Cambridge
O Level

Cambridge International Examinations
Cambridge Ordinary Level

PAKISTAN STUDIES **2059/02**

Paper 2 The Environment of Pakistan **October/November 2016**

MARK SCHEME

Maximum Mark: 75

Published

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge will not enter into discussions about these mark schemes.

Cambridge is publishing the mark schemes for the October/November 2016 series for most Cambridge IGCSE®, Cambridge International A and AS Level components and some Cambridge O Level components.

1 (a) Study Fig. 1 which shows the distribution of monthly rainfall in Karachi.

(i) A For how many months does Karachi experience less than 10 mm rainfall?

B Estimate the total rainfall in Karachi for the period July to September. [2]

A 7 (may simply list the 7 months)

B 173 mm *Tolerance 171–175 mm*

(ii) Describe briefly the climatic region in which Karachi is located. [1]

Arid / coastal (maritime) / warm summer, mild winter

(iii) What is the main source of rainfall in Karachi? From which direction do the rain-bearing winds come? [2]

Source: [Secondary] monsoon
Direction: SW

(iv) Describe the effects of tropical cyclones on cities such as Karachi. [4]

Widespread / great / huge / much / many / a lot of – damage
[Flash] floods / blocked drains / sewers
Lives lost / injuries / people missing
Damage to / loss of homes / belongings / slums
Damage to named transport – e.g. roads, railways, ports, airports so people unable to get to work
Damage to named services – e.g. schools / hospitals / clinics
Damage to workplaces / industry - e.g. the fishing industry destroyed so no source of income or loss of income / disrupts exports
Loss to local economy – e.g. through damaged industry / cost of rebuilding / loss of jobs
Damage to transmission lines / power stations / lack of power
Damage to communication – e.g. lack of telecommunications / telephone lines / internet / social media
Shortage / contamination – drinking water / food causing disease to spread

(b) Study Photographs A and B (Insert) which show parts of the lower Indus valley. Using the photographs and your own knowledge, explain the advantages for agriculture in areas like this. [4]

Near to river / lake / water source (for ease of irrigation / plentiful water for sugar cane or cotton)
[Active / old] flood plain (allows floods to spread over a large area)
River floods regularly / every 1–8 years (e.g. depositing alluvium / providing water and nutrients / which is useful for rice / suitable for Buffalo to wallow idea)
Alluvium / fertile soil (to increase crop yields)
Wide area / floodplain / space / up to 40 km wide (which provides large area of land for intensive cropping)
Flat (e.g. for ease of cultivation / easy to grow crops / easy to use machinery / easy for cattle to graze) (2 + 2)

Maximum of 2 + 2 (mark + development mark)

(c) Study Fig. 2 which is a map showing different forest types in Pakistan.

(i) <u>In the key</u>, name the types of forest shown on the map. [2]

(Top to bottom) Mangrove, Riverain / Bela, Irrigated, Coniferous / Alpine

(Mark as one or two correct 1 mark; three or four correct 2 marks)

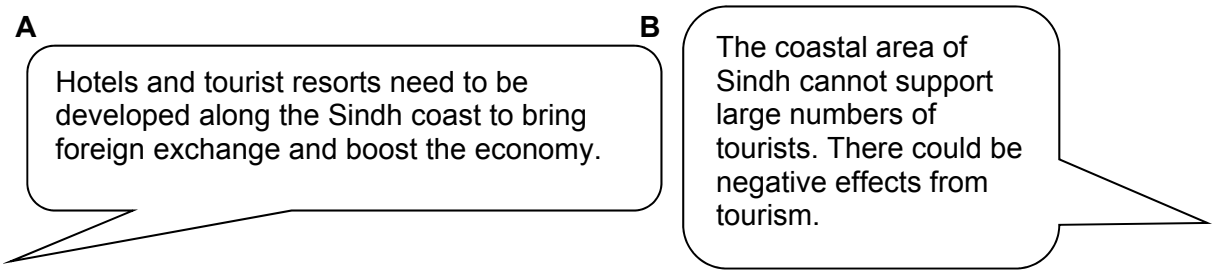
(ii) For <u>one</u> of the forest types you have named in (i):

- **Describe the features of the forest –** *2 marks*
- **Explain the uses or purpose of the trees that grow there –** *2 marks* **[4]**

Description: 2 Marks	Uses / Purpose: 2 Marks	General points: max 1 Mark
MANGROVE • Leaves – broad / drip tips / leathery / pointed • Low / 3–8 m / do not grow tall / general height 3 m • Grow on mudflats • Survive in sea water / salt tolerant • Roots bend into water • Roots filter salt from water	• Firewood • Breeding ground for fish / shrimps • Leaves food / nutrition for fish • Fodder for camels / livestock • Protects from coastal erosion • Furniture • Thatching material • Barrier against floods, tsunami, storms / intensity of earthquakes	• Reduce surface run-off • Prevent floods • Prevent soil erosion • Protect against air pollution / purify air • Protect soil (conserve soil) • Humus to increase soil fertility • Increase rainfall • Timber • Habitats / breeding and conserving areas for birds and wildlife
RIVERAIN / BELA • Shishum / • babul / willow / dhak • Commercial hardwoods	• For furniture / agricultural instruments / construction • Firewood	
IRRIGATED • Blocks of same species shishum / babul / eucalyptus / jhand • Dense / compact	• Firewood • Shade • For construction / fencing	
CONIFEROUS / ALPINE • 30 m • Spruce / fir / deodar / kail / chir • Evergreen • Conical shape / downward	• For furniture / boxes / crates • For paper and pulp • Protection from landslides • Tourism	

sloping branches • Leaves small / narrow / needle-shaped / leathery • Roots wide-spreading / shallow • Survive in low temps	• For scenic beauty • For construction • Firewood	

(d) Read the following two views about the possibilities for tourism in Sindh province:



Which view do you agree with more? Give reasons to support your answer and refer to places or examples you have studied. **[6]**

L3	5–6 marks	6 – ***Developed points explaining both views. Evaluation gives clear support to one view. At least one reference to an appropriate place or example*** 5 – ***Developed points explaining both views. Evaluation gives clear support to one view***
L2	3–4 marks	4 – ***Developed point(s) explaining both views. No evaluation*** 3 – ***Developed point(s) explaining one view***
L1	1–2 marks	2 – ***Simple point(s) addressing both views*** 1 – ***Simple point(s) addressing one view*** 0 – ***No valid response***

Indicative content (development of points or examples in parentheses)

For tourism
Sindh has many tourist attractions
Beaches (Clifton Beach / Sand spit / Hawkes Bay / Paradise Point)
Historical buildings (Quaid-i-Azam Mausoleum / National Museum / Mohatta Palace)
Tourism industry undeveloped / has scope for development / investment
Creates employment (such as drivers / guides / hotel staff)

Against tourism
Sensitive environment (threats to mangrove forests / fishing grounds)
Tourists bring culturally unacceptable behaviour / dress code
Tourists can pollute the environment with noise / litter / oil from jet skis, etc. (which disturbs local residents / looks unsightly / is a danger to wildlife)
Indus delta / most of Sindh coast unsuitable for development (swamps / marshes / creeks / forests)
Karachi needs tourist industry infrastructure (e.g. no passenger ferry terminal)
Declining / lack of tourist numbers
Employment only seasonal
Loss of livelihood due to construction of resorts (e.g. fishermen)

2 (a) Study Fig. 3 which is a map showing the locations where three different non-metallic minerals are extracted in Pakistan.

(i) For any <u>two</u> locations, state the name of the mineral extracted and a use for this mineral. Write your answers in the spaces provided on Fig. 3. [4]

You should choose from the following list: gypsum limestone rocksalt

<u>Location</u>
NW – rocksalt / limestone / gypsum
Central – limestone / gypsum
S – limestone

Mark <u>any</u> <u>two</u> correct

<u>Uses</u>
Rocksalt: cooking / preservation / soda (used in laundries / textiles / tanning) flavouring food
Gypsum: paints / fertilisers / boards / cement / to treat saline soil / plaster of paris
Limestone: for building / cement / bleach / glass / soap / paints / to treat saline soil / bleaching powder / paper

(ii) Using Fig. 3 and your own knowledge, suggest difficulties there may be in getting minerals to export markets. [3]

Heavy / bulky commodities
Expensive to transport
Roads and railways from mining areas poorly developed / or not connected
Mostly extracted far inland / away from ports / Karachi / distance from markets / takes a long time / remoteness
Mountainous / rugged terrain
Theft
Inappropriate / inadequate vehicles to transport minerals

(b) Study Photograph C (Insert).

(i) Name the type of livestock shown in this photograph. [1]

Goat *(only)*

(ii) Why is this type of livestock valuable to the farmer? [3]

Goatskin / leather products
Meat / food
Dairy products e.g. milk, yoghurt, cheese,
Can survive in rugged areas / sparse grazing / costs little or nothing to feed / do not need much looking after / move goats around easily
Dung as manure / fuel
Source of income
Wool

(iii) What environmental problems can be caused by keeping this type of livestock? [2]

Overgrazing / too many livestock animals in too small an area / livestock not moved to different pastures / land becomes more marginal
Soil erosion / desertification / land becoming barren
Damage to young trees / deforestation

(c) (i) Name <u>two</u> of Pakistan's main exports. [2]

Linen / textiles / clothing / men's suits / bed linen
Raw cotton / cotton yarn / cotton products
Carpets / tents /rugs
Rice
Refined petroleum / oil
Cement
Leather / leather products / named leather product e.g. shoes
Sports goods
Surgical instruments
Chemicals

(ii) Read the following article:

> Pakistan produces many goods that could be exported in greater quantities. For a variety of reasons the amount of exports remains low: in 2013 the value of exports was only 13% of GDP.

Explain why it is difficult for Pakistan to sell more of its goods to other countries. [4]

Challenging to compete with foreign / larger companies / producers (accept an example, e.g. Egypt – textiles)
Quality of items (lack of access to / high cost of raw materials / machinery)
Child labour causes barriers to trade (e.g. EU)
Limited management expertise in the export industry
Other countries have trade barriers / tariffs / quotas / restrictions (to protect their own industries / markets)
Relations with some other countries restricts trade
Pakistan government may have trade barriers with other countries (e.g. China – on cheap imported goods)

Maximum of 2 + 2 (mark + development mark)

(d) Chemical fertilisers to help increase agricultural production are one of Pakistan's main imports. These imports are expensive. Read the following two views:

A

> Pakistan should manufacture more of its own chemical fertilisers to reduce the need for importing them.

B

> Pakistan should rely less on chemical fertilisers and reduce the need for importing them by using natural alternatives.

Which view do you agree with more? Give reasons to support your answer and explain why it is important to reduce imports of chemical fertilisers. [6]

L3	5–6 marks	6 – ***Developed points addressing both views and the importance of reducing imports of chemical fertilisers. Evaluation gives clear support to one view*** 5 – ***Developed points addressing both views and the importance of reducing imports of chemical fertilisers. No evaluation***
L2	3–4 marks	4 – ***Two developed point(s) addressing any view*** 3 – ***Developed point addressing any view***
L1	1–2 marks	2 – ***Two simple point(s) addressing any view*** 1 – ***Simple point addressing one view*** 0 – ***No valid response***

Indicative content (development of points in parentheses)

Chemical fertilisers
Modern factories (e.g. Enven-Engro in Daharki, Sindh) are energy efficient / environmentally compliant
Cow dung is in insufficient amounts / used as a fuel in rural areas
Pakistan has large supplies of natural gas (the main raw material for fertiliser) (at Sui)

Natural alternatives
Fertiliser factories use large amounts of fuel (especially natural gas)
Ample source of manure from large livestock sector
Ample source of compost from agricultural waste
Alternative methods of improving soil quality are possible (crop rotation / nitrogen-fixing plants / beans / legumes / avoiding overcropping / multi-cropping)

Importance
The cost of imports (trade / balance of payments deficit / imports>exports) (fertilisers one of top 5 imports / 2% imports)
Chemical fertilisers cause water pollution (agricultural runoff containing chemicals goes into streams / rivers / causes eutrophication)

3 (a) Study Fig. 4 which is a diagram of a coal mine.

(i) Choose <u>two</u> terms from the list below and use them to label the diagram in any <u>two</u> of the spaces provided.

adit cage shaft open-cast seam tunnel [2]

<u>Any two</u> of (left to right): cage, tunnel, shaft, seam, shaft, (type of mine)

(ii) Suggest <u>two</u> reasons for using this type of mine and <u>one</u> disadvantage of using it. [3]

<u>Reasons</u> – *2 marks*

To access seams deep below surface
To access seams of different depths
Can exploit further along the seams
Where seam does not appear at / near surface / hillside

<u>Disadvantage</u> – *1 mark*
<u>More</u> expensive
Greater risk of accident / flooding / gas build-up – credit all reasonable ways that accidents can happen
Dependent on [power for] lift to the surface

(iii) What type of coal is imported by Pakistan and how is it used? [2]

<u>Type</u>: Anthracite / bituminous – *1 mark*
<u>Use</u>: Steel industry / heavy engineering / smelting – *1 mark*

(b) Explain what the fuel CNG is and state the main reasons for using this fuel. [4]

<u>Definition</u> – *Reserve 1 mark*
<u>Compressed</u> natural gas
Gas compressed to 1% volume it has at normal pressure
Methane under high pressure

<u>Reasons</u> – *Reserve 1 mark*
Used (instead of petrol / diesel) in transport / vehicles
Especially buses / rickshaws
(Compared to petrol / diesel) cheaper, cleaner / reduces air pollution, safer
Can be stored / transported in cylinders

(c) Study Fig. 5 which is a graph giving information about different non-renewable fuels used for electricity production in Pakistan over the period 2006–11.

(i) What is meant by the term 'non-renewable fuel'? [2]

An energy source that depletes / runs out / is not being replaced / has fixed reserves / is finite – *1 mark*
With any one example e.g. fossil fuels, wood, coal, oil – *1 mark*

(ii) Which fuel use has increased by the largest amount between 2006 and 2011? [1]

Oil

(iii) Use information from the graph to describe <u>one</u> main difference between the change in gas used for electricity production and the change in oil used for electricity production. [2]

Gas overall decrease: oil <u>overall</u> (throughout / 2006–2011 / over the years) increase
Gas from 36 to 27–28 TWh / by 8–9 TWh: oil from 27–28 to 33–34 TWh / by 6–7 TWh

Reserve 1 mark for use of data with <u>unit</u> (TWh)

(iv) Explain why so little coal is used for electricity production in Pakistan. [3]

Coal mined in Pakistan is unsuitable
Lignite, sub-bituminous to peat
Contains impurities / sulfur
Low heat producing, low carbon content, large amount of ash, does not give out much energy
Coal reserves not exploited due to shortage of funds / technical skills
Not imported (because expensive)
Difficult / expensive to transport around country because bulky
International agreements / pressure to use less coal since is a dirty fuel / causes high emissions of smoke / CO2

(d) Read the following article:

Energy crisis

Industrial growth in Pakistan relies on the availability of energy. Pakistan does not produce enough energy for its needs and therefore spends a lot of its earnings on expensive imports of fuels.

Describe briefly different measures that can be taken to solve the country's energy crisis. To what extent can these measures be successful? [6]

L3	5–6 marks	6 – ***Developed points addressing measures taken and the extent of their success with evaluation*** 5 – ***Developed points addressing measures taken and the extent of their success***
L2	3–4 marks	4 – ***Two developed point(s) addressing any measure*** 3 – ***Developed point addressing any measure***
L1	1–2 marks	2 – ***Two simple point(s) addressing any measure*** 1 – ***Simple point addressing any measure*** 0 – ***No valid response***

Indicative content (development of points in parentheses)

Measures
Moving away from non-renewable / large-scale schemes to renewable / small-scale schemes
E.g. wind, solar, biogas (details / examples)
Investment in large-scale power stations
E.g. nuclear, wind, solar, HEP, gas, coal gas (details / examples)
Energy saving in workplaces / homes
Public / media awareness about not wasting energy resources

Evaluation *(depends on measures)*
Successful
Small-scale schemes can be maintained locally / in rural areas
Given sufficient government / private / foreign investment
Wind – large empty areas of uplands / Makran coast
Solar – lack of cloud (250–300 sunny days per year)
Biogas – large agricultural sector producing manure / plant waste

Unsuccessful
Opposition to new technology / power stations
High cost (leading to domestic / foreign debt)
Changes of government priorities (large projects may be delayed / cancelled)
Limited skills / expertise (in using advanced technology)
Other issues considered higher priority than saving energy (e.g. escaping poverty / increasing levels of education / health)
Hydro in north – far from the major centres of population, transport costs
Green energy is less reliable

4 (a) (i) Describe <u>two</u> human inputs used in the cultivation of cotton. [4]

Labour (people) – picking / ploughing / sowing, etc. / mainly women / paid at low rate
Machinery / appropriate example of machinery (e.g. tractors) – picking / quick process
Pesticides / insecticides – prevent disease and damage to the crop
Fertilisers – larger size of cotton boll / for high yields
Irrigation – 1 month and 3 months after sowing / when rainfall is lacking
HYVs – Nayyab / 78 / B-557 / 149-F / resistance to leaf-curl virus / humidity tolerant / less sensitive to temperature
Capital / investment / finance – purchase machinery, seeds, fertiliser, pay labour
Government loans / subsidies – purchase of machinery, seeds, fertiliser
Knowledge – shape of the land, soil type, aspect, weather patterns
Traditions – farming methods handed down over generations

Maximum of 2 + 2 *(mark for a named input + mark for detail)*

(ii) Study Fig. 6 which is a graph showing the production of raw cotton in Pakistan over the period 1982–2014.

A Describe the main changes in the production of raw cotton between 1982 and 2014. [3]

Overall increase
Overall fluctuation
Significant rises: 82/83 to 91/92 / 94 to 04
Significant falls: 91/92 to 94/95 / 04 to 07/10

Maximum of 1 mark for use of data

B Suggest <u>three</u> reasons for the production levels seen in the years 1991, 2004 or 2011. [3]

Ample / plenty of / no shortage of rainfall / irrigation
No / little rain at harvest, no flooding
No / little frost / mild night temperatures
No / few insect attacks / diseases
Greater use of fertilisers, HYVs
Greater use of insecticides and pesticides
Government incentives / policies e.g. need to produce more food, increased availability of loans

(b) Describe different ways in which governments can support farmers. [4]

Providing / maintaining <u>large</u> irrigation schemes / dams / canals
Providing solutions for waterlogging and salinity, (such as SCARP, tubewell linings, etc.)
Developing HYV seeds (on government farms / collaboration with MNCs)
Plant protection programme / aerial spraying / advising on pesticides and treatment methods
Offering loans (for machinery / tubewells / fertilisers / pesticides / seeds / labour costs)
Veterinary care
Livestock research (on government farms)
Redress after flood / natural disaster
Land reform
Educating / training farmers (on use of HYVs / modern farming methods / sustainable methods / organic farming)

Further development / increased production of fertiliser industries
Providing weather forecasts

(c) Study Fig. 7 which is a table giving information about agriculture in Pakistan over the period 1950–2010.

(i) Describe the relationship between agricultural labour force and cropped area. [2]

As labour force decreases, area increases / negative correlation / inverse relationship - *1 mark*
Use any four statistics to illustrate above statement, e.g. 'Labour was 66% whereas area was 13 ha then later when labour was 45% the area was 23 ha' - *1 mark*

(ii) Suggest reasons for the change over the period 1950–2010 for either labour force or cropped area, as shown in Fig. 7. [3]

Labour force
Mechanisation of farms
Rural to urban migration
Alternative work / occupations / factory work / informal sector work in urban areas
Higher paid work in urban area
Education and learning more / wider skills

Cropped area mark
force and cropped area.
–2011.rs.gs on expensive imports of fuels.
Reclamation of desert
More areas irrigated
Deforestation
Soil improved by fertilisers
Greater demand for food crops / commercial crops

(d) Read the following two views:

A

Pakistan should plant more cash crops on its land to generate export earnings.

B

More land should be used to grow crops to feed the growing population of Pakistan.

Which view do you agree with more? Give reasons to support your answer and refer to examples you have studied. [6]

L3	5–6 marks	6 – ***Developed points explaining both views. Evaluation gives clear support to one view. At least one reference to an appropriate example*** 5 – ***Developed points explaining both views. Evaluation gives clear support to one view***

L2	3–4 marks	4 – ***Developed point(s) explaining both views. No evaluation*** 3 – ***Developed point(s) explaining one view***
L1	1–2 marks	2 – ***Simple point(s) addressing both views*** 1 – ***Simple point(s) addressing one view*** 0 – ***No valid response***

Indicative content (development of points in parentheses)

Cash crops
For
Income (balance of payments / trade deficit / debt / imports greater than exports)
Can bring high profits
Benefits from government incentives (e.g. support prices / development of new seeds)
Access to loans for modern / expensive inputs (e.g. fertilisers / pesticides / machinery / HYVs)
Examples: wheat, rice, cotton, sugar cane, tobacco, oilseeds
Economies of scale on large holdings / single crops

Against
Many farmers cannot afford cost of modern agricultural methods in cash crop farming
Cash crops are monocultures (vulnerable to disease / uses chemical inputs such as fertilisers / pesticides which can pollute water)

Food crops
For
Population growing rapidly (1.6% per annum)
Increasing demand for food
Fertile land becoming scarce (due to waterlogging and salinity / desertification / soil erosion / over cultivation)
Saves expensive imports of food / reduces import bill
Can be grown on subsistence farms / at low cost (using traditional methods / implements / family labour / small holdings)
Examples: rice, millet / bajra, sorghum / jowar, maize, fruit, vegetables

Against
Farmers growing only food crops / subsistence farmers do not make enough income / profit to invest in improving their farms for more output
Development may progress at a slow rate if subsistence farming increases – people will be occupied in providing food and not working in other sectors
Not all families may have access to fertile land
May not have the skills to grow own food
If adverse weather conditions affect many farms – could result in famine – if Pakistan imports food the population can still be fed

5 (a) (i) Study Fig. 8 which is a bar graph giving information about infrastructure spending in Pakistan for 2014–15.

A What is meant by the term 'infrastructure'? [2]

Definition: the basic facilities / services / installations / utilities e.g. electricity, water needed for the functioning / operation of a community / society / enterprise / country / area - *1 mark*
Example: Roads / rail / ports / airports / electricity / gas /power supplies / sewerage / water / telecommunication / phone lines / internet provision – *1 mark*

B Using information from Fig. 8 only, describe problems for infrastructure spending in 2014–15. [3]

Projects cost much more than funds / money available
Total projects Rs7700 ±100 bn, funds available Rs700 ±100 bn – lack of funds overall
Source of funds available – government Rs400 ±100 bn, private Rs150 ±50 bn, foreign assistance Rs 150± 50 bn – government has to rely heavily on private / foreign assistance
Large amount / number of ongoing / new projects
Not all projects can be funded successfully – ongoing projects Rs 4200 ± 100 bn / new projects e.g. new Wapda Rs1500 ± 100 bn, new K-L motorway Rs800 ± 100 bn, new other Rs1200 ±100 bn, new total RS3500 ± 100 bn
Wapda more expensive than money available / Wapda Rs1500 ± 100 bn, funds available Rs 700 ± 100 bn
Money available would only pay for Karachi-Lahore motorway / funds available Rs 700 ± 100 bn, K-L motorway Rs 700 ± 100 bn

Maximum of 1 mark for use of data with Rs bn units. Tolerance ± 100 Rs bn

(ii) Spending on infrastructure projects is lower in some years than others. Suggest reasons why this might be. [3]

Size of debt / trade / balance of payments deficit
Limited financial resources / lack of funds available / limited amount of money collected through taxes
Narrow export base leads to instability in export earnings
Investment is sometimes difficult
Spending cuts to balance budget
No agreements with foreign capital / banks
Change of government / policies
Other national priorities / more pressing priorities than development projects
Funds for natural disaster relief
No large projects in those years / projects may have been completed / maintenance of existing projects prioritised
Less financial aid

(b) Read the following article:

People move to towns and cities from the countryside for many reasons and often in large numbers. Some people return but most stay. As well as changing the lives of the migrants in many different ways, this rural–urban migration also brings change to the urban areas. The effects can be positive or negative.

(i) State two pull factors for the movement of population described in the article. [2]

Higher paid jobs / better working conditions / more opportunity / variety of work
Better / higher education / colleges
More reliable sources of food
Expectation of better quality of life
Greater access to healthcare / hospitals / more hospitals / doctors
Better healthcare / improved medicines / vaccinations
Constant supply / availability of water / electricity / gas / telephone
More entertainment
Better / more housing
Better road / rail / bus links
Better law and order

(ii) Describe the effects on urban areas of the movement of large numbers of people into them. [4]

Greater workforce
Increased competition for jobs / more unemployment
Greater variety of skills
Larger local market
Overcrowding / shortage of housing / shanty development
Overpopulation / densely populated
Shortage of food / lack of food
Strain / pressure on named services e.g. need more schools
Strain on named utilities e.g. water, power
Crime increases / increase in violence
Growth in informal sector
Urban sprawl / unplanned urban growth
Traffic congestion / jams
Increase in social and psychological problems
Air / water / land / noise pollution / dumping untreated waste / damage to aquatic life
Increased incidence of named health hazard – dysentery, cholera / disease spreads more quickly

(c) (i) Name a fishing port on the Sindh coast. [1]

Karachi / Korangi

(ii) Describe activities that are involved in the secondary sector of the fishing industry. [4]

Gutting / washing / cleaning (initial preparation of fish for other processes / ensure hygiene)
Freezing (preserve (freshness) / for export)
Canning (preserve / for export)
Converting to fishmeal (for domestic poultry feed)
Salting (so that the fish is preserved)
Curing (dehydrates the fish so it can last longer / preserve)
Smoking (preserves the fish and gives it a unique taste)
Storage (of fish in refrigerators allows maximum storage time) / refrigerating (keeps the fish in its original state for eating)
Packaging (preparing for transport / preparation for sale / protects the fish from contamination / prevents spoilage)

Boat making / making nets / repairing boats / repairing nets (preparing for the process of catching fish)

Maximum of 2 + 2 (mark + development mark)

(d) To what extent is it possible to develop the fish processing industry further in Pakistan? Give reasons to support your answer and refer to places or examples you have studied. [6]

L3	5–6 marks	6 – ***Developed points explaining both views (possible and not possible). Evaluation gives clear support to one view. At least one reference to an appropriate place or example*** 5 – ***Developed points explaining both views. Evaluation gives clear support to one view***
L2	3–4 marks	4 – ***Developed point(s) explaining both views. No evaluation*** 3 – ***Developed point(s) explaining one view***
L1	1–2 marks	2 – ***Simple point(s) addressing both views*** 1 – ***Simple point(s) addressing one view*** 0 – ***No valid response***

Indicative content (development of points or examples in parentheses)

Possible
Long undeveloped coastline (1050 km / Makran Coast 750 km)
Gwadar being developed as a new port / fish harbour with modern facilities / EPZ (providing base for linkage to central Asian states)
Potential at Pasni / Jiwani / Sur Bandar / Ormara (allowing more fish to be refrigerated / preserved for transport to Karachi)
Government support (provides essential facilities for a fishing port to allow sustainability)
Compliance with EU / international quality standards (to remove import bans / embargoes)
Increase local ice factories / refrigerated storage / packing / canning facilities (to reduce need to transport to Karachi)
Training / education (could provide employment of local educated youth)
Value added products made for export (make more foreign exchange)

Not possible
Limited private sector and/or government investment / expensive to expand / contributes little to exports / focus on other industries (meaning technology and skills are not upgraded)
Many processing plants under capacity / out of operation (showing that the future development is uncertain)
Few skilled workers
Coastline remote / poor transport links (e.g. no railway / small airports / delayed new road links)

Canning factories have been unhygienic and a cause for import bans (to EU / Saudi Arabia)
Unreliable export market (about 30% worldwide)
Low profits (6% of foreign exchange)
Foreign competition
Urban centres prefer fresh fish (so processed fish only to a few large department stores)
Per capita consumption is low (1.6 kg p.a.)