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### UACE Geography paper 3: Mining in Uganda

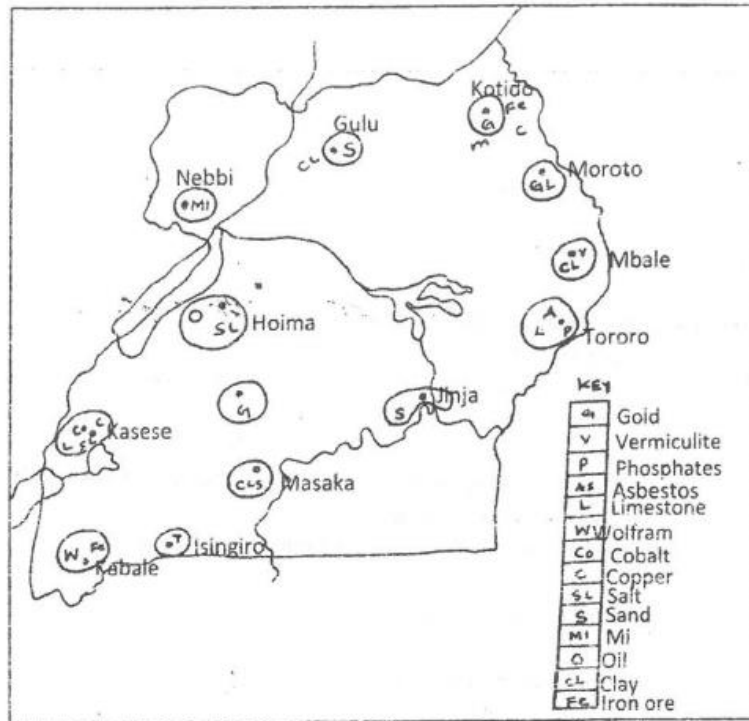
1. Assess the contribution of mining sector to the development of Uganda (25marks)

Candidates are expected to come up with the current status of mining sector in Uganda as

- Mining in Uganda contributes 0.5% to DGP through exports
- Foreign Direct Investment has increased from 18bn(2013) to 3 trillion (2016)
- Licence fees and Royalties have increased from 1.8bn (2003) to 52bn (2011)
- The mining sector has developed from 17.4% (2011) to 25% (2017)
- Sand and clay are the most mined minerals in Uganda.
- Some valuable minerals such as oil (hoima), vermiculite (Mbale), Uranium (Kiboga) have been discovered.
- Most minerals are exported in raw form
- Most mining companies are owned by foreigners
- Most mining is done using rudimentary tools
- Oil extraction/drilling is still in infancy stage.

Candidates are expected to identify the minerals and mining areas using a sketch

## A SKETCH MAP OF UGANDA SHOWING MINING AREAS MINERALS



Candidates are expected to bring out contributions of the mining sector to the development of Uganda

### Positive contributions

- Minerals provide raw materials for manufacturing industries e.g. limestone and gypsum from Tororo and Hoima used in cement industries. Kaolin from Bushenyi, Rakai, Mpigi, Buwambo is used to manufacture ceramics. Phosphates are used to manufacture fertilizers while clay is used to manufacture bricks and tiles at Kajjansi.
- Mineral such as Vermiculite, gold, cobalt and cement are exported to earn the country foreign exchange.
- The mining sector employs a large number of people. These in turn earn income to improve their standards of living
- Mining has led to development of urban area such as Tororo and Kilembe town. Such towns provide social, economic and health services such as accommodation, trade and commerce.
- Mining facilities have promoted development of social economic infrastructures such as roads and railways and electricity for example in Buliisa.
- Mining has led to improvement of international relationships through trade
- The mining sector has provided a way of diversifying the economy in addition to agriculture and industry.
- The mining sector boosts tourism in Hoima, Mbale, Bushenyi and Tororo due to presence of various minerals such as wolfram, gold, iron ore.

- Mining sector has led to generation of government revenue through licences and taxes to companies such as Heritage oil and gas limited.
- Mining sector has created training opportunities in Universities and Institutes and training of labour force.
- Mining of sand and clay has boosted the construction industry

#### Negative contribution

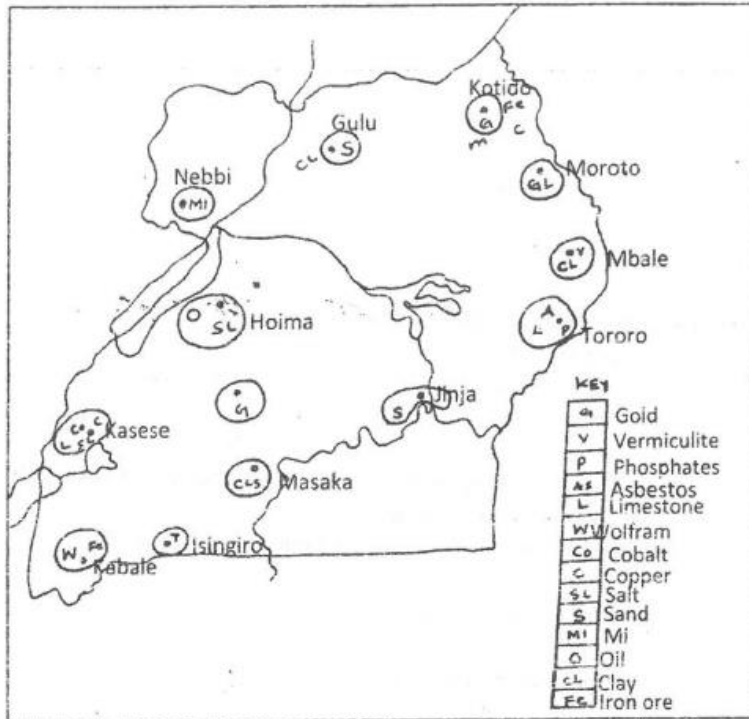
- Opencast and Adit mining has led to destruction of agricultural land for example Kilembe mine large heap of soil extracted were dumped on the agricultural land.
  - The excavated hollows created due to mining become breeding places for mosquitoes that transmit malaria in Kajjansi, Seeta etc.
  - Mining sector has increased air and water pollution for example limestone mining in Tororo and Hoima increase dust particles in air.
  - Mining sector has led to rapid disappearance of forest because trees are used as fuel for example in the firing of bricks.
  - Mining sector leads to growth of urban areas with associated negative consequences such as increased crime rates.
  - A decline in mining activities causes unemployment for example in Kilembe mine
  - Profit repatriation
2. The low level of mineral exploitation in Uganda is primarily due to poor technology. Discuss (25marks)
- Or
3. Account for the low level of exploitation of mineral resources in Uganda (25 marks)

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Candidates are expected to come up with the extent to which poor technology has contributed to low levels of mineral exploitation.

- Poor technology has made it difficult to obtain mineral at deeper levels underground e.g. oil in Buliisa
- Crude/rudimentary tools are used to obtain mineral ores e.g. salt from Lake Katwe
- Poor technology has limited mineral exploration and prospecting e.g. oil in Rhino camp was not discovered inspite of aeroplane echoes indicating its existence
- Poor technology has limited the processing of minerals e.g. salt from Katwe
- Poor technology has made the transport of mineral difficult for example at Kajjansi clay is transported on wheel barrows.

Candidates are expected to come up with other factors responsible for low level of mineral exploitation such as

- Exhaustion of mineral has led to low level of mining industry for example copper from Kilembe mine.
- Limited capital to invest in the mining sector
- Small quantities of mineral deposits e.g Tin ore in Kikagati
- Poor quality mineral ores
- Poor transport network to mining areas increases the transport costs.
- Limited skilled labour to mine and process the mineral
- Limited market and fluctuating prices of the mineral
- Some mineral are located on privately owned land that require big compensation before mining can take place.
- Some mineral are poisonous
- Some tribes like Karamajong are hostile limiting mining in their areas for example mining of gold from Karamoja.
- Political instability in places like Moroto and Kasese limit mining activities.
- Shortage of power limit mineral processing such as limestone in Kotido
- Profit repatriation hinder growth of the mining industry.
- Disease outbreak e.g. for example Ebola in Kasese
- Corruption and embezzlement by government officials
- International territorial conflicts for example between Uganda and DRC.
- Accidents scare away potential labour force to the mining sector.
- Harsh climate for example excessive heat in Karamoja limit mining of Gold
- Smuggling leading to loss of government revenue
- Limited research preventing discovery of mineral ores
- Conflicts of land use between mining and wildlife conservation.

4. (a) Describe the status of mining sector in Uganda (10marks)

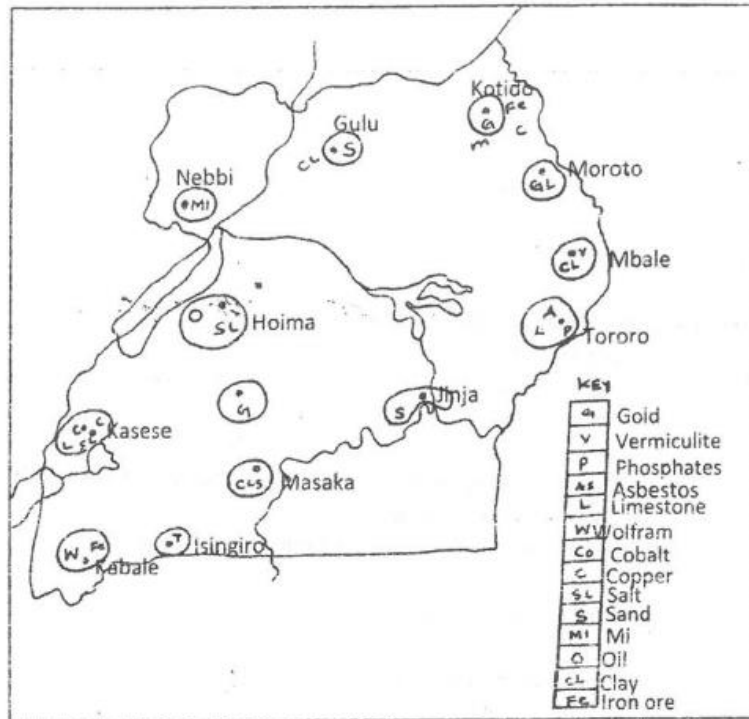
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(b) Explain the challenges facing the mining sector in Uganda (15marks)

Candidates are expected to come up with challenges in the mining sector such as

- Poor technology e.g. use of rudimentary tools in extraction of gold from Busia
- Exhaustion of mineral has led to low level of mining industry for example copper from Kilembe mine.
- Limited capital to invest in the mining sector to buy modern equipment.
- Small quantities of mineral deposits e.g Tin ore in Kikagati
- Poor quality mineral ores
- Poor transport network to mining areas increases the transport costs.
- Limited skilled labour to mine and process the mineral
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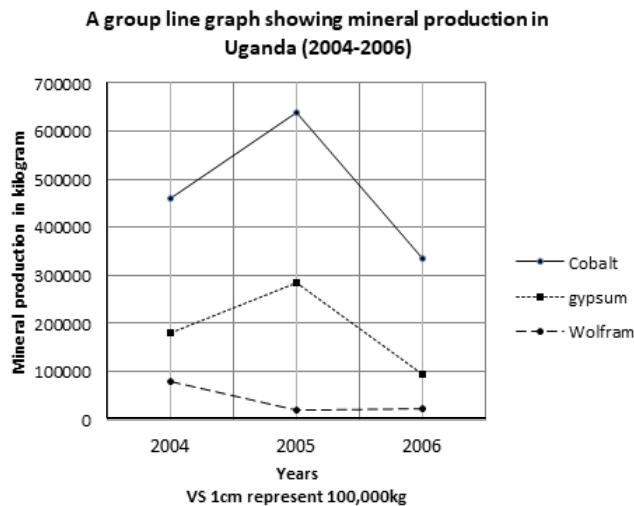
5. Study the table below showing mineral production in Ugandaa (2004 – 2006) answer the questions which follow

Mineral	Quantity (kilogram)		
	2004	2005	2006
Cobalt	459,000	638,000	335,000
Gypsum	181,000	285,000	93,000
Wolfram	80,000	19,000	23,000

Adapted: NEMA 2006/7 State of the Environment Report for Uganda, UNDP, The World Bank p102

(a) Draw a group line graph to show the trend in mineral production between 2004 and 2006. (10marks)

Candidates are expected to draw line graph to show the trend in line production



(b) Account for the trend in mineral production identified in (a) above. (07marks)

Candidates are expected to account for the fluctuation in the trend of mineral production

Reasons for upward/improved trend

- Increase in prices of some minerals e.g. cobalt and gypsum between 2004 and 2005.
- Rapid development of building and concentration in industry which encouraged gypsum mining.
- Positive government policy of mineral prospecting and production and the mining act (2003) which is investor friendly e.g. cobalt
- Increased market/demand for cobalt
- Relative political stability encouraging mining
- Availability of skilled labour offered by foreigners
- Improved technology
- Improved transport and communication

Reasons for downward trend/decline

- Expiry of some mining permits and licences leading to fewer mining companies
- Mineral depletion/exhaustion
- Insecurity in mining areas
- Fall in market prices
- Fall in the market of minerals
- Corruption
- Incidence of pests and diseases like Ebola
- Smuggling
- Limited technology
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(c) Assess the contribution of the mineral sector to the development of Uganda. (08marks)

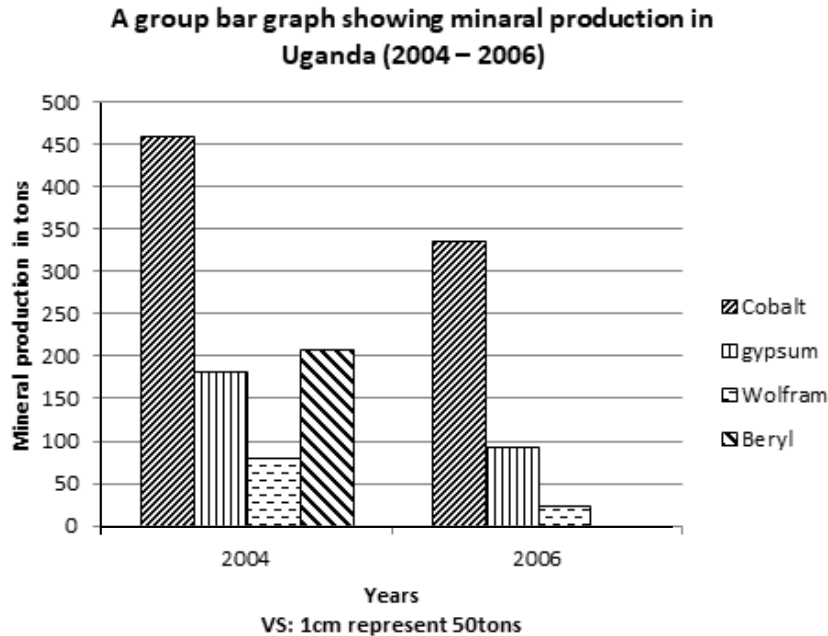
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Mineral	Quantity (tons)	
	2004	2006
Cobalt	460	335
Gypsum	181	93
Wolfram	80	23
Beryl	207	00

Adapted: MEMA 2006/7 State of the Environment Report for Uganda, UNDP, The World Bank p102

(a) Draw a group bar graph to portray the information given in the table





(b) Account for the decline in the mineral production between 2004 and 2006.

Reasons for downward trend/decline

- Expiry of some mining permits and licences leading to fewer mining companies
- Mineral depletion/exhaustion
- Insecurity in mining areas
- Fall in market prices
- Fall in the market of minerals
- Corruption
- Incidence of pests and diseases like Ebola
- Smuggling
- Limited technology

(c) Describe the steps being taken to improve the mining sector in Uganda

- Increased funding of the mineral sector
- Liberalization/privations of mineral sector in order to attract investors.
- Increased research or mineral exploration
- Training of labour force
- Improvement in political security
- Extension of power to the mining areas
- Rehabilitation of road network to the mining center
- Minimizing corruption
- Importation/development of appropriate technology in the mining sector.
- Recycling mineral by-products e.g. cobalt

- Expansion of market through research and advertisement

7.

Thanks

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