development of Kenya.
  - (i) They provide employment opportunities.
- 13. State two problems which the Imperial British East African Company faced in the administration of the Protectorate.
  - (i) Shortage of funds
  - (ii) Problem of transportation
  - (iii) Poor coordination from the colonial office in London
  - (iv) In-experienced administrators
  - (v) Shortage of personnel
  - (vi) Lack of knowledge of the area
  - (vii) Hostility

# Any 2x1 = (2mks)

14. Name the treaty which marked the colonial spheres of influence in East African in 1886.

Anglo-Germany agreement.

# 1x1 = (1mk)

- 15. State two grievances of the Kikuyu Central Association (KCA) against the colonial government in Kenya.
  - (i) Racial discrimination
  - (ii) African representation in the Legco
  - (iii) The Kipande system
  - (iv) They were against taxation
  - (v) Forced labour
  - (vi) Demanded the release of Harry Thuku
  - (vii) Land problem
  - (viii) Cultural Issues

#### Any 2x1=2mks)

 What was the main result of the Devonshire White Paper of 1923? In case of conflict of interests between immigrant races and Africans those of Africans should be paramount.

1x1 = (1mk)

- 17. Name two African leaders who were detained in 1952 at the declaration of a State of Emergency.
  - (i) Jomo Kenyatta
  - (ii) Bildad Kagia
  - (iii) Fred Kubai
  - (iv) Paul Ngei
  - (v) Achieng Oneko
  - (vi) Kungu Karumba
  - (ii) They generate revenue for the government
  - (iii) Some provide loans for domestic investment
  - (iv) Some provide specific services to the residents e.g.

Any 2x1 = (2mks)

# **SECTION B**

- 18. (a) Give five reasons which led to the migration of the Cushites from their original homeland into Kenya during the pre-colonial period?
  - (i) They moved in search for pasture and water for their livestock.
  - (ii) There was drought and famine in their original homeland.
  - (iv) There was outbreak of diseases and epidemics in their original homeland.
  - (v) To escape from constant attacks from their neigbours/or external attacks
  - (vi) They moved in search of land for settlements as their population had increased.
  - (vii) They moved to know what was beyond the horizon/adventure.

(5x1=5mks)

- (b) Explain five result of the inter action between the Bantu and the Cushites in the pre-colonial period.
- (i) Intermarriages which strengthened relationships between communities.
- (ii) Some Bantu adopted Islam from the Cushites.
- (iii) Some Bantu copied some customs of the Cushites such as circumcision and age set systems.
- (iv) The Bantu and Cushites raided other for cattle which led to loss of property and lives/increased welfare.
- (v) Cushites attacked the Bantu which led to further migration (e.g. Orma/Orma Orma/Galla pushed the Eastern Bantu from Shungwaya)./Displacement
- (vi) The cushites and the Bantu exchanged goods which led to the development of trade.
- (vii) Some Cushites were absorbed/assimilated by the Bantu.

Any 5x2 = (10mks)

- 19. a) What were the reasons for the construction of Kenya-Uganda railway during the colonial period?
  - (i) To facilitate the movement of the troops to suppress resistances/pacification.

- (ii) To transport the administrators into the interior for effective control of British East Africa.
- (iii) To promote the development of legitimate trade/Abolish slave trade
- (v) To transport goods from interior to the coast (raw material) and manufactured goods from the coast.
- (vi) The British wanted to exploit the resources in the interior

### Any 3x1 = (3mks)

- b) Explain six effects of the construction of the Kenya-Uganda railway.
- (i) It led to the emergence of towns along the railway line e.g. Voi, Nairobi.
- (ii) It enabled people to travel to and from the interior to different destinations easily.
- (iii) It encouraged the construction of feeder roads thus improving transportation in the interior.
- (iv) It led to land alienation and establishment of settler plantations where different cash crops were grown/Displacement
- (v) It stimulated both internal and external trade./Development of trade.
- (vi) It led to the Indian Coolies settling in Kenya/Introduction of India
- (vii) It led to employment opportunities to many people in Kenya.
- (viii) It provided revenue for the government.
- (ix) It made it possible for the missionaries to spread Christianity into the interior/Led to opening of interior.
- (x) It enabled the government to administer more effectively /colonists.
- (xi) It led to the alteration of the Kenya –Uganda branch

#### 6x2=12mks.

- 20. a) State three methods which were used by the British to establish their rule in Kenya. (3mks)
  - (i) They used military conquest to crash the resistances of African communities./Direct rule
  - (ii) They signed treaties of protection with some local leaders/collaboration.
  - (iii) They established administrative posts in the interior from where they controlled the protectorate effectively.
  - (iv) They tricked African leaders to give away their land.
  - (v) They occupied areas that were previously under the imperial British East African company (IBEACo.) rule
  - (vi) They used missionaries to persuade Africans to accept authority.

# Any 3x1 = (3mks)

- (b) Describe the organization of the Central Government in Kenya during the colonial period. (12mks)
- (i) The Central Government was headed by a Governor who represented the British Government.
- (ii) The Governor ensured the implementation of colonial policies.
- (iii) There was a legislative council which made laws for the colony
- (iv) The laws were approved by the Governor
- (v) The colony was divided into provinces headed by provincial commissioner.

- (vi) The provinces were divided into Districts headed by District Commissioners.
- (vii) Divisions were divided into locations headed by African Chiefs.
- (viii) Locations were divided into sub-locations headed by sub-chiefs.
- (ix) The sub-locations were divided into villages headed by headman.
- (x) All administrators from the rank of the District Officer to Governor were British.
- (xi) Divisions headed by the District Officers

Any 6x2= (12mks)

21. (a) Why did the British use direct rule in administering most parts of Kenya? (3 mks)

Most communities did not have centralized administrative systems therefore the British appointed chiefs

There were many ethnic groups with diverse social- cultural systems which made it difficult for the British to apply indirect rule

Most communities resisted British rule and so they had to be controlled directly. There was an existing system of direct rule used by the imperial British East

Africa company on which the British built their administration Had enough administration administrators

Any 3 x 1 = 3 mks)

- (b) Explain six ways through which Ronald Ngala contributed to the struggle for independence in Kenya (12 mks)
- (i) He advocated for equal living standards for all races in Kenya
- (ii) He was a founder member of the Mijikenda Union formed in 1947, which played an important role in the Mijikenda political awareness
- (iii) As a member of the legislative council (Legco) he advocated for increased African representation
- (iv) He organized many political rallies in coast province during which he demanded for the release of people who had been detained under emergency laws
- (v) As president of Kenya African Democratic Union (KADU) he advocated for independence
- (vi) As African elected members Organization (AEMO) he mediated between extremes and moderates to create unity.
- (vii) As a leader to the Lancaster House Conference he participated in the drafting of the independence constitution
- (viii) In 1961, Ngala as leader of KADU accepted to form a coaliation government with new Kenya Party so as not to delay the independence process.

(Any 6 x 2 = 12 mks)

### **SECTION C**

- 22. (a) Identify three types of local authorities in Kenya
  - (i) Municipal Councils
  - (ii) Town councils
  - (iii) Country councils
  - (iv) Urban councils
  - (v) City councils

#### (Any 3 x 1 = 3 marks)

- (b) Explain the relationship between the central and local government in Kenya
- (i) The local authorities operate the policy guidelines formulated by the central government.
- (ii) The minister in charge of the government approves all the activities that the local government plan to undertake
- (iii) All the councilors nominated by political parties into the local authorities are approved by the minister of the local government.
- (iv) All the by- laws made by the local authorities are approved by the minister before being implemented.
- (v) Records of all council meetings and business transactions are submitted to the Minister for verification and approval.
- (vi) Any local authority which does not operate according to the guidelines of the central government can be dissolved by the minister
- (vii) The minister for local government scrutinizes the annual reports of the local authorities to evaluate their performance
- (viii) The minister appoints senior officials who sit in the local authorities meetings to give guidance on government policy.
- (ix) The financial records of all local authorities are audited by the officers of the central government
- (x) Local authorities submit their loan applications and intended revenue sources to the central government through the minister of local government.
- (xi) The central government gives grants/ financial aid to local authorities for their operations.
- 23. (a)
  - (i) The national flag
  - (ii) The national Anthem
  - (iii) The coat of arms
  - (iv) The loyalty pledge
  - (v) The presidency
  - (vi) The constitution
  - (vii) The National language

# Any $3 \ge 1 = 3 \text{ mks}$ )

- (b) Explain six factors which undermine National Unity in Kenya
- (i) Unequal distribution of natural/ National resources causes imbalanced

regional economic development. This causes dissatisfaction and disharmony.

- (ii) Different religious beliefs and practices may lead to discrimination on religious grounds.
- (iii) The practice of tribalism leads to favouring people of one's tribe in employment and allocation of resources. This creates hatred among people.
- (iv) Nepotism leads to use of public resources to favour one's relatives resulting to unfair treatment of other people
- (v) Asking for and offering of bribes to obtain and give services violets peoples right to equal treatment/ corruption
- (vi) Ethnic conflicts/ disputes/ clashes discourage co- operation among the Citizens
- (vii) Racism leads to discrimination on the basis of colour/ race. This creates suspicion and hated among people.
- (viii) Discrimination on the basis of gender denies people the right to participate equally in national development (Any 6 x 2 = 13 mks)

24.

- (a) What are the functions of the Attorney General in Kenya?
- (i) Gives legal advice to the government
- (ii) Gives consent for a person to be prosecuted
- (iii) Can institute/ undertake criminal proceedings against any person
- (iv) Can terminate any prosecution proceedings at nay stage
- (v) Drafts and presents government bills for debate in parliament
- (vi) Participates in parliamentary debates/ ex officio

(Any 3 x 1 = 3 mks)

- (b) Explain six responsibilities of a Kenyan citizen
- (i) Obeying the laws of the country to promote peace and harmony
- (ii) Respecting other citizens, their views and property to ensure peaceful coexistence.
- (iii) Taking part activities that promote national development for example contributing towards famine relief fund/ Harambee
- (iv) Participating in meetings organized by government official and other community leaders to ensure effective implementation of policies.
- (v) Contributing to the income of the government by paying axes
- (vi) Offering positive criticism to the government to promote good governance/ Participating in contribution making process and referendum
- (vii) Exercising one's voting rights during presidential, parliamentary and civic elections to enhance democracy.
- (viii) Taking part in community policing and volunteering information about criminal activities to the police to enhance security
- (ix) Avoiding corrupt practices and adhering to accountability and transparency norms for sustainable economic development
- (x) Being loyal and patriotic to the country in order to promote national security and social cohesion (Any  $6 \times 2 = 12 \text{ mks}$ )

#### K.C.S.E HISTORY & GOVERNMENT PAPER 2 2005 SECTION A (25 mks)

- 1. State one theory that explains the origin of people
  - (i) The evolution theory
  - (ii) The creation theory
- 2. Give TWO advantage of using the steam engine in the transport Industry in the nineteenth century (2 mks)
  - (i) It did not pollinate the air
  - (ii) It was cheap
  - (iii) It increased the speed of locomotives (Any  $2 \ge 1 = 2 \le 3$ )
- 3. Give TWO factors that led to the growth of urban centers in Greece
  - (i) The area was secure from external attacks
  - (ii) The area had a well organized administrative system
  - (iii) There was population increase due to existence of religious and educational institutions
  - (iv) There was development of trade and commerce
  - (v) Existence of well organized military systems

(Any 2 x 1 = 2 mks)

4. Identify one form of picture writing during the early civilizations

- (i) Cuneiform
- (ii) Hieroglyphics (Any 1 x 1 = 2 mks)
- 5. Give ONE importance of the Odwira festivals in the ancient kingdom of the Ashanti.
  - (i) Promoted unity of the people
  - (ii) It brought the kings together to pledge loyalty to the Asantehene/ or Emperor
  - (iii) It provided opportunity for the kings to settle disputes
  - (iv) It provided an opportunity for the Kings to honour the dead

(Any 1 x 1 = 1 mk)

6. Identify the main commodity in the Trans Atlantic trade (1 mk)(i) slaves(1 x 1) = 1 mk)

7. State TWO economic effects of the industrial revolution in North America

- (i) Machines replaced human labour in factories
- (ii) There increased demand for raw materials in North America
- (iii) The search for markets for manufactured goods increased

(Any 2 x 1 = 2 mks)

8. Name TWO missionary societies which worked West Africa in the nineteenth century.

- (i) Base missionary society (B.M.S)
- (ii) Church missionary Society (C.M.S)
- (iii) Presbyterians
- (iv) Bremen missionary Society (B.M.S)
- (v) Methodists

(Any 2 x 1 = 2 mks)

- 9. State one way in which European nationalism contributed to the colonization of Africa
  - (i) Countries competed to acquire many colonies to prove that they were powerful
  - (ii) France wanted to restore her past glory after defeat in Franco- Prussian War
  - (iii) New nations such as Italy and Germany wanted to be equated with the rest of Europe.
- 10. Identify TWO chartered companies which were used to administer European colonial possessions in Africa
  (i) The Royal Niger Company
  (ii) The British South Africa Company
  (iii) The Germany East Africa Company
  - (iv) The imperial British East Africa Company (Any  $2 \ge 1 = 2mks$ )
- 12. Give one reason why the Shona supported the British during the Ndebele resistance of 1893.

(i) To stop raids from the Ndebele

(ii) They did not want to be ruled by Ndebele (1 x 1 = 1 mk)

- 13. Name one political party fought for independence in Ghana
  - (i) The united Gold coast convention (UGCC)
  - (ii) The convention Peoples Party (CPP)
  - (iii) The national League of the Gold Coast (NLGC)

$$(Any 1 x 1 = 1 mk)$$

- 14. Give TWO reasons why there were civil wares in the democratic Republic of Congo (DRC) soon after independence
  - (i) Lack of qualified personnel to administer the country
  - (ii) The economy of the county was in the hands of the foreigners
  - (iii) Ethnic differences between Katanga and Kasai provinces
  - (iv) Army mutinies due to the control by foreign officers

(Any 2 x 1 = 2 mks)

# 15. State two advantages of being a member of the commonwealth organization

- (i) Enables one to get aid either capital or technical
- (ii) Enables one to develop trade links
- (iii) Benefits from innovative economic ideas

$$(Any 2 x 1 = 2 mks)$$

- 16. Name the type of constitution used in great Britain
  - (i) Unwritten constitution (1 x 1 = 1 mk)
- 17. Give ONE disadvantage of a federal system of government
  - (i) There is a great temptation for succession by parts of the country
  - (ii) It can lead to unequal development (Any  $1 \ge 1 = 1 \text{ mk}$ )

### SECTION B (45 mks)

18. What were the stages in the development of tools by early people? (a) (i) The earliest tools were made from stones (ii) People hunted animals and used bones and ivory to make tools Later people used sharpened sticks as tools (iii) As people improved in technology they developed iron tools (v) (Any 3 x 1 = 3 mks)(b) Explain SIX ways through which the development of iron technology affected African communities in the pre- colonial period Better farming tools were made which were used to clear large areas of (i) forests (ii) Strong weapons were made and were used to conquer weaker communities Iron technology enabled communities to establish strong defence items (iii) (iv) Centres where iron working took place developed into towns e.g. Meroe A class of highly respected professionals (Blacksmiths with the (vi) knowledge of iron technology emerged) Items made of iron were exchanged in trade (vii) The possession of iron tools enables many communities to migrate and (viii) settle in different areas such as the Bantus Ornaments were made from iron for decoration (ix) (Any 6 x 2 = 12 mks)19. (a) Give THREE classes of people in Hinduism At the highest level are the priest/ Brahmins (i) The second level consists of merchants and farmers/ Vaishyas (ii) (iii) Then there are servants and workers/ Sudras (iv) At the lowest level are outcasts/ Pariah (Any 3 x 1 = 3 mks)(b) Explain SIX effects of the spread of Islam in Africa up to the end of the 19<sup>th</sup> Century Some of the Africans who were converted to Islam completely left their (i) traditional beliefs and practices Islamic Law was adopted in the administration of states where Islam (ii) spread/ Sharia (iii) Islamic education based on the Koran was introduced The use of Arabic language by Moslems led to the development of (iv) languages such as Kiswahili and Hausa The building of mosques and residential houses introduced Arabic (v) architectural designs in Africa. Arabic style of dressing, music and diet were copied by Africans who had (vi) been converted to Islam Moslem traders introduced new crops such as cloves/ dates (vii)

- (viii) Islam created cohesiveness among the believers
- (ix) There was intermarriages between Arabs and Africans leading to emergence of new communities such as the Waswahili
- (x) In areas where Islam was spread through Jihads there was great loss of life
- (xi) The spread of Islam encouraged the development of slavery and slave trade
- (xii) The spread of Islam encouraged establishment of Islamic empires
- (xiii) Over dependence on donations and foreign and has made people to be reluctant to grow food crops
- (xiv) Poor implementation of food policies has led to inadequate food production
- (xv) Poor/ inadequate food storage facilities leads to wastage.

Any  $6 \ge 2 = 12 \le 3$ 

- 20. (a) What were the effects of using electricity in industries inn Europe in the nineteenth century
  - (i) It lowered the cost of production since it was a cheaper source of energy
  - (ii) Work was carried out for long hours as there was light
  - (iii) It enabled goods to be produced quickly and large quantities
  - (iv) Work became lighter as machines operated efficiently
  - (v) Transportation was made easy and faster
  - (vi) There was a clean working environment in factories
  - (vii) It led to the location of industries away from sources of energy
  - (b) Explain FIVE effects of scientific inventions on agricultural development in Europe during the nineteenth century
  - (i) Invention of machines such as tractors promoted large scale farming
  - (ii) Use of artificial fertilizers to improve soils led to high yields of crops
  - (iii) Use of pesticides in farming led to improved quality/ exotic products
  - (iv) Cross breeding of crops and animals led to improved quality/ exotic products
  - (v) Improved infrastructure such as roads and railways led to effective marketing of farm products
  - (vi) Refrigeration/ canning led to effective preservation of farm products
  - (vii) Controlling temperatures in the storage rooms led to preservation of farm products for long

### (10 mks)

- 21. (a) Give THREE problems which Europeans colonialists faced as they established their rule in Africa in the second half of the nineteenth century
  - (i) They were attacked by tropical diseases
  - (ii) Difficult terrain hindered their movement
  - (iii) They faced hostility from some African communities
  - (iv) The region lacked developed means of transport and communication
  - (v) They faced shortages of food and medicine

(vi) There was lack of a common language between the Europeans and Africans

(Any 3 x1 = 3 mks)

- (b) What were the result of the collaboration between Lewanika of the Lozi and the British in the nineteenth century
- (i) Lewanika received payment of £ 2000 yearly
- (ii) He lost his authority as the administration was taken over by the British South Africa Company
- (iii) The British South Africa Company took over the control of the minerals
- (iv) The Lozi land was alienated and given to British settlers
- (v) The Lozi were forced to pay taxes in order to maintain the administration
- (vi) The Lozi were forced to work as labourers on settler's farms
- (vii) The Lozi were employed in the civil service
- (viii) The British South Africa Company developed infrastructure in Barotseland
- (ix) The British established their rule peacefully in Northern Rhodesia
- (x) Lewanika was honoured with the title paramount chief until his death
- (xi) The British used Barotseland as a base to conquer the neighbouring communities.

(Any 6 x 2 = 12 mks)

### **SECTION C (30 Marks)**

#### Answer any TWO questions from this section in the answer booklet provided

- 22. (a) State THREE privileges which were enjoyed by assimilated Africans in the four communes of Senegal
  - (i) They were allowed to vote during elections
  - (ii) They were allowed to vie for posts in the French Parliament
  - (iii) They were exempted from forced labour
  - (iv) They were allowed to work and live in France
  - (v) They received French education
  - (vi) They had freedom of movement within the French empire
  - (vii) They were exempted from paying taxes
  - (viii) They were allowed to become French citizens

(Any 3 x1 = 3 mks)

- (b) Why did French system of assimilation fail in areas outside the Communes
- (i) The Africans were not willing to become Christians
- (ii) The Africans were not able to get the French type of education
- (iii) The system faced opposition from the Muslim
- (iv) The French parliamentarians did not want to compete with Africans for Cabinets posts
- (v) The African traditional rulers feared they would lose their positions
- (vi) French traders feared competition so they opposed the system

- (vii) It was expensive to implement the system because of the vastness of the French empire
- (viii) The varied African cultures made it difficult for them to be absorbed into the French culture. (Any  $6 \ge 12$  mks)
- 23. (a) What were the causes of bombing of Nagasaki and Heroshima in Japan
  - (i) Many people lost their lives
  - (ii) Property of great value was destroyed
  - (iii) The radio active elements caused many diseases
  - (iv) Many people were maimed
  - (v) There was economic decline
  - (vi) Many People suffered psychologically
  - (vii) Japan surrendered unconditionally

(Any 3 x 1 = 3 mks)

- (b) Explain SIX factors which contributed to the rise of Japan as an industrial power after the second World War
- (i) The government made education compulsory and encouraged research leading to innovative ideas
- (ii) People were encouraged to study abroad leading to technological advancement
- (iii) There was financial support for industrialization
- (iv) The availability of raw materials for industrialization from in and outside Japan
- (v) The culture of hard work encouraged local and foreign investment
- (vi) The Government policies encouraged local and foreign investment
- (vii) The cheap and skillfully made products attracted market locally and abroad
- (viii) The topography was unsuitable for agriculture. This made Japan to develop other sectors thus diversifying the economy
- (ix) The development of hydro- electric power provided energy for industrialization
- (x) The Prevailing peace promoted development
- (xi) The improvement in transport accelerated the process of industrialization (Any  $6 \times 2 = 12 \text{ mks}$ )
- 24. (a) What are the functions of the Security Council of the United Nations
  - (i) It investigates disputes which are reported
  - (ii) It advises member states to settle disputes peacefully
  - (iii) It uses diplomacy and economic sanctions to bring World peace
  - (iv) It appeals for peace keeping force from member states
  - (v) It admits/ suspends/ expels members from the United Nations Organization.

(Any 3 x 1 = 3 mks)

- (b) Explain SIX problems which the United Nations is facing in its efforts to maintain World Peace.
- (i) The increase in terrorist activities has created tension/ hatred among member countries thus threatening World Peace
- (ii) Frequent border/ ethnic disputes make the work of the United Nations difficult
- (iii) The organization faces shortage of funds because many member countries fail to remit their annual subscriptions