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G11 Theory paper November 2016. Marking guidelines.

Q 1: resource utilisation

1.1 match the column (10)

1	E
2	A
3	D
4	B
5	C

1.2 energy consumption in SA

1.2.1 nuclear 2% (6)
Gas 2%
Petroleum products 14%

1.2.2 coal is plentiful in South Africa, coal is cheap to extract and use (4)

1.2.3 Mpumalanga province (2)

1.2.4 **socio-environmental** impacts (4)

Health risks from pollution, lung diseases

Acid rain causing environmental damage

Acidifying of streams and groundwater

Economic impacts (4)

Cost of dealing with environmental impacts such as human health care issues.

Cost of rehabilitating surface and groundwater issues.

1.2.5

a) carbon dioxide (2)

b) carbon dioxide is a greenhouse gas that absorbs outgoing terrestrial radiation heating the atmosphere. This is called the greenhouse effect. Excessive carbon dioxide released during coal combustion has increased the greenhouse effect unnaturally resulting in global warming / climate change. (6)

1.2.6

(24)

Type of energy source	Level of application. Scale:- small to large	Advantages	Disadvantages
Nuclear	Can be used on a large scale to power national grids	No carbon emissions Little wastes product	Extremely costly Environmental concerns
Solar (photovoltaic)	Only really applicable to local small scale applications such as homes	Pollution free and sunlight is free	Expensive to install Only works during the day
Wind turbines	Can be used on a regional scale to supplement grids	No emissions Wind is free	Unightly Only works in windy regions expensive
Hydro-electric	Used at regional and national level	No emissions	Environmentally very bad Useless/unreliable in more arid environments

Please accept any reasonable points made!

12.7.1 26.5%

(2)

1.2.7.2 17.3%

(2)

1.2.7.3 the steady increase in electrification of houses will lead to a greater demand for electricity in the future.

(4)

1.3 power supply and economic development

1.3.1 countries with a higher electricity consumption have a higher GDP. Use any two countries as examples.

(4)

1.3.2 strategic service – a service that is critical to a strategy of development/industrialisation. Countries that have developed have had access to power and continue to use high levels of power to maintain and continue their economic development.

(6)

1.4 the gold mining industry in SA

1.4.1 decreases from around 80% in 1970 to below 20% by 2000. (2)

1.4.2 SA decreases from around 1000 tons in 1970 to below 500 tons by 2000. The rest of the world increases from around 250 tons in 1970 to around 2000 tons by 2000 (4)

1.4.3 ESSAY on gold mining.

Use discretion here but PLEASE, the argument is critical.

Production volume – this has decreased in total and in comparison to global production.

Less volume means less total income while other areas of the economy would have grown substantially, such as trade. Therefore less overall importance to the economy.

Labour market instability - this effects production reliability and production costs.

Labour unrest scares off investors who are less likely to invest in new mines and will be inclined to sell off marginal mines which have become unprofitable due to the increase in labour costs. This increases the risk of retrenchments and unemployment.

R/\$ exchange rate – a weak rand boosts profits on exports but hampers any imported technology.

The weak rand has kept the gold mining industry afloat, allowing for continued demand for local service industries and support the local labour market.

Combined the gold mining industry would be considered a 'twilight industry' which has decreasing relevance to the economy of SA compared to what it was decades ago.

Question 2: South African economics.

2.1 definitions

(20)

1	C
2	D
3	E
4	A
5	B
6	H
7	J
8	F
9	G
10	I

2.2 the occupational structure

2.2.1 categorise

(6)

- a) primary sector
- b) tertiary sector
- c) secondary sector

2.2.2 trade – as it deals with vast amounts of imports and exports worth billions of Rand. Export industry values are multiplied by the exchange rates to make the contribution to the economy the most important.

(6)

2.2.3

(8x1=8)

	Formal sector	Informal sector
Labour laws	Entrenched	none
regulation	Prescribed	Very little if any
tax	Controlled	Escapes formal taxation
Security	Protected	None

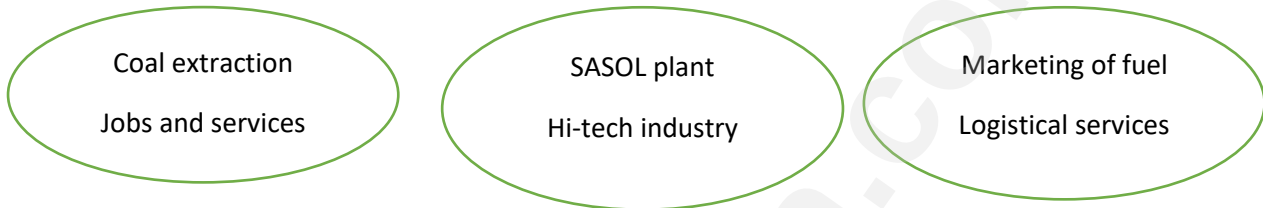
2.3 Case-study: SASOL

2.3.1 a) secondary (2)

b) secondary sector is important for international competitiveness with regards to manufacturing and processing. Value chains linked to beneficiation create wealth within a country and promote economic resilience. (4)

2.3.2 SASOL reduces SA's dependence on crude oil imports from abroad. It also reduces strategic vulnerability. (4)

2.3.4 SASOL value chain (6)



Any relevant points such as water, power, transport, finances etc.

2.4 the location of industry – mind map

2.4.1 Resource oriented – need to be close to the resource/mineral etc because of low raw value or massive bulk such as timber.

Market oriented – needs to be [can be] close to the market/urban area because of perishability of the product, high nett value etc such as motor assembly, electronics. (8)

2.4.2

a) SA is an arid country, this limits the potential for location of certain industries. (2)

b) Power supply problems are hugely limiting to manufacturing and processing. (2)

2.4.3 Industrial development in any emerging market economy is, in part, dependent on the qualifications/skills/education of the labour force.

SA's large unemployment rate is due to the job market not growing fast enough to accommodate the growing labour force entrants but also, as SA's economy becomes more complex, moving away from physical labour, there is a growing need for advanced skills and better levels of education. (6)

2.5 The effect of policies on industrial development.

2.5.1 water, power, sanitation, housing, education, health care. (4x1=4)

2.5.2 transport infrastructure such as highways, harbours etc , heavy power, water supply, (4x1=4)

2.5.3 (6x1=6)

a) Eastern Cape

b) Nelson Mandela Metropol

c) Port Elizabeth

d) Coega

e) mariculture and aquaculture

f) wind energy

2.5.4 FAW, GM – automotive sector (4)

2.5.5 41km roads, 184km electrical cables etc – see brochure (4)

2.5.6 MUST BE LOCATIONAL – examples (4)

15 minutes to PE by road, rail etc

Access to three ports, EL, PE, NGQURA