



Mark Scheme (Results)

Summer 2019

Pearson Edexcel International GCSE
In Pakistan Studies (4PA1) Paper 02

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Question number	Answer	Mark
1(a)(i)	<p style="text-align: center;">AO3 (1 mark)</p> <ul style="list-style-type: none"> • B as this is an area of calm weather • Not A as this forms due to rising air containing water vapour which condenses. • Not C as this occurs to either side of the eye • Not D as this occurs on the outer edges of the cyclone as air cools, becomes dense and sinks. 	(1)

Question number	Answer	Mark
1(a)(ii)	<p style="text-align: center;">AO3 (1 mark)</p> <p>Award 1 mark for correct point, maximum 1 mark.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Calm weather at eye (1) <input type="checkbox"/> Slowly descending air (1) <input type="checkbox"/> 30–65 km in diameter (1) <input type="checkbox"/> 482–644 kms wide (1) <input type="checkbox"/> 6–8 km high (1) <input type="checkbox"/> Circular shape (1) <input type="checkbox"/> Low pressure (1) <input type="checkbox"/> Very heavy rainfall (1) <input type="checkbox"/> Travel at speeds up to 65 km/hour (1) <p>Accept any other appropriate response.</p>	(1)

Question number	Answer	Mark
1(b)	<p style="text-align: center;">AO1 (2 marks)</p> <p>Award 1 mark for each correct point, up to a maximum of 2 marks.</p> <ul style="list-style-type: none"> • Warm sea surface (1) • Temperature of at least 26°C (1) • Location between 5 and 20° north or south of the Equator (1) • An existing storm/depression (1) • An area of low pressure (1) <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
1(c)	<p>AO1 (1 mark)/AO2 (2 marks)</p> <p>Award 1 mark for initial point and 2 further marks for expansion, up to a maximum of 3 marks. Credit only one cause.</p> <p>The River Indus transports large volumes of sediment due to fluvial erosion (1). The river's energy is reduced as it flows into the Arabian Sea (1). This causes sediment (load) to be deposited and build up over time to form the delta (1).</p>	(3)

Question number	Answer	Mark
1(d)	<p>AO2 (2 marks)/AO3 (2 marks)</p> <p>Award 1 mark for an outlined reason and 1 mark for expansion of the reason, up to a maximum of 2 marks each. Only two reasons should be credited.</p> <p>(1) Climate change is causing global temperatures to rise</p> <p>freezing point, causing glacial melting, evidence for this is the Shimshal river flow. (1)</p> <p>(1) therefore, the temperature of ice increases above</p> <p>A decline in the amount/volume of winter snowfall (1) means that the volume of a glacier is not maintained, resulting in ablation, evidence for this is the retreating Khurdopin Glacier. (1)</p> <ul style="list-style-type: none"> • Calving occurs when large amounts of ice break off from the glacial snout (1) this occurs when a glacier flows into a sea or lake. No evidence in the photograph as the glacier does not reach the sea/lake. (1) • Sublimation (1) where ice changes into water vapour without first becoming liquid. This process cannot be seen in the photograph. (1) 	(4)

Question number	Indicative content	
1(e)	<p style="text-align: center;">AO1 (3 marks)/AO2 (3 marks)</p> <p>The indicative content below is not prescriptive and candidates are not required to include all the material indicated as relevant. Other relevant material not suggested below must also be credited.</p> <p>Mark labelled/annotated diagrams as text but do not double credit</p> <ul style="list-style-type: none"> • 225 million years ago India and Pakistan formed a large island separated from Asia by the Tethys Ocean. About 50-40 million years ago northward drift of the Indian continental plate became slower, indicating the start of the collision between the Eurasian and Indian continental plates which resulted in the Himalayan uplift. • The Eurasian plate was partly crumpled and pushed up above the Indian plate, but because both plates have similar densities neither plate was subducted. Therefore, the continental crust became thicker due to folding by compression and was forced up to form the Himalayas and the Tibetan Plateau. • The Himalayas are still rising by more than 1 cm per year due to the continued northward movement of the Indian plate northwards into Asia. • However, weathering and erosion are the Himalayas at about the same rate as uplift is taking place. 	
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1-2	Demonstrates limited understanding of concepts, some of which may be inaccurate or irrelevant. (AO1) Demonstrates unsustained links to the conceptual focus of the question, which are not developed. (AO2)
Level 2	3-4	Demonstrates partial understanding of concepts, which are mostly accurate and relevant. (AO1) Demonstrates some links to the conceptual focus of the question, which are partially developed. (AO2)
Level 3	5-6	Demonstrates thorough understanding of concepts, which are accurate and relevant. (AO1) Demonstrates sustained links to the conceptual focus of the question, which are developed. (AO2)

Question number	Indicative content
1(f)	<p style="text-align: center;">AO2 (4 marks)/AO3 (4 marks)</p> <p>The indicative content below is not prescriptive and candidates are not required to include all the material indicated as relevant. Other relevant material not suggested below must also be credited.</p> <p>Access the environmental impacts which may result from exploitation of one non-renewable energy resource in Pakistan.</p> <p>Indicative content</p> <p>Relevant points that support the statement may include:</p> <ul style="list-style-type: none"> □ There are deposits of lignite coal in the Thar coalfield however these deposits contain impurities called volatiles which produce large volumes of CO² when burnt. □ The coal will be mined by open cast methods. This will result in huge open pits that reach below the water table. Once mining is finished, the pits will fill with water contaminated with sulphur, which can contaminate the ground water making it acidic and damaging to local ecosystems. □ Any unwanted waste from mining is piled up near to the open cast pit. Rainwater passing through the waste will pick up heavy metals such as mercury and arsenic, which are then transported to streams and rivers, damaging wildlife and water quality. <p>Relevant points to counter the statement might include:</p> <ul style="list-style-type: none"> □ The negative environmental impacts can be reduced if careful methods of coal extraction are enforced. For example, there are plans in Thar to line the reservoir tanks serving the coal mines, therefore preventing contamination of ground water and resulting environmental problems. □ Modern coal fire power stations can have 'scrubbers' that extract pollutants before they are released into the atmosphere. This reduces greenhouse gasses especially CO².

Level	Mark	Descriptor
	0	No rewardable material
Level 1	1-3	<ul style="list-style-type: none"> • Demonstrates isolated elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) • An unbalanced or incomplete argument that provides limited consideration of factors, leading to judgements and a final conclusion that are not supported by evidence. (AO3)
Level 2	4-6	<ul style="list-style-type: none"> • Demonstrates elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) • An imbalanced argument that provides some consideration of factors, leading to judgements and a final conclusion that are partially supported by evidence. (AO3).
Level 3	7-8	<ul style="list-style-type: none"> • Demonstrates accurate understanding of concepts and the interrelationship between places, environments and processes. (AO2) • A balanced, well-developed argument that provides thorough consideration of factors, leading to judgements and a final conclusion that are well supported by evidence. (AO3)

Question number	Answer	Mark
2(a)(i)	<p style="text-align: center;">AO3 (1 mark)</p> <p>C as $2.1 + 2.3 + 2.6 + 4.2 + 5.6 = \\16.8 Not A as $2.1 + 2.3 + 2.6 + 4.2 + 5.6 = \\16.8 not $\\$18.8$ Not B as $2.1 + 2.3 + 2.6 + 4.2 + 5.6 = \\16.8 not $\\$17.8$ Not D as $2.1 + 2.3 + 2.6 + 4.2 + 5.6 = \\16.8 not $\\$15.8$</p>	(1)

Question number	Answer	Mark
2(a)(ii)	<p style="text-align: center;">AO3 (1 mark)</p> <p>Money earned by a worker abroad and sent to family/friends in the worker's home country.</p>	(1)

Question number	Answer	Mark
2(b)	<p style="text-align: center;">AO1 (2 marks)</p> <p>Award 1 mark for each correct point, up to a maximum of 2 marks.</p> <p>Machinery (1) Vehicles (1) Plastic goods (1) Iron and steel (1) Pharmaceuticals (1) medical equipment (1) Organic chemicals (1) Engines (1) Pumps (1).</p> <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
2(c)	<p style="text-align: center;">AO1 (1 mark)/AO2 (2 marks)</p> <p>Award 1 mark for initial point and 2 further marks for expansion, up to a maximum of 3 marks each. Only credit one factor.</p> <ul style="list-style-type: none"> • Pakistan has made significant progress in increasing home-produced food supplies (1) for example the per capita output of cereals, such as wheat and rice, has increased (1). This improves the food security situation as it reduces the need to import food supplies (1). • Green Revolution technologies have reduced the large food deficit (1) and Pakistan now successfully produces enough rice for domestic consumption (1) and significant quantities are exported, earning income, both of which result in improved food security (1). 	(3)

Question number	Answer	Mark
2(d)	<p style="text-align: center;">AO2 (2 marks)/AO3 (2 marks)</p> <p>Award 1 mark for an outlined reason and 1 mark for expansion of the reason, up to a maximum of 2 marks.</p> <p>Passenger traffic</p> <ul style="list-style-type: none"> • There has been a large increase in scooters, tuk tuks, private car ownership etc. (1) which are more convenient to use and cheaper than using the rail network (1). <p>Freight wagons</p> <ul style="list-style-type: none"> • Investments in the rail system have been minimal (1), therefore many of the locomotives have fallen into disrepair reducing the number of working freight wagons. (1). • New major highways such as M-1 Peshawar Islamabad motorway (1) connects Pakistani motorways to Afghanistan creating a much more efficient route than freight transport (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Indicative content	
2(e)	<p style="text-align: center;">AO1 (3 marks)/AO2 (3 marks)</p> <p>The indicative content below is not prescriptive and candidates are not required to include all the material indicated as relevant. Other relevant material not suggested below must also be credited.</p> <ul style="list-style-type: none"> • Globalisation and TNCs may adversely affect the culture and traditions of Pakistan due to introduction of western ideas and technology. <ul style="list-style-type: none"> • Globalisation and TNCs can encourage polluting industries and practices as manufacturing and resource extraction are for profit. In Pakistan industrial development tends to be poorly regulated, resulting in environmental damage. For example this includes river pollution such as the Indus which is polluted by heavy metals. • Globalisation and TNCs can cause over-exploitation of resources. For example, developing industry in Pakistan is increasing water scarcity. • Globalisation and TNCs tend to benefit the richest countries, which control and dominate world trade at the expense of developing countries. Countries such as Pakistan provide the north and west with cheap labour and raw materials. This limits Pakistan's economic development. <ul style="list-style-type: none"> • Profits tend to go to more developed countries limiting the development and financial security of the 'host' country such as Pakistan. • However, globalisation can increase free trade between countries, encouraging TNCs to invest in Pakistan • Globalisation can increase the sharing of information between countries, assisting the development of countries such as Pakistan. 	
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–2	Demonstrates limited understanding of concepts, some of which may be inaccurate or irrelevant. (AO1) Demonstrates unsustainable links to the conceptual focus of the question, which are not developed. (AO2)
Level 2	3–4	Demonstrates partial understanding of concepts, which are mostly accurate and relevant. (AO1) Demonstrates some links to the conceptual focus of the question, which are partially developed. (AO2)
Level 3	5–6	Demonstrates thorough understanding of concepts, which are accurate and relevant. (AO1) Demonstrates sustained links to the conceptual focus of the question, which are developed. (AO2)

Question number	Indicative content
2(f)	<p style="text-align: center;">AO2 (4 marks)/AO3 (4 marks)</p> <p>The indicative content below is not prescriptive and candidates are not required to include all the material indicated as relevant. Other relevant material not suggested below must also be credited.</p> <p>Indicative content</p> <p>Relevant points that support the statement may include:</p> <ul style="list-style-type: none"> • Investment is much higher in Sindh and the Punjab, most of the main urban and industrial areas, such as Karachi, are located in these provinces and the government gives priority to these areas when investing in improvements such as infrastructure. This leads to increasing inequality in development between regions and adversely affects the over- all development of Pakistan. • The main commercial agricultural areas are also Punjab and Sindh, providing income and economic advantages to these areas and promoting economic stability. Other areas such as Balochistan have lower agricultural production. As agricultural products are important exports, this limits the value of exports and the development of Pakistan. <ul style="list-style-type: none"> • Feudal systems and unrest in the northern areas result in low investment and low levels of economic development. Large areas of Pakistan do not contribute to the economy development of Pakistan. • Infrastructure is unevenly balanced across the country with most of the major road/rail links in the Indus regions. This limits the development of Pakistan as many areas are isolated and limits development. <p>Relevant points to counter the statement may include:</p> <ul style="list-style-type: none"> • Development in Pakistan is unequal, with more investment in the Punjab and Sindh provinces. However, urban areas such as Karachi, which provide relatively high incomes and are financial centres, are important for Pakistan's development and help to reduce the disparity of economic development within the country. • Education levels and literacy rates vary within Pakistan. Literacy is directly linked to economic development and there are inequalities. However, government incentives to reduce illiteracy levels will help to increase development and reduce the impact of regional variations.

Level	Mark	Descriptor
	0	No rewardable material
Level 1	1-3	<ul style="list-style-type: none"> • Demonstrates isolated elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) • An unbalanced or incomplete argument that provides limited consideration of factors, leading to judgements and a final conclusion that are not supported by evidence. (AO3)
Level 2	4-6	<ul style="list-style-type: none"> • Demonstrates elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) • An imbalanced argument that provides some consideration of factors, leading to judgements and a final conclusion that are partially supported by evidence. (AO3)
Level 3	7-8	<ul style="list-style-type: none"> • Demonstrates accurate understanding of concepts and the interrelationship between places, environments and processes. (AO2) • A balanced, well-developed argument that provides thorough consideration of factors, leading to judgements and a final conclusion that are well supported by evidence. (AO3)

Question number	Answer	Mark
3(a)(i)	<p style="text-align: center;">AO3 (1 mark)</p> <p>B as the points intersect at 0.42 Not A as the points intersect at 0.42 not 0.40 Not C as the points intersect at 0.42 not 0.44 Not D as the points intersect at 0.42 not 0.46</p>	(1)

Question number	Answer	Mark
3(a)(ii)	<p style="text-align: center;">AO3 (1 mark)</p> <p>Award 1 mark for correct point, maximum 1 mark. 0.08 (accept 0.07 to 0.09) (1)</p> <p>Do not accept any other response.</p>	(1)

Question number	Answer	Mark
3(a)(iii)	<p style="text-align: center;">AO1 (2 marks)</p> <p>Award 1 mark for each correct point, up to a maximum of 2 marks.</p> <p>Life expectancy at birth (1) Expected years of schooling (1) Income measured by Gross National Income (1)</p>	(2)

Question number	Answer	Mark
3(b)	<p style="text-align: center;">AO1 (1 mark)/AO2 (2 marks)</p> <p>Award 1 mark for initial point and 2 further marks for expansion, up to a maximum of 3 marks each. Only credit one factor.</p> <ul style="list-style-type: none"> • Increased emissions of greenhouse gases (1) mainly due the combustion of fossil fuels in cars, factories and fossil fuel powered electricity production (1) in particular carbon dioxide (CO²) prevents radiation from returning to space and increases the temperature of the atmosphere (1). • Modern animal farming and rice are significant producers of methane (1) which is a greenhouse gas about 20 times more potent than carbon dioxide. (1) Livestock farming is responsible for about 37% of human caused methane emissions (1). <p>Accept any other appropriate response.</p>	(3)

Question number	Answer	Mark
3(c)	<p style="text-align: center;">AO2 (2 marks)/AO3 (2 marks)</p> <p>Award 1 mark for an outlined reason and 1 mark for expansion of the reason, up to a maximum of 2 marks each.</p> <p>Subsistence farming</p> <ul style="list-style-type: none"> • Many of the farms are very small, only 1-3 hectares, so the farmer only produces enough for a family and there is not a surplus to sell (1) this means that the rural community does not have an income to help with development projects. (1) • Subsistence farming depends on favourable weather conditions, periods of drought/flood can mean that the farmer is unable to save seeds for the following years crops (1) resulting in rural communities having less food supply and food security (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Indicative content	
3(d)	<p style="text-align: center;">AO1 (3 marks)/AO2 (3 marks)</p> <p>The indicative content below is not prescriptive and candidates are not required to include all the material indicated as relevant. Other relevant material not suggested below must also be credited.</p> <ul style="list-style-type: none"> • Rising sea levels will increase the need for coastal defences. This is particularly true in the Indus River Delta area. Karachi, with a population of approximately 17 million, is Pakistan’s main port. Pakistan faces considerable challenges in protecting Karachi as the Pakistani economy is already in deficit and raising the money to carry out major coastal protection works will be difficult. • Pakistan is just self-sufficient in food production but in the near future the rate of increase in food production will not be able to match the increase in population. The loss of coastal agricultural land due to rising sea levels will have serious economic implications as money will have to be spent on importing food instead of economic development. • Rising sea levels will cause climate refugees from villages and small towns along the coastline. These refugees will require resettling in Pakistan, either in temporary or permanent homes. This will require considerable investment, which will provide a significant challenge to Pakistan’s weak economy and further reduce the money available for development. 	
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–2	<p>Demonstrates limited understanding of concepts, some of which may be inaccurate or irrelevant. (AO1)</p> <p>Demonstrates unsustainable links to the conceptual focus of the question, which are not developed. (AO2)</p>
Level 2	3–4	<p>Demonstrates partial understanding of concepts, which are mostly accurate and relevant. (AO1)</p> <p>Demonstrates some links to the conceptual focus of the question, which are partially developed. (AO2)</p>
Level 3	5–6	<p>Demonstrates thorough understanding of concepts, which are accurate and relevant. (AO1)</p> <p>Demonstrates sustained links to the conceptual focus of the question, which are developed. (AO2)</p>

Question number	Indicative content
3(e)	<p style="text-align: center;">AO2 (4 marks)/AO3 (4 marks)</p> <p>The indicative content below is not prescriptive and candidates are not required to include all the material indicated as relevant. Other relevant material not suggested below must also be credited</p> <p>Indicative content</p> <p>Relevant points that support the statement may include: Named megacity: Karachi.</p> <ul style="list-style-type: none"> • Law and order in Karachi have improved due to 'Karachi operation', and is now considered one of the safer cities in Pakistan This has improved the global image of Karachi and made foreign investment more likely. • More than 50 % of the population of major cities live in slums and squatter settlements. To reduce the severe housing backlog the government has built low-cost housing under a dedicated Prime Minister's Programme. In addition, the government has approved a programme of urban renewal and slum improvements. The Government of Sindh has prepared specific development plans to reduce problems in Karachi. • The city government is developing a plan to ban the registration of more diesel buses and to convert old public transport vehicles with CNG. The 'Green Bus' and other schemes will help to reduce the severe air pollution which exists in some parts of Karachi. <p>Relevant points to counter the statement may include:</p> <ul style="list-style-type: none"> • Urbanisation has increased the size of Pakistan's biggest cities so rapidly that the national, regional and local governments are unable to deliver public services or create productive jobs. Urban poverty is increasing, with one in eight urban dwellers living below the poverty line. This is particularly true in Karachi. • The State Bank of Pakistan estimates that urban housing was approximately 4.4 million units short of demand in 2015. Pakistan's five largest cities will account for 78 per cent of the total housing shortage by 2035. Even when the government provides housing it is often low quality. Karachi, one of the world's fastest growing megacities with an estimated 17 million people, has the second highest amount of substandard housing in South Asia and sixth highest globally.

	<p>Most plans and incentives are affected by bureaucratic and administrative delays. They are also affected by corruption and the lack of political will.</p> <p>The government has prepared Master Plans to improve urban infrastructure networks, services and utilities. Consequently, the rate of urbanisation has declined from 3.5 per cent in 1998 to 3.3 per cent in 2013. In Karachi however immigration and natural growth is about 5% a year and Karachi's population is now growing much faster than projected.</p>	
Level	Mark	Descriptor
	0	No rewardable material
Level 1	1-3	<ul style="list-style-type: none"> • Demonstrates isolated elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) • An unbalanced or incomplete argument that provides limited consideration of factors, leading to judgements and a final conclusion that are not supported by evidence. (AO3)
Level 2	4-6	<ul style="list-style-type: none"> • Demonstrates elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) • An imbalanced argument that provides some consideration of factors, leading to judgements and a final conclusion that are partially supported by evidence. (AO3)
Level	Mark	Descriptor
Level 3	7-8	<ul style="list-style-type: none"> • Demonstrates accurate understanding of concepts and the interrelationship between places, environments and processes. (AO2) • A balanced, well-developed argument that provides thorough consideration of factors, leading to judgements and a final conclusion that are well supported by evidence. (AO3)

