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PAKISTAN STUDIES

2059/02

Paper 2 The Environment of Pakistan

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MARK SCHEME

Maximum Mark: 75

Published

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

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

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This document consists of **23** 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>Study Fig. 1.1, a map of Pakistan. On Fig. 1.1, <u>shade one</u> area where apples are grown in Pakistan.</p> <ul style="list-style-type: none"> • northern border of Balochistan • central Balochistan • south-western border of Khyber Pakhtunkhwa (KPK) • central northern KPK • north-eastern border of KPK • north-western border of Punjab/Islamabad Capital Territory <p>Accept any form of identification i.e. shading, symbol etc. in correct area 1 @ 1 mark</p>	1
1(a)(ii)	<p>State <u>one</u> reason why apples are grown in this area and one important use of apples.</p> <p>Reason: low(er)/cooler temperatures/can grow apples around the fields of other crops/major crops cannot be grown so apples grown instead/ climate moderate/mild temperature</p> <p>Use: subsistence/to feed the family/important source of vitamins/part of a healthy diet/to sell/for profit/export/any of making juices or syrups or sauces or jams/to fulfil local demand for fruit/animal fodder or feed</p> <p>2 @ 1 mark</p>	2
1(b)(i)	<p>Study Fig. 1.2 (Insert), a photograph of livestock in Pakistan. Using Fig. 1.2 <u>only</u>, identify the type of livestock shown.</p> <p>cattle/bullock/bulls/cows</p> <p>1 @ 1 mark</p>	1
1(b)(ii)	<p>Study Fig. 1.3, a diagram showing a type of lift irrigation. Describe how water is obtained for irrigation using this method.</p> <ul style="list-style-type: none"> • Persian wheel; • animals are used to turn/moves a wheel; • the animals are blindfolded; • turns a horizontal/smaller wheel; • attached/geared to a vertical/larger wheel; • buckets or pots attached to the wheel; • the pots raise water from the well; • pots spill contents into the channel to fields/irrigate field. <p>4 @ 1 mark</p>	4
1(b)(iii)	<p>List <u>two</u> ways the livestock shown in Fig. 1.2 can be used other than as draught power for irrigation.</p> <ul style="list-style-type: none"> • ploughing/threshing/harvesting; • pulling carts; • <u>carrying</u> heavy loads/raw materials/people/transport; • for meat/milk/skin/hides/dung/or other product. <p>2 @ 1 mark</p>	2

Question	Answer	Marks
1(c)(i)	<p>Explain two natural factors required for growing wheat. You should develop your answer.</p> <p>Temperature:</p> <ul style="list-style-type: none"> • sowing in dry season (1); average temperature 15 °C/10–20 °C (dev); • mild temperature/ideal temperature 10–20 °C / 15–25 °C (1); for growing (dev); • 20–30 °C/sunny/warm/hot / (1) for ripening/harvesting (dev); <p>Rainfall:</p> <ul style="list-style-type: none"> • moderate/ample rainfall/250–1000 mm (1); growth of wheat stalk/ some rain just before the harvest swells the grain ensuring a higher yield (dev); • only some areas are rain fed (1); Potwar plateau and some parts of Khyber Paktunkhwa/other areas are irrigated (dev); <p>Soil:</p> <ul style="list-style-type: none"> • moderately loamy/clayey soil/fertile soil (1); produces better quality crops/higher yields (dev); • land must be well drained (1); otherwise wheat will not grow/does not thrive if there is stagnant water/waterlogged (dev); <p>Growing period:</p> <ul style="list-style-type: none"> • needs at least 90 days (1); for basic varieties to grow (dev) • needs 120 days growing period (1); for better varieties/higher yield/ HYV (dev); <p>Relief:</p> <ul style="list-style-type: none"> • flat/undulating ground/gently sloping (1); to facilitate the use of machinery/examples e.g. combine harvester/easier to sow/plough/ harvest (dev). <p>Note: One mark for identification of appropriate idea and a further mark for development. Note: Max. 2 marks if no development.</p> <p style="text-align: right;">2 @ 2 marks</p>	4

Question	Answer	Marks
1(c)(ii)	<p>Contrast wheat production on a small-scale subsistence farm and a cash crop farm</p> <p>small-scale subsistence farm:</p> <ul style="list-style-type: none"> • land ploughed with traditional methods/wooden plough/bullocks; • well irrigation/charsa/Persian wheel/karez/rainwater is used; • (harvesting is done by) manual labour/by hand; • (grain is separated from the chaff) by animal power; • cow dung is used (as manure); • for family use/only enough produced for the family; • desi seeds; • low yield/less production; • mostly uses family labour; • little/no investment; • small area/amount of land used. <p>cash crop farm:</p> <ul style="list-style-type: none"> • tractor/machinery used for ploughing; • normally canal irrigation/water/tubewells used; • reapers and or combine harvesters used; • threshing machines used; • chemical fertilisers/pesticides used; • for selling/export; • use HYV's; • workforce employed/hired; • large amount of land used; • large capital investment. <p>Note: accept any two ideas for small scale subsistence and any two ideas for cash crop farm.</p> <p style="text-align: right;">@ 1 mark</p>	4
1(c)(iii)	<p>What is waterlogging? Tick (✓) one correct answer from the list below:</p> <p>The water table rises to the surface.</p> <p style="text-align: right;">1 @ 1 mark</p>	1

Question	Answer	Marks
1(d)	<p>Read the following two views about initiatives that have been implemented to improve agricultural production in Pakistan.</p> <p>A – Land reforms have had the most impact on agricultural production. B – The use of chemicals has had the most impact on agricultural production.</p> <p>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.</p> <p>Levels marking</p> <p>No valid response 0</p> <p>Level 1 1–2 Simple point referring to one view (1) Simple points referring to any view (2)</p> <p>Level 2 3–4 Developed point referring to one view (3) Developed points referring to both views (4)</p> <p>Level 3 5–6 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>Content Guide Answers are likely to refer to:</p> <p><u>Agree with View A more</u></p> <ul style="list-style-type: none"> • aimed at increasing productivity in some areas/for some crops; • reduced power of a few landlords therefore more people able to increase output and earnings; • larger areas of land are available to cultivate rather than many individual small holdings therefore able to mechanise/use machinery; <p>Etc.</p> <p><u>Agree with View A less</u></p> <ul style="list-style-type: none"> • lack of will to implement this strategy; • some Barani lands have incomplete land records so difficult to redistribute; • land is traditionally passed from one generation to the next without legal documentation; • wealthy landlords could use their influence to avoid land reform; • most land remained in the hands of a few wealthy landlords; <p>Etc.</p>	6

Question	Answer	Marks
1(d)	<p><u>Agree with View B more</u></p> <ul style="list-style-type: none"> the production and use of fertiliser and/or pesticides is actively encouraged; chemical fertilisers are used to improve agricultural production by increasing soil fertility, and are popular with farmers as many soils lack nitrogen/are infertile; use of pesticides helps the crop to grow healthy and protects it against insects/bugs/diseases/named examples. Popular with farmers as yield is better quality and makes more profit; <p>Etc.</p> <p><u>Agree with View B less</u></p> <ul style="list-style-type: none"> use of chemical fertilisers and/or pesticides has led to environmental degradation/land or water pollution; chemicals draining into rivers/water bodies causes algae growth using up oxygen/causes eutrophication fish and plants die; water pollution affects towns and cities that are supplied by rivers, human health and other livestock; pesticides can remain in the crop which is then eaten causing illness - gastro-intestinal infections/tuberculosis etc; use of chemicals causes more problems than it solves; <p>Etc.</p>	6

Question	Answer	Marks
2(a)(i)	<p>Study Fig. 2.1 (Insert), a map showing the location of New Islamabad International Airport in Islamabad-Rawalpindi. Using Fig. 2.1 <u>only</u>, describe the location of New Islamabad International Airport.</p> <ul style="list-style-type: none"> direction from named feature e.g. motorway/industrial area; distance from named feature; in rural area/on outskirts of built up area/edge of urban area/ Islamabad/Rawalpindi; south-west/west from centre of Islamabad/Rawalpindi/urban/built up/residential area; connects to Kashmir Highway; direction from named city e.g. north of Lahore/south of Peshawar. <p style="text-align: right;">2 @ 1 mark</p>	2

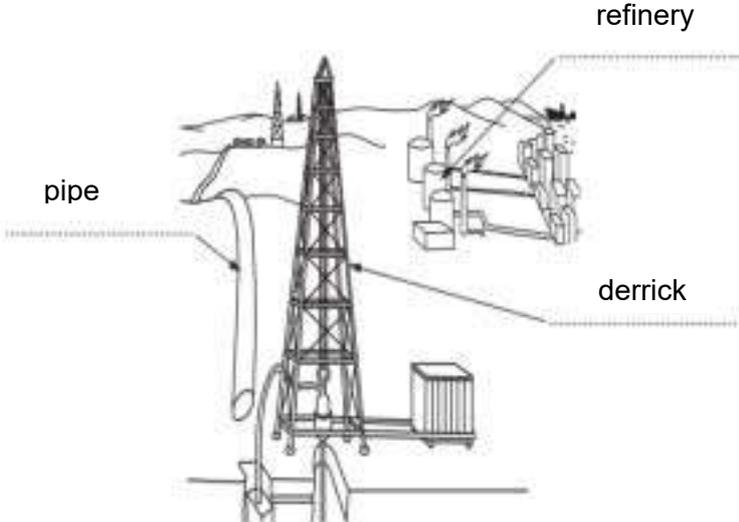
Question	Answer	Marks
2(a)(ii)	<p>Describe three factors that encourage the location and development of airports in Pakistan.</p> <ul style="list-style-type: none"> • availability of flat/wide/open land/plain (needed for runways/for building); • near to/in large cities/areas of large population (for employees/customers/trade); • near to industry (to encourage international trade/business); • need for faster/efficient transport for cargo (especially for perishable goods or named examples); • air routes to areas (like Gilgit and Skardu) makes otherwise inaccessible areas more accessible; • rise in living standards/more disposable income (has led to more people using air transport); • government policies/funding (to encourage growth of air transport or examples); • security (to encourage international investment/so tourists feel safe); • increased tourism; • links to (other infrastructure) roads and railways; <p>Note: Max 1 for list, some relevant description must be provided 3 @ 1 mark</p>	3
2(a)(iii)	<p>Suggest <u>two</u> disadvantages of air transport for people and <u>two</u> disadvantages of air transport for the movement of goods.</p> <p>people:</p> <ul style="list-style-type: none"> • expensive tickets/cannot afford to pay/compared with other transport; • limited luggage allowance/items allowed onboard are restricted; • not a door to door service – money spent to transfer to/from airport; • limited number of flights per day compared with trains/buses; • luggage can be lost/damaged; • flights cancelled/delayed/late due to bad weather; • likely increased taxes for people (long term investment with little benefit for many people)/cost of maintaining airports is expensive; • noise pollution near to runways/airports; • air pollution near to runways/airports <p>goods:</p> <ul style="list-style-type: none"> • expensive to transport goods internally and internationally; • difficult to transport bulky goods/can only transport small or perishable goods; • <u>fragile</u> goods damaged when loading/unloading or due to turbulence; • not all cities/locations have an airport within Pakistan so some areas cannot be reached; • not a door to door service – money spent to transfer to/from airport; • limited number of flights per day compared with trains/buses; • flights cancelled/delayed/late due to bad weather. <p>Note: Max 1 for list, some relevant description must be provided 4 @ 1 mark</p>	4

Question	Answer	Marks
2(b)(i)	<p>Study Fig. 2.2 (Insert), a photograph of a seaport in Pakistan. Using Fig. 2.2 <u>only</u>, describe the features of the seaport shown.</p> <ul style="list-style-type: none"> • next to/near to the sea; • a large area of flat land/lot of space; • cranes/machinery; • containers/girders; • (large) ship(s)/tugs; • wharf/dock/piers; • deep water/sheltered; • tower/watch tower/flood lights; • railway line; • lorries/trucks; • refinery/round containers • portcabins/flat roofed buildings/temporary buildings. <p style="text-align: right;">3 @ 1 mark</p>	3
2(b)(ii)	<p>Name <u>three</u> main seaports in Pakistan.</p> <ul style="list-style-type: none"> • Karachi/Keamari, • Qasim/Mohammed Bin Qasim • Gwadar <p style="text-align: right;">3 @ 1 mark</p>	3

Question	Answer	Marks
2(c)	<p>Explain the importance of the development of seaports to Pakistan. You should develop your answer.</p> <ul style="list-style-type: none"> • makes use of deep water/sheltered harbours (1); to facilitate container ships/large ships/cruise ships (dev); • improves the national economy (1); makes use of the long coastline in the south of the country (dev); • provides economic opportunities (1); especially for the largest province of Balochistan (dev); • provides opportunities for international links/trade (1); other countries can import/export through the ports of Pakistan/named examples e.g. Afghanistan/China/Middle East countries (dev); • Pakistan can export goods abroad (1); bulky goods can be moved relatively cheaply e.g. minerals/earns foreign exchange (dev); • provides employment opportunities (1); in areas usually reliant on traditional activities or named examples e.g. fishing (dev); • seaports handle most international trade (1); increasing trade (dev); • infrastructure development like roads/railways near the sea (1) boosts the local economy/allows nearby area to be developed and modernised (dev); • increase trade (1); so can pay off debts (dev); • increased transportation of goods (1); boosts the economy (dev); • increase GDP (1); through more exports (dev); • links to other countries (named examples) (1); so improves trade/relations (dev); • to develop tourism (1); to facilitate cruise ships etc. (dev); • encourage industrialisation (1); to provide employment (dev). <p>Note: One mark for identification of appropriate idea and a further mark for development. Note: Max. 2 marks if no development.</p> <p style="text-align: right;">2 @ 2 marks</p>	4

Question	Answer	Marks
2(d)	<p>The New Islamabad International Airport opened in 2018 with a capacity of nine million passengers per year expanding to 25 million passengers per year by 2025.</p> <p>Evaluate whether building major new infrastructure projects such as international airports is the best way to encourage further economic development 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.</p> <p>Levels marking</p> <p>No valid response 0</p> <p>Level 1 1–2 Simple point referring to one view (1) Simple points referring to any view (2)</p> <p>Level 2 3–4 Developed point referring to one view (3) Developed points referring to both views (4)</p> <p>Level 3 5–6 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>Content Guide Answers are likely to refer to:</p> <p><u>Building new infrastructure projects</u></p> <ul style="list-style-type: none"> • modern state of the art airports may encourage/old airports may deter people from travelling; • encourages international trade/named examples; growth of tourism; • old airport still put to good use/aid the military; • provides employment opportunities both nationally/internationally; • increases national income/investment in services and facilities for local population or named examples; increases number of international routes available; • other examples such as railways/motorways/highways can be credited as appropriate; <p>Etc.</p> <ul style="list-style-type: none"> • 	6

Question	Answer	Marks
(d)	<p><u>Ideas against</u></p> <ul style="list-style-type: none"> • long term investment so returns will not be immediate; • cost a lot to build/may increase debt; • would have been more cost effective to improve the old airport rather than build a new one; • other international airports in Pakistan may lose business so overall business is not increased; tourism may still not increase; • other infrastructure needs to be improved to support further economic development e.g. electricity supply (or other named examples); • development of smaller projects may be more beneficial e.g. in rural areas with raw materials available; • other examples such as railways/motorways/highways can be credited as appropriate; <p>Etc.</p>	

Question	Answer	Marks
3(a)(i)	<p>Study Fig. 3.1, a diagram showing oil prospecting and drilling. Complete the labels on Fig. 3.1 by choosing the correct words from the list below:</p> <div style="text-align: center;">  </div> <p>1 mark for 1–2 labels correct, 1 mark for third correct label 2 @ 1 mark</p>	2
3(a)(ii)	<p>Study Fig. 3.2, a line graph showing daily oil consumption in Pakistan from 2007 to 2017. Complete Fig. 3.2 by plotting daily oil consumption in 2012 using the information below.</p> <p>1 mark for accurate plot of 410 barrels of oil consumed per day for 2012, 1 mark for accurate completion of line 2@ 1 mark</p>	2

Question	Answer	Marks
3(a)(iii)	How many barrels of crude oil were produced per day in Pakistan in 2019? Circle the correct answer. 91 000	1 1 @ 1 mark
3(a)(iv)	State <u>two</u> ways that oil is transported on land in Pakistan. <ul style="list-style-type: none"> • pipeline(s)/pipes • road/tanker/barrels/truck/lorry • rail/tanker 	2 2 @ 1 mark
3(b)(i)	Define the term 'refined'. Cleansing/purification/removal/separation of impurities/substances/unwanted elements/toxins are removed (by processing/industrial processes).	1 1 @ 1 mark
3(b)(ii)	Study Fig. 3.3 (Insert), a photograph of an oil refinery in Pakistan. Using Fig. 3.3 only, describe the features of the oil refinery shown. <ul style="list-style-type: none"> • large/huge/vast/wide area of land; • built on flat land; • round buildings/square buildings; • storage tanks/storage cylinders; • (tall) towers/chimneys/columns; • grey/white/striped/blue buildings; • (raised) pipelines/pipes; • different coloured/curved pipe(line)s; • roads/pathways; • crane; • air conditioning units; • scaffolding/ladders; • mostly made from metal. 	3 3 @ 1 mark
3(b)(iii)	Name <u>two</u> refineries in Pakistan and state where each one is located <ul style="list-style-type: none"> • Attock: Morgah/Potwar Plateau/Rawalpindi; • Pak-Arab PARCO; Mehmood Kot/Muzzafargarh/Multan District; • Byco Petroleum; Khalifa Point/Hub • Pakistan refinery; Karachi; • National refinery; Karachi; • ENAR refinery; Karachi; • Trans-Asia refinery; Karachi; • Byco refinery; Karachi; • Bosicor refinery; Hub/Karachi; • Khalifa Coastal refinery; Lasbela District / Kharan. 	4 4 @ 1 mark

Question	Answer	Marks
3(c)	<p>Explain how oil is used to generate electricity in a thermal power station. You should develop your answer.</p> <ul style="list-style-type: none"> • oil is burnt/used as fuel (1) heats water/generating heat (dev) • heat boils water (1) which then turns to steam (dev) • steam turns a turbine (1) producing electricity in the generator (dev) • steam produced (1) transfers kinetic/potential energy to electrical energy (dev) • transformers control the voltage (1) and then transfer the electricity to where it is needed via power lines and pylons (dev) <p>Note: One mark for identification of appropriate idea and a further mark for development. Note: Possible opportunity to allow a further mark or marks for additional development. Note: Max. 2 marks if no development.</p> <p style="text-align: right;">2 @ 2marks</p>	4
3(d)	<p>In 2017 Pakistan discovered its largest oil and gas reserve at Jhandial Well. It is expected that at least 292 billion cubic feet of gas and 23 million barrels of oil can be recovered.</p> <p>Evaluate whether Pakistan should develop new oil and gas reserves. 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.</p> <p>Levels marking</p> <p>No valid response 0</p> <p>Level 1 1–2 Simple point referring to one view (1) Simple points referring to any view (2)</p> <p>Level 2 3–4 Developed point referring to one view (3) Developed points referring to both views (4)</p> <p>Level 3 5–6 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>	6

Question	Answer	Marks
3(d)	<p>Content Guide Answers are likely to refer to:</p> <p><u>Develop new oil and gas reserves</u></p> <ul style="list-style-type: none"> • Pakistan has an energy crisis so any new reserve will help to solve this; • Jhandial is a sizeable find/bigger than previous reserves so worth investing in; • both gas and oil have been found there; • Pakistan will save money/foreign exchange on importing oil; <p>Etc.</p> <p><u>Ideas against further development</u></p> <ul style="list-style-type: none"> • it is expensive to exploit the new reserves; • foreign investors like China may be needed to extract the gas and oil; • dependence on other countries will outweigh the benefits of finding/using the oil and gas found; • an improved infrastructure is needed to exploit the resources or transport them to where they are needed; • lack of trained personnel may hinder the exploitation of resources; • oil and gas are fossil fuels and therefore finite; • dependence on other countries will outweigh the benefits of finding/using the oil and gas found; • an improved infrastructure is needed to exploit the resources or transport them to where they are needed; • further environmental degradation will occur from extracting and transporting these resources; • Jhandial will only help in the short term hence, Pakistan should be looking for more sustainable solutions to the energy crisis/ Pakistan should be looking to invest in alternative energy sources over non-renewable sources; <p>Etc.</p>	

Question	Answer	Marks
4(a)(i)	<p>Study Fig. 4.1, a pie graph showing the percentage share of Pakistan's total forest cover by province-level area. <u>Complete</u> the pie graph in Fig. 4.1 to show the percentage of total forest cover found in Gilgit-Baltistan and Sindh. Use the information below and the key provided.</p> <p>1 mark for accurate completion of line on pie chart (11%/9% or vice versa), 1 mark for Sindh correctly shaded, 1 mark for Gilgit-Baltistan correctly shaded</p> <p style="text-align: right;">3 @ 1mark</p>	3

Question	Answer	Marks
4(a)(ii)	<p>Complete the passage below about reasons for the variations in the percentage share of forest cover shown in Fig. 4.1. Choose the correct words from the list and place them in the spaces provided.</p> <p>KPK has the largest percentage share of forest cover in Pakistan because the <u>climate</u> is more suitable for growing trees. There are fewer trees in Punjab because the land is needed for <u>cultivation</u>. Some areas may have suffered more from <u>deforestation</u> than others.</p> <p style="text-align: right;">3 @ 1 mark</p>	3
4(b)(i)	<p>State <u>three</u> functions of forests in Pakistan.</p> <ul style="list-style-type: none"> • provides shade/lowers temperature; • provides humus/fertilises soil; • prevent soil erosion/landslides; • reduces flooding/prevent silt/reduce surface runoff; • used for timber; • used for fuel wood/firewood/wood; • for making products e.g. furniture/boats/paper/trucks/bridges; • provide oxygen/reduce carbon dioxide/air pollution/purify air; • shelter for wildlife/habitat; • building houses; • for domestic use/cooking; • scenic beauty/recreation opportunities/tourism; • for medicinal purposes/in pharmaceutical industry; • provide moisture through evapotranspiration; • mangroves protect coastlines/provide breeding ground for fish; • provides food/fruit/nuts/herbs. <p style="text-align: right;">3 @ 1 mark</p>	3
4(b)(ii)	<p>State <u>one</u> difference between productive forests and protection forests.</p> <ul style="list-style-type: none"> • productive forests are mainly natural/high tree density/forest canopy is closed/great commercial value/mostly used for extraction of timber/wood/firewood; • protection forests are mainly planted by people/man-made/often linear/along roads/railways/in parks/little commercial value/main function is to protect the soil/provide shade. <p style="text-align: right;">2 @ 1 mark</p>	2

Question	Answer	Marks
4(b)(iii)	<p>Study Fig. 4.2, a diagram showing how altitude affects vegetation type. Using Fig. 4.2 and your own knowledge, suggest how altitude affects the type and amount of vegetation in Pakistan.</p> <ul style="list-style-type: none"> • fewer trees grow as altitude increases/more trees grow at lower altitudes; • more variety of trees/forests/grow at lower altitudes/named examples/altitude affects temperature lower altitudes are warmer which results in a wider variety of trees/forests; • mangrove forests are along coastline/mouth of rivers/low altitude/sea level to 1000 m/irrigated/riverain/sub-tropical/tropical thorn; • high/mid-altitudes only have evergreen/coniferous/alpine trees/types of leaves described/sloping branches; • only coniferous grow 1000–4000 m; • altitude affects temperature/temperature decreases with height which results in stunted growth of trees at 4000 m and above/alpine forests; • 4000–4500 m only alpine grow/highest forest is alpine/alpine found just below snow line; • no trees grow above the snowline/above 4500 m. <p style="text-align: right;">4 @ 1 mark</p>	4
4(c)	<p>Explain <u>two</u> effects of deforestation on the natural environment of Pakistan. You should develop your answer.</p> <ul style="list-style-type: none"> • exposure of soil (1); leads to soil erosion by wind or water (dev); • no roots to slow down infiltration (1); leads to flooding (dev); • habitat loss/less shade for animals (1); leads to extinction of animals/species (dev); • breaks down the food chain (1) leads to extinction (dev); • more CO₂ in the atmosphere/more pollution in the air (1); increased global warming/climate change/increased temperatures/because trees act as filters/trees absorb pollutants (dev); • increased surface runoff (1); due to lack of roots to slow down movement of water/which could lead to flooding (dev); • amount of rainfall is decreased/water cycle disrupted (1); due to less evapotranspiration (dev). <p>Note: One mark for identification of appropriate idea and a further mark for development. Note: Possible opportunity to allow a further mark or marks for additional development. Note: Max. 2 marks if no development.</p> <p style="text-align: right;">2 @ 2marks</p>	4

Question	Answer	Marks
4(d)	<p>The United Nations environment programme supports Pakistan’s initiatives with forest owners, the timber industry and forest-dependent communities to keep its forests alive and healthy by controlling deforestation and degradation.</p> <p>To what extent can initiatives on forests encourage further sustainable development 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.</p> <p>Levels marking</p> <p>No valid response 0</p> <p>Level 1 1–2 Simple point referring to one view (1) Simple points referring to any view (2)</p> <p>Level 2 3–4 Developed point referring to one view (3) Developed points referring to both views (4)</p> <p>Level 3 5–6 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>Content Guide Answers are likely to refer to:</p> <p><u>Forest initiatives can encourage further sustainable development</u></p> <ul style="list-style-type: none"> • there is a financial incentive for the government/country to protect their forests and reduce deforestation; • it is an international initiative so likely to be implemented and monitored effectively; • specific criteria clearly identified for governments/countries to adopt; • examples of sustainable management strategies for implementation e.g. plant a tree for everyone cut down; • use of LPG/CNG or other fuels will lead to less deforestation; • education about the importance of trees and sustainable development of forests; • local landowners given a financial incentive to plant trees rather than other uses/named examples; • encourage eco-tourism; <p>Etc.</p>	6

Question	Answer	Marks
4(d)	<p><u>Ideas against</u></p> <ul style="list-style-type: none"> individual landowners will still deforest areas if they need the land for other purposes or examples of what land is needed for; it is not clear how much will be paid to the government/country for their co-operation; the financial incentives may not be lucrative enough compared to the financial benefits of deforestation; long term project/investment as takes time for trees to grow; resistance to education about the importance of trees in some tribal areas; political/government changes can alter forest laws; initiatives may be mismanaged; illegal cutting of trees/cutting cannot be controlled; <p>Etc.</p> <p>Named examples could include: The Tarbela/Mangla Watershed Management Project/Rachna Doab Afforestation Project/Billion Trees project/Agha Khan Rural Support Programme etc.</p>	

Question	Answer	Marks
5(a)(i)	<p>Define the term 'migration'.</p> <p>Migration is the movement of people from one place to another/leave own country and settle in another/moving in and out of an area.</p> <p>1 @ 1 mark</p>	1
5(a)(ii)	<p>Suggest <u>four</u> push factors that lead to rural-urban migration.</p> <ul style="list-style-type: none"> drought so crops die/lack of water for people/crops/livestock; natural disasters/earthquakes; not enough land to divide between heirs due to large families; insufficient food grown/pest attack/leads to hunger/illness; overgrazing by livestock leads to soil degradation/erosion/flooding; high unemployment rate/low paid jobs/no or lack of jobs/few high salaried jobs/work for family; lack of services e.g. schools/shops; lack of hospitals/medical facilities; lack of infrastructure e.g. metalled roads/electricity supply; floods destroy homes/fields/livelihoods; no/limited irrigation due to lack of electricity e.g. tubewell; no/limited recreational facilities or examples; mechanisation in farming; <p>4 @ 1 mark</p>	4

Question	Answer	Marks
5(a)(iii)	<p>Describe the impacts of rural-urban migration on rural areas of Pakistan.</p> <p>Negative impacts:</p> <ul style="list-style-type: none"> • rural de-population/low population/fewer people left behind; • reduced workforce/people available to work on farms; • reduced production; • more women/children/older people/dependent population left behind/imbalance in population; • feeling isolated/families are separated; • fewer people discourages investment/development in rural areas; • children are needed to work on the farm so cannot go to school; • falling birth rate; • families work harder to make up for the people who have left. <p>Positive impacts:</p> <ul style="list-style-type: none"> • send money back and so improve quality of life in rural area; • more availability of food/electricity etc; • more jobs available as people have moved out/less unemployment. <p style="text-align: right;">3 @ 1 mark</p>	
5(b)(i)	<p>Study Fig. 5.1, a map showing the distribution of urban population in Pakistan in 2018. Using Fig. 5.1 <u>only</u>, describe the distribution of urban population in Pakistan.</p> <ul style="list-style-type: none"> • uneven distribution; • most/high population is distributed in the north-east/east; • least/low population is in the south-west/west/far north; • two locations have 5+ million: south and north-west; • linear distribution north-west to south-east; • most frequent distribution is 50 000 to 99 999; • one area of 5+ million along Arabian Sea/very few along coastline/Arabian sea/most are inland; • two areas of 0.5–0.99 million on the disputed boundary; • only one area of 0.1–0.49 million in the south-west; • only one area of 0.5–0.99 million in centre-west/west; • reference to scale and correct number identified from key. <p style="text-align: right;">3 @ 1 mark</p>	3
5(b)(ii)	<p>Study Fig. 5.2, a bar graph showing the percentage of the population living in urban centres by province in 2018. <u>Complete</u> Fig. 5.2 by drawing the bar for Sindh using the information below.</p> <p>Accurate completion of bar at 52%</p> <p style="text-align: right;">1 @ 1 mark</p>	1
5(b)(iii)	<p>Using Fig. 5.2 <u>only</u>, list the provinces in rank order by their percentage of population living in urban centres.</p> <p>highest-lowest: Sindh, Punjab, Balochistan, Khyber Pakhtunkhwa (KPK)</p> <p style="text-align: right;">1 @ 1 mark</p>	1

Question	Answer	Marks
5(b)(iv)	<p>State <u>two</u> problems which occur when large numbers of people live in urban areas.</p> <ul style="list-style-type: none"> • pressure/burden on school places; • pressure/burden on healthcare services; • pressure/burden on transport/traffic congestion; • pressure/burden on sanitation/need more sanitation; • housing shortage/shanty town development/homelessness; • unemployment/not enough jobs/growth of informal economy; • environmental degradation/more noise/air/water/land pollution; • more waste generated/rubbish tips/rubbish in streets; • increased load shedding/shortage of electricity; • increased crime/theft. <p style="text-align: right;">2 @ 1 mark</p>	2
5(c)	<p>Explain <u>two</u> physical factors that affect the population distribution of Pakistan. You should develop your answer.</p> <ul style="list-style-type: none"> • topography/landscape/relief (1); e.g. flat land/plain area - more people able to settle there/build houses (dev); • climate (1); e.g. no extremes of temperature or rainfall - more people live there (dev); • soil fertility (1); e.g. rich fertile soil so able to grow crops and feed the population - so more people live there (dev); • availability of natural resources raw materials or named examples (1); provides employment opportunities/settlements grow up around resources - more people live there (dev); • availability of water (1) near to rivers/lakes/fresh water/water a necessity for life/irrigation - more people live there (dev); • natural routes (1) e.g. gaps through mountains/confluence of valleys/natural harbours provides transport opportunities between countries/inaccessible areas - more people live there (dev); • proximity to coast/beach/mountains/forests (1) for fishing opportunities/development of tourism/mountaineering/recreation -more people live there (dev); <p>Note: One mark for identification of appropriate idea and a further mark for development. Note: Max. 2 marks if no development.</p> <p style="text-align: right;">2 @ 2marks</p>	4

Question	Answer	Marks
5(d)	<p>Read the following two views about the impact of migration on Pakistan’s future economic development.</p> <p>A: The emigration of working-age people from Pakistan will encourage further economic development.</p> <p>B: The immigration of skilled and professional people to Pakistan will encourage further economic development.</p> <p>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.</p> <p>Levels marking</p> <p>No valid response 0</p> <p>Level 1 1–2 Simple point referring to one view (1) Simple points referring to any view (2)</p> <p>Level 2 3–4 Developed point referring to one view (3) Developed points referring to both views (4)</p> <p>Level 3 5–6 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>Content Guide Answers are likely to refer to:</p> <p><u>Agree with View A more</u></p> <ul style="list-style-type: none"> • Pakistan has a large population so encouraging people to move abroad will alleviate the burden of unemployment/encourage development; • people who migrate will send remittances home which will improve household income/quality of life and increase revenue in Pakistan through domestic spending and investment in health/education; • people may move abroad and gain training and expertise then return to Pakistan and help to develop the country by sharing skills/educating others/generating high income; • less money has to be spent on training and/or benefits in Pakistan saving the balance of payments; • people may diversify with this income/build wealth/invest in assets; • reduced labour supply can lead to increased wages in local labour markets; • increased demand for local goods/services from increased remittances; <p>Etc.</p>	6

Question	Answer	Marks
5(d)	<p><u>Agree with View A less</u></p> <ul style="list-style-type: none"> • people who move abroad tend to be young economically active males; which changes the population composition and may leave a gap/skills shortage in Pakistan for filling certain jobs; • loss of labour may lead to reduced production in agricultural/cottage industries; • young and elderly dependants need the economically active to work in Pakistan to contribute towards GDP and balance of payments; • encouraging the economically active to migrate creates more problems than it solves; <p>Etc.</p> <p><u>Agree with View B more</u></p> <ul style="list-style-type: none"> • Pakistan has a lack of skilled and professional people which may hold back further economic development; • skilled and professional people can teach/educate/train the people in Pakistan; • skilled and professional people can set up businesses and create further employment opportunities; <p>Etc.</p> <p><u>Agree with View B less</u></p> <ul style="list-style-type: none"> • it may lead to further unemployment of Pakistani people as foreigners will take the jobs that are available; • Pakistani people may be put off from training and education if this does not lead to secure employment; • foreign workers will send remittances to their home country which will not benefit Pakistan economically; <p>Etc.</p>	