

CAMBRIDGE INTERNATIONAL EXAMINATIONS

GCE Ordinary Level

MARK SCHEME for the May/June 2014 series

2059 PAKISTAN STUDIES

2059/02

Paper 2 (Environment of Pakistan), maximum raw mark 75

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1 (a) Study Fig 1, a graph showing wheat production and cultivation

- (i) By how much did wheat production increase from 1991 to 2010?** [1]

10 million tonnes

- (ii) By how much did the area of wheat cultivation increase from 1991 to 2010?** [1]

11 million acres

- (iii) Compare the production of wheat from 1991 to 2000 with the production from 2001 to 2010.** [2]

Both increased

Both fluctuated (year to year)

For 1991–2000 Accept converse for 2001–10

Lower (average) production

Increased at a higher rate

From 14–21 mn / by 7 mn whereas 2001–10 from 19–24 mn / by 5 mn

Rises to / maximum 21 mn whereas 2001–10 24 mn

References to figures need million

- (iv) To what extent was wheat production related to the cultivated area from 1991 to 2010?** [3]

- Direct relationship / positive correlation / relationship described e.g. when production is high, area is high
- *Inverse / no relationship = 0 Res 1*
- Both lowest in 1991
- Both highest in 2010
- Year both constant – 2009
- Years both increase – 1994 / 1997 / 1999 / 2004 / 2006 / 2008
- Years both decrease – 1993 / 1998 / 2000 / 2001
- Exception (*max 1*) e.g.: production increases when area decreases – 2002
- production increases when area constant – 1991
- production decreases when area constant 2005 / 2007
- area increases when production constant – 1992 / 1995 / 2003
- area decreases when production constant – 1996

- (b) (i) Circle the months in which most wheat is grown in Pakistan.** [1]

October–May: Both periods circled = 0

- (ii) Explain why the climate at this time is most suitable for wheat farming** [3]

- Mild temperatures / 10–20 °C for growth
- Warmer / 25–30 °C (in spring) for ripening / harvesting
- Moderate rainfall / 150–500mm (in spring) for growth / to swell the grain / before harvest
- Dry period / no rain (in spring) for harvest

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(c) Why are waterlogging and salinity called ‘the twin menaces for farmers’? [2]

- Waterlogging restricts root growth / prevents air pockets in soil
- Salinity poisons the soil / plants cannot tolerate salt

OR the generic for 1 mark max if neither statement above:

Takes agricultural land out of production / makes land uncultivable / infertile / damages crops / reduces yields / reduces income

(d) Describe the ways in which damage by waterlogging and salinity can be prevented. [6]

- Tubewells to lower water table (fresh water pumped up to flush out salt)
- Surface drains dug (diverts surface water to river / lake)
- Canals lined (prevents seepage)
- Canals closed temporarily
- (Eucalyptus) trees planted (deep roots absorb water from water table)

(e) To what extent can better education and training increase farm production? [6]

Possibilities – Res 2

Prevention of waterlogging and salinity / better water management / irrigation

Knowledge of proper fertiliser / pesticide usage

Knowledge of better seed varieties

Use of / ability to repair / maintenance of farm machinery

Easier to get bank / government loans / manage farm finances

Problems – Res 2

Lack of land

Lack of money (to implement the training)

Lack of named infrastructure + link, e.g. electricity for machinery

Power of landlords

Climatic problems

Reluctant to change from traditional methods

[Total 25]

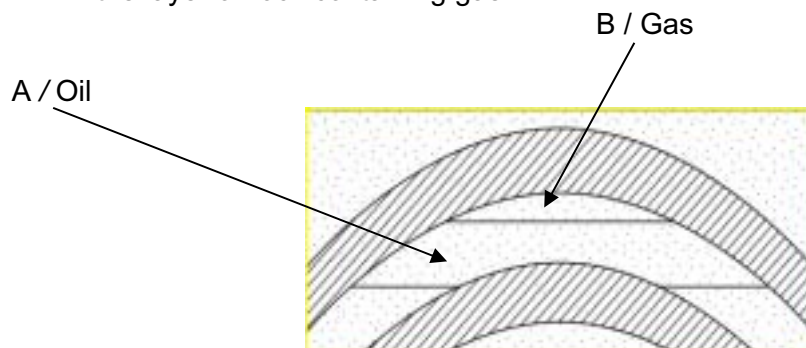
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2 (a) Study Fig 2, a cross section showing an oil trap.

(i) Label on the diagram

[2]

A the layer of rock containing oil
B the layer of rock containing gas



(ii) What is meant by the term 'porous rock'

[1]

Rock with pores / holes / spaces / that lets liquids or gases pass through

(iii) Why is the feature in Fig. 2 called 'an oil trap'?

[2]

Oil cannot get through the rocks around it
Oil lies / trapped between layers of non-porous / impervious / impermeable rock
Oil rises to the top of the anticline / top of bend in rocks

(b) Study Fig. 3 which shows the uses of oil.

Choose three of the following terms to complete Fig. 3.

[3]

by products – in the LHS heading box
pesticide – below plastics
petrol – below fuels

(c) Study Fig. 4, a map showing oil refineries and pipelines in Pakistan.

(i) Name and locate the oil refinery marked on the oilfield in Fig. 4.

[2]

Attock (oil refinery)
Morga(h) / Rawalpindi / Potwar Plateau / SE of Peshawar / NW of Faisalabad

(ii) Name one refinery where imported oil is processed.

[1]

National Refinery / Pakistan Refinery / Pak-Arab Refinery / Korangi / Mahmood Kot

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- (iii) Explain the importance of the White Pipeline, and other pipelines to the development of Pakistan. [4]

White Pipeline will carry refined oil / frees existing pipeline for crude oil – Res 1

Reduce rail / road transport

Cheaper method of transport (than tanker / rail transport)

Faster method of transport (than tanker)

To meet (increasing) demand for oil

Will increase industrialisation / employment / economic prosperity / living standards / attracts investment (in inland areas)

- (d) (i) Name an area where coal is mined in Pakistan, and state one type of coal found there. [2]

Quetta – coking coal / Sharig coal / sub-bituminous

Lower Sindh / Thar (desert) – lignite

Salt Range / Dandot Pidh – sub-bituminous / lignite

Makerwal – sub-bituminous

If no or incorrect named area, 0 marks

[2 × 1 mark]

- (ii) Give two reasons why most of the coal mined in Pakistan is called 'low quality'. [2]

High ash content

High moisture content

High sulphur content

Low (hydro)carbon content

Gives off less heat / low heating value / low burning temperature

Crumbles easily / soft / not compressed

- (e) To what extent can Pakistan rely on fossil fuels to increase fuel and power supplies? [6]

Possibilities – Res 2

Large reserves of gas

Sui / Pirkoh / Mari / Potwar Plateau area

Large / new reserves of coal

Of a type suitable for use in power stations / power generation

Coal a cheap fuel

Potential of coal gas

Port at Karachi for imports

Problems – Res 2

Small oil reserves / oil has to be imported

Will run out / not renewable

Coal is heavy / bulky to transport

Gas is difficult to transport / explosive

Fossil fuels expensive to import

Because becoming inaccessible / higher cost of production / exploration / extraction / rising world prices

[Total 25]

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3 (a) Study the map Fig.5

- (i) Name the towns A, B and C** [3]

A – Quetta
B – Peshawar
C – Gilgit

- (ii) Name one of the passes D, E and F shown on Fig. 5, and name the country that it links to Pakistan.** [2]

D – Khojak pass – Afghanistan
E – Khyber pass – Afghanistan
F – Khunjerab pass – China

- (iii) Give two reasons why air transport is used to carry lightweight or valuable goods to other countries instead of roads.** [2]

Safety / less likely to be damaged / stolen / less risk of accidents
Speed

(b) Study Fig. 6 (insert) an advertisement for cotton fabric.

- (i) State three ways in which this company can be contacted.** [3]

Any three of (Mobile) telephone, e-mail, internet / website, fax, letter, visit

- (ii) Explain the importance of good communications to a business such as Cotton Fabrics International.** [3]

For ordering supplies / linking to dealers / enabling best prices
For advertising
For market research
For direct (internet) sales / after sales service / customer contact / loyalty
Speed of contact
Global reach / www / international exposure
To enable deliveries / transport of workforce / businessmen

- (c) (i) Name two dry ports in Pakistan.** [2]

Any two of Sambrial / Sialkot, Lahore, Multan, Faisalabad, Rawalpindi, Hyderabad, Larkana, Quetta, Peshawar

- (ii) Explain how dry ports have increased trade in Pakistan.** [4]

Increases foreign trade / more exports / more imports
Better access to remote areas / areas away from Karachi / opened up interior
Saves time / expense of providing own transport to coast
Less congestion / relieves burden at Karachi / Keamari / Port Qasim / sea ports
Speeds up / more efficient paperwork / customs checks
Stimulated / encouraged businesses / investment
More efficient loading / containerisation

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- (d) To what extent could a better road network increase the development of small scale and craft industries of Pakistan? [6]

Advantages – Res 2

More remote areas can be connected
 e.g. Swat – *Allow other relevant examples*
 Good access to raw materials
 Greater access to training
 Greater access to (export) markets,
 Increases tourist market
 Faster / safer trade

Problems – Res 2

Limited marketing skills / access to product markets
 Roads likely to be often closed in mountain areas
 Due to landslides / avalanches / snow
 Cost of transport / middle man / do not have own transport
 Allows more import of cheap manufactured goods / more competition

[Total 25]

- 4 (a) Study Fig. 7, a map of deforestation.

- (i) Name the areas of deforestation A and B. [2]

A – Sulaiman Range
 B – Safed Koh / FATA

- (ii) Name the desert C. [1]

Kharan desert

- (iii) State three reasons why deforestation occurs in one of the areas shown on Fig. 7. [3]

Farming / growing food / fodder / cash crops,
 For firewood
 For timber
 Mining
 Roads
 Overgrazing
 Housing / urbanisation / residential
 Industry

- (b) Study the article below from 'Dawn', November 4th, 2011.

- (i) By how much has forest cover decreased since independence? [1]

30.5%

- (ii) By how much should it increase by 2015 to meet its commitment under the UN goal? [1]

3.5%

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(c) State and explain three effects of deforestation in mountainous areas. [6]

Any three of the following

Soil erosion, no roots to hold the soil / less interception

Landslides / avalanches

Rocks / snow no longer held back by trees

Leaching, no roots to bring minerals to surface / minerals washed out of exposed soil / infertile soils

Silt blocks rivers

Water runs off slopes

Silt fills reservoirs / canals

Silt settles in still / slow moving water

Flooding

Runoff increased / less interception

Extinction / loss of species

Loss of habitat

Less rainfall / lower humidity

Less transpiration

Less shade

Loss of branches and leaves

Less tourism

Loss of scenic beauty

Shortage of firewood

No fuel for heating / domestic use

[3 × 2 marks]

(d) Explain how forests can become a source of income for the people of rural areas. [4]

Firewood / charcoal

Named raw material e.g. timber / roots / leaves / ephedra / fruit / nuts

For cottage / small scale / craft / pharmaceutical industries

Named product e.g. furniture, toys, souvenirs

Forests attract tourism

Goods can be sold to tourists

Creates employment e.g. forest guides / rangers / forest department / forestry

(e) (i) What is meant by the term 'sustainable agriculture'? [1]

A definition such as

Supplying the food / agricultural product needs of the present generation while protecting / not compromising the food / agricultural product needs of those in the future

Or

Supplying the food / agricultural product needs of the present generation while protecting / not compromising the natural environment

Or

Supplying the food / agricultural product needs of the present generation while minimising environmental damage

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- (ii) To what extent can agriculture be sustainable in Pakistan? [6]

Possibilities – Res 2

Less overcropping / multicropping

Methods of preserving soil e.g. terraces / contour ploughing

Restrict use of heavy machinery

Keeping vegetation cover

Better water management / avoiding over watering / conserving water / lining canals

Organic farming / using manure

Use of appropriate knowledge / training

Problems – Res 2

High demand for more food

Pressures on land e.g. for timber

Lack of education / awareness of sustainable methods

Unco-operative landlords

Land reform needed

Lack of government will / support / investment

Resistance to changing traditional / modern methods

[Total 25]

- 5 (a) Study Fig. 8 showing the United Nations figures for the different age groups in Pakistan.

- (i) What was the percentage of the age group 0–14 years in 2010? [1]

35–37 (%)

- (ii) Which age group of the population has decreased from 1990 to 2010? [1]

0–14

- (iii) How has the percentage of working population (aged 15 to 64) changed from 1980 to 2010? [1]

Increased / decreased to 1990 then increased

- (b) (i) What is meant by ‘seasonal migration’? [2]

Moving / migrating from one place to another according to the time of year / season

Do not accept use of ‘migrate’ and ‘season’ together in a response

Influenced by the weather / quality of pasture / suitable living conditions / rearing conditions for animals / availability of water / employment

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(ii) Name and describe an example of seasonal migration. [4]

Transhumance – Res 1

Moving to higher land / mountains in the summer

Animals kept on high summer pastures

Returning to valleys in the winter

Animals brought down to lower pastures / to sheds in winter

e.g. goats / sheep / cattle / yaks / dzu

Northern and Western mountains

OR

Nomadic / nomadism – Res 1

Moving from place to place looking for water and pasture

Taking their animals

e.g. sheep / goats / camels

Taking their tents

Settle for a short period / several weeks

Balochistan and desert areas

Specific example – Res 1

Outward movement to which location + time of year / reason

Details

Return movement to which location + time of year / reason

Details

Time period

Area within Pakistan

Maximum 3 marks if no specific example

(c) Study Photographs A and B (Insert).

(i) Give four features of the housing shown in the photographs. [4]

Closely built / dense / congested

Low / one storey

Near water level / near dirty water

Some have power / telephone lines

Poor / scrap materials / makeshift

Named scrap building material e.g. corrugated metal / wood / cloth

No glass in windows

Rusty

Stones on roofs

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(ii) Explain why people live in areas such as those shown in Photographs A and B. [6]

Rural-urban migrants
 Refugees
 Looking for work / safety
 Close to work
 Work for low pay / poor / work in informal sector / poverty
 Cheap / cannot afford housing / housing too expensive
 Unemployed
 Authorities cannot provide enough housing / no investment in housing
 Only space / land that is available
 Access to water
 Considered only to be temporary
 Relatives already living there

(d) To what extent can living conditions in areas such as those in Photographs A and B be improved? [6]

Possibilities – Res 2

Self-help schemes
 Authorities provide building materials / blocks / bricks and people their own labour
 International charities
 Work with street children, etc.
 (Local) Government schemes / projects
 Building of low-cost / permanent housing / loans to build own housing
 With minimum standards and basic facilities e.g. toilets
 Infrastructural development e.g. roads, water supply, sanitation, rubbish collection, electricity
 Provision of schools / (family planning) clinics

Problems – Res 2

Lack of government will / priorities / political instability
 Lack of government funds / investment
 Corruption
 Dangerous for Western charities
 High cost
 Long term
 Huge scale of the problem
 May attract more migrants
 Local resistance to improvement projects

[Total 25]