

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**



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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.** [Res. 2]
- Islamabad**
 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]