



# Cambridge IGCSE™

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**PAKISTAN STUDIES**

**0448/02**

Paper 2 The Environment of Pakistan

**May/June 2023**

MARK SCHEME

Maximum Mark: 75

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**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.

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This document consists of **28** printed pages.

**Generic Marking Principles**

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptors for a question. Each question paper and mark scheme will also comply with these marking principles.

**GENERIC MARKING PRINCIPLE 1:**

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptors for the question
- the specific skills defined in the mark scheme or in the generic level descriptors for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

**GENERIC MARKING PRINCIPLE 2:**

Marks awarded are always **whole marks** (not half marks, or other fractions).

**GENERIC MARKING PRINCIPLE 3:**

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

**GENERIC MARKING PRINCIPLE 4:**

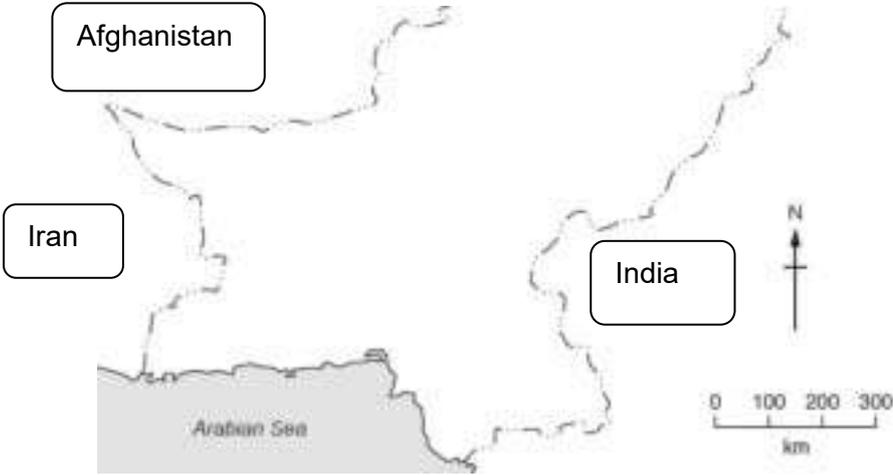
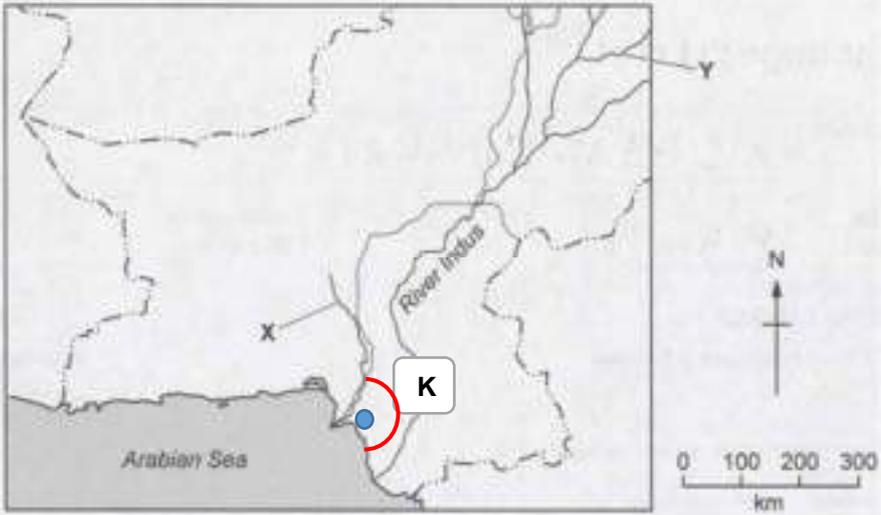
Rules must be applied consistently, e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

**GENERIC MARKING PRINCIPLE 5:**

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

**GENERIC MARKING PRINCIPLE 6:**

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

Question	Answer	Marks
1(a)(i)	<p><b>Study Fig 1.1, a map showing southern Pakistan and surrounding countries.</b></p> <p><b>On Fig 1.1 label the following: Afghanistan, India, Iran. You should write the name in the correct location on the map.</b></p>  <p style="text-align: right;">3 @ 1 mark</p>	3
1(a)(ii)	<p><b>Add a dot and the letter <u>K</u> onto Fig. 1.1 to show the location of Karachi.</b></p>  <p style="text-align: right;">1 @ 1 mark</p>	1
1(a)(iii)	<p><b>Using Fig. 1.1 <u>only</u>, what is the approximate length of Pakistan's coastline? <u>Circle</u> the correct answer.</b></p> <p>1000 km</p> <p style="text-align: right;">1 @ 1 mark</p>	1
1(a)(iv)	<p><b>Name the rivers labelled <u>X</u> and <u>Y</u> on Fig. 1.1.</b></p> <p><b>X:</b> River Hub (Hab) <b>Y:</b> River Ravi</p> <p style="text-align: right;">2 @ 1 mark</p>	2

Question	Answer	Marks
1(b)	<p><b>Suggest <u>four</u> ways in which rivers are important to Pakistan.</b></p> <ul style="list-style-type: none"> <li>• source of water/create reservoirs (domestic use/people to drink)</li> <li>• to provide a source of food/fish (to eat)</li> <li>• for transport (people/goods)</li> <li>• to provide nutrients/alluvium to the soil/flood plain/mangroves</li> <li>• for farming/agriculture/irrigation (of fields/crops)</li> <li>• for livestock/cattle/buffalo to drink/bathe/cool down</li> <li>• fish <u>farming/commercial</u> fishing/aquaculture</li> <li>• <u>named</u> manufacturing industry e.g. cement/textiles</li> <li>• for <u>cooling</u> in power stations/industry</li> <li>• habitat for wildlife/biodiversity/ecosystems</li> <li>• afforestation projects</li> <li>• to produce hydel/hydroelectric power/electricity</li> <li>• to add to scenic beauty to the area (for tourism)</li> <li>• for leisure activities/named example e.g. boating/swimming/photography/fishing</li> <li>• for employment <u>in a named industry</u> e.g. fisherman/farmer</li> </ul> <p style="text-align: right;">4 @ 1 mark</p>	<b>4</b>
1(c)(i)	<p><b>Study Fig. 1.2 (Insert), a photograph showing part of the Karakoram range.</b></p> <p><b>Describe the <u>natural</u> features of the landscape shown.</b></p> <ul style="list-style-type: none"> <li>• mountain(s)/<u>mountain</u> range</li> <li>• high/tall</li> <li>• steep (slopes)/sloping</li> <li>• valley(s)</li> <li>• peak/pyramidal peak/arete</li> <li>• snow/ice/frozen</li> <li>• rugged/jagged/sharp/rocky/barren/(bare)rock/scree/moraine</li> <li>• gullies</li> <li>• glaciers/<u>tongues of ice</u>/<u>rivers of ice</u></li> <li>• confluence</li> </ul> <p style="text-align: right;">4 @ 1 mark</p>	<b>4</b>

Question	Answer	Marks
1(c)(ii)	<p><b>Explain <u>two</u> ways in which the natural topography shown in Fig. 1.2 influences human activities. You should develop your answer.</b></p> <ul style="list-style-type: none"> <li>• mountains/steep slopes/rugged terrain/uneven land/fast flowing rivers make building settlements/roads/railways/telecommunication lines difficult; routes are forced to follow valleys/or use high passes/embankments/cuttings/tunnels/bridges (dev) so transport and communications are limited (dev) so construction is more expensive (dev)</li> <li>• rugged landscape discourages development of large-scale industries; as there is not enough flat land to build on (dev) so most people work in small scale/cottage industries (dev)</li> <li>• <u>high/mountainous areas</u> experience extreme cold/heavy snowfall/are frozen through winter so roads blocked/cut off; people cannot travel to markets (dev) people spend some of the year indoors/can't work outside (dev)</li> <li>• bare rock/scree/thin/barren soils so there are few or no farming opportunities/cannot grow crops; so there is transhumance/seasonal migration (dev) so food is scarce/has to be transported to the area (dev) so farming activity is limited to valleys where landscape is flatter/soils are deeper/fertile (dev)</li> <li>• glaciers/meltwaters feed the rivers so fresh water is provided for farming lower down in the valley; meaning a variety of crops can be grown (dev)</li> <li>• Natural landscape/mountains/slopes attract tourists to visit; which provides employment opportunities (dev) so local people provide accommodation/tours/make souvenirs (dev) to photograph the scenery/for trekking/skiing/climbing (dev) which encourages government to build services/transport infrastructure in the area (dev)</li> <li>• steep slopes/v shape/narrow valleys are ideal for developing hydel power stations; so can produce renewable electricity for industry/homes (dev) which creates employment for local people (dev)</li> </ul> <p><b>Note:</b> Influences can be positive or negative.</p> <p><b>Note:</b> 1 mark for simple point and a further mark for the development of the point. 1 mark for second simple point and a further mark for development of the second point.</p> <p><b>Note:</b> Max. 2 marks if no development. 2 @ 2 marks</p>	<b>4</b>

Question	Answer	Marks
1(d)	<p><b>Water is a valuable resource for the continued sustainable development of Pakistan. Read the following two views about providing water:</b></p> <p><b>A Water pollution is the biggest threat to the continued provision of water supplies.</b></p> <p><b>B A shortage of dams is the biggest threat to the continued provision of water supplies.</b></p> <p><b>Which view do you agree with more? Give reasons to support your answer and refer to examples you have studied. You should consider view A <u>and</u> view B in your answer.</b></p> <p><b>Levels marking</b></p> <p>No valid response <span style="float: right;"><b>0</b></span></p> <p><b>Level 1</b> <span style="float: right;"><b>1–2</b></span>  Simple point referring to one view (1)  Simple points referring to any view (2)</p> <p><b>Level 2</b> <span style="float: right;"><b>3–4</b></span>  Developed point referring to one view only (3)  Developed points referring to both views <i>or</i> developed point and a relevant example (4)</p> <p><b>Level 3</b> <span style="float: right;"><b>5–6</b></span>  Developed points referring to both views with evaluation or relevant example (5)  Developed points referring to both views with evaluation and relevant example (6)</p> <p><b>Content Guide</b></p> <p><b>Agree with view A because:</b></p> <ul style="list-style-type: none"> <li>• untreated sewage/industrial effluent makes water unusable</li> <li>• dumping of waste in rivers is not strictly regulated</li> <li>• regular flooding causes fresh water supply to be contaminated</li> <li>• removing pollution from water is expensive and reduces the money available for water provision infrastructure</li> <li>• etc.</li> </ul> <p><b>Disagree with view A because:</b></p> <ul style="list-style-type: none"> <li>• water pollution can be easily solved/prevented by imposing laws and fines on industries/companies who pollute the water</li> <li>• there are more serious threats to Pakistan’s water supply such as climate change e.g. increased risk of drought/flooding</li> <li>• a bigger threat is from neighbouring countries limiting the water supply from the headwaters</li> <li>• etc.</li> </ul>	<b>6</b>

Question	Answer	Marks
1(d)	<p><b>Agree with view B because:</b></p> <ul style="list-style-type: none"> <li>• rising temperatures increase evaporation from reservoirs so more of them are needed</li> <li>• global warming is melting glaciers in the mountains, more dams are needed to store water in reservoirs</li> <li>• Pakistan needs more water storage capacity to hold heavy rainfall e.g. in monsoon season, so water can be utilised</li> <li>• more reservoirs could alleviate future drought conditions if available supply was stored</li> <li>• more small dams across the country could aid in crop irrigation</li> <li>• it would be very expensive to build more dams/money is needed for other sectors.</li> <li>• etc.</li> </ul> <p><b>Disagree with view B because:</b></p> <ul style="list-style-type: none"> <li>• there are enough dams already, those under construction need to be completed</li> <li>• existing dams are not all in the places where need is greatest therefore they have limited use</li> <li>• silting of reservoirs causes lower capacity making them less worthwhile</li> <li>• water conservation is a better solution than building more dams</li> <li>• conflicts over how water is used is a bigger threat</li> <li>• etc.</li> </ul> <p><b>Examples:</b> could include named dam/pollutant/settlement/river etc. but not named diseases.</p>	

Question	Answer	Marks
2(a)(i)	<p><b>Study Fig. 2.1, a climate graph showing rainfall and temperature for a region of Pakistan.</b></p> <p><b><u>Complete</u> Fig. 2.1 for July using the information below.</b></p> <ul style="list-style-type: none"> <li>• accurate plotting of dot at 36 °C and the line joined up</li> <li>• accurate completion of bar at 5 mm (no need for bar to be shaded)</li> </ul> <p style="text-align: right;">2 @ 1 mark</p>	<b>2</b>
2(a)(ii)	<p><b>Using Fig. 2.1 <u>only</u>, describe the climate shown in the graph.</b></p> <p>Temperature:</p> <ul style="list-style-type: none"> <li>• high temperatures/hot <u>during summer</u></li> <li>• mild temperatures/cool <u>during winter</u></li> <li>• highest temperature in July</li> <li>• highest temperature is 36 °C</li> <li>• lowest temperature in Jan</li> <li>• lowest temperature is 12 °C</li> </ul> <p>Rainfall:</p> <ul style="list-style-type: none"> <li>• arid/dry climate/(very)low/little rainfall</li> <li>• 39 mm rainfall</li> <li>• May/June/Sept/Oct/Nov have no rainfall</li> <li>• most rain falls from December/Jan–April</li> <li>• highest rainfall is in Jan</li> <li>• highest rainfall is 11 mm</li> </ul> <p><b>Note:</b> 1 mark reserved for each of temperature and rainfall</p> <p style="text-align: right;">3 @ 1 mark</p>	<b>3</b>
2(a)(iii)	<p><b>What type of climate region does the graph show? <u>Circle</u> the correct answer.</b></p> <p>arid</p> <p style="text-align: right;">1 @ 1 mark</p>	<b>1</b>

Question	Answer	Marks
2(b)(i)	<p><b>Describe the climate characteristics (rainfall and temperature) of the semi-arid region of Pakistan.</b></p> <p>Temperature:</p> <ul style="list-style-type: none"> <li>• warm(er)/hot(ter)/high(er) temperatures <u>in summer/May–Sept</u></li> <li>• <u>in summer/May–Sept</u> 20–40 °C</li> <li>• cool(er)/mild/moderate <u>winter/Nov–March</u> <b>OR</b> cold(er) in <u>winter/Nov–March</u></li> <li>• <u>in winter/Nov–Mar</u> –5–25 °C</li> </ul> <p>Rainfall:</p> <ul style="list-style-type: none"> <li>• low/sparse/scanty/unreliable rainfall</li> <li>• monsoon rainfall in <u>summer/June–September</u></li> <li>• (western) depression rainfall <u>in winter/December–March</u></li> <li>• (total) 250–600 mm of rainfall</li> <li>• E of the region has higher rainfall/W of region is drier</li> <li>• there is likely to be more evaporation than precipitation</li> </ul> <p><b>Note:</b> 1 mark reserved for each of temperature and rainfall</p> <p style="text-align: right;">4 @ 1 mark</p>	<b>4</b>

Question	Answer	Marks
2(b)(ii)	<p><b>Explain <u>two</u> benefits of the climate for people living in mountain areas in Pakistan. You should develop your answer.</b></p> <ul style="list-style-type: none"> <li>• cool(er) temperatures in summer are more bearable; meaning workers do not suffer heat strokes (dev) allows more diversity of crops to grow (dev) attracts seasonal tourism providing employment (dev)</li> <li>• cool(er) climate allows nuts/fruits (such as apricots) to be grown; which can be sold for income/exported improving the balance of trade (dev)</li> <li>• warmer temperatures in spring melt glaciers which feeds the streams and rivers providing people vital water supplies; which are essential in cottage industries (dev)</li> <li>• (relief) rainfall provides water supply to houses; for domestic uses/for livestock (dev)</li> <li>• rainfall promotes agriculture in valleys/on terraced slopes; food supplies can be produced locally/reduces need to transport food to area (dev)</li> <li>• cool temperatures/snow in the mountains attracts trekkers/climbers so providing locals employment opportunities; offering accommodation in guesthouses/hotels (dev)</li> <li>• ice and snow add to the scenic beauty of the area generating tourism; locals can earn income as mountain guides/working in shops etc. (dev)</li> <li>• ice and snow-capped northern mountains provide a natural border between neighbouring countries; traversing them is difficult so protects locals from possible conflicts (dev)</li> <li>• Below the snowline alpine/coniferous forests grow providing (fuel)wood; reducing the need to import other fuel supplies (dev) providing a supply of timber for building (dev)</li> <li>• Mountainous areas have strong winds allowing wind power generation; this provides electricity for local industries/homes (dev)</li> </ul> <p><b>Note:</b> 1 mark for simple point and a further mark for the development of the point. 1 mark for second simple point and a further mark for development of the second point.</p> <p><b>Note:</b> Max. 2 marks if no development.</p> <p style="text-align: right;">2 @ 2 marks</p>	<b>4</b>
2(c)(i)	<p><b>What is hydel power? Tick (✓) <u>one</u> box below.</b></p> <p>Electricity generated using energy from:</p> <p>fast flowing water</p> <p style="text-align: right;">1 @ 1 mark</p>	<b>1</b>

Question	Answer	Marks
2(c)(ii)	<p><b>Hydel power stations can be found in mountainous areas of Pakistan. Describe how electricity can be generated from hydel power.</b></p> <ul style="list-style-type: none"> <li>• (the force of) <u>fast flowing</u> water is used/water goes through penstock/sluice for <u>faster flow</u></li> <li>• water <u>spins/turns/drives</u> the turbine</li> <li>• a shaft goes into a generator</li> <li>• the shaft spins rapidly (inside a magnetic field in the generator)</li> <li>• <u>the generator</u> produces electricity</li> <li>• the electric current is regulated by a transformer/electricity goes through a transformer</li> <li>• electricity is sent through transmission/power lines (at the required voltage to where it is needed)</li> </ul> <p><b>Note:</b> Credit can be given for points made on an annotated diagram. 4 @ 1 mark</p>	4
2(d)	<p><b>Power sources are vital for economic development in Pakistan.</b></p> <p><b>To what extent can hydel power be relied upon for the future economic development of Pakistan? Give reasons to support your <u>judgement</u> and refer to examples you have studied. You should consider <u>different</u> points of view in your answer.</b></p> <p><b>Levels marking</b></p> <p>No valid response <span style="float: right;"><b>0</b></span></p> <p><b>Level 1</b> <span style="float: right;"><b>1–2</b></span> Simple point referring to one view (1) Simple points referring to any view (2)</p> <p><b>Level 2</b> <span style="float: right;"><b>3–4</b></span> Developed point referring to one view only (3) Developed points referring to both views <i>or</i> developed point and a relevant example (4)</p> <p><b>Level 3</b> <span style="float: right;"><b>5–6</b></span> Developed points referring to both views with evaluation or relevant example (5) Developed points referring to both views with evaluation and relevant example (6)</p> <p><b>Content Guide</b></p> <p><b>Hydel power can be relied upon because:</b></p> <ul style="list-style-type: none"> <li>• hydel power is a renewable source of energy and is sustainable</li> <li>• Pakistan has many mountainous regions with plenty of rainfall and glaciers which can provide adequate supply of water to generate electricity (for industries)</li> <li>• once the reservoirs, hydel power station and power lines have been constructed there are low maintenance costs</li> <li>• can provide a cheaper alternative to fossil fuels</li> </ul>	6

Question	Answer	Marks
2(d)	<ul style="list-style-type: none"> <li>• Pakistan needs to continue to invest in renewable sources of energy as fossil fuels are running out/remaining reserves are expensive to mine</li> <li>• fossil fuels cost a lot to import</li> </ul> <p><b>Hydel power cannot be relied upon because:</b></p> <ul style="list-style-type: none"> <li>• hydel is reliant on rainfall/fast flowing rivers so when reservoirs or rainfall is low not enough power can be generated for continuous supply</li> <li>• there will be reduced rainfall due to climate change/rainfall cannot be relied upon so need a back-up of fossil fuels to ensure there are no power shortages (in cities)</li> <li>• it is expensive to provide/build the infrastructure for producing hydel power, such as dams and power lines</li> <li>• there is a mismatch between where the hydel power can be produced and where it is needed/transmission lines have to cover long distances</li> <li>• other named power sources would be <u>more</u> cost effective/reliable because e.g. nuclear power provides a continuous supply</li> </ul> <p><b>Examples:</b> could include named dam/hydel plant/region/river/ WAPDA/project in construction etc.</p>	

Question	Answer	Marks
3(a)(i)	<p><b>Study Figs. 3.1, 3.2, 3.3 and 3.4 (Insert), photographs showing four different crops grown in Pakistan.</b></p> <p><b>Identify the type of crop shown in each photograph.</b></p> <p>Fig. 3.1 = rice Fig. 3.2 = sugar cane Fig. 3.3 = cotton Fig. 3.4 = wheat/barley</p> <p style="text-align: right;">4 @ 1 mark</p>	<b>4</b>
3(a)(ii)	<p><b>Using Fig. 3.1 (Insert) <u>only</u>, describe the characteristics of the crop shown.</b></p> <ul style="list-style-type: none"> <li>• <u>leaves</u> are long/straight/narrow/spiky/pointed</li> <li>• small seeds/grains</li> <li>• <u>stalks/grains/seeds</u> are drooping/hanging/bending</li> <li>• <u>grains</u> are clustered together/growing along stalks</li> <li>• <u>grains</u> are covered by chaff/husks</li> <li>• <u>leaves</u> are (bright) green/yellow/<u>seeds/grains</u> are green/yellow/cream/white/<u>chaff</u> is cream/white (colour max 1 mark)</li> </ul> <p style="text-align: right;">2 @ 1 mark</p>	<b>2</b>
3(b)(i)	<p><b>Study Fig. 3.5, a map showing sheep-rearing areas in southern Pakistan.</b></p> <p><b>Using Fig. 3.5 <u>only</u>, describe the distribution of the main sheep-rearing areas.</b></p> <ul style="list-style-type: none"> <li>• uneven/scattered/widespread distribution</li> <li>• in <u>all</u> provinces <u>on the map/on Fig 3.5/ all</u> named provinces</li> <li>• along international <u>boundaries/border</u></li> <li>• along named province <u>boundaries/border</u>: Balochistan &amp; Sindh/ Balochistan &amp; Punjab/Punjab &amp; Sindh</li> <li>• Balochistan has the largest <u>main area</u>/Sindh has the smallest <u>main area</u></li> <li>• central/mid/N/NE Balochistan</li> <li>• SE(tip) of Sindh/<u>small area</u> in N/NE Sindh</li> <li>• W/NW/SW of Punjab</li> <li>• found between 25–31°N, 61–71°E <u>in Balochistan</u> found between 24–28°N, 69–71°E <u>in Sindh</u> found between 29–31°N, 69–73°E <u>in Punjab</u></li> </ul> <p><b>Note:</b> latitude and longitude = max 1 mark.</p> <p style="text-align: right;">3 @ 1 mark</p>	<b>3</b>

Question	Answer	Marks
3(b)(ii)	<p><b>Explain <u>two</u> reasons why sheep are reared in the regions shown in Fig. 3.5. You should develop your answer.</b></p> <ul style="list-style-type: none"> <li>• provide a wide range of useful products; such as <u>named example (milk/cheese/wool/meat/skin etc.)</u> (dev)</li> <li>• are profitable/low cost to rear/source of income/reared for commercial purposes; the wool is used in manufacture of textiles/there is a high demand for meat in the domestic/export markets (dev)</li> <li>• the meat is in high demand for religious/cultural celebrations; they are sacrificed in large numbers at festivals such as Eid-al-Adha/their meat is prized above other meats for special/celebration meals (dev)</li> <li>• are relatively low cost to keep/subsistence farmers rear sheep; meat/milk used to feed their families/use the wool to make clothes (dev)</li> <li>• can be nomadic/are often reared by nomadic people; they are relatively fast to herd/can move over the terrain easily (dev)</li> <li>• can survive in mountainous areas/on slopes/uneven/rough/marginal land; because they are sure footed/they can be reared on land not wanted for other more profitable uses/named land use examples (dev)</li> <li>• are adaptable/can survive in many climate conditions; can grow thicker coats for survival in cold areas/do not require much water in hot climates/do not require a lot of care from farmers (dev)</li> <li>• can graze on many types of vegetation/grass/shrubs; can roam over wide areas to find grazing (dev)</li> </ul> <p><b>Note:</b> 1 mark for simple point and a further mark for the development of the point. 1 mark for second simple point and a further mark for development of the second point.</p> <p><b>Note:</b> Max. 2 marks if no development.</p> <p style="text-align: right;">2 @ 2 marks</p>	<b>4</b>
3(c)(i)	<p><b>Define ‘cash crop farming’.</b></p> <p>Farming that produces crops for sale/to make money/to be sold for profit/for commercial purposes.</p> <p style="text-align: right;">1 @ 1 mark</p>	<b>1</b>
3(c)(ii)	<p><b><u>Complete</u> the diagram to show how cash crop farming operates as a system. You should give one example of: an input; a process: an output.</b></p> <p><b>inputs:</b> money/capital/labour/tools/machinery/named example of tool or machinery/seeds/fertiliser/pesticide/insecticide/land/soil/climate/water/rainfall/sunshine</p> <p><b>processes:</b> ploughing/planting/sowing/transplanting/weeding/spraying / irrigation/picking/harvesting/winnowing/threshing</p> <p><b>outputs:</b> crops/named example crops/by-products/profit</p> <p style="text-align: right;">3 @ 1 mark</p>	<b>3</b>

Question	Answer	Marks
3(c)(iii)	<p><b>Suggest <u>two</u> ways agricultural production in Pakistan could be increased.</b></p> <p>(By increased use of/access to:)</p> <ul style="list-style-type: none"> <li>• GM/high-yielding varieties(HYVs)/drought resistant seeds</li> <li>• manure/(chemical) fertilisers/pesticides/insecticides</li> <li>• <u>modern</u> irrigation systems or named examples e.g. sprinkler</li> <li>• reducing water pollution/water conservation</li> <li>• crop rotation/multi-cropping</li> <li>• machinery/mechanisation</li> <li>• (farmer) education/training/increased literacy rates</li> <li>• subsidies/loans</li> <li>• lowering prices/seed banks</li> <li>• land consolidation/reform/reclamation/larger area/fields</li> <li>• treating/preventing waterlogging/salinity</li> <li>• tree planting for shade/to prevent soil erosion</li> </ul> <p style="text-align: right;">2 @ 1 mark</p>	<b>2</b>
3(d)	<p><b>Pakistan has a large agricultural sector which contributed around 20 per cent to its Gross Domestic Product (GDP) in 2020.</b></p> <p><b>Evaluate the opportunities for, and challenges of, continuing to develop agriculture sustainably in Pakistan. Give reasons to support your <u>judgement</u> and refer to examples you have studied. You should consider <u>different</u> points of view in your answer.</b></p> <p><b>Levels marking</b></p> <p>No valid response <span style="float: right;"><b>0</b></span></p> <p><b>Level 1</b> <span style="float: right;"><b>1–2</b></span>  Simple point referring to one view (1)  Simple points referring to any view (2)</p> <p><b>Level 2</b> <span style="float: right;"><b>3–4</b></span>  Developed point referring to one view only (3)  Developed points referring to both views or developed point and a relevant example (4)</p> <p><b>Level 3</b> <span style="float: right;"><b>5–6</b></span>  Developed points referring to both views with evaluation or relevant example (5)  Developed points referring to both views with evaluation and relevant example (6)</p>	<b>6</b>

Question	Answer	Marks
3(d)	<p><b>Content Guide</b></p> <p><b>Opportunities for developing agriculture sustainably include:</b></p> <ul style="list-style-type: none"> <li>• rich fertile soil along e.g. Indus plain produces high output/reduces need for fertilisers as sediments are deposited naturally</li> <li>• the use of fertilisers natural and chemical would increase output/reduce the need for imported food/could export more crops/increase balance of trade</li> <li>• land reforms would improve output by consolidating holdings and protecting the rights of tenants/breaking the monopoly of landlords/thus increasing the land available for farming/increasing production</li> <li>• use of machinery should increase which means that farming can be intensified/more produced on same amount of land</li> <li>• Pakistan has the potential to improve output further through education/training/skills to enable farmers to use new technology/machinery/techniques/irrigation methods</li> </ul> <p><b>Challenges of developing agriculture sustainably include:</b></p> <ul style="list-style-type: none"> <li>• majority of quality, useable farmland is already in production</li> <li>• increasing population is increasing demand for land for other uses such as urbanisation/transport/industry</li> <li>• crops are threatened by pests and diseases, whole crops can be wiped out making farming unsustainable</li> <li>• farmers may not be able to afford pesticides/insecticides, they are harmful to the environment</li> <li>• farmers may not be able to afford HYV seeds, so may not produce enough crops to sell/can only produce enough for themselves</li> <li>• many farmers have small holdings/subsistence farmers which means that only small amounts of food are produced/does not help the future economic development of the country</li> <li>• some farmers continue to use traditional methods which does not improve the quality or quantity of crops produced, education/training for farmers but some resistant to using modern techniques</li> </ul> <p><b>Examples:</b> could include named regions/crops/irrigation equipment/named machinery/types of seed e.g. IR8/land reform policies etc.</p>	

Question	Answer	Marks												
4(a)(i)	<p><b>Study Fig. 4.1, a diagram showing the intended destination for the main products of some of Pakistan’s major industries.</b></p> <p><b><u>Complete</u> Fig. 4.1 by using arrows to match the type of industry-with the correct product and its main destination. An example has been done for you.</b></p> <table border="1" data-bbox="395 483 1236 846"> <thead> <tr> <th>type of industry</th> <th>product</th> <th>destination</th> </tr> </thead> <tbody> <tr> <td>sports goods</td> <td>footballs/cricket bats</td> <td>export market</td> </tr> <tr> <td>iron and steel</td> <td>metal rolls/bars/tubes/ wires/sheets</td> <td>domestic market</td> </tr> <tr> <td>surgical instruments</td> <td>needles/scalpels scissors</td> <td>domestic and export market</td> </tr> </tbody> </table> <p style="text-align: right;">3 @ 1 mark</p>	type of industry	product	destination	sports goods	footballs/cricket bats	export market	iron and steel	metal rolls/bars/tubes/ wires/sheets	domestic market	surgical instruments	needles/scalpels scissors	domestic and export market	<b>3</b>
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4(a)(ii)	<p><b>State <u>one</u> city where each of the following industries takes place in Pakistan.</b></p> <ul style="list-style-type: none"> <li>• sports goods – Sialkot</li> <li>• iron and steel – Faisalabad / Gujranwala / Islamabad / Jacobabad / Karachi / Lahore / Quetta / Peshawar / Rawalpindi / Taxila</li> <li>• surgical instruments – Sialkot/Lahore</li> </ul> <p style="text-align: right;">3 @ 1 mark</p>	<b>3</b>												
4(a)(iii)	<p><b>To which sector do the types of industry named in <u>(a)(i)</u> belong? <u>Circle</u> the correct answer.</b></p> <p>secondary</p> <p style="text-align: right;">1 @ 1 mark</p>	<b>1</b>												

Question	Answer	Marks
4(b)(i)	<p><b>Study Fig. 4.2 (Insert), a photograph taken inside a steel mill in Pakistan.</b></p> <p><b>Using Fig 4.2 <u>only</u>, describe <u>three</u> features of the steel mill shown.</b></p> <ul style="list-style-type: none"> <li>• large/wide building/factory</li> <li>• <u>high</u> ceiling</li> <li>• machinery/mechanised/high tech</li> <li>• rollers</li> <li>• metal/steel <u>plate</u>/steel bar(s)/steel sheet/rolled steel</li> <li>• staircases/walkways/bridge</li> <li>• barriers/railings</li> <li>• windows</li> <li>• lights/spotlights/floodlights/strip lights/electricity/power supply</li> <li>• offices/<u>control</u> room (to the side)</li> <li>• <u>two/three</u> storeys/floors/levels</li> <li>• container(s)/<u>storage</u> box</li> </ul> <p style="text-align: right;">3 @ 1 mark</p>	<b>3</b>
4(b)(ii)	<p><b>Study Fig. 4.3, a line graph showing changes in the percentage share of total employment by employment sector in Pakistan between 2012 and 2020.</b></p> <p><b><u>Complete</u> Fig. 4.3 by plotting the percentage share employed in the secondary sector in 2018 and the tertiary sector in 2020 using the information below.</b></p> <p>accurate completion of secondary line: 2018 – 25%</p> <p>accurate completion of tertiary line: 2020 – 38%</p> <p style="text-align: right;">2 @ 1 mark</p>	<b>2</b>

Question	Answer	Marks
4(b)(iii)	<p><b>Suggest reasons for the changes in the percentage share of total employment for each employment sector shown in Fig. 4.3.</b></p> <ul style="list-style-type: none"> <li>• <b>(primary decline)</b> more mechanised/mechanisation/manual work reduced loss of agricultural land importing more food/raw materials rural to urban migration low wages</li> <li>• <b>(secondary remains steady)</b> lack of investment in industries manufactured goods are imported some new factories/mills employ few people due to machines</li> <li>• <b>(secondary slight increase)</b> foreign/multi-national investment some new manufacturing industries need workers more educated/skilled/trained/literate population people attracted to jobs by higher wages/better conditions</li> <li>• <b>(tertiary industry increased)</b> increased high technology/ICT/research and development increased call centre/banking/insurance jobs more international/domestic tourism increasing <u>demand/growing population</u> for more services/shops / entertainments/leisure more disposable income to spend on services more educated/skilled/trained/literate population people attracted to jobs by higher wages/better conditions</li> </ul> <p><b>Note:</b> 1 mark per section. No credit for the same idea used in more than one sector.</p> <p style="text-align: right;">3 @ 1 mark</p>	3

Question	Answer	Marks
4(c)	<p><b>Explain <u>two</u> factors influencing the location of the iron and steel industry in Pakistan. You should develop your answer.</b></p> <ul style="list-style-type: none"> <li>• close to raw materials (e.g. iron ore/manganese); as raw materials are expensive/bulky to transport (dev)</li> <li>• in areas where raw materials are accessible by mining; complex extraction requires more money/highly skilled workforce/expensive machinery (dev)</li> <li>• site of steel mill must be flat land; this reduces construction costs/level rollers required for steel sheet production (dev)</li> <li>• site of steel mill must have area of large/cheap land available; for future expansion/for storage (dev)</li> <li>• mine/mill needs a reliable/available power supply; such as a power station/named example e.g. Karachi nuclear plant/connected to national grid/load shedding will slow production (dev)</li> <li>• needs a close water supply/river/sea; to be used as a coolant (dev)</li> <li>• good transport links/routes are required nearby; such as roads/railways for ease/speed of transporting raw materials/finished products (dev)</li> <li>• coastal location for steel mills; to allow access to port/import of raw materials (dev)</li> <li>• near to towns/cities/large population/densely populated areas; for abundant/skilled/unskilled labour/where workers can commute (dev)</li> <li>• steel mill away from <u>housing/residential</u> area; due to noise/air pollution (dev)</li> <li>• near to manufacturing industries/named example e.g. car assembly plants/steel girders; for sales/markets for goods/because they use the iron/steel to make their finished product (dev)</li> </ul> <p><b>Note:</b> 1 mark for simple point and a further mark for the development of the point. 1 mark for second simple point and a further mark for development of the second point.</p> <p><b>Note:</b> Max. 2 marks if no development. 2 @ 2 marks</p>	<b>4</b>

Question	Answer	Marks
4(d)	<p><b>The informal sector plays an important role within many of Pakistan’s major industries.</b></p> <p><b>To what extent does informal labour benefit the economic development of Pakistan? Give reasons to support your <u>judgement</u> and refer to examples you have studied. You should consider <u>different</u> points of view in your answer.</b></p> <p><b>Levels marking</b></p> <p>No valid response <span style="float: right;"><b>0</b></span></p> <p><b>Level 1</b> <span style="float: right;"><b>1–2</b></span>  Simple point referring to one view (1)  Simple points referring to any view (2)</p> <p><b>Level 2</b> <span style="float: right;"><b>3–4</b></span>  Developed point referring to one view only (3)  Developed points referring to both views <i>or</i> developed point and a relevant example (4)</p> <p><b>Level 3</b> <span style="float: right;"><b>5–6</b></span>  Developed points referring to both views with evaluation or relevant example (5)  Developed points referring to both views with evaluation and relevant example (6)</p> <p><b>Content Guide</b></p> <p><b>Informal labour benefits economic development because:</b></p> <ul style="list-style-type: none"> <li>• informal labour plays an important role in many industries e.g. textile industry/sports goods etc. allowing export products to be manufactured</li> <li>• informal sector employs large numbers of people providing them income, to spend on other goods and services</li> <li>• allows people with little education/skills to gain income so can reduce number of homeless/extreme poverty</li> <li>• skills in informal work are handed down through generations so government have less need to invest in education</li> <li>• informal industry makes use of local raw materials/waste products from other industries, therefore reduces cost of/need for imports</li> <li>• tourists spend money on informally made traditional craft products contributing to GDP</li> <li>• informal jobs can fit work around other commitments providing extra income for people, this income can be spent in other sectors</li> </ul> <p><b>Informal labour may not benefit economic development because:</b></p> <ul style="list-style-type: none"> <li>• if formal instead of informal labour was used there would be less unemployment or under-employment/more taxes paid to government so more investment could take place/examples of how taxes could be used to further develop the country</li> <li>• informal labour is better for industries because it reduces costs in paying taxes/can pay lower wages <b>but</b> this negatively affects the economy overall</li> </ul>	<b>6</b>

Question	Answer	Marks
4(d)	<ul style="list-style-type: none"><li>• do not have to maintain a contract/regular hours, informal labour is only used temporarily to fill gaps to meet demand so the contribution to the economy fluctuates</li><li>• it may limit international trade – non-standardised goods/poor working conditions/some areas of the informal sector use child labour</li><li>• formal labour could increase international trade/meet international standards to increase value of goods/exports</li></ul> <p><b>Examples</b> could include named industries e.g. brick kiln/surgical instruments, craft products e.g. embroidery/shoes etc.</p> <p style="text-align: right;">3 @ 1 mark</p>	

Question	Answer	Marks
5(a)(i)	<p><b>Study Fig. 5.1 (Insert), a map showing part of the urban area of Islamabad.</b></p> <p><b>Using Fig. 5.1 <u>only</u>, describe the location of the ‘National Institute of Health’.</b></p> <ul style="list-style-type: none"> <li>• on the outskirts/edge/east <u>of</u> Islamabad/built up/urban area/city</li> <li>• along/on/accessed via Park Road</li> <li>• near/close to the following named features: Rawal Lake Rawal Town Korang River Jinnah Stadium Shakarparian Park Jinnah Convention centre Park Road</li> <li>• direction from any named feature: NE of Margalla Town/Pakistan Airforce Base Nur Khan E/ENE of Rawal Town E of Shakarparian Park E/ESE of Jinnah Stadium/Fatima Jinnah Park SE of Margalla Hills/Rawal Lake/President’s House/Islamabad Zoo/Faisal Mosque/Jinnah Convention Centre S/SW of Quaid-i-Azam University</li> <li>• distance in km from any named feature: 1.5–5 Rawal Lake 2.5–4.5 Rawal Town 3.5–6.5 Margalla Town 4.5–5.5 Jinnah Convention Centre 4.5–7.5 Shakarparian Park 5–6.5 Jinnah Stadium 6–9 South of Quaid-i-Azam University 7–9 President’s House 8–11 Pakistan Air Force Base Nur Khan 11–15 Margalla Hills 10–12.5 Islamabad Zoo 11–12.5 Faisal Mosque 11–13.5 Fatima Jinnah Park</li> </ul> <p style="text-align: right;">3 @ 1 mark</p>	3
5(a)(ii)	<p><b>Using Fig. 5.1 <u>only</u>, identify <u>two</u> areas used for leisure and recreation.</b></p> <ul style="list-style-type: none"> <li>• parks/open spaces (in key)</li> <li>• (main) commercial area (in key)</li> <li>• Named features: (max 2) Jinnah Convention centre / Fatima Jinnah Park/Korang River /Islamabad Zoo/Jinnah Stadium/Margalla Hills/Rawal Lake/ Shakarparian Park/Quaid-i-Azam University</li> </ul> <p style="text-align: right;">2 @ 1 mark</p>	2

Question	Answer	Marks
5(a)(iii)	<p><b>Fig. 5.1 shows an area around the edge of Islamabad that could be used for future development.</b></p> <p><b>Suggest <u>three</u> ways in which this area could be developed for leisure and tourism.</b></p> <ul style="list-style-type: none"> <li>• hotels/guest houses/campsite</li> <li>• restaurants/cafes</li> <li>• shops/mall/markets</li> <li>• parks/open space/picnic area</li> <li>• taxis/car hire facilities/bus station</li> <li>• museums/theatres/cinema</li> <li>• wildlife centres/zoo</li> <li>• sports ground/gym/stadium/racetrack/go-karting track/skatepark</li> <li>• amusement park/theme park/water park/boating <u>lake</u></li> <li>• viewing point/observation tower</li> </ul> <p style="text-align: right;">3 @ 1 mark</p>	<b>3</b>
5(b)(i)	<p><b>Define ‘death rate’.</b></p> <p>The number of deaths/people who die <u>per 1000 people per year</u></p> <p style="text-align: right;">1 @ 1 mark</p>	<b>1</b>

Question	Answer	Marks
5(b)(ii)	<p><b>Explain <u>two</u> ways in which death rates can be reduced in Pakistan. You should develop your answer.</b></p> <ul style="list-style-type: none"> <li>• (improved) medical/health facilities/medical staff; so there are fewer people per doctor/increased access to healthcare/people can be treated quickly/disease and illness diagnosed and treated (dev)</li> <li>• (more) vaccination programmes e.g. cholera/covid-19/access to medicines e.g. antibiotics/malaria tablets; reduce death from disease/reduces infant mortality rates (dev)</li> <li>• (improved) sanitation/access to clean water/flushing toilets/waste disposal/sewerage system/high quality housing; to avoid water borne disease/allows people to wash hands/surfaces/electricity/heating or other examples reduces risks of diseases (dev)</li> <li>• (health) education/literacy e.g. importance of hygiene/about handling food/about alcohol/smoking/how diseases/viruses are spread/health information advertisements; leads to healthier lifestyles/to make people aware of how to keep fit and healthy/people seeking medical care when needed (dev)</li> <li>• mechanisation/improvements in agriculture; increases food supply/prevents malnutrition/famine (dev)</li> <li>• <u>improved</u> diets/<u>healthier</u> diets/increasing food production; examples of improvements in agriculture/people not eating too many calories/increasing calorific intake/which helps build healthy immune system (dev)</li> <li>• exercising regularly; helps to maintain a healthy body/lowers risk of heart disease etc (dev)</li> <li>• <u>increasing</u> incomes; to be able to afford higher quality housing/can afford medication/treatment (dev)</li> <li>• legislation/(health and safety) regulations/building regulations/<u>air</u> and <u>water</u> pollution controls/smoking legislation; fewer people doing dangerous work/less likely to be killed in accidents/less destruction in natural disasters/safer/healthier environments (dev)</li> </ul> <p><b>Note:</b> 1 mark for simple point and a further mark for the development of the point. 1 mark for second simple point and a further mark for development of the second point.</p> <p><b>Note:</b> Max. 2 marks if no development. 2 @ 2 marks</p>	4

Question	Answer	Marks
5(b)(iii)	<p><b>Life expectancy is the average number of years a person is likely to live from birth.</b></p> <p><b>Suggest <u>two</u> ways that an increasing life expectancy could benefit Pakistan.</b></p> <ul style="list-style-type: none"> <li>• more workers/economically active people <u>producing goods/services/contributing to the economy/increasing GDP</u></li> <li>• more workers to <u>provide taxes to government</u></li> <li>• people can work for longer so build more financial security/pensions/savings</li> <li>• people can be independent/self-sufficient to an older age/not need to be cared for by younger adults</li> <li>• older generation can pass down experience/skills/knowledge</li> <li>• older generation can look after (grand)children/allow parents to work/do voluntary work</li> <li>• reduced infant mortality/fewer child deaths increases <u>future</u> workforce</li> </ul> <p style="text-align: right;">2 @ 1 mark</p>	<b>2</b>
5(c)	<p><b>Describe why seasonal migration occurs in Pakistan.</b></p> <ul style="list-style-type: none"> <li>• transhumance is practised/farmers move their flocks to the <u>cooler</u> highlands in summer/move their flocks to the <u>warmer</u> plains/lowlands in winter</li> <li>• nomadic farmers move to cities to sell livestock in markets/move to seek new grazing land for their animals</li> <li>• water shortages due to seasonal drought</li> <li>• lack of food/food shortages e.g. in summer due crop failure</li> <li>• to avoid extreme cold/ice/snow in winter which make conditions dangerous/roads are blocked/mountain areas are isolated</li> <li>• unbearable heat so people move to higher/cooler/northern areas in summer</li> <li>• monsoon/seasonal flooding, e.g. along the River Indus</li> <li>• lack of work e.g. in winter due to heavy snowfall</li> <li>• seasonal work in tourism/agriculture/manufacturing e.g. cotton mills; people move to find another job after it ends</li> <li>• moving for education/during term time/for the academic year</li> </ul> <p style="text-align: right;">4 @ 1 mark</p>	<b>4</b>

Question	Answer	Marks
5(d)	<p><b>Physical and social factors contribute to variations in population density.</b></p> <p><b>Assess the importance of these factors in causing differences in population density between provinces / administrative areas in Pakistan.</b></p> <p><b>Give reasons to support your <u>judgement</u> and refer to examples you have studied. You should consider <u>different</u> points of view in your answer.</b></p> <p><b>Levels marking</b></p> <p>No valid response <span style="float: right;"><b>0</b></span></p> <p><b>Level 1</b> <span style="float: right;"><b>1–2</b></span>  Simple point referring to one view (1)  Simple points referring to any view (2)</p> <p><b>Level 2</b> <span style="float: right;"><b>3–4</b></span>  Developed point referring to one view only (3)  Developed points referring to both views <i>or</i> developed point and a relevant example (4)</p> <p><b>Level 3</b> <span style="float: right;"><b>5–6</b></span>  Developed points referring to both views with evaluation or relevant example (5)  Developed points referring to both views with evaluation and relevant example (6)</p> <p><b>Content Guide</b></p> <p><b>Physical factors:</b></p> <p><b>Reasons why some administrative areas have a higher population density include:</b></p> <ul style="list-style-type: none"> <li>• there is more flat land available for building on</li> <li>• the climate is favourable for growing crops – no climate extremes such as too cold or too dry</li> <li>• there is a plentiful supply of fresh water for agricultural, domestic and industrial use</li> <li>• soils are fertile so a variety of crops can be grown</li> </ul>	<b>6</b>

Question	Answer	Marks
5(d)	<p><b>Reasons why some administrative areas have a lower population density include:</b></p> <ul style="list-style-type: none"> <li>• steep slopes e.g. Gilgit-Baltistan which makes building settlements/roads/railways/airports difficult and thus these areas are inaccessible</li> <li>• low temperatures/ice and snow make areas unfavourable for living in and difficult to rear animals or grow crops</li> <li>• high temperatures and low rainfall in the desert areas e.g. Balochistan make it difficult to live there</li> <li>• infertile soils make growing a wide variety of crops difficult</li> <li>• regular flooding deters people from settling</li> </ul> <p><b>Social factors: (accept socio-economic factors)</b></p> <p><b>Reasons why some administrative areas have a higher population density include:</b></p> <ul style="list-style-type: none"> <li>• good quality, brick-built houses with electricity and clean running water e.g. people want to live in Karachi/Islamabad etc.</li> <li>• investment in education with a variety of schools from primary up to university level especially in the large cities attracts families</li> <li>• there is a wide variety of healthcare provision such as specialist clinics and hospitals, people want to live/work close to services</li> <li>• a variety of employment opportunities in all economic sectors or named examples of job types attracts a large population</li> <li>• higher wages tend to be paid in the cities, people live close to workplaces</li> <li>• MNC's/businesses or named examples offer employment to a large number of people, companies set up where there are large population centres and even more people are attracted</li> </ul> <p><b>Reasons why some administrative areas have a lower population density include:</b></p> <ul style="list-style-type: none"> <li>• less people so fewer schools/hospitals/services are provided</li> <li>• business/industry and investors favour cities, there are fewer of these in Balochistan/KPK/Gilgit-Baltistan so less investment and fewer jobs available</li> <li>• narrow range of job opportunities mostly in primary sector such as mining/farming which are lower paid/more risky/less attractive</li> </ul> <p><b>Examples:</b> could include named areas/regions/provinces/cities, named rivers, mountain ranges.</p> <p><b>Guidance:</b> Punjab and Sindh have a higher population density; KPK, Balochistan and Gilgit-Baltistan have a lower population density.</p>	