**UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS**

**GCE Ordinary Level**

# MARK SCHEME for the October/November 2010 question paper for the guidance of teachers

## 2059 PAKISTAN STUDIES

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

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UNIVERSITY of CAMBRIDGE International Examinations

**1 (a) Study Fig. 1, which shows a map of Pakistan. [4]**

**(i) Name the cities A, B and C, and the line of latitude D.**

A Quetta
B Hyderabad
C Lahore
D 30°N

**(ii) With reference to Fig. 1, explain how the population density of the area north of the line D is related to relief (topography) and water supply. [5]**

Relief (res. 2)
Higher density on (Indus) plain / flat land / low land
Lower density in mountains / hills /sloping land
Lower density in foothills of Hindu Kush / other named range
Lower density in Sulaiman Hills / north Balochistan plateau

**NB. Candidate may refer to density in key or just 'more' or 'less' – allow.**

Water Supply (res. 2)
Higher density where irrigated / rivers
Higher density where more rain (in Northern Punjab)
Lower density where less rainfall
Lower density in deserts

**NB. Candidate may refer to density in key or just 'more' or 'less' – allow.**

**(b) Study Fig. 2, which shows the weight of marine fish caught 1996–2006. The weight of fish caught in 2006 was less than in 1996.**

**(i) Suggest *two* reasons for this decrease. [2]**

Over-fishing
Water pollution / oil spills etc.
Loss of breeding / shelter / feeding areas (i.e. mangroves)
Fishing in closed season / when breeding
Fishing by boats from other countries

**(ii) Describe how the weight of fish caught changed in the years between 1996 and 2006. [3]**

Increases and decreases / fluctuates
Highest in 2002
Two peaks
Lowest in 2006
No increase since 2003 / decline from 2004
Max and min. figures (only)

**(c) Describe how marine fishing methods can be improved. [5]**

Boats with engines
Can go further offshore
Can stay at sea for several days
Cold storage on boat
Mechanised equipment / winches
Nylon / bigger / stronger/ nets or ropes
Weather forecasts
Sonar to locate fish
Satellite navigation
Training / education

**(d) Study Fig.3. With reference to Fig. 3, explain the advantages and disadvantages of developing the fishing industry in Pakistan. [6]**

**NB: This can include fish farming / freshwater fishing**

Advantages (res. 2)
More food
Healthier food / more protein etc.
More employment / more income/ less unemployment
Exports to – or of – (e.g. shrimps to Japan, dried fish to Middle East, to Sri Lanka)
Better communications with – (e.g. better roads, telecommunications in Balochistan)
More education by teaching skills
More technology – introduction of engines, machines, radar, satellite navigation
Growth of other industries e.g. Processing, boat building
Sustainability as fish are 'free', should not 'run out'

Disadvantages (res. 2)

| | |
|---|---|
| Education | – lack of skilled labour |
| Technology | – costs money, imported |
| Water pollution | – kills, damages fish, Pakistan's rivers are polluted, mangroves polluted |
| Restrictions | – marine fishing banned in June and July |
| | – controls on net size |
| Quality | – some products banned by western countries |
| | – can be poisonous / makes them unsuitable to eat |
| Income | – not large, delayed profit |
| Sustainability | – issues of over-fishing |

**[Total: 25]**

**2 (a) Study Fig. 4 (Insert) which shows patterns of goat rearing in Pakistan.**

**(i) Describe the distribution of goat rearing in Balochistan. [3]**

Widespread / low and moderate in most areas
Main area in SE / E / Sindh border / Kalat / Khuzdar / Central Brahui Range / Kirthar Range / Indus Plain (allow up to 2 named areas)
Main area in North / NW / NWFP border / Zhob
Low in West / Western borders / Chagai Hills / Ras Koh / Kharan desert
No information for coastal and some other areas

**(ii) Suggest why the government of Pakistan discourages the rearing of goats. [2]**

Overgrazing
Loss of vegetation / deforestation
Soil erosion / soil loose

**(iii) Why are there many nomadic farmers in Balochistan? [3]**

Shortage of / to search for grazing / food
Shortage of / to search for water
Agriculture / cultivation /crop growth difficult or impossible
Low population (so plenty of land)

**(b) Explain why buffalo are not reared in Balochistan. [3]**

Lack of water to drink
Lack of water to wash / lie in / bath in / keep cool
Lack of water / buffalo need water (1)
Lack of fodder crops / poor grazing
Lack of demand / few urban areas

**(c) Study Photographs A and B (Insert) showing a buffalo farm in Lodhran district, Punjab.**

**(i) How do the photographs show that these buffalo are being kept in good living conditions? [6]**

<u>Photo A</u>
Covered shelters / shade / roof / shed etc.
Brick / concrete / will not collapse
Fodder / food
Feeding trough
Brick standing by troughs
Clean conditions / dung cleared away

<u>Photo B</u>
Water for bathing / washing / cooling /drinking
Concrete pool
Clean water / water from well
Organised storage of fodder / dung

**(ii) Suggest why buffalo farms can often be found around urban areas. [2]**

Food (for urban population) / demand for milk or meat
Must be fresh / deteriorates quickly
Can make deliveries / supplied on a regular basis
Products for processing, e.g. milk, ghee, butter

**(d) Meat provides a valuable source of protein in food, and there are many other useful products from animals.**

**Explain the advantages and disadvantages of developing livestock farming in Pakistan. [6]**

Advantages (res. 2)
More food / healthy food / great demand – with e.g.
Other products – with example (hides, horn)
Exports (with example)
Employment / earnings
Manure / dung / gobar / for burning
Processing industries (with example)
Sustainable e.g. animals reproduce, traditional skills

Disadvantages (res. 2)
Loss of land / water for food crops.
Overgrazing problems.
Less investment in other forms of farming.
Low income / low profit.
Disposal of waste / problems of cleanliness / pollution (with example)
Cost of setting up / fodder / vets bills etc (max 2)
Disease transfer to humans
Some products not of export quality / banned by western countries
Not sustainable e.g. (may refer to above)

**[Total: 25]**

**3 (a) Study Fig. 5, which shows the sectors of employment by percentage in Pakistan.**

**(i) Which is the largest sector? [1]**

Paid employment

**(ii) Give an example of self-employment. [1]**

Farmer, shopkeeper, lorry driver etc.

**(iii) What is the percentage of 'unpaid family workers'? [1]**

25%

**(iv) State *two* jobs that may be done on a farm by unpaid family workers. [2]**

Sowing, harvesting, threshing, weeding, bird-scarer, feeding animals etc.

**(v) Suggest why many farms rely on unpaid family workers. [3]**

Poverty / cannot afford hired labour
Subsistence / small farms
Manual labour / not mechanised
Large families / no other jobs available
Inherited / learned skills

**(b) Explain the push factors, other than low pay that may cause rural-urban migration. [5]**

Lack of: – clean water / sanitation / poor health
– health care facilities / hospitals / clinics
– education / illiteracy
– electricity / bright lights etc.
– jobs / mechanisation
– farmland / subdivision of land
– entertainment – example
– food / malnutrition

Degradation of land / salinity/soil erosion
Power of the landlords / Zamindari etc.
Political problems / Taliban / Al Kaida etc.
Natural disasters / drought etc.

**(c) Study Photograph C (Insert), which shows a valley in Shangla district, NWFP.**

**(i) With reference to the photograph, explain why agriculture is difficult in this area. [4]**

Difficulties (must be explained)
Soil erosion
Lack of flat land
Other land uses in valley base
Poor soils
Lack of irrigation
Lack of mechanisation (with reason)
Cold temperatures / snow and ice
Rabi crops cannot be grown
Lack of water in winter
Flooding in summer
Problems of terraces

**(ii) Name *two* cottage industries that could be developed in this area. [2]**

Allow 1 general and 1 specific cottage industry

Specific – carpet, knitting, weaving, wood carving, etc.

**(d) Choose *two* of the improvements shown below, and explain to what extent these *two* improvements could create more employment opportunities in mountain valleys. [6]**

| | |
|---|---|
| ROAD BUILDING | RELIABLE ELECTRICITY SUPPLY |
| CLEAN WATER SUPPLY | BETTER TELECOMMUNICATIONS |

Reserve 1 mark for one limitation / problem of one chosen improvement (i.e. 'to what extent')

ROAD BUILDING
Ideas such as:
– Transport so more industries established
– Cottage / small scale industries grow
– Trade (with example)
– Tourism (with example)
– Settlement so more service industries
– Road construction and supply work
– Jobs – e.g. drivers, maintenance, roadside services etc.

BUT – high maintenance environment / roads often need repair etc.

RELIABLE ELECTRICITY SUPPLY
Similar to above
Ideas such as:
– Can work day and night
– Can use computers etc.
– Opportunities for mechanisation of cottage industries /more light or heat
– Construction of new HEP schemes
– More tubewells for agriculture

BUT – can supply be reliable? / problem of shortages etc.

BETTER TELECOMMUNICATIONS
Similar to above
Ideas such as – IT opportunities
– More sales etc.
– Construction of infrastructure
BUT – cost of infrastructure, chance of damage etc.

CLEAN WATER SUPPLY
Similar to above
Ideas such as – More food processing industries
– Healthy so more working days
BUT – shortage of water, winter freezing etc.

Allow 'attracts investment' and 'attracts industry' only once unless well developed.

Reserve 2 marks for each of 2 factors chosen.
Reserve 1 mark for disadvantage / limitation to **one** factor

The mark scheme for **(d)** is not exhaustive.

Credit what comes that is relevant to **employment** opportunities.
Credit can be give for negative answers e.g. 'this is **not** possible'.

**[Total: 25]**

**4 (a) Study Fig. 6, which shows energy sources by percentage in Pakistan.**

**(i) Name the *two* largest sources of energy. [2]**

Gas and oil

**(ii) Which source named on Fig. 6 is renewable? [1]**

HEP

**(iii) Suggest *two* sources of energy in the 'others' sector of Fig. 6. [2]**

2 of
coal, coke, solar, wind, nuclear, etc.

**(b) (i) Name an HEP (hydel) power station and state the name of the river on which it is built. [2]**

Tarbela on the River Indus
Mangla on the River Jehlum
Warsak on the River Kabul
(see atlas or textbook for others)

Credit correct dam for 1 mark even if not on correct river

**(ii) Why is HEP (hydel) an important source of electricity in northern Pakistan ? [3]**

Cheap to generate
Renewable
Available / no fossil fuels / no thermal power stations
Rivers / water from glaciers
High rainfall
Lack of evaporation / lower temperatures
Deep / steep sided valleys for dams
No air pollution / $CO_2$

**(iii) Why can the supply of power from these stations be unreliable? [3]**

Shortage / not enough for every user/ load shedding
Silting in reservoir (reduces capacity)
Silt in turbines (causes damage)
Seasonal shortages e.g. winter / frozen / monsoon etc.
Lack of rainfall / changing climate
Theft
Damage to power lines
Old / worn machinery

**(c) Study Fig. 7, which shows the location of Faisalabad.**

**State *three* factors shown on Fig. 7 which influence the cotton industry in Faisalabad. For *each* factor, explain its importance to the development of this industry. [6]**

(Reserve 3 marks for factors)

| | |
|---|---|
| Irrigated farmland | – for raw cotton e.g. Rechna Doab |
| Rivers/barrages | – supply water for washing cotton |
| Road/railway | – for supply of goods, sales |
| Dry port | – for exports, transport to Karachi |
| Thermal power | – for electricity supply for machines etc. |
| Airport | – for businessmen |

**(d) Study Fig. 8.**

**In recent years there has been little growth in the cotton textile industry. With reference to Fig. 8, explain the advantages and disadvantages of increasing cotton textile production in Pakistan. [6]**

Candidates can choose as many factors as they like.
Reserve 2 marks for *advantages*, and 2 marks for disadvantages / problems

JOBS
More available, can reduce unemployment, higher income, formal employment, move from primary to secondary
BUT need for literacy and skills, may cause rural urban migration and its consequences

SKILLS
Beneficial to workforce, higher earnings,
BUT shortage of training at the present time

COMPETITION
Will improve standards
BUT cannot compete, low quality of Pakistan products, synthetics may be cheaper

TRADE
Will stimulate / increase trade, earn foreign exchange, improve balance of payments, pay off debts
BUT inadequate port facilities, poor roads / rail etc.

TECHNOLOGY
Good for development, can improve quality and / or quantity
BUT high cost, lack of skilled workforce, unemployment, shortage of electricity, more imports

INFRASTRUCTURE
Stimulates construction of better roads, railways, power supply, water supply
BUT higher costs, shortages at source, others may lose supply e.g. power, water

GENERAL
Increase GDP
BUT – may cause less investment in other industries
less land for food crops
quality must be good
leaf curl virus / other pests
climatic limitations
etc.

**[Total: 25]**

**5 (a) Study Fig. 9, which shows an advertisement for a big company.**

**(i) State *four* ways of contacting this company.** **[2]**

2 ways = 1 mark

Telephone (number)
Fax
E-mail / web site / internet
Letter / address
Visit

**(ii) Which is the slowest way of contact?** **[1]**

This depends on the answer to **(i)**.
Order of speed: e-mail – fax - telephone – letter – visit

**(iii) Why does the company advertise many different ways of contacting it?** **[1]**

Easy
Choice
Depends on distance
To attract foreign interest
Visit is more personal

**(b) (i) Explain *two* of the reasons given in the advertisement for using this tractor on a farm? [2]**

(1 mark for each line)

| | |
|---|---|
| Big and powerful | Replaces several animals, reduces labour force, faster, larger farms |
| Quick and efficient | Saves time, better cultivation<br>Higher yield, better than manual labour |
| Many tasks | Only one machine needed, can plough and harvest, reduces labour force |

**(ii) Why are tractors not used by many small-scale farmers? [4]**

Too expensive to buy
High cost of leasing / fuel / maintenance etc.
Farmers are subsistence farmers
Little profit / low yields
Small fields / farms
Lack training / skills / education
Plenty of family / cheap labour / cause family unemployment
Cannot take loans

**(iii) In what ways can the government help small-scale farmers to mechanise their farms? [4]**

Loans
Leasing / hiring
Subsidies / reduced costs / cheap / goods affordable (not 'free' or 'give')
Training / education
Advertising / leaflets / use of media
Land reform / consolidation so that –
Promote co-operatives

**(c) (i) From the list below state *two* imports and *two* exports. [2]**

| | | | | |
|---|---|---|---|---|
| COTTON | MACHINERY | WHEAT | IRON ORE | LEATHER |
| CRICKET BATS | SURGICAL EQUIPMENT | | | COMPUTERS |

2 correct imports = 1 mark  2 correct exports = 1 mark

Imports  machinery, wheat, iron ore, computers
Exports  cotton, leather, cricket bats, surgical equipment

**(ii) The European Union (EU) is a major trading partner of Pakistan.**

**Name *two* countries in this trading community. [2]**

Any 2 EU countries

**(iii) Why it is important that Pakistan trades both imports and exports with the EU? [2]**

To improve / maintain the balance of payments
To increase / maintain foreign currency
To make good relations / trade agreement

**(d) The development of wind power generators off the coast of Pakistan could reduce the country's dependence on imported fuels.**

**Explain the advantages and disadvantages of developing alternative power sources. [5]**

NB The introduction refers to wind, but the question is about **any** alternative power supply.

Advantages (of **any** alternative power supply) (res. 2)
Cheap power (after construction)
Renewable / do not run out.
Reduces $CO_2$ emissions / air pollution / harmful gases
Free resource / readily available
E.g. sunny climate, coast, mountains for HEP
Increases supply of electricity / less loadshedding / power cuts
Can be used in remote areas / mountains / deserts / etc.
Lower cost of oil / coal imports / improves balance of trade / can pay off debt

Disadvantages (of **any** alternative power supply) (res. 2)
Expensive to build / cost of import
Expensive / foreign technology
Unreliable (referring to weather etc.)
Lack of skills / expertise
Low output from generators
May not be in areas where power is needed / much of country a long way from coast

**[Total: 25]**