

**MARK SCHEME for the October/November 2010 question paper
for the guidance of teachers**

2059 PAKISTAN STUDIES

2059/02

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

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 must be read in conjunction with the question papers and the report on the examination.

- CIE will not enter into discussions or correspondence in connection with these mark schemes.

CIE is publishing the mark schemes for the October/November 2010 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.



Page 2	Mark Scheme: Teachers' version	Syllabus	Paper
	GCE O LEVEL – October/November 2010	2059	02

1 (a) Study Fig. 1, which shows a map of Pakistan. [4]

(i) Name the cities A, B and C, and the line of latitude D.

- A Quetta
- B Hyderabad
- C Lahore
- D 30°N

(ii) With reference to Fig. 1, explain how the population density of the area north of the line D is related to relief (topography) and water supply. [5]

Relief (res. 2)

Higher density on (Indus) plain / flat land / low land
 Lower density in mountains / hills / sloping land
 Lower density in foothills of Hindu Kush / other named range
 Lower density in Sulaiman Hills / north Balochistan plateau

NB. Candidate may refer to density in key or just 'more' or 'less' – allow.

Water Supply (res. 2)

Higher density where irrigated / rivers
 Higher density where more rain (in Northern Punjab)
 Lower density where less rainfall
 Lower density in deserts

NB. Candidate may refer to density in key or just 'more' or 'less' – allow.

(b) Study Fig. 2, which shows the weight of marine fish caught 1996–2006. The weight of fish caught in 2006 was less than in 1996.

(i) Suggest *two* reasons for this decrease. [2]

- Over-fishing
- Water pollution / oil spills etc.
- Loss of breeding / shelter / feeding areas (i.e. mangroves)
- Fishing in closed season / when breeding
- Fishing by boats from other countries

(ii) Describe how the weight of fish caught changed in the years between 1996 and 2006. [3]

Increases and decreases / fluctuates
 Highest in 2002
 Two peaks
 Lowest in 2006
 No increase since 2003 / decline from 2004
 Max and min. figures (only)

Page 3	Mark Scheme: Teachers' version	Syllabus	Paper
	GCE O LEVEL – October/November 2010	2059	02

(c) Describe how marine fishing methods can be improved. [5]

Boats with engines
 Can go further offshore
 Can stay at sea for several days
 Cold storage on boat
 Mechanised equipment / winches
 Nylon / bigger / stronger/ nets or ropes
 Weather forecasts
 Sonar to locate fish
 Satellite navigation
 Training / education

(d) Study Fig.3. With reference to Fig. 3, explain the advantages and disadvantages of developing the fishing industry in Pakistan. [6]

NB: This can include fish farming / freshwater fishing

Advantages (res. 2)

More food
 Healthier food / more protein etc.
 More employment / more income/ less unemployment
 Exports to – or of – (e.g. shrimps to Japan, dried fish to Middle East, to Sri Lanka)
 Better communications with – (e.g. better roads, telecommunications in Balochistan)
 More education by teaching skills
 More technology – introduction of engines, machines, radar, satellite navigation
 Growth of other industries e.g. Processing, boat building
Sustainability as fish are 'free', should not 'run out'

Disadvantages (res. 2)

Education – lack of skilled labour
 Technology – costs money, imported
 Water pollution – kills, damages fish, Pakistan's rivers are polluted, mangroves polluted
 Restrictions – marine fishing banned in June and July
 – controls on net size
 Quality – some products banned by western countries
 – can be poisonous / makes them unsuitable to eat
 Income – not large, delayed profit
Sustainability – issues of over-fishing

[Total: 25]

Page 4	Mark Scheme: Teachers' version	Syllabus	Paper
	GCE O LEVEL – October/November 2010	2059	02

2 (a) Study Fig. 4 (Insert) which shows patterns of goat rearing in Pakistan.

(i) Describe the distribution of goat rearing in Balochistan. [3]

Widespread / low and moderate in most areas
 Main area in SE / E / Sindh border / Kalat / Khuzdar / Central Brahui Range / Kirthar Range / Indus Plain (allow up to 2 named areas)
 Main area in North / NW / NWFP border / Zhob
 Low in West / Western borders / Chagai Hills / Ras Koh / Kharan desert
 No information for coastal and some other areas

(ii) Suggest why the government of Pakistan discourages the rearing of goats. [2]

Overgrazing
 Loss of vegetation / deforestation
 Soil erosion / soil loose

(iii) Why are there many nomadic farmers in Balochistan? [3]

Shortage of / to search for grazing / food
 Shortage of / to search for water
 Agriculture / cultivation / crop growth difficult or impossible
 Low population (so plenty of land)

(b) Explain why buffalo are not reared in Balochistan. [3]

Lack of water to drink
 Lack of water to wash / lie in / bath in / keep cool
 Lack of water / buffalo need water (1)
 Lack of fodder crops / poor grazing
 Lack of demand / few urban areas

(c) Study Photographs A and B (Insert) showing a buffalo farm in Lodhran district, Punjab.

(i) How do the photographs show that these buffalo are being kept in good living conditions? [6]

Photo A

Covered shelters / shade / roof / shed etc.
 Brick / concrete / will not collapse
 Fodder / food
 Feeding trough
 Brick standing by troughs
 Clean conditions / dung cleared away

Photo B

Water for bathing / washing / cooling / drinking
 Concrete pool
 Clean water / water from well
 Organised storage of fodder / dung

Page 5	Mark Scheme: Teachers' version	Syllabus	Paper
	GCE O LEVEL – October/November 2010	2059	02

(ii) **Suggest why buffalo farms can often be found around urban areas.** [2]

Food (for urban population) / demand for milk or meat
 Must be fresh / deteriorates quickly
 Can make deliveries / supplied on a regular basis
 Products for processing, e.g. milk, ghee, butter

(d) **Meat provides a valuable source of protein in food, and there are many other useful products from animals.**

Explain the advantages and disadvantages of developing livestock farming in Pakistan. [6]

Advantages (res. 2)

More food / healthy food / great demand – with e.g.
 Other products – with example (hides, horn)
 Exports (with example)
 Employment / earnings
 Manure / dung / gobar / for burning
 Processing industries (with example)
Sustainable e.g. animals reproduce, traditional skills

Disadvantages (res. 2)

Loss of land / water for food crops.
 Overgrazing problems.
 Less investment in other forms of farming.
 Low income / low profit.
 Disposal of waste / problems of cleanliness / pollution (with example)
 Cost of setting up / fodder / vets bills etc (max 2)
 Disease transfer to humans
 Some products not of export quality / banned by western countries
 Not sustainable e.g. (may refer to above)

[Total: 25]

Page 6	Mark Scheme: Teachers' version	Syllabus	Paper
	GCE O LEVEL – October/November 2010	2059	02

3 (a) Study Fig. 5, which shows the sectors of employment by percentage in Pakistan.

(i) Which is the largest sector? [1]

Paid employment

(ii) Give an example of self-employment. [1]

Farmer, shopkeeper, lorry driver etc.

(iii) What is the percentage of 'unpaid family workers'? [1]

25%

(iv) State two jobs that may be done on a farm by unpaid family workers. [2]

Sowing, harvesting, threshing, weeding, bird-scarer, feeding animals etc.

(v) Suggest why many farms rely on unpaid family workers. [3]

Poverty / cannot afford hired labour
 Subsistence / small farms
 Manual labour / not mechanised
 Large families / no other jobs available
 Inherited / learned skills

(b) Explain the push factors, other than low pay that may cause rural-urban migration. [5]

Lack of: – clean water / sanitation / poor health
 – health care facilities / hospitals / clinics
 – education / illiteracy
 – electricity / bright lights etc.
 – jobs / mechanisation
 – farmland / subdivision of land
 – entertainment – example
 – food / malnutrition

Degradation of land / salinity/soil erosion
 Power of the landlords / Zamindari etc.
 Political problems / Taliban / Al Kaida etc.
 Natural disasters / drought etc.

Page 7	Mark Scheme: Teachers' version	Syllabus	Paper
	GCE O LEVEL – October/November 2010	2059	02

(c) Study Photograph C (Insert), which shows a valley in Shangla district, NWFP.

(i) With reference to the photograph, explain why agriculture is difficult in this area. [4]

Difficulties (must be explained)

- Soil erosion
- Lack of flat land
- Other land uses in valley base
- Poor soils
- Lack of irrigation
- Lack of mechanisation (with reason)
- Cold temperatures / snow and ice
- Rabi crops cannot be grown
- Lack of water in winter
- Flooding in summer
- Problems of terraces

(ii) Name **two** cottage industries that could be developed in this area. [2]

Allow 1 general and 1 specific cottage industry

Specific – carpet, knitting, weaving, wood carving, etc.

(d) Choose **two** of the improvements shown below, and explain to what extent these **two** improvements could create more employment opportunities in mountain valleys. [6]

ROAD BUILDING

RELIABLE ELECTRICITY SUPPLY

CLEAN WATER SUPPLY

BETTER TELECOMMUNICATIONS

Reserve 1 mark for one limitation / problem of one chosen improvement (i.e. 'to what extent')

ROAD BUILDING

- Ideas such as:
- Transport so more industries established
 - Cottage / small scale industries grow
 - Trade (with example)
 - Tourism (with example)
 - Settlement so more service industries
 - Road construction and supply work
 - Jobs – e.g. drivers, maintenance, roadside services etc.

BUT – high maintenance environment / roads often need repair etc.

RELIABLE ELECTRICITY SUPPLY

Similar to above

- Ideas such as:
- Can work day and night
 - Can use computers etc.
 - Opportunities for mechanisation of cottage industries /more light or heat
 - Construction of new HEP schemes
 - More tubewells for agriculture

BUT – can supply be reliable? / problem of shortages etc.

Page 8	Mark Scheme: Teachers' version	Syllabus	Paper
	GCE O LEVEL – October/November 2010	2059	02

BETTER TELECOMMUNICATIONS

Similar to above

Ideas such as – IT opportunities
– More sales etc.
– Construction of infrastructure

BUT – cost of infrastructure, chance of damage etc.

CLEAN WATER SUPPLY

Similar to above

Ideas such as – More food processing industries
– Healthy so more working days

BUT – shortage of water, winter freezing etc.

Allow 'attracts investment' and 'attracts industry' only once unless well developed.

Reserve 2 marks for each of 2 factors chosen.

Reserve 1 mark for disadvantage / limitation to **one** factor

The mark scheme for **(d)** is not exhaustive.

Credit what comes that is relevant to **employment** opportunities.

Credit can be give for negative answers e.g. 'this is **not** possible'.

[Total: 25]

4 (a) Study Fig. 6, which shows energy sources by percentage in Pakistan.

(i) Name the two largest sources of energy. [2]

Gas and oil

(ii) Which source named on Fig. 6 is renewable? [1]

HEP

(iii) Suggest two sources of energy in the 'others' sector of Fig. 6. [2]

2 of

coal, coke, solar, wind, nuclear, etc.

(b) (i) Name an HEP (hydel) power station and state the name of the river on which it is built. [2]

Tarbela on the River Indus
Mangla on the River Jehlum
Warsak on the River Kabul
(see atlas or textbook for others)

Credit correct dam for 1 mark even if not on correct river

Page 9	Mark Scheme: Teachers' version	Syllabus	Paper
	GCE O LEVEL – October/November 2010	2059	02

(ii) Why is HEP (hydel) an important source of electricity in northern Pakistan ? [3]

Cheap to generate
Renewable
Available / no fossil fuels / no thermal power stations
Rivers / water from glaciers
High rainfall
Lack of evaporation / lower temperatures
Deep / steep sided valleys for dams
No air pollution / CO₂

(iii) Why can the supply of power from these stations be unreliable? [3]

Shortage / not enough for every user/ load shedding
Silt in reservoir (reduces capacity)
Silt in turbines (causes damage)
Seasonal shortages e.g. winter / frozen / monsoon etc.
Lack of rainfall / changing climate
Theft
Damage to power lines
Old / worn machinery

(c) Study Fig. 7, which shows the location of Faisalabad.

State *three* factors shown on Fig. 7 which influence the cotton industry in Faisalabad. For *each* factor, explain its importance to the development of this industry. [6]

(Reserve 3 marks for factors)

Irrigated farmland – for raw cotton e.g. Rechna Doab
Rivers/barrages – supply water for washing cotton
Road/railway – for supply of goods, sales
Dry port – for exports, transport to Karachi
Thermal power – for electricity supply for machines etc.
Airport – for businessmen

(d) Study Fig. 8.

In recent years there has been little growth in the cotton textile industry. With reference to Fig. 8, explain the advantages and disadvantages of increasing cotton textile production in Pakistan. [6]

Candidates can choose as many factors as they like.
Reserve 2 marks for *advantages*, and 2 marks for *disadvantages* / problems

JOBS

More available, can reduce unemployment, higher income, formal employment, move from primary to secondary
BUT need for literacy and skills, may cause rural urban migration and its consequences

SKILLS

Beneficial to workforce, higher earnings,
BUT shortage of training at the present time

Page 10	Mark Scheme: Teachers' version	Syllabus	Paper
	GCE O LEVEL – October/November 2010	2059	02

COMPETITION

Will improve standards

BUT cannot compete, low quality of Pakistan products, synthetics may be cheaper

TRADE

Will stimulate / increase trade, earn foreign exchange, improve balance of payments, pay off debts

BUT inadequate port facilities, poor roads / rail etc.

TECHNOLOGY

Good for development, can improve quality and / or quantity

BUT high cost, lack of skilled workforce, unemployment, shortage of electricity, more imports

INFRASTRUCTURE

Stimulates construction of better roads, railways, power supply, water supply

BUT higher costs, shortages at source, others may lose supply e.g. power, water

GENERAL

Increase GDP

BUT – may cause less investment in other industries

less land for food crops

quality must be good

leaf curl virus / other pests

climatic limitations

etc.

[Total: 25]

5 (a) Study Fig. 9, which shows an advertisement for a big company.

(i) State *four* ways of contacting this company.

[2]

2 ways = 1 mark

Telephone (number)

Fax

E-mail / web site / internet

Letter / address

Visit

(ii) Which is the slowest way of contact?

[1]

This depends on the answer to (i).

Order of speed: e-mail – fax - telephone – letter – visit

(iii) Why does the company advertise many different ways of contacting it?

[1]

Easy

Choice

Depends on distance

To attract foreign interest

Visit is more personal

Page 11	Mark Scheme: Teachers' version	Syllabus	Paper
	GCE O LEVEL – October/November 2010	2059	02

- (b) (i) Explain *two* of the reasons given in the advertisement for using this tractor on a farm? [2]

(1 mark for each line)

Big and powerful	Replaces several animals, reduces labour force, faster, larger farms
Quick and efficient	Saves time, better cultivation Higher yield, better than manual labour
Many tasks	Only one machine needed, can plough and harvest, reduces labour force

- (ii) Why are tractors not used by many small-scale farmers? [4]

Too expensive to buy
High cost of leasing / fuel / maintenance etc.
Farmers are subsistence farmers
Little profit / low yields
Small fields / farms
Lack training / skills / education
Plenty of family / cheap labour / cause family unemployment
Cannot take loans

- (iii) In what ways can the government help small-scale farmers to mechanise their farms? [4]

Loans
Leasing / hiring
Subsidies / reduced costs / cheap / goods affordable (not 'free' or 'give')
Training / education
Advertising / leaflets / use of media
Land reform / consolidation so that –
Promote co-operatives

- (c) (i) From the list below state *two* imports and *two* exports. [2]

COTTON	MACHINERY	WHEAT	IRON ORE	LEATHER
CRICKET BATS	SURGICAL EQUIPMENT		COMPUTERS	

2 correct imports = 1 mark 2 correct exports = 1 mark

Imports machinery, wheat, iron ore, computers
Exports cotton, leather, cricket bats, surgical equipment

- (ii) The European Union (EU) is a major trading partner of Pakistan.

Name *two* countries in this trading community. [2]

Any 2 EU countries

- (iii) Why it is important that Pakistan trades both imports and exports with the EU? [2]

To improve / maintain the balance of payments
To increase / maintain foreign currency
To make good relations / trade agreement

Page 12	Mark Scheme: Teachers' version	Syllabus	Paper
	GCE O LEVEL – October/November 2010	2059	02

- (d) The development of wind power generators off the coast of Pakistan could reduce the country's dependence on imported fuels.

Explain the advantages and disadvantages of developing alternative power sources. [5]

NB The introduction refers to wind, but the question is about **any** alternative power supply.

Advantages (of **any** alternative power supply) (res. 2)

Cheap power (after construction)

Renewable / do not run out.

Reduces CO₂ emissions / air pollution / harmful gases

Free resource / readily available

E.g. sunny climate, coast, mountains for HEP

Increases supply of electricity / less loadshedding / power cuts

Can be used in remote areas / mountains / deserts / etc.

Lower cost of oil / coal imports / improves balance of trade / can pay off debt

Disadvantages (of **any** alternative power supply) (res. 2)

Expensive to build / cost of import

Expensive / foreign technology

Unreliable (referring to weather etc.)

Lack of skills / expertise

Low output from generators

May not be in areas where power is needed / much of country a long way from coast

[Total: 25]