

# UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

GCE Ordinary Level

## MARK SCHEME for the June 2005 question paper

### 2059 PAKISTAN STUDIES

2059/02

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

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**June 2005**

**GCE O LEVEL**

**MARK SCHEME**

**MAXIMUM MARK: 75**

**SYLLABUS/COMPONENT: 2059/02**

**PAKISTAN STUDIES**  
**The Environment of Pakistan**



**UNIVERSITY of CAMBRIDGE**  
**International Examinations**

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- 1 (a) (i) Name the city A**  
Karachi [1]
- (ii) Name the line of latitude B**  
Tropic of Cancer/23½° N [1]
- (iii) Name the river C**  
Dasht [1]
- (iv) Name the area D**  
Indus delta/Thatta district [1]
- (v) Name the province E**  
Balochistan [1]
- (b) (i) What type of forest grows in the area F on Fig. 1?**  
Mangrove [1]
- (ii) Why is this type of forest only found in this area?**  
Saline soil/salt water in soil  
Tidal regular flooding  
Trees are adapted to this environment/have aerating roots/roots filter salt/salt secreted [2]
- (iii) The area of this forest has decreased in size in recent years. How and why has this affected the local fisheries?**
- How (Res 1)**  
Fewer fish
- Why (Res 1)**  
Roots provide shelter for young fish  
Less food  
Breeding ground 2 @ 1 [2]
- (c) The Kaghan Valley and others in the Himalaya Mountains attract international and domestic tourists.**
- (i) Explain why tourists visit these valleys.**  
Views of mountain peaks, snow, waterfalls, etc.  
Forests/orchards  
Fishing in River Kunhar  
Saiful Maluk Lake  
Jeep rides  
Walking/hiking/climbing/mountaineering/picnics  
Unique area/nothing like it anywhere else  
Polo  
Flora/fauna  
Cooler climate than plains  
Traditional crafts/customs/lifestyle/cottage industries  
etc. [3]

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- (ii) Explain with reference to two examples, why tourists visit cultural attractions in Pakistan.

**Examples**

Credit any two examples of **cultural** tourist attractions (res 2) and (max 2)

Archaeological sites

Moen-jo-darn, Harappa, Taxila,  
Kashmir Smats (caves) in NWFP  
etc.

Historic and religious sites

Forts (Baltit), Lahore  
Mosques (Badshahi, Muhabat),  
Tombs (Chaukandi, Makli, Allarma Iqbal, Ranjit Singh),  
Shrines (Uch Sharif)  
Khyber Pass,  
Shalimar Gardens,  
Kalash Valley  
Swat area  
etc.

Modern buildings

Faisal mosque, Parliament building, Presidential palace,  
Jinnah mausoleum, Minar-Pakistan,  
**NOT** dams, reservoirs etc.

**Named/Located** example of traditional culture

Swat, Gilgit, Kalash, Kaghan valleys

**Named/Located** Festival

Basant panchmi – kite flying at Lahore  
Mela chiragan – festival of lamps beside Shalimar gardens

**Named/Located** Bazaar or Market

Anaskali, Chitral, Swat, Kalash, etc.

**Why they visit**

Historic interest  
Museum  
Religious faith  
Education  
Different culture to their own

Candidates can gain 2 marks without examples.

**[4]**

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- (d) **Explain the advantages of developing tourist attractions in Pakistan.**  
Foreign exchange/currency  
Reduced debt  
Reduced trade deficit/improved balance of payments  
More jobs + development  
Higher incomes to locals + dev  
Better local economy/demand for more services  
Better facilities, infrastructure, services, communications for locals  
(up to **2 marks**)  
Better cultural understanding  
Sustainable industry/will not run out like coal  
Reduces rural-urban migration  
Cultural/historic sites restored/maintained **[4]**
- (e) **Why is capital important in the development of tourism?**  
Building and maintenance of shops, hotels, etc.  
Security  
Travel facilities/roads/jeeps/buses, etc.  
Provision of **named** infrastructure  
Professional management  
Marketing and publicity/advertising  
etc. **[4]**

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**2 (a) (i) Compare the amount, and seasonal distribution of rainfall at Quetta and Lahore.**

- Q winter max, L summer max
- Q max December to March/February, L max July to August/August
- Q second wet month July, L second wet season January to March
- Q lower total than L/L higher total than Q
- Q more in December than L
- Equal in March and/or November
- L rain in all months, Q no rain in June and September
- L more than Q April – October/April - June
- L higher maximum than Q

Must compare both charts for credit  
 res. 1 for comparison of amounts  
 res.1 for comparison of seasonal dist.

**[4]**

**(ii) Give reasons for the differences in amount and seasonal distribution of rainfall at these locations. [6]**

**QUETTA**

- More rain from winter depressions [Max 2]
- Summer convectional rainfall [Max 2]
- No/negligible monsoon rainfall

**LAHORE**

- Less rain from winter depressions
- Little convectional rainfall/low humidity
- Monsoon winds – this should include both the SE and NW monsoon [Max 4 marks]
- Comparison of locations (1 mark)
- Monsoon brings more rain than depressions (1 mark)
- Must refer to differences** (in each type of rainfall)

**(b) (i) Compare the mean monthly temperatures of Quetta and Lahore**

- Both graphs have a similar range/both 20-22°
- Q colder/L warmer
- Q smooth curve, L sharp drop after June
- Q slight drop May to July, L increases then decreases

Must compare **both** charts for credit

**[3]**

**(ii) Explain the seasonal changes in temperature at Lahore.**

- Effect of latitude/angle of the sun's rays [Max 2]
- Rising in dry season/lack of cloud cover before monsoon
- Drop in July related to start of monsoon season/heavy rainfall/stratus cloud [Max 2] **[3]**

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- (c) (i) What are the benefits and problems for farmers in the area of Lahore which result from the rainfall?

**Benefits** [Res.1]

Some rain in all months/throughout year  
 Enough without irrigation/ for barani farming  
 Monsoon rain/summer rain for Kharif crops  
 Depression and convectional rain/winter rain for Rabi crops

**Problems** [Res.1]

Uneven distribution  
 Too much in July – August/too little October/November  
 Flooding in wet season  
 Lack of sunshine for ripening crops  
 Drought/high evapotranspiration April – June  
 Early or late arrival of monsoon  
 Heavy rain damages cereals, cotton  
 Pests, disease, virus in wet season  
 Heavy rain ineffective/does not soak in

[Float 3]

[5]

- (ii) Choose one of the problems from (c)(i) and explain how it can be reduced.

**Uneven distribution/too little in some months**

Storage in reservoirs, ponds, tanks, barrages  
 Canals from storage in mountains  
 Use of underground supplies in dry season, tubewells

**Flooding/too much in some months**

Dams (in catchment areas), reservoirs, barrages  
 River embankments/levees  
 Drainage systems/diversion canals  
 Afforestation in catchment area  
 Dredging canals  
 Weather forecasts

Any other **reasonable** problems [Max. 3 any one line]

N.B. Allow a problem not stated in (c)(i)

Credit only **one problem**

[4]

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- 3 (a) (i) How many million acres of wheat were grown in 2000?**  
23.5/23 - 24 [1]
- (ii) For which crop was there a reduction in area from 1990 to 2000?**  
Vegetables [1]
- (iii) For which crop was there an increase in area from 1980 to 2000 by 2 million acres?**  
Cotton [1]
- (b) (i) Why is an increase in wheat production important?**  
Increasing population  
Alleviate starvation/lack of food  
Decreasing imports/step towards self-sufficiency/no loss of foreign exchange  
Increasing export (in good years)/increase foreign exchange [3]
- (ii) State two natural inputs necessary for wheat production, and for each explain its importance.**  
Cool/moderate temperatures 10 – 20 - for germination and good growth/sowing  
Warmer; 25 – 30 for ripening  
Dry period - for ripening/harvesting  
Moderate rainfall/moist/wet weather - for germination/growing/swelling the grain  
Alluvial/loam/clay soil/fertile – for good growth  
Well drained soil – for root growth/aeration  
Flat land – for machinery and/or irrigation  
**N.B. only credit ‘for good growth’ once** [2 marks for each input, float of 1] [5]
- (iii) Explain how human inputs have contributed to the increase in wheat production.**  
Irrigation on Indus plains and semi-arid areas  
Details of irrigation max 2  
Fertiliser factories in (named town)  
HYVs developed e.g. Maxi Pak, Shahkhan 95, Wadnak 95, Kohson 95  
GM modifications  
Plant protection programmes e.g. treated seeds, pesticide sprays, locust watch  
Land reforms making larger fields/more economical units  
Tractors and other modern machinery  
Government loans  
Support prices  
Education/skills/colleges  
Capital from investors/banks  
Land reform  
Named input + explanation required, max 2 each line for development [6]
- (c) (i) What did the land reform laws aim to do?**  
Redistribute land more equally/more fairly/ceiling on land holdings  
Take land away from large landowners/landlords and give it to the tenants/poor farmers/protect tenants from eviction [1]
- (ii) What are the advantages of land consolidation?**  
Economic units  
Use of machinery/modern methods  
Easier to supervise  
Better irrigation  
Better opportunity for investment/easier to get loans  
Opportunities for research  
Bring more land into cultivation [4]



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- (d) **How can education and training help a small-scale farmer to increase his output?**  
 Learn about modern methods e.g. seeds, machinery, pest control  
 Learn how to avoid crop failure  
 Improve literacy e.g. read about what other farmers are doing, where to sell to make most profit  
 Take loans – must be related to education or literacy  
 Credit any line up to 3 marks

[4]

**4 (a) For each of the mines A and B**

- (i) **Name the type of mine,**

A – adit/drift

[1]

B – shaft

[1]

- (ii) **Explain why that is the type of mine there,**

A – coal (seam) exposed on a slope/can dig tunnels along the seam

[1]

B – coal (seam) underground / does not outcrop

[1]

- (iii) **Describe the method of mining coal in the mine.**

**Adit mine**

Horizontal shaft into hillside

Possibly several shafts at different levels

Pick and shovel/trepanner (only credit once)

Dynamite on seam (only credit once)

Buckets/trucks/trolleys/conveyor belt/donkeys to surface

**Shaft mining**

Main shaft (vertical or sloping)

Tunnels/side shafts along seams

Pick and shovel/trepanner (only credit once)

Dynamite on seam (only credit once)

Buckets/trucks /trolleys to main shaft

Lifted to surface/elevator [Res 2 for each type of mine, float of 1]

[5]

**Study the map Fig. 5 showing coalfields and coal mining centres in Pakistan.**

- (b) (i) **Name the coalfield X and one of the mining centres there.**

Quetta (coalfield)

[1]

Sor Range, Degan, Mach, Khost, Shahrig, Harnai

[1]

- (ii) **Name the coalfield Y and one of the mining centres there.**

Lower Sindh (coalfield)

[1]

Blakhra, Jhampir, Sonda

[1]

**State the two main uses of coal mined in coalfield X**

Brick making/brick kilns

(mixed with imported coal) For steel making/in the blast furnace

Briquetting

[2]

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- (c) **Explain why coal has to be imported.**  
 Not good enough for iron smelting/no metallurgical coal/needed for Pakistan Steel  
 Need for coal to mix with poorer grade  
 Difficult to mine/seams thin/seams contorted
- Not enough mined in Pakistan/lack of technology/lack of finance  
 [Credit any line up to 2]
- [3]**
- (d) **Hydro-electric power (HEP) is called a ‘renewable’ source of power.**
- (i) **State three physical conditions necessary for the development of an HEP scheme.**  
 Wet climate/moderate/high rainfall/over 750 mms  
 Water from glaciers/snowfields  
 Deep valley  
 Steep sided valley  
 Narrow valley  
 Impervious/impermeable rock  
 Large drainage basin/large river/large catchment area  
 Cool climate/low evaporation  
 Strong/hard rock  
 Reliable water supply
- [3]**
- (ii) **Why is it important for Pakistan to develop renewable power sources?**  
 Reserves of fossil fuels running out  
 Named pollution/not environmentally friendly/causes global warming/greenhouse gasses  
 More readily available  
 Schemes in remote areas/can be built away from fuel resources  
 Low running costs of HEP, solar power, wave energy etc./cheaper in the long term  
 Fossil fuels expensive  
 Fossil fuels are imported  
 Nuclear power dangerous
- [4]**

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- 5 (a) (i) Describe the distribution of air routes in Pakistan**  
Largest numbers/biggest foci from Karachi (10)  
Centres/foci in other major cities e.g. Lahore, Multan, Turbat, Quetta, (Any 2 examples)  
More south-north/SW-NE/less east-west  
Many routes follow Indus Plain  
Branches up other valleys e.g. Peshawar-Chitral  
None in extreme north,  
Few/none in Chagai, SE Sindh/Thar **[4]**
- (ii) Explain why there are more internal air routes from Islamabad than Dalbandin.**
- Islamabad** **[Res. 2]**  
Federal capital  
Administration/business/tertiary industry  
Larger population  
More people can afford to travel/high standard of living  
International airport  
Access to Northern Areas  
Better road links
- Dalbandin** **[Res.2]**  
Poor road links  
Lower population  
Less administration/office jobs  
Fewer people can afford to travel/low standard of living  
No international airport  
Desert/barren land **2 @ 2** **[4]**
- (iii) Why is air transport and travel important within Pakistan?**  
Faster than road and rail  
Better to reach remote places/places where roads are poor  
Better in hilly/mountainous areas  
Better for light, high value goods  
Less chance of robbery/safer  
More people can afford air fares  
More demand from business  
Can be used all year/not affected by snow, flood etc.  
Tourism within Pakistan  
Emergencies  
Improved communication between cities **[3]**
- (b) (i) Describe the features of Lahore Dry Port that can be seen in Photograph A**  
Lorries/trucks/containers/trailers  
Sign to import examination area  
Storage sheds/warehouses  
Covered loading area/shelter with poles  
Loading platform/raised area  
More containers in background/behind sheds  
Flat/hard/concrete ground  
(2) men/drivers/labours  
Forklift truck **[4]**

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- (ii) **State two other features of a dry port that cannot be seen in the Photograph A.**  
 Export checks and clearance  
 Import examination area  
 Railway yard  
 Refrigeration facilities  
 Management offices/customs administration  
 Cranes/loading facilities  
 Large storage area  
 Security gate/guards [2]

- (iii) **Why are dry ports important to the economy of Pakistan?**  
 Speeds up customs procedures/better collection of revenue/simplified administration  
 Saves time transporting goods to Karachi/hassle-free transport  
 Reduce workload at Karachi port/Port Qasim  
 Stimulate foreign trade (in cities far away from ports) [3]  
 [Credit up to 2 for any line]

- (c) (i) **Name an example of a craft industry**  
 Carpet  
 Traditional textiles  
 Embroidery  
 Jewellery  
 Ceramics  
 Woodwork  
 Metalwork  
 Sports goods  
 Pottery  
 etc. [1]

- (ii) **In what ways is this type of industry important to the local economy?**  
 Employment (in general)  
 Employment of women/the whole family  
 Meet demand of local market  
 Reduces rural-urban migration  
 Uses local raw materials  
 Uses waste materials  
 Low investment in technology/cheap to set up  
 Increases capital/earns money for the local community [4]