



# Cambridge IGCSE™

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**PAKISTAN STUDIES**

**0448/02**

Paper 2 The Environment of Pakistan

**May/June 2022**

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 **26** 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 of southern and western Pakistan. Name landform <u>U</u> and city <u>V</u> shown in Fig. 1.1.</b></p> <p>U = Safed Koh/Spin Ghar/Waziristan Hills</p> <p>V = Karachi</p> <p style="text-align: right;">2 @ 1 mark</p>	<b>2</b>
1(a)(ii)	<p><b>Suggest <u>two</u> reasons why it may be difficult to develop a large airport on the Balochistan Plateau.</b></p> <ul style="list-style-type: none"> <li>• hilly/mountainous</li> <li>• uneven land topography/rough/rugged/rocky</li> <li>• desert/sandy/lack of water/hot/dry/arid/barren</li> <li>• sparsely populated/low population/far from large settlements</li> <li>• lack of labour/workers</li> <li>• lack of customers/lack of demand</li> <li>• local resistance</li> <li>• remote/difficult to access/few roads/no roads</li> <li>• partial/poor/no electricity/power supply</li> <li>• partial/poor/no communications/phone/internet</li> <li>• expensive/not cost effective to build</li> </ul> <p style="text-align: right;">2 @ 1 mark</p>	<b>2</b>

Question	Answer	Marks
1(a)(iii)	<p><b>Study Fig. 1.2 (Insert), a map showing the location of the airport in Peshawar.</b></p> <p><b>Using Fig. 1.2 <u>only</u>, describe the location of the airport.</b></p> <ul style="list-style-type: none"> <li>• outskirts of the commercial area/central part/middle of the city</li> <li>• in the middle of/surrounded by/nearby to residential areas</li> <li>• in-between two rivers</li> <li>• in-between two canals</li> <li>• accessed by/on/<u>named</u> roads, e.g., along Jamrud Road</li> <li>• in-between Khyber and Jamrud roads</li> <li>• in-between Khyber Road and the railway</li> <li>• railway passes/goes around the airport</li> <li>• accurate direction from any <u>named feature on the map</u> e.g. E of Palosai Khwar River S–W of Shahi Park S of Khyber Road</li> <li>• accurate distance from any <u>named feature on the map</u> Kacha Gorhi 6–8 km Industrial area 3–6 km Hayatabad 4–6 km River Palosai Khwar 2–5 km River Bara 2–6 km University 500m–3.5 km Saddar/main commercial area 250 m–3.5 km Administrative area 1 km–3 km Parks and open space 3 km–6 km Shahi Park 4.5–6.5 km</li> </ul> <p><b>Note:</b> Max. 1 mark for accurate direction from named feature/location. Max. 1 mark for distance from named feature/location.</p> <p style="text-align: right;">3 @ 1 mark</p>	<b>3</b>
1(a)(iv)	<p><b>State <u>two</u> improvements that have recently taken place in air communications in Pakistan.</b></p> <ul style="list-style-type: none"> <li>• new/more international airports/terminals (e.g. Islamabad/Sialkot)</li> <li>• new/more routes (both internal and external)</li> <li>• more frequent flights</li> <li>• budget airlines/more airlines</li> <li>• new/more runways/fog-lights (on runways)</li> <li>• new/modern (control) towers</li> <li>• <u>improved</u> flight technology <u>examples:</u> fuel efficient planes/‘fly by wire’ technology, radio communications, signals to the tower, modern navigation systems/GPS/satellites</li> <li>• <u>improved</u> airport efficiency <u>examples:</u> moving walkways, escalators, baggage carousels, air bridges, ticketing/reservation/booking systems/online tickets/self/online check-in</li> </ul> <p style="text-align: right;">2 @ 1 mark</p>	<b>2</b>

Question	Answer	Marks
1(b)(i)	<p><b>Describe <u>two</u> features of large-scale industry.</b></p> <ul style="list-style-type: none"> <li>• requires a large area of land</li> <li>• in factories/warehouses/large storage facilities</li> <li>• capital intensive/large investment</li> <li>• convert raw materials into (manufactured) goods</li> <li>• uses automation/machinery/modern technology</li> <li>• meets international standards/standardised goods/quality controlled</li> <li>• mass production/high output/in bulk/economies of scale</li> <li>• high(er) output per worker/employee</li> <li>• can be a multi-national company</li> <li>• large number of employees/100+</li> <li>• registered/formal industry/regular wages/ contribute to taxes</li> <li>• health &amp; safety/regulations</li> </ul> <p style="text-align: right;">2 @ 1 mark</p>	<b>2</b>
1(b)(ii)	<p><b>Using Fig. 1.2 (Insert) <u>and</u> your own knowledge, suggest <u>two</u> advantages of locating a new large-scale industry at <u>W</u>.</b></p> <ul style="list-style-type: none"> <li>• in large settlement/city; nearby source of workers/utilities <u>example</u> electricity/water</li> <li>• river/canal nearby; for a constant water supply</li> <li>• in residential area; will offer employment opportunities to <u>local</u> people/not far for workers to travel</li> <li>• close to industrial area; for links to similar industries/agglomeration/links to suppliers/to save transport costs</li> <li>• close to commercial area; for banking/retail/customers/marketing or promotion</li> <li>• close to university; for high skilled labour/for links to research/which will be attractive for investors</li> <li>• close to rail/roads/canal/river/airport; for imports/exports/to take heavy goods to ports/to take perishable goods by air/for senior staff to travel to meetings</li> <li>• close to parks; good living area attracts high skilled workers</li> </ul> <p><b>Note:</b> 2 marks for <u>locating</u> a relevant feature on Fig. 1.2, 2 marks for suggested advantages linked to Fig. 1.2. <b>Note:</b> credit for suggested advantages can be given without location.</p> <p style="text-align: right;">2 @ 2 marks</p>	<b>4</b>

Question	Answer	Marks
1(c)	<p><b>Explain how large-scale industries can increase economic development in Pakistan. You should develop your answer.</b></p> <ul style="list-style-type: none"> <li>• provides jobs/employment/reduces unemployment; provides a <u>regular</u> income for families/<u>higher</u> wages/<u>more</u> people earning/paying taxes</li> <li>• agglomeration/multiplier effect/encourage further growth/improve the area; e.g. steel production provides materials for other industries/attracts new investment</li> <li>• more output/goods will be produced; which means Pakistan has more to trade/export/sell/can reduce imports</li> <li>• produce high value/manufactured goods; which have demand in other countries/can increase foreign exchange/can improve the balance of payments</li> <li>• increase in/large amount of exports; reduces need for imports/which will improve the balance of trade/increase GDP</li> <li>• will provide training and skills; trained workforce will have transferable skills/generate more employment opportunities</li> <li>• will require new roads/reliable power supply; this will benefit other local industries as they can use them too</li> <li>• standardised products; meets international standards for improved trade/more trading partners</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. <b>Note:</b> Max. 2 marks if no development.</p> <p style="text-align: right;">2 @ 2 marks</p>	<b>4</b>

Question	Answer	Marks
1(d)	<p><b>The development of international transport links can help to promote further economic growth in Pakistan. Read the following two views:</b></p> <p><b>A</b> <b>Building new international airports in Pakistan has the most potential to increase trade and development.</b></p> <p><b>B</b> <b>Improving existing international seaports in Pakistan has the most potential to increase trade and development.</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 (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:</b> <i>Building new international airports has the most potential to increase trade and development because:</i></p> <ul style="list-style-type: none"> <li>• more employment opportunities can be provided/named examples of types of jobs</li> <li>• employees can be trained/skilled workforce</li> <li>• airports meeting international standards will increase the number of visitors/tourists</li> <li>• provides more business opportunities/entrepreneurs will set up there</li> <li>• enables companies/businesses/individuals to travel so no need to go far for international flights</li> <li>• will attract multi-national companies to locate in Pakistan/have branch companies or offices</li> <li>• more businesses will be attracted/more people will want to visit</li> <li>• able to import/export goods more quickly compared to overland or seaports</li> </ul> <p>Etc.</p>	<b>6</b>

Question	Answer	Marks
1(d)	<p><b>disagree with view A:</b> <i>Building new international airports does not have the most potential to increase trade and development because:</i></p> <ul style="list-style-type: none"> <li>• only light-weight goods can be transported cheaply by air so the trade gains will be fewer as it won't benefit many of Pakistan's main export goods</li> <li>• most likely that multi-national companies will be attracted and profits will leak out of Pakistan</li> <li>• managerial jobs may be outsourced</li> <li>• cost of improving/building international airports is high and could outweigh any financial gains</li> </ul> <p>Etc.</p> <p><b>agree with view B:</b> <i>Improving existing international seaports in Pakistan has the most potential to increase trade and development:</i></p> <ul style="list-style-type: none"> <li>• the infrastructure is already built so will cost less to improve seaports than building airports</li> <li>• ships can carry heavy goods much more cheaply than planes so more goods can be exported</li> <li>• more people are taking cruises for holidays so Pakistan could become a destination for more cruises</li> <li>• Pakistan could be an international trade hub</li> </ul> <p>Etc.</p> <p><b>disagree with view B:</b> <i>Improving existing international seaports in Pakistan does not have the most potential to increase trade and development:</i></p> <ul style="list-style-type: none"> <li>• the ports are already developed but motorways and railways connecting to the ports would need to be further improved which is expensive/complex</li> <li>• there is a lack of space to develop the seaports further so it will cost more/isn't feasible to expand</li> <li>• focusing on developing services/quaternary industries rather than manufacturing would help increase GDP more, so seaports are less needed</li> </ul> <p>Etc.</p>	



Question	Answer	Marks												
2(a)(i)	<p><b>Study Fig. 2.1, a map showing three desert areas in southern and western Pakistan.</b></p> <p><b>Name <u>either</u> desert <u>X</u> or desert <u>Y</u>.</b></p> <p>X Kharan</p> <p><b>or</b></p> <p>Y Thal</p> <p><b>Note:</b> Both gaps must be filled correctly for 1 mark.</p> <p style="text-align: right;">1 @ 1 mark</p>	<b>1</b>												
2(a)(ii)	<p><b>Using Fig. 2.1 <u>only</u>, describe the location of the desert named in (a)(i) above.</b></p> <table border="1" data-bbox="308 819 1297 1518"> <thead> <tr> <th data-bbox="308 819 802 891">X (Kharan desert):</th> <th data-bbox="802 819 1297 891">Y (Thal desert):</th> </tr> </thead> <tbody> <tr> <td data-bbox="308 891 802 954">in Balochistan</td> <td data-bbox="802 891 1297 954">in Punjab</td> </tr> <tr> <td data-bbox="308 954 802 1016">in the west/south-west of Pakistan</td> <td data-bbox="802 954 1297 1016">in central Pakistan</td> </tr> <tr> <td data-bbox="308 1016 802 1117">(close to) border with Afghanistan/Iran</td> <td data-bbox="802 1016 1297 1117">not near an international border/on KPK border</td> </tr> <tr> <td data-bbox="308 1117 802 1451">north of Arabian sea west of Thar desert/south-west of Thal desert west/north-west of Sindh/south-west of KPK/west of Punjab east of Iran/south of Afghanistan/west or north-west of India</td> <td data-bbox="802 1117 1297 1451">north-east of Arabian sea north of Thar desert/north-east of Kharan desert north or north-east of Sindh, south or south-east of KPK, north-east or east of Balochistan north or north-east of India/east or south-east of Afghanistan/north-east of Iran</td> </tr> <tr> <td data-bbox="308 1451 802 1518">27 – 30°N <u>and</u> 61 – 66°E</td> <td data-bbox="802 1451 1297 1518">29 – 32°N <u>and</u> 71 – 72°E</td> </tr> </tbody> </table> <p><b>Note:</b> Max. 1 mark for accurate direction to/from named features.</p> <p style="text-align: right;">3 @ 1 mark</p>	X (Kharan desert):	Y (Thal desert):	in Balochistan	in Punjab	in the west/south-west of Pakistan	in central Pakistan	(close to) border with Afghanistan/Iran	not near an international border/on KPK border	north of Arabian sea west of Thar desert/south-west of Thal desert west/north-west of Sindh/south-west of KPK/west of Punjab east of Iran/south of Afghanistan/west or north-west of India	north-east of Arabian sea north of Thar desert/north-east of Kharan desert north or north-east of Sindh, south or south-east of KPK, north-east or east of Balochistan north or north-east of India/east or south-east of Afghanistan/north-east of Iran	27 – 30°N <u>and</u> 61 – 66°E	29 – 32°N <u>and</u> 71 – 72°E	<b>3</b>
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Question	Answer	Marks
2(a)(iii)	<p><b>Study Fig. 2.2 (Insert), a photograph of part of the Thar desert.</b></p> <p><b>Using Fig. 2.2 <u>only</u>, state <u>two</u> features of the desert shown.</b></p> <ul style="list-style-type: none"> <li>• sandy soil/sand/sand dunes</li> <li>• ridges/depressions/undulating/rolling/uneven/crescentic dunes/curved dunes</li> <li>• flat land <u>in distance</u></li> <li>• dry/arid/barren/infertile land/lack of rain/water</li> <li>• sparsely vegetated/low/lack of vegetation/scanty vegetation</li> <li>• bushes/shrub/scrub/trees</li> <li>• large/vast area</li> <li>• (small) settlements/village/houses</li> </ul> <p style="text-align: right;">2 @ 1 mark</p>	<b>2</b>
2(b)	<p><b>Explain how desert areas influence the development of road networks in Pakistan. You should develop your answer.</b></p> <ul style="list-style-type: none"> <li>• large/vast areas; need to transport materials long distances/makes construction expensive</li> <li>• uneven/rough terrain/sandy; unstable land/difficult to build on/hard to operate machinery/uncemented roads common</li> <li>• sparsely populated areas/few settlements/remote; lack of nearby construction workers/low demand for road use/not cost effective to build</li> <li>• lack of investment in desert areas; due to lack of demand/lack of businesses</li> <li>• lack of power supply/electricity; costly to set up work operations/poor worker accommodation</li> <li>• <u>extreme</u> heat/<u>very</u> hot; causes heat exhaustion/ workers need regular breaks/may demand higher pay</li> <li>• dust/sandstorms; can hinder building work/can block/cover roads when built/difficult to navigate</li> <li>• very dry/barren/lack of water supply; water must be transported in for workers and machinery</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>

Question	Answer	Marks
2(c)(i)	<p><b>Describe the effect of latitude on day length and temperature in Pakistan.</b></p> <p><b>day length:</b></p> <ul style="list-style-type: none"> <li>(Pakistan is in the northern hemisphere so) it is <u>tilted towards</u> the sun; therefore has long(er)/more daylight hours during <u>summer</u></li> <li><b>or</b></li> <li>(Pakistan is in the northern hemisphere so) is <u>tilted away</u> from the sun; therefore has short(er)/fewer daylight hours during <u>winter</u></li> </ul> <p><b>temperature:</b></p> <ul style="list-style-type: none"> <li><u>southern</u> Pakistan is closer to the equator; so has higher temperatures than <u>northern</u> Pakistan</li> <li><b>or</b></li> <li><u>northern</u> Pakistan is further from the equator; so has lower temperatures than <u>southern</u> Pakistan</li> <li>southern Pakistan/areas closer to the equator receive more concentrated/direct/intense rays/of the sun; resulting in higher temperatures</li> <li><b>or</b></li> <li>the sun's rays are dispersed/spread over a larger surface area in the north; so northern Pakistan is cooler than the south</li> <li>the sun's rays are at a higher angle of incidence in southern Pakistan; making temperatures higher</li> <li><b>or</b></li> <li>the sun's rays are at a lower angle of incidence in northern Pakistan; making temperatures lower</li> <li>the sun's rays travel a longer distance through the atmosphere at higher latitudes; making temperatures lower <b>or vice versa</b></li> </ul> <p><b>Note:</b> 2 marks for effect of latitude. 1 mark for effect on day length, 1 mark for effect on temperature</p> <p style="text-align: right;">2 @ 2 marks</p>	4
2(c)(ii)	<p><b>Which of the following factors cause seasonal variations in Pakistan's climate? Tick (✓) <u>two</u> boxes in the table below:</b></p> <ul style="list-style-type: none"> <li>air pressure</li> <li>wind direction</li> </ul> <p style="text-align: right;">2 @ 1 mark</p>	2
2(c)(iii)	<p><b>Describe the characteristics of an arid climate in Pakistan.</b></p> <ul style="list-style-type: none"> <li>hot/extreme heat/high temperatures/30°C+</li> <li>cool nights</li> <li>dry/high evaporation rate</li> <li>winds/windy/sand storms/dust storms</li> <li>winds <u>from May – September</u> (accept months in between)</li> <li>scanty/little/low rainfall/&lt;250 mm per year</li> <li>(only) rainfall in winter/little monsoon rainfall (in summer)</li> <li>mild winters</li> </ul> <p style="text-align: right;">3 @ 1 mark</p>	3

Question	Answer	Marks
2(d)	<p><b>In 2019, more than 1.2 million people experienced food shortages in the south of Pakistan due to drought.</b></p> <p><b>Evaluate the extent to which extremes of climate influence the lives of people and the economy in Pakistan. Give reasons to support your <u>judgement</u> and refer to examples you have studied. You should consider different 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 (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>extremes of climate <u>negatively/have great</u> impact on the lives of people and the economy such as:</b></p> <p><b>e.g. extreme cold/rainfall/storms/flooding:</b></p> <ul style="list-style-type: none"> <li>• can result in many deaths</li> <li>• amount of monsoon rain cannot be predicted</li> <li>• homes on or near to floodplains washed away by flood waters, people lose possessions</li> <li>• some people unprepared/without evacuation plans</li> <li>• flooding caused by storms leaves destruction e.g. power lines down</li> <li>• repairs are expensive, may increase debt/lower GDP</li> <li>• injuries lead to increased costs for healthcare provision</li> <li>• loss of jobs/income when industry/crops destroyed</li> </ul> <p><b>e.g. lack of rainfall/high temperatures/droughts:</b></p> <ul style="list-style-type: none"> <li>• can affect many people over a widespread area</li> <li>• can happen slowly over a period and the effects are not felt until much later</li> <li>• cost of supplying irrigation to drought areas</li> <li>• destroys food supply leading to famine</li> <li>• can cause loss of life to many millions of people and to livestock and crops</li> <li>• can cause out-migration and increase population pressure in urban areas</li> <li>• increased cost to house displaced people</li> </ul>	<b>6</b>

Question	Answer	Marks
2(d)	<p><b>extremes of climate <u>have benefits/have little impact</u> on the lives of people and the economy such as:</b></p> <ul style="list-style-type: none"> <li>• flood water can be stored in reservoirs for use at a later date for irrigation</li> <li>• flood waters bring alluvium which can increase fertility of soils</li> <li>• hotter climates can allow new varieties of crops to be grown</li> <li>• most storms such as cyclones and floods occur near the coastal areas and much of Pakistan's industry is located further inland</li> <li>• Pakistan can build flood defences to prevent loss of life and to protect buildings and industries</li> <li>• Pakistan can provide education and emergency action plans to help protect people from storms</li> <li>• new farming techniques/seeds can resist drought</li> <li>• agriculture is affected but other industries can continue during most extreme climate events</li> </ul>	

Question	Answer	Marks
3(a)(i)	<p><b>Study Fig. 3.1, a diagram showing three methods of coal extraction.</b></p> <p><b>Name the <u>three</u> methods of coal extraction shown in Fig 3.1 in the spaces provided.</b></p> <ul style="list-style-type: none"> <li>• adit = top left</li> <li>• open cast/pit/quarry = top right</li> <li>• shaft = bottom right</li> </ul> <p style="text-align: right;">3 @ 1 mark</p>	<b>3</b>
3(a)(ii)	<p><b>Study Fig. 3.2 (Insert), a photograph of a mine in Pakistan. Using Fig. 3.2 <u>only</u>, identify <u>two</u> features of the mine shown.</b></p> <ul style="list-style-type: none"> <li>• tunnel/underground/passage</li> <li>• rock/stone walls/rocky</li> <li>• lights/dim light/poorly lit</li> <li>• low ceiling/low roof</li> <li>• nets/wire mesh on ceiling/roof</li> <li>• rail(s)/track(s)/train track(s)</li> <li>• (train/rail/mine) trucks/carts/trolleys</li> <li>• orange/brown/grey colour <u>rock/ground/walls</u></li> <li>• flat ground/floor</li> </ul> <p style="text-align: right;">2 @ 1 mark</p>	<b>2</b>

Question	Answer	Marks
3(a)(iii)	<p><b>Suggest how coal is extracted from the type of mine shown in Fig. 3.2.</b></p> <p><b>Adit mine:</b></p> <ul style="list-style-type: none"> <li>• coal/mineral seam is exposed on a hillside</li> <li>• a tunnel/passage is made into the hillside/seam</li> <li>• explosives/mining tools are used/coal is dug out</li> <li>• tracks are laid/put down (through the tunnel)</li> <li>• coal is put/loaded in trucks/carts/trolleys/tubs</li> <li>• trucks/carts/trolleys/tubs run/are transported/pulled/pushed (on a track out of the mine)</li> </ul> <p><b>Shaft mine:</b></p> <ul style="list-style-type: none"> <li>• a shaft is drilled down from the surface to reach the coal seam (underground)</li> <li>• explosives/mining tools are used/coal is dug out</li> <li>• tracks are laid/put down (through the tunnel)</li> <li>• coal is put/loaded in trucks/carts/trolleys/tubs</li> <li>• trucks/carts/trolleys/tubs run/are transported/pulled/pushed (on a track to the shaft)</li> <li>• coal/trucks/loads lifted to the surface</li> </ul> <p style="text-align: right;">2 @ 1 mark</p>	<b>2</b>
3(b)(i)	<p><b>Define ‘renewable’ and ‘non-renewable’.</b></p> <ul style="list-style-type: none"> <li>• renewable can be used again/are infinite/always be present/sustainable/will not run out/not exhaust</li> <li>• non-renewable are finite/limited/will exhaust/ cannot be used again/if used are gone forever</li> </ul> <p style="text-align: right;">2 @ 1 mark</p>	<b>2</b>
3(b)(ii)	<p><b>Complete the table to classify by type (renewable or non-renewable) the energy resources listed below.</b></p> <p>renewable: hydel, solar, wind</p> <p>non-renewable: coal, gas, oil</p> <p><b>Note:</b> 3 marks for 5 or 6 correct, 2 marks for 3 or 4 correct, 1 mark for 1 or 2 correct.</p> <p style="text-align: right;">3 @ 1 mark</p>	<b>3</b>
3(b)(iii)	<p><b>Study Fig. 3.3, a pie chart showing the percentage share by value of Pakistan’s energy sources.</b></p> <p><b>Complete Fig. 3.3 using the information in the key.</b></p> <ul style="list-style-type: none"> <li>• accurate completion of line plotted at 27% or 64%</li> <li>• correct shading of fossil fuels segment – small dots</li> <li>• correct shading of hydel segments – diagonal lines at the correct angle</li> </ul> <p><b>Note:</b> 1 mark for accurate line/divide. 2 marks for correct shading in each segment.</p>	<b>3</b>

Question	Answer	Marks
3(c)	<p><b>Explain <u>one</u> advantage and <u>one</u> disadvantage of generating electricity using solar power. You should develop your answer.</b></p> <p><b>advantages:</b></p> <ul style="list-style-type: none"> <li>• solar is a renewable resource; will not run out/can be used again/reduces use of non-renewables</li> <li>• solar power is environmentally friendly; because it doesn't burn anything/does not create <u>air</u> pollution/greenhouse gases</li> <li>• Pakistan is sunny/has high number of sunshine hours/250-300 sunny days a year; so most/remote regions can utilise solar power</li> <li>• once solar panels have been installed running costs are low; saving money in the long term</li> <li>• small solar panels can be provided on homes; provides electricity to areas without need for pylons and cables</li> <li>• solar panels are portable; can be installed on house rooftops/slopes/can be easily installed</li> <li>• solar panels are low maintenance; minimal running costs/need for servicing</li> </ul> <p><b>disadvantages:</b></p> <ul style="list-style-type: none"> <li>• amount of power generated per solar panel is quite small; may need several to power a home</li> <li>• development of solar farms takes up large areas; land is needed for agriculture/industry etc.</li> <li>• expensive to buy panels/construct solar farms; difficult to afford the initial investment/may need loans/increases debt</li> <li>• no power is generated at night; in winter days are shorter in the north of Pakistan so energy production is not guaranteed</li> <li>• some regions of Pakistan have long periods of cloud/rain/snow; less power is generated during these times/a backup source may be needed</li> <li>• solar panels can get covered in dust/sand; require cleaning to ensure they can still operate/reduces their efficiency</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>	4

Question	Answer	Marks
3(d)	<p><b>Pakistan plans to generate 60 per cent of its power using renewable energy by 2030, yet coal-fired power stations are being rapidly developed. In 2016 there was one coal-fired power station and by 2019 there were nine, providing 15 per cent of Pakistan’s electricity supply.</b></p> <p><b>To what extent is it possible for Pakistan to generate more of its power from renewable energy? 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 (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>It is not possible to produce more electricity from renewable resources:</b></p> <ul style="list-style-type: none"> <li>• Pakistan already has power stations set up to use coal/oil/gas</li> <li>• continuing to use reserves of coal/oil/gas is cheaper than setting up alternatives from scratch</li> <li>• requires knowledge/skilled workers to set up</li> <li>• renewables (or examples) are not 100% reliable</li> <li>• Pakistan has invested heavily in developing coal fired power stations; this would be wasted</li> <li>• problems with sandstorms in desert areas covering the solar panels; need to be cleaned so that they work properly/not as effective as hoped</li> </ul> <p>Etc.</p>	<b>6</b>



Question	Answer	Marks
3(d)	<p><b>It is possible to produce more electricity from renewable resources:</b></p> <ul style="list-style-type: none"> <li>once set up running costs are low, making them more sustainable</li> <li>labour is available to work on the construction/maintenance of renewable power stations</li> <li>Pakistan has a lot of sunshine – perfect for solar power/desert areas can be used for solar farms</li> <li>Pakistan has lots of hilly areas – perfect for wind energy</li> <li>Pakistan already has several dams and this can be extended to produce more hydel power</li> <li>Pakistan has a coastline so it can develop tidal energy and build offshore wind farms</li> <li>Pakistan recognises there are benefits of renewables/they are environmentally friendly</li> </ul> <p>Etc.</p>	

Question	Answer	Marks
4(a)(i)	<p><b><u>Complete</u> the table to define the <u>three</u> main types of farming in Pakistan.</b></p> <p>cash crop/commercial/arable</p> <p>livestock/pastoral</p> <p>subsistence/small-scale <u>subsistence</u></p> <p>3 @ 1 mark</p>	3
4(a)(ii)	<p><b>Study Fig. 4.1, a map showing the areas in southern and western Pakistan where one type of livestock is mainly kept.</b></p> <p><b>State the type of livestock mainly kept in the areas shown on Fig. 4.1.</b></p> <p>sheep/goats</p> <p>1 @ 1 mark</p>	1
4(a)(iii)	<p><b>Using Fig. 4.1 <u>only</u>, describe the distribution of the areas within southern and western Pakistan where the livestock is mainly kept.</b></p> <ul style="list-style-type: none"> <li>throughout the country/widespread</li> <li>in all provinces (on the map)</li> <li>mainly in Balochistan</li> <li>between 24°–33°N <u>and</u> 62°–72°E (accept data within given range)</li> <li>on international boundary/boundaries/border</li> <li>(small) area in south-east Pakistan</li> <li>(large) area of central Pakistan</li> <li>west/south-west area of Punjab</li> <li>south-west area of KPK</li> <li>south-east area of Sindh/<u>small area</u> in north-east Sindh</li> <li>north/north-east area/band (west to east) across/in central Balochistan</li> </ul> <p>3 @ 1 mark</p>	3

Question	Answer	Marks
4(b)(i)	<p><b>Study Fig. 4.2, a divided bar graph showing the percentage share by value of major crops grown in Pakistan.</b></p> <p><b>Using the information in Fig. 4.2 <u>only</u>:</b></p> <ul style="list-style-type: none"> <li>• <b>which crop accounts for a quarter of the value of major crops?</b></li> <li>• <b>what is the percentage share of sugar cane?</b></li> </ul> <p>• Cotton • 12%</p> <p style="text-align: right;">2 @ 1 mark</p>	<b>2</b>
4(b)(ii)	<p><b>State <u>one</u> major use for each of the crops below:</b></p> <ul style="list-style-type: none"> <li>• cotton: making clothes/garments/furnishing fabrics/bed linen/industrial fabrics/textiles/yarn/wearing</li> <li>• rice: (staple) food/diet/nutrition/animal fodder/eating/consumption</li> <li>• tobacco: recreation/cigars/cigarettes/pipes/medicine/pharmaceuticals/smoking/chewing</li> </ul> <p style="text-align: right;">3 @ 1 mark</p>	<b>3</b>

Question	Answer	Marks
4(c)(i)	<p><b>Explain how the natural factors of soil and climate affect the growth of cotton. You should develop your answer.</b></p> <p><b>soil:</b></p> <ul style="list-style-type: none"> <li>• should be fertile/alluvial/black/loam/loamy/clay; for the crop to grow <u>well</u>/so the soil is well drained</li> <li>• the pH of the soil should be neutral/pH5.8-8.0/neither very acid or alkaline; cotton is very sensitive to/does not grow well in alkaline soil</li> <li>• impervious sub-soil is needed/essential; because it retains water/so soil stays moist</li> <li>• needs manure/dung/animal waste; to improve/maintain fertility of the soil</li> </ul> <p><b>climate:</b></p> <ul style="list-style-type: none"> <li>• ideal temperature for cotton is hot/25–35°C; is needed for high yield/crops cannot survive in cold/best for ripening/harvesting</li> <li>• mild night-time temperatures are needed/not too cold at night; for the development of the bolls/is sensitive to frost</li> <li>• dry days are best for harvesting; rain will spoil the bolls at harvest time</li> <li>• ample/sufficient/moderate/regular rainfall is needed/500–1000 mm; frequent showers with sunny periods in between/to prevent crops withering/for optimal growth</li> <li>• when rainfall is less than 500 mm it is too dry; (crop fails/die/water/irrigation is needed)</li> <li>• flooding/heavy rainfall; (will destroy the crops/causing them to rot/breaking down the stalks)</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. <b>Note:</b> Max. 2 marks if no development</p> <p style="text-align: right;">2 @ 2 marks</p>	4
4(c)(ii)	<p><b><u>Complete</u> the passage below about tobacco farming in Pakistan. Choose the correct words from the list and place them in the spaces provided.</b></p> <p>Tobacco is mainly grown in <b><u>Khyber Pakhtunkhwa</u></b> and <b><u>Punjab</u></b>. The varieties of tobacco grown on fertile soils with irrigation facilities are for the <b><u>export</u></b> market.</p> <p><b>Note:</b> Khyber Pakhtunkhwa and Punjab can be in either order.</p> <p style="text-align: right;">3 @ 1 mark</p>	3

Question	Answer	Marks
4(d)	<p><b>Water is a valuable resource for development, yet Pakistan faces acute water shortages. 2600–5300 litres of water per day are needed to grow enough food for one person compared with 50 litres of water being needed per person per day for domestic use.</b></p> <p><b>Evaluate the extent to which the use of water in agriculture in Pakistan can be made more sustainable. Give reasons to support your judgement and refer to examples you have studied. You should consider different 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 (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>water use in agriculture can become more sustainable:</b></p> <ul style="list-style-type: none"> <li>• water losses from leaking pipes/unlined canals can be repaired/reduced/preventing waterlogging and salinity</li> <li>• water saving devices/sprinklers/drip irrigation can be implemented to reduce water wastage</li> <li>• install water meters so that farmers are aware of their usage</li> <li>• clear dams/dykes to reduce waterlogging and salinity</li> <li>• use of seeds/high-yielding varieties that require less water/drought resistant varieties</li> <li>• education/training of farmers about water use and conservation</li> <li>• restrictions imposed on farmers to constrain water usage</li> <li>• modernisation of irrigation equipment</li> </ul> <p>Etc.</p>	<b>6</b>

Question	Answer	Marks
4(d)	<p><b>water use in agriculture cannot become more sustainable:</b></p> <ul style="list-style-type: none"> <li>• some farmers will not be able to afford water meters or other water saving devices/installing tubewells requires huge investment</li> <li>• some farmers use inefficient farming practices cause waterlogging and salinity</li> <li>• some farmers are resistant to using modern techniques as they prefer their traditional practices</li> <li>• growing population requires more food which means more water will be used to grow crops</li> <li>• groundwater supplies are being used at a rate faster than they can be replenished</li> <li>• there are too many problems with irrigation systems it would be impossible to fix them all, leakage from canals reduces water availability</li> </ul> <p>Etc.</p>	

Question	Answer	Marks
5(a)(i)	<p><b>Define ‘population distribution’.</b></p> <p>is the way that people are <u>spread/scattered over an area</u></p> <p>or</p> <p>it is the <u>pattern</u> of <u>where people live</u></p> <p><b>Note:</b> 1 mark for the idea of spread/pattern. 1 mark for area/place/where people live</p> <p style="text-align: right;">2 @ 1 mark</p>	2
5(a)(ii)	<p><b>Study Fig. 5.1 (Insert), a map showing average annual population change by district in southern and western Pakistan between 1998 and 2017.</b></p> <p><b>Using Fig. 5.1 <u>only</u>, describe the distribution of the districts within southern and western Pakistan with over 4 per cent annual population change.</b></p> <ul style="list-style-type: none"> <li>• uneven distribution/more in south <u>than</u> in north</li> <li>• on/near international borders with Iran/Afghanistan</li> <li>• mostly in Balochistan</li> <li>• in central area of Pakistan</li> <li>• south-west/west/north-east part of Balochistan</li> <li>• south-west part of/coast of Sindh/Balochistan-Sindh boundary</li> <li>• central/north/north-east/north-west part of Khyber Pakhtunkhwa</li> </ul> <p style="text-align: right;">3 @ 1 mark</p>	3

Question	Answer	Marks
5(a)(iii)	<p><b>Suggest <u>two</u> reasons for the annual population change of the district labelled <u>Z</u> in Fig. 5.1.</b></p> <ul style="list-style-type: none"> <li>• international migration</li> <li>• internal migration between provinces/districts</li> <li>• rural to urban migration</li> <li>• displaced people/refugees</li> <li>• push or pull factors (two from below:) in search of jobs/education/healthcare, etc. fleeing war/conflict/disaster/hazards, etc.</li> <li>• increasing birth rates</li> <li>• decreasing death rates/infant mortality rates</li> <li>• birth rate is increasing while death rate is decreasing</li> <li>• people are living <u>longer/longer</u> life expectancy</li> <li>• people having <u>larger</u> numbers of children</li> </ul> <p style="text-align: right;">2 @ 1 mark</p>	<b>2</b>
5(b)(i)	<p><b>Study Fig. 5.2 (Insert), a photograph of part of a tent city in Pakistan.</b></p> <p><b>Using Fig. 5.2 <u>only</u>, describe <u>two</u> features of the area shown.</b></p> <ul style="list-style-type: none"> <li>• Large/vast area of land/flat land/barren</li> <li>• wood/wooden poles/wooden beds</li> <li>• fabric/cloth/plastic sheets/tarpaulins</li> <li>• low/small/single storey (homes/dwellings)</li> <li>• densely populated/high density/close together (homes/dwellings)</li> <li>• white/bright coloured (homes/dwellings)</li> <li>• tracks/non-metalled roads</li> <li>• little vegetation/few trees</li> <li>• arid/dry/dusty/sandy ground</li> <li>• land pollution/litter/waste/rubbish on ground</li> <li>• clothes on roofs</li> <li>• pylons/water tower/large building <u>in distance</u></li> </ul> <p style="text-align: right;">2 @ 1 mark</p>	<b>2</b>
5(b)(ii)	<p><b>State <u>two</u> reasons for the growth of tent cities in Pakistan.</b></p> <ul style="list-style-type: none"> <li>• migration/rural-urban migration/growing population/overpopulation</li> <li>• overcrowding/lack of land in cities</li> <li>• demand for housing is higher than supply/there is a lack of housing</li> <li>• difficult to keep pace with the large number of houses needed</li> <li>• formal housing is unaffordable/poverty/unemployment</li> <li>• tent homes are cheap to construct</li> <li>• tent homes can be built quickly</li> </ul> <p style="text-align: right;">2 @ 1 mark</p>	<b>2</b>

Question	Answer	Marks
5(b)(iii)	<p><b>Describe <u>four</u> problems faced by many people living in tent cities.</b></p> <ul style="list-style-type: none"> <li>• overcrowded/cramped/congested living conditions/lack of privacy</li> <li>• noisy/noise pollution/not soundproof</li> <li>• little protection from weather/sun/rain/wind/dust</li> <li>• homes are poorly built/easily destroyed/leak/fall down/lack foundations</li> <li>• homes catch fire/fires spread easily</li> <li>• rubbish piles/lack of rubbish disposal/waste attracts vermin and flies/smells</li> <li>• lack of security/possible wild animal attacks/high crime rates/difficult to police</li> <li>• often unemployed/employed in low paid/informal jobs/unskilled jobs/poverty/poor</li> <li>• can be evicted/land can be cleared/no rights of ownership</li> <li>• disease can spread more easily</li> <li>• food shortages/lack of food/malnutrition</li> <li>• lack of sanitation <u>examples</u>: taps/kitchens/(running/piped) water/drains etc./have to travel to collect water/standing water attracts mosquitoes</li> <li>• lack of infrastructure/utilities <u>examples</u>: metalled roads/toilets/sewerage disposal/internet/ telephone/no electricity supply/unable to have appliances, e.g., fridges/lights</li> <li>• lack of services <u>examples</u>: doctors/healthcare/hospitals/schools/education/public transport, etc.</li> </ul> <p style="text-align: right;">4 @ 1 mark</p>	4

Question	Answer	Marks
5(c)	<p><b>Explain <u>two</u> strategies which could be used to improve living conditions in existing tent cities in Pakistan. You should develop your answer.</b></p> <ul style="list-style-type: none"> <li>• build hospitals/health services; for vaccinations against disease</li> <li>• build schools/education/self-help/resident training schemes; teach skills to improve housing/improve employment options/improve health</li> <li>• <u>clean/drinking</u> water/water taps/wells/pipes/ water tanks installed; providing a supply of running water to each house/to reduce the chance of catching disease</li> <li>• toilets/sewerage system installed; reducing the spread of infectious diseases or example</li> <li>• gas/electricity provided; allowing people to heat and light their homes</li> <li>• roads built; provides jobs in construction/allows people to access more employment/education opportunities</li> <li>• streetlights installed; makes people feel safer and/or reduces crime</li> <li>• building materials provided; to make the houses brick/more private/stable/better insulated</li> <li>• rubbish collections: to clean up the area and reduce the vermin/spread of disease</li> <li>• open spaces/parks created; provides space for recreation/play/sports/trees create shade</li> <li>• loans/funding <u>from</u> government/NGOs; pay for education/allow them to get qualifications/ to make their houses more secure/safer</li> <li>• <u>government/NGOs</u> build/provide affordable homes; which have running water/electricity provided</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. <b>Note:</b> Max. 2 marks if no development</p> <p style="text-align: right;">2 @ 2 marks</p>	4



Question	Answer	Marks
5(d)	<p><b>Read the following two views about approaches that could be taken to further develop Pakistan’s economy.</b></p> <p><b>A</b></p> <p><b>Reducing death rates and the spread of disease in Pakistan is the best way to develop the economy further.</b></p> <p><b>B</b></p> <p><b>Improving literacy rates and educational provision in Pakistan is the best way to develop the economy further.</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 and 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 (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 A because:</b></p> <ul style="list-style-type: none"> <li>• less people will be ill so can go to work</li> <li>• government won’t have to spend as much money on hospital care</li> <li>• if infant mortality rate is reduced people will have fewer children, lowering the birth rate</li> <li>• widespread vaccination programmes can reduce the spread of disease, therefore less burden on healthcare</li> </ul> <p>Etc.</p>	<b>6</b>

Question	Answer	Marks
5(d)	<p><b>disagree with A because:</b></p> <ul style="list-style-type: none"> <li>• reducing death rates will mean that there will be more dependents to support which places more burden on the government</li> <li>• reducing death rates will lead to higher unemployment</li> <li>• reducing death rates will put more pressure on healthcare facilities</li> <li>• there are not enough doctors/vaccines to enable a lower death rate/reduce the spread of disease</li> </ul> <p>Etc.</p> <p><b>agree with B because:</b></p> <ul style="list-style-type: none"> <li>• improved literacy rates and educational provision will lead to a more skilled workforce</li> <li>• an educated and literate population can improve technology and innovate new ideas</li> <li>• rise of entrepreneurs to develop businesses</li> <li>• will attract investment from abroad</li> </ul> <p>Etc.</p> <p><b>disagree with B because:</b></p> <ul style="list-style-type: none"> <li>• literacy rates tend to be higher in city areas so development will be patchy/uneven</li> <li>• educational provision is limited and not everyone has access to schools/higher education</li> <li>• some families do not send their children to school so this is difficult to achieve</li> </ul> <p>Etc.</p>	