

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

Specimen for Examination from 2008

IGCSE

MARK SCHEME

MAXIMUM MARK: 75

SYLLABUS/COMPONENT: 0448/02

**Pakistan Studies
The Environment of Pakistan**



**UNIVERSITY of CAMBRIDGE
International Examinations**

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Question 1

(a) Study the map of Pakistan Fig. 1.

On your answer paper name:

(i) country A

China

(ii) city B

Peshawar

(iii) river C

Chenab

(iv) plain D

Upper Indus (Plain) / Punjab

(v) state the number in N of the line of latitude E

28

[5]

(b) Study the map Fig. 2.

(i) Explain why the monsoon wind that is shown develops.

Strong heating of ground / High temperatures over land / N Pakistan / Central Pakistan

Causes air to rise / become lighter / less dense

Low pressure created

High pressure created

Winds move from high to low pressure

[4]

(ii) Describe the rainfall distribution shown in Fig. 2 and explain how it is caused by the monsoon winds.

Description (res 2)

Lowest/ less than 25mm in West Baluchistan and extreme NW

Large areas / Lower Indus Plain less than 125mms

Most of Baluchistan less than 125mm

Decreasing towards NW and SW / Increasing towards SE and NE

Highest in NE Punjab / Murree area / over 500 mm

Etc.

Explain (res 2)

Winds from N India forced to rise by mountains

Winds from Arabian Sea / secondaries rise over SE Sindh

Wind has lost moisture over India and Bangladesh/ tail end, so less rain in Pakistan than India

Baluchistan remote from monsoon winds so less rain

High mountains in NE increase rainfall

Plains have less rain than mountains

Res 2 + 2, float 3

[7]

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- (c) (i) Name a plateau where barani wheat farming takes place.

Potwar [1]

- (ii) How is the cultivation of wheat related to the seasonal rainfall on the plateau?

ploughing October – December /when first rain falls

seed sown after rain

rain continues though growing period/ some rain before harvest to swell the grain

dry period for harvest [3]

- (d) How may storms and heavy rainfall cause problems for people in Pakistan?

Ideas such as

Effects of *flooding*
 Wind damage
 Lightening strike
 Landslides
 Etc.

Damage to *Communications*
 Power
 Homes
 Fields
 Workplace
 Etc.....

Res 2 for ideas, up to 3 for dev of an idea [5]

Question 2

Study the photograph A of an area in Shangla District in NWFP.

- (a) (i) Describe in not more than **two** words, the topography(relief) shown in the photograph.

mountainous / wooded / coniferous(trees)/ steep slopes/deep valleys [1]

- (ii) What type of trees are shown in this photograph?

coniferous / spruce / fir / deodar/kail/chir [1]

- (iii) At what altitude do these trees grow in NWFP?

1000-4000 metres [1]

- (iv) How is this type of tree adapted to the climate in this area?

Conical shape to shed snow

Small leaves }

Thick, leathery leaves } *to reduce transpiration*

Evergreen to take advantage of short growing season [3]

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(b) (i) Trees have been cut down in Area X. What effects may this have on the soil there?

leaching

soil erosion

gullying

landslides/total soil loss/only rocks left *credit effect + dev*

[3]

(ii) How can deforestation affect water supplies?

Too little: Muddy water undrinkable/polluted

Reduced evapotranspiration so less rain

Silt in reservoirs reduces storage

Silt blocks irrigation channels

Irregular flow/ comes in bursts

Too much: Flooding/faster runoff

[4]

(iii) State and explain **one** way in which the damage done by deforestation can be reduced

ways: regeneration programmes

education / better management

forest reserves

legal controls on commercial cutting / selective cutting

restricting use of heavy machinery

supply of gas to Northern areas to reduce need for firewood

terracing

explanation: credit according to way stated in answer

1 mark for way plus 2 for explanation

[3]

(c) Why are there irrigated plantations in the Indus Plain?

Construction }

Firewood }

Furniture } *uses max 2*

Boxes }

Agricultural implements }

Irrigation available

Shade

Prevent erosion of banks

Reduces air pollution

For shade

Reduce timber imports

Etc.

[4]

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(d) Using examples, suggest why the Northern Areas of Pakistan are attractive to tourists.

Examples – Kaghan, Swat, Gilgit valleys, Chitral, etc. (res 1, max 2)

mountain scenery

forests

recreation

photography

trekking

cooler climate than the rest of Pakistan

Etc.

[5]

Question 3

(a) Study the chart Fig. 3.

(i) Which crop is grown on the largest area?

Wheat

[1]

(ii) Which crop has the lowest production per acre?

Rice

[1]

(iii) Why is there such a large production of sugar-cane from a small area?

Large/tall plant

High yield per plant

[2]

(iv) Name another important cash crop in Pakistan

cotton

tobacco

maize

[1]

(b) Fig.4 shows the areas where sugar-cane is grown.

(i) Name the areas of high sugar-cane production.

Peshawar district

NW of NWFP

Faisalabad district

Central Punjab

Nawabshah/Nausharo Firoz/Hyderabad/Badin district

Central Sindh/near the river in Sindh

[3]

(ii) Why are these areas suitable for the cultivation of sugar cane?

Temperature 25 35 C

Irrigation to make up for shortage of rainfall (1520mm)

Loam/clay/silt/alluvial soil (not fertile only)

Fertiliser factories

Good road system

[4]

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(iii) What happens to sugar cane from the time it is fully grown to when sugar juice is extracted?

cut by hand/manual labour

transported by bullock cart/lorry/truck

quickly transported

scrubbed with chalk to remove dirt and smell

crushed to remove juice in heavy rollers

[4]

(iv) Explain why bagasse is an important by-product of a sugar cane factory.

Fuel

Can be used to generate electricity

Animal feed

Made into chipboard/paper

[2]

(c) (i) State two climatic inputs for rice cultivation.

high rainfall/over 1500mms/ more than 1270 mms

temperature 20 – 30 C

warm, dry period for harvesting

[2]

(ii) How can the yield(production) per hectare of rice be increased?

Ideas such as

Irripak/HYV varieties/ genetic modification to increase output

Modern irrigation / perennial canals to give better water supply/at correct times

Modern fertilisers/pesticides to improve growth/prevent loss

Machines to make work faster

Education to make farmers aware of better methods

Reduction of waterlogging and salinity to increase cultivable area

(Max 2 per line for example or dev.)

[6]

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Question 4

(a) Study the diagram Fig.5.

(i) Name the two raw materials W and X.

iron ore

manganese

[2]

(ii) Name two other inputs Y and Z.

limestone/flux

water

electricity

labour

capital

transport

new technology (must be named) e.g. computerisation, telecommunication

[2]

(iii) Why is coal imported in addition to that produced in Pakistan?

Poor quality of local coal

Mixed with local coal

Not enough local coal

[2]

(b) Describe how **two** human inputs contribute to production at Pakistan Steel.

Capital – for wages, new machines, transport etc.

Electricity / power- for faster work etc.

Labour- for work, trained for better work, details of jobs max 2

Transport – for inputs, outputs, from or too

government policies- tax concessions, training

new technology- for better productivity, communication etc.

(for each input res. 1+1 for name, float of 4)

[6]

(c) Why is over 50% of the output of Pakistan Steel sent north from Karachi to the Punjab?

To Taxila

Heavy engineering

Machinery for industry and power generation/ construction / railways boilers etc.

Construction of buildings/ bridges / pylons

Etc.

[3]

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(d) What features of Pakistan Steel show that it is an industry in the ‘formal sector’?

Large-scale industry

Employed labour

Good quality goods/service

Capital intensive

Regular working hours

Regular wages

Legal and registered

[4]

(e) How does the government attract local and foreign investors to develop industries in Pakistan?

Industrial estates

Example eg. Sindh Trading Estate Ltd. (SITE)

Tax exemptions on imported machinery

Less foreign exchange control

Tax holidays

Simplified procedures

Private power stations

Example Hub (?Hab) power project

Less foreign exchange control

Better roads/railways/airports

Dry ports for better security

Agencies to help investors provide infrastructure e.g. water, electricity, telephone, roads to estates

Land available for housing, commercial, social facilities near industrial zones

Consistent policies/stable government

Etc.

[6]

Question 5

(a) Study Fig. 6 showing population pyramids for rural and urban areas in Pakistan.

(i) Compare the percentage of children aged 9 and under in rural and urban areas, and give **three** reasons for this difference.

Rural greater than urban (max 1)

reasons

Lack of education on birth control/family planning

Lack of availability of contraceptive measures

Traditional values

Religious beliefs

High infant mortality rates

Need for family labour on farms

(or accept the reverse for urban areas)

[5]

(ii) How do both pyramids show that the birth rate has fallen?

bar lengths getting shorter 0-9 years

[1]

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(b) (i) What is the percentage of people aged 20-24 in urban areas?

20(%) [1]

(ii) Is this larger or smaller than the percentage in rural areas?

larger [1]

(iii) What is the **main** reason for this difference?

Rural-urban migration [1]

(c) (i) Describe the urban pull factors that cause rural-urban migration.

Better quality of life / living standard (max 1)
More reliable food supply
Attractions of entertainment/bright lights
Better employment opportunities (max2)
Better services eg. Health, education (max 2) [4]

(ii) What improvements may be made in some rural areas to reduce rural-urban migration?

Ideas such as
Better access to medical / health and family planning facilities
More free contraceptives and better availability
Better access to education and training
More / better jobs
Better (named) infrastructure/ roads, electricity, telephone etc.
Land reform
More cottage and small-scale industries in villages
Better (named) service other than those above
Etc. [6]

(d) How may improvements in literacy and education help to lower the rate of population growth?

Ideas such as
More doctors, nurses, teachers
Health education
Nutrition awareness
Birth control and Family planning
Better jobs with better working conditions, shorter hours
Etc. (credit any idea up to 3 marks) [6]

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Glossary for Pakistan Studies

abadi	settlement / village
ajrak	printed cloth (using blocks)
bangar	old alluvium
bar	alluvial terrace
barani	rain fed / areas where cultivation depends on rainfall
begar	free services
bela	forest along the bank of a river
bet	active flood plain / summer bed of river
bhangar	old alluvium
Bharat	India
binola	cotton seed
(canola)	= Canadian oilseed with low acidity = oilseed rape
charsa	irrigation method - water lifted from well in buckets drawn up by an animal
chaudhari	feudal lord / village chief/ headman / title of landholder
dasht	wilderness, sea of sand
desi	native (re crops)
dhand	small salt lake
dhar	flat land between dunes (as 'patti')
dhenkli	(shaduf) irrigation method - water lifted from well using a bucket, rope and pole
dhoru	abandoned river channel
doab	'between rivers' / interfluve
ghee - banaspati	vegetable ghee similar to margarine and made from oilseeds
ghee - desi	clarified butter made from dairy products
gur	raw sugar (in a solid state)
hamun	inland drainage shallow salt lake / playa lake
hari	peasant/tenant
jagir	rent-free land given to individuals or institutions by the government
kacha	unmetalled road
katchi abadi	shanty / squatter settlement or (especially in Lahore and Karachi) a private or local government housing scheme for the poor
kaurjo	diversion canal (in Makran, Balochistan)
khaddar	fresh / new alluvium
khaddar khes	coarse cloth
khadera	ravine, badland
kharif	crops grown during the summer season

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khes	cloth
khusas	embroidered shoes
luu	hot wind / intense heat
malak	feudal lord
mandis	markets
mustagh	'ice mountain' - a mountain covered by snow all year round
nala	tributary gorge / ravine, irrigation ditch
otaq	guest house
patti	narrow area of flat land between dunes (as 'dhar'), passage, path
phutti	seed cotton (boll including seeds)
pucca	metalled road
pull	bridge
rabi	crops growing during the winter season
rakh	tropical thorn forest
rizq	(colloquial) 'bread and butter' situation
roti	bread
saddar	main market place
sailaba	irrigation method using flood water
shamilat	common grazing land
talab	tank (small reservoir), pond
tehsil	administrative area (similar to a UK parish)
tibba	sand dune
toba	pond
wadaira	feudal lord
zamindari	a system in which land owned by one person is cultivated by others