

MARK SCHEME for the October/November 2012 series

0453 DEVELOPMENT STUDIES

0453/01

Paper 1, maximum raw mark 80

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge will not enter into discussions about these mark schemes.

Cambridge is publishing the mark schemes for the October/November 2012 series for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level components and some Ordinary Level components.

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1 (a) (i)

Poorer families Mud and straw Raw materials Low quality/cheap	Richer families Bricks and concrete Manufactured products Weather resistant/expensive
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[2]

(ii) (Satellite) Television/ Tractors/ Piped Water/ Buses

[1]

(iii) Some villages have piped water and communal wells
Most villages have schools for children up to 11 or 12 / primary schools
Most villages have weekly visits from health care workers
People have houses for shelter
People grow their own food in the surrounding fields.

[2]

(iv) **Clean water:**

All houses should have piped clean water/access to a standpipe;
Provision of adequate sanitation/waste disposal;
Education for all in ways to reduce water pollution.

OR

Education:

A primary school for each village;
Training of more teachers;
Provision of free education;
Making primary education compulsory;
Provision of more books/ equipment.

OR

Health care:

A medical centre in each village/ visit by mobile clinic;
The means of transport to get sick people to hospital in emergencies;
A resident qualified mid-wife;
Regular visits by a doctor;
Pharmacy provided in villages;
Provision of clean water supply/improved sanitation.

OR

Food:

Better transport to towns to buy a variety of food/more food;
Introduction of methods to increase yields/ efficiency;
Improvement in storage methods.

OR

Shelter:

Provision of indoor sanitation;
Supply of piped water to each house;
Construction with more weather-resistant materials;
Provision of better ventilation/ chimneys.

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- Credit development for any of the above methods [3]
(b) (i) Traditional / subsistence / peasant / mixed [1]

- (ii)** Land – small plots/ family owned/ tenant occupied;
 Labour – mainly family / labour intensive/ division of labour;
 Capital – low capital input/ simple technology.

1 mark for each of land, labour, capital [3]

- (iii)** Problem of distance to a main road/ local town;
 Poor surfaces may be impassable in wet season;
 No regular/ affordable modern means of transport to carry goods;
 Bullock cart is slow /product may deteriorate;
 Limit of how much can be carried on foot and by bus. [2]

(c) Levels marking:

Level 1 (1 or 2 marks)

Simple statements with **basic** points made:

Farmers should:

- be able to buy improved seeds
- have access to fertilisers and pesticides
- be able to join cooperatives
- get training/ have access to extension workers
- be able to get cheap credit

Level 2 (3 or 4 marks)

A **sound** attempt with points being developed or exemplified:

Farmers should:

- be able to buy improved seeds/fertilisers/pesticides to grow high yielding crops
- be able to join cooperatives to gain the benefits of sharing ideas and technology
- have access to extension workers/training to learn about modern farming methods and new products.
- be able to get cheap credit to be able to borrow money to buy modern machinery.

Level 3 (5 or 6 marks)

A **comprehensive** attempt with points being developed or exemplified:

The use of high yielding crops which are disease/drought resistant would improve output. Artificial fertilisers would increase yields by providing the nutrients required by the crops and pesticides would kill pests that kill plants or reduce their quality. Modern machinery would allow faster, more efficient production. Farmers need to be able to access cheap credit as this would enable them to borrow money to make these farm improvements.

The creation of cooperatives would mean that farmers gain the benefits of working together. The cooperative could buy fertilisers and pesticides in bulk to reduce costs. By sharing modern machinery and tools, production would be more efficient. Agricultural advisers could be brought in to introduce members to modern techniques and new high yielding varieties. Irrigation systems could be set up for those individual farmers who could not afford their own.

[6]

[20 marks]

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- 2 (a) (i) Africa. [1]
- (ii) India, Pakistan, Congo, Sudan, Nigeria, Ghana etc. [1]
- (iii) South Asia [1]
- (iv) There is a negative relationship/ the higher the percentage of births attended by skilled health workers the lower the maternal mortality rate;
The relationship is not perfect / there are anomalies / not all countries within a region have the same MMR;
Reference to MMR and % attendance relationship in any named region(s) without use of data (eg using terms such as high or low);
Use of relevant data comparing MMR and % attendance in named region(s);
1 mark reserved for figures [3]
- (b) (i) Distance to hospitals or clinics/ few hospitals;
Use of unqualified/ traditional birth attendants/ lack of skilled health workers;
Lack of cleanliness/ dirty instruments/ lack of clean water/ ignorance of need for sterile conditions;
Births to very young mothers/ early marriage;
Poor health/ nutrition/ living environment weakens pregnant women;
Frequent pregnancies;
HIV/Aids causing weakness in mothers;
Unable to afford/ obtain ante-natal care/ medication;
Inadequate medical equipment;
Gender discrimination means mothers' health is not considered to be important. [3]
- (ii) So that everyone can afford maternal care services;
So that mothers do not sacrifice their own health to save money;
To reduce the MMR/ Infant Mortality Rates/ number of orphans;
To raise the importance of women's health/avoid gender discrimination. [2]
- (c) Educated mothers will understand:-
The importance of a balanced diet to maintain good health;
The importance of good hygiene in the home;
The benefits of smaller families / use of contraception;
The importance of taking their children for vaccinations/ regular check-ups;
The importance of disease prevention;
Mothers educate others in better healthcare;
Mothers more able to get jobs and so afford better healthcare/ standard of living;
Economic benefits for country allowing more investment in health care. [3]

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(d) Levels marking:

Level 1 (1 or 2 marks)

Simple statements with **basic** points made:

There is illness and the death of many adults/increase in death rate.

Many children are unable to attend school.

Workers stay at home to support sick relatives.

Economic progress slows down.

High cost of medical care.

Level 2 (3 or 4 marks)

A **sound** attempt with points being developed or exemplified:

Many children are orphaned with no one to look after them and are unable to attend school.

Economic progress has slowed down because so many people of working age are sick and unable to work or need to stay at home to look after sick relatives.

High medical costs mean there is less money to spend on improving infrastructure.

Level 3 (5 or 6 marks)

A **comprehensive** attempt with points being developed or exemplified:

Many children are orphaned and have to be looked after by their grandparents which may cause mental and physical stress. The children may not be able to attend school which means literacy rates will fall and they will not learn the skills to enable them to work to develop the economy in future.

Many people of working age have to support sick and dying relatives and so are unable to work and contribute to the family income which results in increased poverty and hardship. Medical costs and good food may not be afforded which could lead to further health problems.

The government will receive less revenue in taxes as fewer people are able to work. Money for extra medical costs is needed which means there is less for a government to spend on improving infrastructure such as roads and power supplies which would encourage investment in industries and promote economic development. The country may need to borrow money and so falls into debt which makes further development difficult. **[6]**

[20 marks]

- 3 (a) (i) 24(%) **[1]**
- (ii) 4 (tonnes) **[1]**
- (iii) The population of China is much larger than that of USA. **[1]**
- (iv) **Three** reasons
 Large amounts of fossil fuels burned;
 The countries have many industries;
 The populations have high standards of living – emissions from heating, household appliances, etc.
 A great deal of fuel is used for transporting goods/ many people have cars. **[3]**
- (b) (i) Energy generated from a source that will not run out / can be replaced etc. **[1]**

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- (ii) Solar / Wind/ Hydro Electric Power (HEP) / tidal / waves/ geothermal heat/ wood/biomass. [2]
- (c) (i) Global warming may cause the polar ice caps to melt. Ocean water is heated and expands. Sea level rises. Islands are low lying. Increasing intensity of tropical storms. [2]
- (ii) The hot desert margins may expand/ desertification in the tropical areas means crops cannot be grown there or livestock kept. Drought/ Insufficient water reduces quality and quantity of food supplies; Climate change causes the world crop belts to move/ crops may be grown in areas previously unsuitable for them; More intense storms causing flooding will destroy crops; Increasing soil erosion linked to desertification/ flooding; Pests may increase and cause low yields; Flooding/ Drought may cause deaths of farmers which will affect production. [3]

(d) Levels marking:

Level 1 (1 or 2 marks)

Simple statements with **basic** points made:

Air pollution from vehicles using fossil fuels.
Industries emit chemical fumes into air / dispose of waste products into rivers.
Noise from traffic.
Provide adequate sewage disposal.
Provide a regular rubbish collection service.

Level 2 (3 or 4 marks)

A **sound** attempt with points being developed or exemplified:

Air pollution from vehicles using fossil fuels could be reduced by increasing taxes on cars and fuel/ promoting the use of public transport / cycle ways would reduce air pollution from transport.
Pollution from industries sending out chemical waste into the air and water could be reduced by laws enforcing use of cleaner industrial methods.
Rubbish and litter in streets could be cut down by local authorities having regular rubbish collections.
Presence of human waste could be solved by building drains and sewage systems.

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Level 3 (5 or 6 marks)

A **comprehensive** attempt with points being developed or exemplified:

Air and noise pollution from traffic could be reduced by increasing taxes on fuel and cars that emit large amounts of pollutants. Bus lanes, park and ride systems and cycle ways would also reduce the number of cars on roads. High car park charges and low bus fares are other methods that could be used.

The problem of human waste and rubbish can be reduced by the construction of a sewage system with proper sanitation for all buildings. Councils should arrange regular rubbish collections with dumps outside the urban areas. Recycling of waste should be promoted and companies should be encouraged to use less packaging. Fines for those dropping litter should be given.

Laws are needed to control industrial pollution by chemical waste emitted into the air or water. These laws should be enforced as heavy fines for polluters would deter others. Production that makes large amounts of noise should be limited to certain hours of the day.

For marks in Level 3 both causes and methods of reduction must be considered. **[6]**

[20 marks]

4 (a) (i) Primary. **[1]**

(ii) Description of **two** problems:

Not enough money to import goods/ shortage of foreign exchange;

Need to borrow money/ get into debt / not enough money to pay off interest on debt.

No money for healthcare / education/ infrastructure etc.

A trade deficit may lead to recession and unemployment. **[2]**

(b) **Three** problems of relying on tourism:

Situations outside the country's control may mean tourists stay away and income falls;

High cost of developing tourism facilities reduces money for infrastructure projects etc;

Profits sent out of country as tourism is developed by MNCs;

Wealth often concentrated in tourist areas;

Need to import foreign expertise, staff, food etc;

If tourism declines the country has no other means of generating wealth;

Seasonal nature of tourism leads to unemployment in slack season;

Devaluation of currency makes imports more expensive. **[3]**

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(c) (i) A new(ly) industrialised/ industrialising country. [1]

(ii) Description of the changes:

In 2011:

Less variety of primary goods exported;

Exports included manufactured/ electronic goods rather than just primary goods/ greater variety of exports;

Exports now include services;

Imports of vehicles had stopped/ vehicles now exported;

Imports mostly producer/ semi-processed goods rather than consumer/ finished goods;

Fuel is now imported;

A positive balance of trade has been created/ more money earned from exports than spent on imports;

Greater value of trade/ imports/ exports. [4]

(iii) Primary sector will have decreased in both relative importance and in number of people employed;

Secondary sector will have increased/ a large number now employed in industry;

Tertiary sectors will also have increased/ a large number of people now employed in the service industries, such as transport, banking, marketing, etc. [3]

(d) **Levels marking:**

Level 1 (1 or 2 marks)

Simple statements with **basic** points made:

Advantages:

Bring in foreign expertise.

Bring in foreign investment.

Help to diversify the economy.

Gain in foreign currency.

Train local people.

Provide jobs for local people.

Disadvantages:

Pay low wages.

Most of the profit goes overseas.

Employ expatriates in senior jobs.

They may withdraw suddenly.

Compete with local businesses.

Lack of respect for local culture.

Cause air/water pollution.

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Level 2 (3 or 4 marks)

A **sound** attempt with points being developed or exemplified:

Advantages:

Foreign expertise is brought in which helps to train local people in new skills.
 People get jobs and use their income to support shops etc. in the local economy.
 Foreign currency is earned which helps the balance of payments and reduces debt.

Disadvantages:

MNCs employ expatriates in senior jobs and local people do the unskilled jobs with no training.
 MNCs exploit workers with low wages and bad working conditions.
 They compete with local businesses which often close and cause job losses and poverty.
 They may pollute the local area with chemical spillages / devastated landscapes as governments usually have little control over the activities of MNCs.

Level 3 (5 or 6 marks)

A **comprehensive** attempt with points being developed or exemplified.

Advantages:

Local people get jobs and can use their income to improve their standard of living. Education can be afforded as well as medical costs and a varied diet and so the family's health improves. The local economy benefits as workers spend their money and more services may be provided.
 Foreign currency is earned through increasing exports and this helps the balance of payments. Debt interest can be repaid so the country's debt does not build up and the government can use tax revenue to build more schools and hospitals and improve transport networks.

Disadvantages:

MNCs aim to make the most profit they can and as a result workers are paid low wages for long hours. Health and safety conditions in factories are poor and workers who complain are often fired. No trade unions are allowed as these would try to improve workers' conditions but would cost the MNC money.
 The host country has no say in decisions, and has little control over MNCs. They compete with local businesses and put them out of business by undercutting them in local markets. The MNCs may then withdraw suddenly creating further unemployment and hardship.
 MNCs are often attracted to low income countries as environmental laws are missing or not enforced by corrupt officials. Mining operations and huge commercial farms may cause large scale deforestation with loss of habitats and biodiversity. Air and water pollution of the local area not only affects wildlife but also communities whose drinking water may become contaminated.

For Level 3, both advantages and disadvantages must be considered.

[6]

[20 marks]