

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

GCE Ordinary Level

MARK SCHEME for the November 2004 question paper

2059 PAKISTAN STUDIES

2059/02

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

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November 2004

GCE O LEVEL

MARK SCHEME

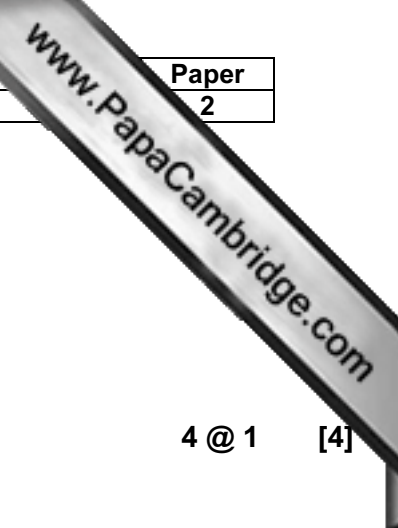
MAXIMUM MARK: 75

SYLLABUS/COMPONENT: 2059/02

PAKISTAN STUDIES
The Environment of Pakistan

1	(a)	(i) 36 (°N)		
		(ii) Himalaya(s)		
		(iii) Kabul		
		(iv) Kharan		
		(v) Quetta	5 @ 1	
	(b)	(i) 666mm/660mm to 680mm	1 @ 1	
		(ii) (monsoon) winds from Bay of Bengal/India/E pressure pattern (max 2) (tail end of) monsoon air rises and cools condensation/water droplets form moisture-laden	5 @ 1	[5]
		(iii) moderate/fairly heavy increasing 70-180mms/doubles/by 25mm per month max. in March min. in December.	3 @ 1	[3]
		(iv) depression rain/western depressions/disturbances originate in Mediterranean area enter Pakistan through Afghanistan (<i>not</i> Iran for Murree) long land journey depletes moisture reaching area	3 @ 1	[3]
		(v) convectional/thunderstorms	1 @ 1	
		formation high temperatures/strong heating moisture evaporated from rivers/lakes/vegetation/moisture-laden air (moist) air rises (strongly/rapidly)/convection occurs air cooled as it rises causes condensation of moisture/water vapour formation of thunderstorms (max 2) formation of hailstones (max 2)	3 @ 1	[4]
	(c)	(i) 20/15-25 mm	1 @ 1	[1]
		(ii) sheltered by surrounding mountains/rain shadow too far west for monsoons to reach/little monsoon rain western depressions mostly deflected from area/do not reach area/few depressions lacks sources of moisture for convectional rainfall to develop/desert area temp. inversion prevents convection NOT 'it is in a desert'	3 @ 1	[3]
			Total for Question 1	[25]

- 2 (a) (i) **'Areas with forests'**
 northern mountains/northern NWFP/Northern Area/named area or mountain range
 (some on) Potwar Plateau/Salt Range
 western highlands/(western) NWFP/NW Pakistan/Afghan border
 northern Balochistan (Plateau)/central Brahui Range
 Indus delta/Hab delta/Sindh coast
 Below snow line/4500m
 Areas with wet climate/rainfall amount?
 NOT mountains/hills/highlands etc.
- (ii) **'irrigated forests'**
 most by rivers/by Indus
 6/7 in Punjab/most in Punjab/uip
 1 in Lower Sindh/near Hyderabad/lower LIP
 1 on border of Punjab and NWFP/confluence of Indus and Gomol
 named plantation (**max 1**) see p 49 Sethi 2nd ed.
Reserve 1 for each group. Float of 2 marks. 4 @ 1 [4]
- (b) (i) *steep valley sides exposed/soil erosion occurs
 landslides
 avalanches
 flooding
 eroded/broken up/destroyed/telephone wires grounded
*** Allow once only in (i), (ii) or (iii)** 3 @ 1 [3]
- (ii) *steep valley sides exposed/soil erosion occurs
 flooding
 irrigation canals/channels blocked
 less rainfall
 salts in irrigation water – salinity
 (coarse) sand and gravel deposited on fields
 crops destroyed
*** Allow once only in (i), (ii) or (iii)** 3 @ 1 [3]
- (iii) *steep valley sides exposed/soil erosion occurs
 decreases water/electricity supply/power supply
 silt in reservoirs
 rivers blocked
 less rain
 silt in intake pipes/turbines/power plant
 landslides may break power lines
*** Allow once only in (i), (ii) or (iii)** 3 @ 1 [3]
- (c) (i) **definition (res 1)**
 in a line
 planted by man
- where found**
 alongside canals/rivers
 alongside roads/railways
 along field boundaries
 etc. 4 @ 1 [4]



- 2 (c) (ii) prevent soil erosion
 lower the temperature ...
 provide shade
 fruit/food
 firewood/timber
 leaves/roofing
 to reduce air pollution/make clean air

4 @ 1 [4]

- (d) **workshop (res 1)**
 large shed
 dark/poorly lit
 (simple) machinery/named machines, band saw, electric motor (max 2)
 lack of safety guards
 (many) hand tools/named tools (max 2)
 sawdust/shavings
 window
 planks of wood
 etc.

characteristics of type of industry (res 1)

- small scale/cottage industry
 craft industry
 traditional skills
 labour intensive
 simple machinery (do not double mark)
 use local raw materials/timber
 local specialisation
 supply larger factories in towns
 possible export
 sales to tourists
 encouraged by government/PSIC
 less than 10 employees (small-scale)
 family/no hired labour (cottage)
 fixed assets less than Rs. 10 million
 in homes/small workshops

4 @ 1 [4]
Total for Question 2 [25]

- 3 (a) (i) flat area
 flooded
 banks (of earth)/bunds
 about 1 metre high
 fields
 (scattered) trees/bushes on banks

4 @ 1 [4]

- 3 (a) (ii) farming using natural rainfall/flooding
 can only be carried out after flooding/must wait for floods
 farmers have no control of water supply/rain variable
 seasonal /continuous cropping rarely possible
 higher banks/bunds have to be built to hold as much water as possible
 when it comes
 (usually) can only grow coarser grains/millet (bajra)/sorghum
 (jowar)/pulses
 lower yields/output
 variable yields/outputs
 further floods could destroy seedlings/standing crop
 less advanced/traditional methods
 annual floods supply nutrients
 smaller farms

Allow 'irrigation farming' approach. Comparisons need only be implied. 5 @ 1 [5]

- (b) **characteristics**
 depends (entirely) on rainfall/rain-fed area
 (low) banks/bunds constructed
 field size varies considerably/small/large fields
 ploughing after/if rain falls
 farmers too poor to own tractors/lack of machines/traditional
 methods
 use of animal dung/no fertiliser
 some years rainfall is insufficient/crops fail
 low yields
 often sheep/goats reared as alternative source of food/income
 family labour
 etc.

4 @ 1

- crops (res 2)**
 wheat
 barley
 groundnuts
 millet/bajra
 pulses/gram/mash/masoor/moong
 sorghum/jowar
 oil seed/rape/mustard (not cotton)
 maize

2 @ 1 [6]

- (c) (i) requires warm temperatures for growth
 20°C to 30°C
 dry season for harvest
 monsoon rain for growth/flooding fields
 1270-2000mms
 winter/rabi season is too cold (even in south)

2 @ 1 [2]

- (ii) requires over 1275mm rainfall (in growing season)
 prefers over 2000mm rainfall
 nowhere in Pakistan has this amount of rainfall (in the growing season)
 not enough rain for flooding fields

2 @ 1 [2]

- 3 (c) (iii) good irrigation
 details of canal network
 flat land assists in provision of irrigation/for use of machines
 have clay/loam/alluvial soils/soils rich in minerals/soils which retain
 fertilisers/rich in nutrients
 have water retentive soils
north-east Punjab receives more/heavier rainfall than any other plain
 areas in Pakistan ...
 large population/towns/cities
 large farms
 tubewells in Punjab
 impervious layer below soil
 high monsoon rain in Punjab

5 @ 1 [5]

- (iv) basmati
 Bangladesh

2 @ 1 [2]

Total for Question 3 [25]

- 4 (a) capital from foreign investment/banks/governments
 flat land/sites
 agricultural raw materials plentiful/available ...
 ... wheat/rice/oilseeds/sugarcane/hides (not cotton)
 7 power stations serve area
 main cities are on (national) electricity (grid)
 gas pipelines to area (from Sui/Potwar Plateau)/for power stations
 water available from rivers/canals
 Grand Trunk Road/etc }
 served by railway network/named rail route } area served by
 roads, rail, air -
 airports at (at least one name) } any two for 1 mark
 large labour force
 educated workers available/University of Lahore/etc.
 industrial estates have been built in area + details of incentives (max 2)
 export processing zone benefit from government incentives + details
 (max 2)
 dry ports encourage international trade + details (max 2)
 etc.

must 'describe' and be related to the area

7 @ 1 [7]

- 4 (b) (i) pioneered here to serve needs of British army in colonial times/traditional/for many generations
 (highly) skilled workforce has developed ...
 labour is cheap
 foreign investment
 raw materials imported through Lahore/Sialkot airport
 good electricity/gas/water/road/rail/etc. services (max 2)
 high value goods
 cottage industries/small scale industries supply larger factories/outworkers
 high value goods
 EPZ and dry port
 airport
 etc.

3 @ 1 [3]

- (ii) negative balance of trade
 lacks foreign exchange
 a large burden of debt
 capital/money to buy essential imports
 needs capital/money to develop infrastructure/services
 needs capital/money to develop its industries
 Sialkot's exports are highly competitive on the world market
 high value-added exports

does not necessarily need to be related to Sialkot

5 @ 1 [5]

- (iii) **EPZ**
 government incentives (max 2)
 infrastructure put in place (max 2)
 attracts foreign/private investment
 attracts foreign technological/management skills
 improved quality
 better marketing
 etc.

airport

closer than Lahore's
 cheaper transport for imported **light** raw materials
 more convenient for visiting businessmen
 more convenient for exporting **light** goods
 service industries develop to serve airport
 tourism
 etc.

**Reserve 2 marks for each of EPZ and airport. Float of 1 mark.
 General answer max. 2**

5 @ 1 [5]

- 4 (c)
- flat site
 - large area
 - cheap land
 - unobstructed approaches for aircraft
 - firm/solid ground
 - well drained land
 - climatic factors e.g.. snow, fog
 - few/nobody living in area to be developed
 - large pool of labour available ...
 - closeness to utilities/water/electricity
 - closeness to road/rail/transport links
 - (preferably) far away from houses
 - demand
 - availability of fuel
 - etc.

5 @ 1 [5]

Total for Question 4 [25]

- 5 (a)
- (i) first/largest/biggest
 - (ii) last/fourth/lowest/least
 - (iii) very low/low/sparse
- (b) (i) (includes (by far) its largest city) Quetta
 has 575 000/over 500 000 people/largest city
 administration centre/government offices
 military base
 farming valleys/area ...
 Pishin/Mastung valley ...
 apples/apricots/grapes/almonds/tobacco
 Quetta coalfield
 woollen textiles (Harnai/Mastung)/cotton
 vegetable ghee/cooking oil (Quetta)
 road network
 railway focus
 (international) airport
 on national electricity grid/gas pipeline
 passes through highland
 markets/warehouses/trade
 dry port
 entertainment + ex.
 University/good schools
 Cool summers
 Medical/health facilities
 Rural – urban migration + reason

3 @ 1 [3]

6 @ 1 [6]

- 5 (b) (ii) mountainous
 Sulaiman/Toba Kakar/Chagai/Ras Koh/Siahhan/Central
 Makran/Makran Coast/Brahui/Kirthar Range (names max 2)
 very low rainfall/arid/desert/scarcity of water
 Kharan (Sandy)/Kachhi Desert
 lack of water for domestic/industrial purposes
 lack of water for irrigation
 very hot in summer
 (very) high evapo-transpiration
 very/cold winters
 large areas of bare rock/barren/lack vegetation
 large areas of sandy waste }
 large areas of reg } infertile soils = 1
 saline soils }
- hamuns (lakes) often dry/salt lakes/inland drainage/seasonal rivers
 Mashkel/Kap/etc Hamun/named river
 limited mineral resources/not exploited
 little developed by British
 lack of communications over vast areas
 lack of education/health/social facilities/services/electricity/etc. (max 1)
 lack of jobs
 very little industry

'many have moved out', 'because of tribal conflicts' = 0

7 @ 1 [7]

- (iii) 51-100 per square km
 near river Indus
 canal from Guddu barrage/Indus ...
 ... (part of) area irrigated
 ... flat/plain land
 ... alluvial soils
 ... rice/wheat/edible oils/pulses
 fishing
 Sui gas field
 road/rail communications network
 on national electricity grid/gas pipeline
 named town/city/state e.g. Jaffarabad, Nasirabad
 etc.

4 @ 1 [4]

- (iv) administrative centres
 education/health centres
 oases ...
 ... fed by karez
 ... fed by tubewells
 grow dates/vegetables/fruit etc.
 fishing e.g. Gwadar, Pasni, Ormara
 industries connected with fishing
 ports
 military posts
 border check-point
 example (max 2 for different functions)

5 @ 1 [5]

Total for Question 5 [25]