

CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge Ordinary Level

MARK SCHEME for the October / November 2014 series

2059 PAKISTAN STUDIES

2059/02

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

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1 (a) Study Fig. 1 which shows a map of Pakistan. Name:

(i) The rivers E, F, and G. [3]

E Indus
F Jhelum
G Ravi

(ii) One of the dams H or J. [1]

H Tarbela
J Mangla

(b) What is meant by

A: a link canal

Diverts / transfers / moves water from / links barrages / syphons to rivers / canals
Diverts / transfers / moves water from / links [western] rivers to other [eastern] rivers / canals
Diverts / transfers / moves water between / links rivers / river and canal

B: a perennial canal

Supplies water throughout the year
Supplied from dams / barrages

C: an inundation canal?

Supplies water in the rainy season
Taken from rivers / when rivers high / flood

[3]

(c) Explain the importance of the Indus Water Treaty to Pakistan. [4]

Ensures that India does not restrict Pakistan's water supply / water supply in Pakistan is maintained

Ensures an effective / dependable irrigation system in the Indus Plain
Pakistan has exclusive rights to waters of the rivers Indus, Jhelum, and Chenab

Maintains agricultural production
Tarbela and Mangla dams built [to store water]

Barrages / syphons / link canals built [to distribute water]
Enabled construction cost of works to be shared with Western countries and India

(d) Study Photograph A.

(i) Name the type of forest shown. [1]

Coniferous / alpine / montane

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(ii) Suggest three reasons why these forests are being cut down. [3]

Sale of timber
 For fuel / heating
 Cleared for: Farming
 Mining / mineral exploration
 Setting up industries / factories
 Housing / urbanisation / resorts / hotels
 Roads / other named infrastructure

(iii) Explain the effects of this deforestation. [4]

Soil erosion because no roots to hold soil / soil exposed / no interception
 Soil becomes infertile / loses nutrients because of leaching / top layer of soil eroded / no humus formation from leaves
 Soil becomes unfit for agriculture
 Siltation in reservoirs because soil [exposed and] washed into rivers
 Siltation in reservoirs leads to reduction in capacity of reservoirs / dams become silted up / reduces HEP production
 Siltation in reservoirs leads to reduction in capacity of canals / irrigation / water supply
 Flooding because increased surface runoff / less interception
 Flooding leads to destruction of buildings / infrastructure / farmland
 Landslides / avalanches because slopes / rocks / snow not held by trees
 Landslides / avalanches lead to blocked roads / buildings destroyed
 Loss of scenery / beauty / shade leads to decrease in tourism
 Loss of habitat so species lost / extinctions / animals move away / disturbed
 Air pollution from burning
 Decrease in rainfall due to less transpiration
 Fewer trees to take up of CO₂ and effect on global warming / climate change

(e) To what extent is it possible to save and even increase the area of forests in Pakistan? Explain your answer. [6]

Possibilities

Legislation / action on illegal logging / fines / penalties
 Government protection of forest areas / national parks / reserves
 Restrict logging / quotas / licences / selective cutting
 Education / public awareness campaigns
 Use of alternative fuel / natural gas instead of burning wood
 Planting trees / named afforestation / re-afforestation projects / irrigated / commercial plantations / plantations for firewood
 Providing alternative grazing areas
 Action against pollution [which affects mangroves]

Problems

Cost / lack of finance
 Security issues
 Lack of government will / government priorities
 Demand for timber / firewood / wood for construction / named products
 Land needed for housing / industry / agriculture / roads
 Very long term project

[Total: 25]

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- 2 (a) Explain what is meant by each of the following terms, and choose one example of each from the given list.
A raw material; B waste material; C value added material [6]
- A Basic commodity from which finished goods are made / which is changed by a manufacturing process
 Coal / limestone
- B Unused / unwanted by-product
 Slag / CO₂
- C Product that increases in value / worth due to industrial activities / a material improved as it goes through a manufacturing process
 Steel / coke
- (b) Study Fig. 2, a map of the site of the Pakistan Steel Mills.
- (i) Name the creek X and the port Y. [2]
- X Gharo
 Y Port[Bin] Qasim
- (ii) Name the sea to the south where ships can travel to the steel mills. [1]
- Arabian [Sea]
- (iii) Using Fig. 2 and your own knowledge, state three factors that make this site suitable for the development of the Pakistan Steel Mills. Explain one advantage that each factor gives to this industry. [6]
- Factors
 Flat / cheap / unused land
 Coastal site / natural / deep water harbour
 Limestone nearby / at Thatta / Murli Hills
 Fresh water nearby / at Lake Haleji
 Power stations nearby / at Pipri / Korangi
 Rail / road connection
 Township on site / near Karachi
- Advantages
 Low set-up cost
 Allows transport by ship / of heavy / bulky materials
 Cheap transport of raw materials
 Reliable / continuous power supply
 Ease of transport of raw / heavy / bulky materials / products [especially to HMC at Taxila]
 Readily available supply of labour
 Market for sales / exports

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(c) Explain why the Pakistan Steel Mills is an industry in the 'formal sector'. [4]

Capital intensive
 Employed / not self-employed
 Mechanised / fewer workers
 Regular working hours
 Regular / fixed wages
 In purpose built factory / office
 Legal / registered / pays tax

(d) To what extent can work in the informal sector improve the lives of those living in urban areas? Explain your answer. [6]

Might Would otherwise be unemployed / unemployed / unemployable find work
 Source of income
 Can afford better diet / improved housing / education / luxuries
 May be suitable for unskilled / illiterate
 Can use traditional skills
 Goods / services available locally

Might not Poor working conditions
 Low / irregular incomes
 Too many people doing the same thing / too much competition
 May employ children who do not receive education
 Goods are poor quality

[Total: 25]

3 (a) Study Fig.3, a graph showing rainfall in Dir, Khyber Pakhtunkhwa.

(i) What is the minimum rainfall, and when does it occur? [2]

50–52 mm
 October

(ii) What is the maximum rainfall, and when does it occur? [2]

253 / 254mm
 March

(iii) For how many months between October and June is the rainfall above 80mm? [1]

6

(iv) Give two causes of high rainfall between October and June at Dir. [2]

Western / winter depressions / disturbances
 Relief rainfall
 Convectional rainfall / currents
 Thunderstorm

(v) What is the main cause of summer rainfall at Dir? [1]

Monsoon

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- (b) (i) In the list below circle three inputs used mostly for cash crop farming. [3]

Chemical fertiliser
High yield seeds
Modern tractor

- (ii) Explain how each of the three inputs you have circled can increase crop yields. [6]

Chemical fertiliser: Adds / replaces nutrients e.g. nitrogenous / nitrates, phosphates, potassium / potash
Larger plants

High Yield Seeds: Increase in yield described / allows multi-cropping / shorter growing period
Resistant to disease / pests
Need less water / drought resistant
Larger plants

Modern tractor: Quick
Efficient
Can use better tools / implements / powers tube-wells
Allows multi-cropping

- (c) (i) Explain what is meant by sustainable livestock farming. [2]

To meet the food / animal product needs of the present generation while not compromising the ability of future generations to meet their food / animal product needs
To meet the food / animal product needs of the present generation while protecting / minimising damage to the natural environment
Not overstocking which causes soil erosion / desertification
Not polluting water supplies with farm waste
Protecting young trees from grazing

- (ii) To what extent can livestock farming increase food supply in Pakistan? Explain your answer. [6]

Possibilities

Provides meat / milk / eggs / cheese / named food item
Provides protein
Provides raw material for food processing industry
Through selective breeding / livestock research
Higher quality fodder
Through better husbandry / fattening programmes
Cleanliness / hygiene / preventing disease
Veterinary services / vaccinations

Problems

Lack of land
Cost of / lack of fodder / water
Lack of education
Lack of government support
Cost of modern methods / facilities

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4 (a) Study Fig. 4.

- (i) Name the smallest and largest province by area. [2]**

Smallest – KPK
Largest – Balochistan

- (ii) What is the population density of Sindh province? [1]**

216 people per sq. km.

- (iii) Which is the most densely populated province? [1]**

Punjab

- (b) Choose two of the factors given below and explain how they cause a low population density in Balochistan. [6]**

Relief

Mountainous

Too steep / uneven for irrigation / building / agriculture

Difficult to construct transport routes

Long journey times

Climate

Extremely dry / arid / desert

Really hot in summer

Very cold in mountains

Too dry for farming

Shortage of water

Infrastructure

Lack of / poor named infrastructure

Lack of / poor roads for access to food / essential supplies

Lack of / poor roads for trade / industrialisation / communication

Lack of power / electricity / telecommunications / water for homes / businesses / schools

Security

Tribal warfare / insurgencies / terrorism / bombings

Threat to homes / livelihood

Danger of death

Hinders education

Prevents investment / industrialisation

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(c) Study Fig. 4 again.

(i) Which province has the largest percentage of population over 65? [1]

Punjab

(ii) Compare the age range of Punjab and Balochistan provinces. [2]

For Punjab (reverse for Balochistan)

Fewer under 15 / children / young people

More 15 to 65 / working age / independent

More over 65 / elderly

(d) Use Fig.4 and your own knowledge to explain the advantages and problems caused by the age distribution of either Punjab or Balochistan [6]

For Punjab (reverse for Balochistan)

Fewer children

Advantages

- Reduced demand for / pressure on resources schools / clinics for young
- More chance of education / school places
- Less likelihood of poverty in family

Problems

- Fewer workers / less innovation / fewer unemployed
- Not enough young to look after old

More people of working age

Advantages

- More production / economic growth
- More taxes paid / people earning

Problems

- Fewer job opportunities / more unemployment / lower wages
- More pressure on named resources e.g. healthcare / recreation / public transport / food supply

Larger population of older dependents

Advantages

- Old give good advice / provide family support

Problems

- Old cannot work / do not contribute to economy
- More healthcare / family / social support / homes for elderly / pension needed
- Cost of care / pensions / raised taxes to provide for care / pensions

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(e) To what extent can the birth rate of Pakistan be reduced? Explain your answer. [6]

Possibilities

More education of women / more women in careers (will marry later / have shorter reproductive spans / less desire for children / large families)
 More education on family planning / awareness of [economic] problems caused by high BRs
 Use of family planning / better access to contraception / more family planning programmes / clinics / population policy
 Cheaper contraception
 More hospitals / clinics / better healthcare (lowers infant mortality so less need to replace those who die)
 Approval of family planning by religious leaders
 Raising marriage age
 Banning child labour (so less need for children to work on farms)

Problems

Lack of education / illiteracy
 Lack of empowerment of women to control family size
 Traditions / opposition to contraception
 Lack of medical facilities / investment in family planning programmes
 Traditional beliefs encouraging large families
 Early marriage

[Total: 25]

5 (a) Study Fig. 5, a map showing air routes in Pakistan.

(i) Give the destination of the air routes from Karachi R, S, and T. [3]

R Gwadar
 S Peshawar
 T Lahore

(ii) Describe the pattern of air routes from Islamabad. [3]

In most directions / widely spread
 More / many to the south
 Longer routes to the southwest
 Fewer / a few to the north
 Shorter routes to the north
 None to the coast

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- (b) Explain the benefits of air transport to the people and the local economy of the northern mountains of Pakistan.

[6]

People

Allows movement where lack of / inaccessible by roads / railways / roads blocked by snow
 Faster means of travel
 Enables faster relief after earthquakes / landslides
 Access to hospitals in medical emergencies / transport of medicines
 Supply of imported food items
 Employment e.g. air hostess / pilot / airport staff / hotel staff / waiter / guide

Local economy

Good for transport of perishable goods
 Good for transport of valuable / light goods
 Promotes trade
 Promotes cottage / small-scale industry
 Brings income / foreign exchange / currency from tourism

- (c) (i) What is meant by the term 'cottage industry'?

[1]

Production of saleable goods / industry / valid named industry in own home

- (ii) State and explain three advantages of establishing cottage industries in a rural area.

[6]

Advantages

Employment / self-employment
 Employment of women / whole families
 Income / export earnings
 Meets demands of local market
 Raw materials available locally / cheaply
 Low technology

Explanation

Ability to support family
 Reduces rural-urban migration of otherwise unemployed
 Promotes independence / equality of women
 Raises standard of living / quality of life
 Boosts national economy / GDP / BOP
 Puts money in local economy
 Promotes self-reliance of area
 Saves expensive imports / extra transport costs
 Suitable for poorer people
 Low set-up costs

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- (d) To what extent can small scale and cottage industries be sustainable? Explain your answer. [6]

Possibilities

Can be done in the home (so low set up costs)
 Local raw materials / re-used waste materials (therefore cheap / less need to borrow money)
 Simple technology (so less need for electricity / power supply)
 Small scale causing less damage to environment
 Traditional skills / does not demand education (people can support themselves when other work not available / possible)
 Government support / schemes / loans
 Use of machinery
 Use of electricity (allowing work after dark)
 Provision of other named infrastructure
 Training / education

Problems

Small output / low earnings
 Low profits (therefore difficult to escape poverty)
 Need for 'middle man' which reduces profits
 Poor quality products (so lack of demand / low value)
 Use of child labour (restricting markets / sales)
 Lack of education / telecommunications (which limits marketing skills / limit marketing ability)

[Total: 25]