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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UNIVERSITY of CAMBRIDGE
International Examinations

November 2004

GCE O LEVEL

MARK SCHEME

MAXIMUM MARK: 75

SYLLABUS/COMPONENT: 2059/02

PAKISTAN STUDIES
The Environment of Pakistan

UNIVERSITY of CAMBRIDGE
International Examinations

1 (a) (i) 36 (°N)
(ii) Himalaya(s)
(iii) Kabul
(iv) Kharan
(v) Quetta

5 @ 1 [5]

(b (i) 666mm/660mm to 680mm **1 @ 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 (*not* 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 Gomal
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

3 @ 1 [3]

(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

6 @ 1 [6]

5 (b) (ii) mountainous
Sulaiman/Toba Kakar/Chagai/Ras Koh/Siahan/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 <u>per square km</u>
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]