

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.

- 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?

[3]

Supplies water in the rainy season

Taken from rivers / when rivers high / flood

(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.

- 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 each from the given list.
A raw material; B waste material; C value added material
- 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'.

- 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.

- 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.

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?

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.

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.

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.

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]