

MARK SCHEME for the May/June 2008 question paper

0448 PAKISTAN STUDIES

0448/02

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

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1 (a) Study the Photograph A, showing sugar cane cultivation.

(i) Describe the scene.

- bullocks/cattle/buffalo/ox/cow
- traditional/manual labour/man/farmer
- wooden
- plough/ploughing
- young/small plants
- ratoons
- flat
- dry soil
- uncut crop in background
- trees in background

[4]

(ii) What are the advantages and disadvantages of using tractors instead of animals for work on a farm?

Advantages (res.2)

- Faster/quicker/suitable for larger fields
- More efficient/modern/less hard work/do not tire
- Needs fewer workers
- Saves animal feed/land/cost of animals

Disadvantages (res.2)

- Expensive to buy/few available to buy/imported }
 - Cost of fuel } max. 2 costs
 - Cost of repair/difficult to repair }
- Breakdowns
- Unemployment
- Needs skilled labour
- Compact the ground
- No milk/meat/food etc.
- No dung for fertiliser
- Maintenance/repair facilities may not be locally available
- Cannot use in mountains/fragmented farms

[6]

(b) Yields from crops vary from year to year. Explain the reasons for this.

- Lack of rain }
- Timing/ variability of rain } max.2 climate
- Flooding }
- Wind }
- Problems of irrigation/shortage of water/silt in canals/reservoirs/mechanical failure
- Build up of salt and waterlogging
- Pests and diseases (max 2)
- Family problems/sickness/men go to city
- Reference to better inputs must relate to previous year's profit

[4]

(c) (i) What work is done on the farm by these animals, other than that shown on the photograph?

- Hoeing – to remove weeds, thin seedlings
- Harvesting – cutting the crop
- Milling/grinding/threshing – to remove husks, for flour, by animal walking round
- Transport – of seeds, fertiliser, crop, to field, to market,
- Drawing water – from wells, by shaduf, charsa, by walking round
- Threshing – separating the husk from the seed

[3]

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- (ii) **What do these animals and other livestock on the farm produce that they can use or sell?**
Dairy products/milk/butter/ghee etc.
Meat
Hides/skin
Young stock
Eggs
Dung
Hooves
Horns
Bones
- [3]

- (d) **How can livestock farming be improved in Pakistan?**
Capital/investment/loans/subsidies for – named purpose
Selective/cross breeding, breeding on scientific lines – for better animals etc.
Better feed/fodder – for stronger, bigger, animals etc.
More grazing land – by irrigation, drainage, fertiliser etc.
Control of disease – e.g.
 Research – disease, breeding, feed etc.
 Vaccination – to improve health
 More medicines/more vets to treat animals
 Education/training in named modern methods
 Better hygiene/care/living conditions etc.
 Mechanisation e.g. milking machines for hygiene, speed
- [5]

2 (a) **Study Fig.1, a map of natural hazards in Pakistan.**

- (i) **Describe the distribution of soil erosion in Balochistan.**
Scattered/widespread/in mountains
Especially in SW
Line at base of highlands
Named mountain range/hills/plateau e.g. Central Makram Range, Coastal Range, Chagai Hills
Provincial borders
- [3]
- (ii) **Explain why the dry climate of Balochistan increases the risk of soil erosion.**
Lack of vegetation/bare soil
Slow to re-grow
Over cultivation
Dry soil less cohesive
Wind blows soil away
- [3]
- (iii) **Where does eroded soil go to?**
Wind blown into dunes/on foothills
Into rivers/canals/ditches/sea
Reservoirs/dams/lakes
- [3]
- (iv) **How can soil be protected in areas of low and unreliable rainfall?**
Shelter belts/trees/afforestation
Irrigation of trees
Prevent over-grazing/move livestock/fewer livestock
Fill gullies/improved cultivation
Terraces and stone lines/reduce gradient
Contour ploughing
Strip farming
- [4]

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(b) Study Fig. 1 again.

(i) Which area is affected by tropical cyclones?

Coast/sindh coast, Balochistan coast
Named area e.g. Indus delta, Makram coast

[1]

(ii) Describe the physical effects of tropical cyclones in this area.

High winds
High waves
Heavy/high rainfall
Floods
Thunderstorms/thunder/lightening
Damage (max.3) but buildings max 1, roads and railways max 1

[5]

(c) Heavy rain and thunderstorms affect business and industry in urban areas. Explain the advantages and disadvantages of the rain and storms.

Advantages (res.2)

Water supply
Reservoirs filled for HEP/power supply

Disadvantages (res.2)

Floods – damage and blockage of roads
High winds – damage to buildings, trees
Erosion of land – effect on roads/railways/runways
Loss of power supply – loss of production, business
Danger of lightening
Loss of raw material e.g. cotton, sugar cane
Disruption of fishing/shipping/trade
No flights for businessmen

[6]

3 (a) Study Fig. 2 a map of population density distribution in Sindh province.

(i) Name the cities A, B and C.

A – Karachi
B – Hyderabad,
C – Sukkur,

(ii) Name the desert D.

NB. NOT THAL
Thar(parkar)

(iii) Name the river E.

Indus

[5]

(b) (i) Explain the physical reasons for a higher density of population in area Y.

NB. NOT 'GOOD CLIMATE'

alluvial/rich/fertile soil for good agriculture
well drained soil for good agriculture, travel, building etc
flat land for use of machinery, travel/building/irrigation etc.
water available for irrigation, domestic use, industry etc.
(max 2 uses from any line)

[4]

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- (ii) **Explain the low population density in area X.**
Delta/Indus delta
Salt water/saline soil – difficult to farm/poor soil
Low river flow/lack of fresh/clean water – so unsuitable for farming, domestic use
Flooding – so causes problems to farming, industry
Swamp/marsh – difficult to build/poor foundations
Mangrove trees – so lack of farmland
Tropical storms/typhoons/cyclones – dangerous
Lack of roads – so difficult to move around
Lack of other named infrastructure – so no industry, improved living standards
Dry climate/lack of rain so no agriculture, industry, sanitation
Fishing in decline due to pollution/mangroves dying
Lack of industry therefore no jobs [3]

(c) Port Qasim is located 20 kilometers south-east of city A.

- (i) **Give two reasons why this site was chosen for a new port.**
Deep water
Sheltered harbour/creeks/inlets
Close to Karachi/relieve pressure on Karachi Port
Near steelworks/Pakistan Steel Mill
Flat land
Space for industrial development
Near oil refinery [2]
- (ii) **Name the other port in Sindh to the west of city A.**
Keamari/Karachi Port [1]

(d) Iron ore, oil, and machinery are imported in large quantities at Port Qasim.

- (i) **Give one large-scale use of each of these three.**
Iron ore – to Pakistan Steel at Korangi, steel, named iron or steel product
Oil – transport, power, electricity, chemicals, etc.
Machinery – vehicles, named industry, power generators etc. [3]
- (ii) **Another large import is wheat. Name one country from which it is imported.**
UK, USA, Russia/Australia [1]
- (iii) **Explain why Pakistan will need to continue to import wheat.**
Increasing population
Poor agricultural production/smaller area cultivated/increase slower than population [2]

(e) Name one dry port and explain why dry ports are needed to reduce the burden on sea ports.

- Sambrai(Sialkot), Lahore Multan, Faisalabad, Rawalpindi, Hyderabad, Larkana, Peshawar, Quetta
Reasons:
lack of space/storage
to deal with paperwork/quicker processing and clearing/customs duties/tax etc.
relieve congestion
only 2/3 sea ports/few sea ports
allows packing/unpacking (of containers) (1+3) [4]

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(c) Study Fig. 3 a graph comparing the production of marine and inland fish in Pakistan.

(i) Compare the changes shown in the graph.

- Both increase
- Marine increases more than inland/faster than inland
- Marine increases/continuously but inland had little increase until early 1970s
- Inland increased to nearly 10 times bigger/marine only 5 times bigger
- Comparative figs (max 1) – units not required

[3]

(ii) Explain why more people are employed in inland fisheries than marine fishing.

- More people live near rivers, lakes etc.
- Maintenance of ponds
- Hatcheries
- Feeding
- Harvesting (catching)
- Transport
- Government encouragement/loans etc.

[3]

5 (a) Most hydro electric power (hydrol) schemes are in Northern Pakistan.

(i) Name two large dams and the rivers on which they are built.

- Tarbela on river Indus
- Mangla on river Jhelum
- Warsak on river Kabul
- Must name both dam and river for one mark

[2]

(ii) Why do the reservoirs of these dams hold large quantities of water?

- Deep valley/large valley/high dam
- Steep sides
- Large river/permanent flow/water from snowfields/glaciers
- Low evaporation/cool climate,
- High rainfall

[3]

(b) Study Fig. 4, a diagram showing how hydro electric power is made.

Name the machine A, and explain how it uses the flow of water to make electricity.

- A – turbine/generator/power station
- Turbine spins/rotates/moves

[2]

(c) Study Fig. 5, a pie chart showing the percentage use of electricity.

(i) Which sector uses the largest percentage of electricity?

- Domestic/homes

[1]

(ii) State two other large users of electricity shown on the chart and explain what they use it for.

- Industry – for machinery, computers, lighting, air conditioning etc
- Farming – for much of above, tubewells, drying crops, etc.
- Offices – computers, lighting, communication, air conditioning etc.
- One mark for two large users

Three marks for how the electricity is used (2+1) [1+3]

[4]

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- (iii) **What problems are caused when the electricity supply to factories breaks down?**
Stops production/slow production/output reduced
Damages machinery short circuit/explosion
Damages goods/affects the quality e.g. food, cloth
Delays contracts/orders
Loss of money/profit/orders
Workers laid off/sit idle [4]

- (d) (i) **Name two environmentally-friendly ways of making electricity other than hydro-electric power.**
Any two of solar, wind, tidal, biogas, bagasse, geothermal [2]

- (ii) **Explain why each of the two ways you have named could be used in Pakistan.**
Solar – long hours of sunshine/many sunny days/many days of clear skies
Wind – Indus plain flat, on mountains, windy in coastal areas, Balochistan, mountains
Tidal – for coastal areas esp. Karachi
Biogas – cheap, small scale, disposes of waste product
Bagasse – many sugar cane factories, disposes of waste product, cheap, small scale
(Geothermal – not in Pakistan) [2]

- (iii) **Why is it important that more renewable energy schemes are developed in Pakistan?**
You may use your answers to part (c) and your own knowledge.

General reasons for needing more power supplies:
frequent power cuts and stoppages/load shedding/shortage of HEP
increasing population/industrialisation/development
higher living standards
to encourage development/modernisation/industrialisation
rural electrification

Reasons for more renewable schemes:
fossil fuels running out/renewables do not run out
fossil fuels expensive
renewables cheap/free after installation
can be generated in remote areas/no expensive infrastructure needed
small scale/cheap to construct
nuclear is dangerous/problems of waste disposal-renewables safe
fossil fuels cause air pollution/renewables do not pollute
poor quality of coal/reserves not exploited/small reserves in Pakistan
allows independence/need not rely on other countries

Credit ideas from either section, no reserves [5]