UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

GCE Ordinary Level

MARK SCHEME for the October/November 2007 question paper

2059 PAKISTAN STUDIES

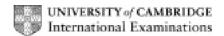**2059/02**   Paper 2 (Environment of Pakistan), maximum raw mark 75

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.

All Examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

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 2007 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.

UNIVERSITY *of* CAMBRIDGE
International Examinations

1　**Study the map Fig. 1 and Photograph A (Insert)**

   (a)　(i)　**Name the deserts X and Y.**　　　　　　　　　　　　　　　　　　　　**[2]**
         X　Thar/Nara/Cholistan/Tharparkar
         Y　Thal

      (ii)　**Describe the scene in Photograph A.**　　　　　　　　　　　　　　　　**[4]**
         Dry/desert
         Camels
         Bare/sandy ground/ barren
         Low bushes　　　　　　　　　　} or sparse vegetation
         Small trees/larger bushes　　　}
         Flat
         No clouds

   (b)　(i)　**Explain why desert X has a very low rainfall.**　　　　　　　　　　**[3]**
         too far south for monsoon rain
         too far east for depressions/westerly winds
         little water to evaporate for convectional rain
         low/flat land so no relief rain
         not coastal so no cyclones/sea breezes

      (ii)　**Describe simple methods that can be used to irrigate *small* areas of desert A.**　**[4]**
         A sentence on 2 or more of the following
         wells, ponds, tanks, shaduf, jars
         tubewell/tanker/sprinkler　　　　　　　　(Can dev to 2 for named method)

      (iii)　**Explain how some parts of desert B can be irrigated by *large-scale* schemes. You should refer to Fig. 1 and use your own knowledge.**　　　　　　**[4]**
         Barrages (name + location)
         e.g.　at Jinnah or Chashma
              at Rasul or Trimmu
         link canals (+ example) – to transfer water
         perennial canals – to provide water all year
         distribution canals – to reach all fields
         inundation and diversion canals
         dams (name + location)
         e.g.　Tarbela
             Mangla　　　　　　　　　　　　　(List max 2)

(c) (i) Why do problems of waterlogging and salinity occur in some irrigated areas? [3]

Waterlogging
Water available all year
Crops given more water than they use
Watertable rises/reaches surface

Salinity
Evaporation of water
Salt in irrigation water
Salts brought to surface
Unlined canals leak

(ii) How can these problems be overcome? [5]

Lowering water table	by tubewells
	trees
Control of water	by lining canals
	closing canals temporarily
	surface drains
Flushing out of salt	by water from tubewells
	surface drains
Education	to improve farming methods
Government schemes	SCARP, WAPDA

[Total: 25]

2 (a) Study Fig. 2 which shows the climate of Multan.

(i) Explain why cotton is grown in this area of the Punjab. Refer to Fig. 2 in your answer. [5]

Reserve 2 marks for reference to Fig. 2
High summer temperatures/Summer temperatures over 30/May–September 32–31
Temperature rises to 35 in June
Not too cold/No temperatures below freezing/Lowest temperature 7 in Jan + Dec
Some rainfall in April–May for sowing/15-18mms
Rainfall increases in July–August for growth/to 60mm
Little rain/dry on October–November for ripening and harvesting/less than 10mms

Other factors
Alluvial/loam   }
Moisture retentive   }
Rich in humus   } reference to soil max. 2
Lime   }
Deep soil   }

Flat land
Dry climate to reduce pest attacks
Good irrigation available
Good roads/infrastructure
Access to capital/investment etc.

(NOT consequences e.g. fertiliser factories, population etc.)

(b) (i) Explain how climatic hazards may destroy or reduce the yield of cotton on farms. [4]

Cold temperatures/Frost + can kill plants
Rain + damages cotton boll before picking
Floods + can wash crops away/soil erosion
Thunderstorms/Cyclones – damages to crops/soil erosion
Drought + can reduce growth, kill young plants

(1 mark for named hazard + 1 for explanation)
(max 2 for list)

(ii) Explain *two* other factors that may reduce the production of cotton in Pakistan. [4]

Virus/Pests/disease + e.g. Leaf-curl virus or other named disease
Lack of <u>irrigation</u> water + reduces yield
'Waterlogging and salinity' or other soil damage + reduce yield
Economic/drop in demand/other crops make more money
Pollution + effect
Loss of fertility – not replenished by floods/depleted by crop

(1 mark for named factor + 1 for explanation)
(max 2 for list)

(c)

cloth	raw cotton	cotton yarn	ready-made clothes

(i) List the following in order of production. [3]

raw cotton   cotton yarn   cloth   ready made clothes

(ii) From your answer to (c)(i) state one product of: [2]
A   a processing industry
Yarn/thread or cloth
B   a manufacturing industry.
cloth or ready-made garment

(iii) Explain why Lahore is an important centre of the textile industry. You should use your answers to (c)(i) and (c)(ii) and your own knowledge. [7]

Cotton grown locally + ex
Water for washing
Machinery from HMC/Taxila
Labour supply – large skilled and unskilled population
Power – national electricity grid, gas pipelines, oil pipeline, power stations + ex
Transport – good roads, railways transport north, south and west + ex
Tele-communications, access to internet,
Education – skilled workforce, IT skills, foreign experts
Dry port – to promote exports
EPZ – to improve quality, better infrastructure
Industrial estates – for accommodation, infrastructure + ex
Market – large population + ex
Investors/entrepreneurs – for capital + ex
Factories for all stages of production

(Needs more than a list)

[Total: 25]

3 **(a)** Study Fig. 3 which shows limestone and rock salt extraction.

    (i) Describe the distribution of limestone extraction in Pakistan.   **[3]**
Widespread
NWFP-Punjab border/Potwar Plateau
N(E) Baluchistan
S Sindh/near Karachi
Central Sindh

    (ii) Rock Salt and Limestone are both 'bulky goods'. What is the cheapest form of transport for these goods?   **[1]**
Railway

    (iii) Why is the supply of limestone to most areas of Pakistan likely to be cheaper than that of rock salt?   **[1]**
does not have to travel so far
quarried in many areas/more widely available

(b) Nearly one million tonnes of rock salt were extracted in Pakistan in 2002.

    (i) What is a mixture of rock salt and water called?   **[1]**
brine

    (ii) What is rock salt used for in Pakistan?   **[2]**
Cooking, preservation, soda ash, bicarbonate, caustic soda for tanning, textiles and laundries
Table salt

                                        (Credit 2 uses, or one with development)

(c) Study Photograph B (Insert) showing a cement factory near Ghulamullah, in Thatta District.

    (i) Describe the scene in the photograph.   **[4]**
Flat
Dry/bare/barren/unpopulated
Rough road to factory
Vegetation in background
Chimney
Smoke/dust/air pollution
Low flat-roofed building
Stones/rocks
Tyre tracks

    (ii) State three *natural* inputs that are needed to make cement.   **[3]**
limestone
gypsum/calcium sulphate
natural gas/coal
clay/shale
water
sand

    (iii) Explain the importance of *three human* inputs at a cement factory and the difficulty of providing them at this site. You should refer to Photograph B and use your own knowledge. **[6]**

<u>inputs</u>
electricity for power
road/railway for transport
labour for good production
telecommunications for supply/sales etc.
machinery for fast/efficient production
capital for investment

<u>difficulty</u>
remote from settlement
lack of skilled/educated workforce
unreliable labour force
lack of named infrastructure
hot/dry climate
lack of local entrepreneurs

(input + difficulty 1+1)

(d) Why is there a large demand for cement in Pakistan? **[4]**

Domestic construction e.g. houses
Industrial construction e.g. Factories
Institutional buildings/schools/hospitals/offices etc.
Communication e.g. roads, bridges, railway sleepers
Port developments
Water management e.g. Dams, canals, embankments
Or could be linked to a new development e.g. Gwadar

(Any line max 2)

[Total: 25]

4 **(a)** **Read the extract below and study Photograph C (Insert).**

> Quetta is an important and busy trading centre. One of its main trades is in textiles and tribal clothes. The centre of the city has seen many modern improvements to its buildings and communications.

    (i) **State three features that can be seen in Photograph C and agree with what is said in the extract.** **[3]**
    People/more than 5
    Many shops/commercial buildings
    Textiles/clothes shops
    Overhead wires/power/telephone lines
    Modern/concrete buildings
    Tarred road
    Truck/4x4/car
    Scooter
    Telecom mast

    (ii) **Why is Quetta an important trading centre?** **[3]**
    Focus of roads/well connected to rest of country
    Main road through pass/RCD highway
    Nomadic tribes
    Near Afghan border/Afghanistan
    Only large settlement in area
    Railway
    Airport
    Capital of Baluchistan
    Dry Port

(b) **(i)** **State *two* types of infrastructure shown in Photograph C.** **[2]**
    electricity (wires)
    road
    telephone (wires) (allow repetition of answer in **(a)(i)**)

    (ii) **Explain why these, and other types of infrastructure are important to a centre such as Quetta.** **[5]**
    Electricity for offices, factories, lighting, power, communication
    Roads for transport of people and goods
    Telephone for quick communication, better business
    Water for drinking, cleaning, hygiene, etc
    Gas for power, heating etc.
    Industrialisation needs good infrastructure
    Hotels for tourism, visitors
    Administration buildings

(c) (i) State *three* types of tertiary employment that may be taking place in this street shown in Photograph C. [3]

shop keeper
office worker
(vehicle) driver
cleaner
etc.

(ii) Why are very few primary jobs available in urban areas? [2]

No arable land
No pasture
No mines or quarries
No forest
Creates pollution
High cost of land

(d) Study Photograph D which shows a refugee camp near Quetta.

(i) Describe the scene in Photograph D. [3]

dry/desert/arid
flat/sloping
hills in distance
stone/gravel/barren/uncultivated
tracks
tents/huts
<u>few</u> people
<u>few</u> animals
fodder/straw
wall
poles
(comparison with photograph C max 1)

(ii) What problems does the arrival of large numbers of refugees create for infrastructure and services? [4]

Lack of, or provision of:
　　Food
　　Water
　　Sanitation
　　Medicine
　　Housing
　　Power
　　Damage to roads
　　Cheaper labour for services
　　Etc.

[Total: 25]

5 (a) Study Fig. 4 which shows some population indicators in Pakistan in 1995 and 2002.

    (i) Which indicator shows that population growth may be slowing down? **[1]**
    Birth rate

    (ii) Which indicator shows that there could be more children in the future? **[1]**
    Lower infant mortality rate

    (iii) Why do the indicators show that there could be more people over 50 in the future?
    Lower death rate **[2]**
    Higher life expectancy

(b) (i) With reference to your answers in (a)(i), (ii) and (iii) explain how the age structure of the population is changing. **[4]**
    Fewer babies
    More young people
    More old people
    Larger proportion not working/dependent
    Smaller proportion working/independent
    Ref. to pyramid shape max. 2

    (ii) What problems will this cause? **[5]**
    more people to look after/dependent population
    need for more schools
    training
    hospitals and clinics
    houses
    adaptations for old
    more unemployment
    more pensioners
    more pressure on government/services
    workers have to work harder/more stress
    higher taxes

(c) (i) Explain the causes of rural-urban migration. [4]

<u>Push factors (res. 1)</u>
Loss of agricultural jobs
Lack of named facilities e.g. shops, entertainment
Lack of school/trained teachers
Lack of health facilities/trained staff
Loss of land
Natural disasters <u>with example</u>
Poverty <u>because of</u>

<u>Pull factors (res. 1)</u>
Better pay
More jobs
Better lifestyle/bright lights effect/entertainment (max 1)
Better education
Better health services   (factor + explanation = 1)
                                           (do not double mark)

(ii) What problems are caused in *rural* areas by migration to urban areas? [4]
Loss of workforce/only the old and young left
fewer children
loss of services e.g. education, medicine, public transport, shops
loss of infrastructure e.g. roads, electricity, telephone
loss of educated people/young people
women left behind/unbalanced sex ratio
lack of government investment/neglected/remain undeveloped
                                           (credit any line to max 2)

(iii) How can people be encouraged to stay in rural areas? [4]
Land reform and consolidation
Better infrastructure (named) e.g. Electricity, water, roads
Better services (named) e.g. Schools, hospitals, clinics
Development of Cottage/small-scale industries
Better communications e.g. Radio, TV
Government schemes
Irrigation schemes
                              (do not accept unless statement is explained)
e.g. Land reform because many farmers have small landholdings
Electricity supplies for raising living standards
More schools to increase literacy
Cottage industries for employment/income
Radios for education/entertainment
Tourism for employment

[Total: 25]