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Cambridge Ordinary Level

PAKISTAN STUDIES

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Paper 2 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.

Cambridge International will not enter into discussions about these mark schemes.

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This document consists of **18** 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:

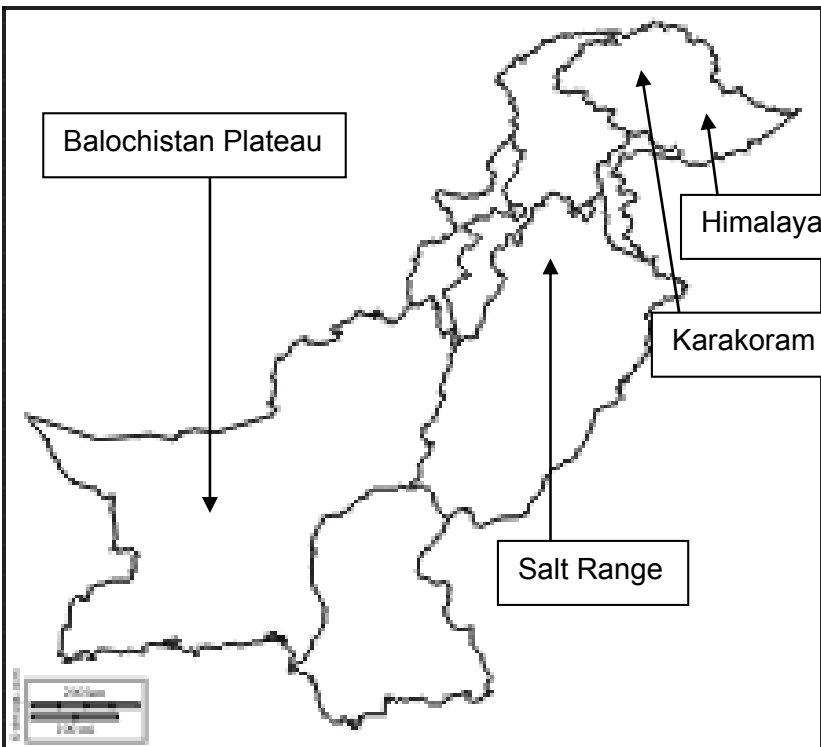
Rules must be applied consistently e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

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)	 4 @ 1 mark	4
1(a)(ii)	• peak • horn • summit • arêtes 1 @ 1 mark	1
1(b)(i)	(The study or description of) features of the landscape, (which includes both natural and artificial features) / natural characteristics of land / structural features of landscape. 1 @ 1 mark	1
1(b)(ii)	• V shaped valleys / deep valleys / narrow valleys / gorges; • U shaped valleys; • Cirque / corrie / arête; • High altitude (6000 m+) / snow-capped or high peaks / hilly / mountainous; • Steep slopes / uneven / rugged; • Scree; • Bare rocks / rocky / barren; • Snowfields / glaciers; • Parallel ranges; • High passes (Khunjerab / Shandur / Lawarai); • Rivers / streams / rapids / waterfalls. 3 @ 1 mark	3

Question	Answer	Marks
1(c)(i)	- Road / rail building; - Demand for firewood / fuel; - To graze / feed livestock; - Build houses / settlements / hotels; - Industry / furniture / timber / paper; - Develop hydel power / power stations / building reservoirs. 2 @ 1 mark	2
1(c)(ii)	- Soil erosion; due to minerals being leached (washed) through the soil / soil blown away / soil washed away downhill (dev); - Increased number of landslides; because no roots to hold the soil together / in place / rain saturates soil and washes it downslope (dev); - Habitats lost; means species are endangered / at risk of extinction / land barren (dev); - Ecosystems destroyed; food-chains are broken / disrupted / animals forced to move to other areas / animals or species die (dev); - Soil washed into rivers; raises the water level of rivers / causes more flooding / causes siltation (dev); - No trees to stop flow of water or run off; leads to flooding / increased run off (dev); - Patches of salt left behind; leads to infertile land (dev); - Evaporation reduced; changes to rainfall pattern (dev); Etc. Note: One mark for identification of appropriate idea and a further mark for development (in parentheses). Note: Max. 2 marks if no development. 2 @ 2 marks	4
1(c)(iii)	- Snow-capped peaks melt during summer to drain water into rivers; - Provides water from high rainfall; - Provides water for hydel power / energy; - River water used for irrigation / agriculture; - Historical passes connect Pakistan to China and Afghanistan; - A natural border (to China and the Central Asian Republics); - Provides a land /trade route through Karakoram Highway; - Source of valuable minerals, timber and fruits; - Provides raw material to several industries or examples: furniture / paper / chipboard / industry / chemical industry; - Mountain peaks provide protection to Pakistan against the cold winds from Central Asia; - Scenic beauty promotes tourism / named landmarks, e.g. K2; - Provision of National Parks or named examples, e.g. Chitral National Park / wildlife preservation; - Source of income from tourism / tourists / contribute to economy. 4 @ 1 mark	4

Question	Answer	Marks
1(d)	Levels marking No valid response 0 Level 1 1–2 Simple point referring to one view (1) Simple points referring to any view (2) Level 2 3–4 Developed point referring to one view (3) Developed points referring to both views (4) 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) Content Guide Answers are likely to refer to: <u>Ways of reducing impact of deforestation</u> • Soil can be more readily protected from erosion in the Northern areas than other areas due to the wetter climate / afforestation on steeper slopes / hedgerows planted / strip cultivation / contour ploughing / terracing on steep slopes; • Supplying irrigation facilities to the deforested areas; • Planting commercial species of trees which grow rapidly; • Reserving land for fuel wood plantation only, saving valuable species of trees; • Education amongst the people about the importance of trees; • Creation of non-governmental agencies to promote afforestation and campaign against deforestation; • Supply natural gas to Northern Regions to ease the pressure on trees for fuelwood; • Improved techniques of raising nurseries and planting trees so deforested areas can be regenerated in a shorter time; • Ensuring that forestry and forest management is more sustainable, e.g. use of selective logging / restricting use of bulldozers / strict enforcement of forest laws / enforcement of village / farm forestry programmes / urban forestry programmes; • Planting fruit trees on the slopes of hills to provide food for the local people; Etc. <u>Acceptable alternative approaches</u> include: arguing that the impacts can be reduced in other areas more easily due to greater accessibility and availability of named resources, etc.	6

Question	Answer	Marks
2(a)(i)	V = Indus W = Jhelum X = Chenab Y = Ravi 4 @ 1 mark	4
2(a)(ii)	Z = Mangla Dam 1 @ 1 mark	1
2(b)(i)	• Amandarra • Balochi • Chasma • Guddu • Islam • Jinnah • Kotri • Kurrangarhi • Marala • Panjnad • Qadirabad • Rasul • Siddha • Sukkur • Sulaimanka • Taunsa • Trimma 2 @ 1 mark	2
2(b)(ii)	• Dams store water / barrages control flow of water; • Barrages can supply little / small amounts / no electricity (dams are major suppliers of hydel power); • Silting is a problem for dams (but not barrages); • Maintenance cost is lower for barrages (more expensive for dams); • Construction and or maintenance time is quicker for barrages (longer for dams); • Construction cost is lower for barrages (more expensive for dams); • Fewer or no people have to be evacuated for barrages; • Barrages have less environmental impact than dams; • Barrages can be built on flat land (dams require steep slopes); • Dams have multiple uses whereas barrages do not; • Dams provide water for a larger area than barrages; • Barrage to deviate channel to an area where there is no river; • Do not need to excavate a large area for barrages. 4 @ 1 mark	4

Question	Answer	Marks
2(b)(iii)	- Reducing water supply / less water available / water becomes silty / pipes blocked / reduces capacity of reservoir / less water stored; - Blocking the flow of water / blocks canals or rivers / chokes or blocks irrigation canals or pipes / water cannot get through / floods may occur; - Weakens foundations of dams / have to be emptied or strengthened / flow of flood water is hampered and can damage dam / damage to turbines or machinery; - Not enough water for irrigation / industry / domestic use; - Reduces water available for hydel power / generation of hydel power stopped; - Encourages growth of algae / eutrophication.	4
2(c)	- Scenic beauty; for tourism / picnic / leisure (dev); - Provides water; especially to areas where rainfall is low/named; examples / sustains life or drinking water (dev); - Helps to generate hydel power / electricity; which reduces power shortages / reduces need to import coal or oil / reduces need to use fossil fuels (dev) / one of main sources of electricity; - Adds alluvium to soil; so, improves the fertility of the soil / aids crop growth (dev); - For fishing industry / subsistence fishing; provides income or food supply to local areas / people (dev); - Provides water for domestic use / in the home; named examples, e.g. cooking / cleaning (dev); - Provides water for industries; named examples, e.g. cement, brick making, cotton (dev); - Provides water for irrigation / agriculture / farming; used to irrigate / water crops / feed livestock / or named examples, e.g. wheat / cotton / sugar cane (dev); - Transport; for trade / avoid using roads or rail / access to ports (dev); Etc. Note: One mark for identification of appropriate idea and a further mark for development (in parentheses). Note: Max. 2 marks if no development. 2 @ 2 marks	4

Question	Answer	Marks
2(d)	Levels marking No valid response 0 Level 1 1–2 Simple point referring to one view (1) Simple points referring to any view (2) Level 2 3–4 Developed point referring to one view (3) Developed points referring to both views (4) 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) Content Guide Answers are likely to refer to: <u>Small dams</u> • Cheaper to construct; • Less technical expertise needed; • Can be built more quickly; • Minimal disruption to people and environment; Etc. <u>Large dams</u> • More people will benefit; • Can produce HEP which is good for developing the country; • Provides employment opportunities; • A bigger area is utilized; Etc.	6
3(a)(i)	• North / north eastern / eastern part of Pakistan; • Distance from named city / Multan / Islamabad; • Direction from named city / north-east of Multan / south-east of Islamabad; • Close / near to border of Jammu and Kashmir / south-west of Jammu and Kashmir; • West of India / near border with India / border city; • Direction from named country or area / east of Afghanistan / north-east of Iran / south-west of China / south-west of Jammu and Kashmir; • In the same province as Multan. 3 @ 1 mark	3

Question	Answer	Marks
3(a)(ii)	• Rubber • Wood / wood pulp • Stitching thread / cotton • Leather • Water • (Linseed) oil / varnish 2 @ 1 mark	2
3(a)(iii)	• In small workshops / within household / small scale industry / in cottages / primitive conditions; • Uses predominantly manual labour / by hand / hand tools; • Processes, e.g. cutting, sewing, stitching, shaping; • The final stages are done in factories; • There are aspects of both formal and informal sectors; • Mostly work is conducted by unskilled / child labourers; • Goods are manufactured to international standards / high quality / for export; • All stages are supervised for quality control. 3 @ 1 mark	3
3(b)(i)	• completion of pie chart • correct shading 2 @ 1 mark	2
3(b)(ii)	• There is no sugar cane grown in Balochistan; • Sugar mills have to be located near the sugar cane fields and there are none in Balochistan; • Sugar cane starts to lose its sugar content as soon as it is harvested / it needs to be crushed immediately; • Too far to transport sugar cane from Balochistan to the nearest sugar mill; • Sugar cane is bulky and heavy so it is expensive to transport. 1 @ 1 mark	1
3(b)(iii)	<u>By-product</u> • Bagasse • Molasses <u>Use</u> • Bagasse: as a fuel in sugar mills / to make chipboard / to make paper / to make animal feed. • Molasses: to manufacture various acids, e.g. citric acid / in the chemical industry / to make cattle feed / to make yeast / as fuel (in sugar factories) / used in manufacture of synthetic rubber. 2 @ 1 mark	2

Question	Answer	Marks
3(c)(i)	Physical factors - Raw material; heavy and bulky to transport / so factory would be best located close to the source of the raw material in order to reduce cost of transportation (dev); - Water; a large quantity of water is needed in steel manufacture / so the factory would be sited near to a large source of water e.g. a river or lake (dev); - Land; flat land is required; as it is easier to build on (dev) / unused land is preferred as money does not have to be spent cleaning up the land first (dev) / large area of land so there is room for expansion and storage if needed in the future (dev); cheap land / so that it is affordable for businesses and loans do not have to be taken out (dev). Human factors - Power; situated near to a thermal or nuclear power station / is preferred so that energy supplies will be uninterrupted (dev); - Labour; skilled and unskilled labour is required so located near to a large town or city / so that labour can access the factory (dev); - Market; located to large towns and cities / railways / ports / so that the products can easily be transported for sale or export (dev); - Communication; near to motorways / railways and / or good IT infrastructure / so that goods can be transported efficiently and deals can be made within Pakistan or beyond (dev); - Transport; near to main road and rail network and ports for the movement of raw material in / finished products out / and for workers / large and bulky raw material needs to be near factory (dev); - Capital; tax breaks, loans, incentives, (dev) etc. Note: One mark for identification of appropriate idea and a further mark for development (in parentheses). Note: Max. 2 marks if no development. 2 @ 2 marks	4
3(c)(ii)	Domestic market: cement / steel / fertilisers Export market: cotton / sports goods / surgical instruments 2 @ 1 mark	2

Question	Answer	Marks
3(d)	Levels marking No valid response 0 Level 1 1–2 Simple point referring to one view (1) Simple points referring to any view (2) Level 2 3–4 Developed point referring to one view (3) Developed points referring to both views (4) 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) Content Guide Answers are likely to refer to: <u>Possibilities</u> • Introduce training programmes; • Advertising to entice local markets to buy locally produced products; • Reducing manufacturing costs; • Improving productivity; • Buy local initiatives or examples; • Improving the standard / quality of locally produced goods to meet international standards; • Incentives for buying local, e.g. creation of more jobs; • Helps reduce impact on climate change by reducing CO₂ emissions; from transport costs / benefits to the environment promoted; • Make it more difficult to import goods / increase tariffs / duties; Etc. <u>Difficulties</u> • Advertising / promotion / branding of imported goods; • Costs / cheaper to buy imported goods; • Quality of local goods; • Skills availability for producing quality goods; • Funding to develop industries / manufacturing; • Technical knowledge / skills; • Energy crisis; • Economic constraints; • Availability of modern technology; • New competitors, e.g. Bangladesh / Vietnam / Turkey; • Low foreign investment in consumer goods; • Restricted market, e.g. international standards applied to products; Etc.	6

Question	Answer	Marks
4(a)(i)	A= Lahore B= Rawalpindi / Islamabad 2 @ 1 mark	2
4(a)(ii)	Karakoram Highway / KKH 1 @ 1 mark	1
4(a)(iii)	• More roads in / most dense in east / north-east / south-east; • Fewer roads in / least dense in south-west / north; • One region the north / north-east has a motorway; • Motorway connects cities (A and B) in the north / north-east; • Many minor roads compared to major highways in all regions. 2 @ 1 mark	2
4(b)(i)	• Faster / more efficient form of transport / to reduce time of journey; • Industrial estates are built along the route / promotes industrial growth; • Trading / raw materials can be delivered to industries / finished products can be delivered to markets / dry ports; • More employment opportunities can be provided (due to industrial expansion); • Motorway can be further expanded to connect Afghanistan and the Central Asian Republic / increase foreign trade / increase in imports and exports; • New settlements can be established along the route; • Connects cities / to outlying rural areas; • Promote tourism; • Relieve traffic on other roads , e.g. N5; • Reduce accidents / safer. 3 @ 1 mark	3
4(b)(ii)	• Fast / efficient; • Can move bulky goods / a lot of people; • Cheaper; • More suitable for long distances; • More comfortable / sleepers; • Less stressful / pay in advance; • Cost effective / economical; • Safe / fewer accidents; • No traffic jams; • More sustainable / less air pollution 4 @ 1 mark	4
4(c)(i)	• It is an <u>inland</u> terminal <u>connected to a seaport</u> by road or rail; • Operates as a centre for the <u>transhipment of sea cargo</u> to <u>inland</u> destinations; • An <u>inland area</u> or multimodal logistics centre <u>connected to the sea</u>. 1 @ 1 mark	1

Question	Answer	Marks
4(c)(ii)	• Faisalabad • Gilgit • Hyderabad • Islamabad • Karachi / Kemari • Lahore • Larkana • Multan • Murgha Pura • Peshawar • Quetta • Rawalpindi • Sambrial / Sialkot 2 @ 1 mark	2
4(c)(iii)	• Can be used to relieve a major seaport of workload and congestion; named examples / Karachi / Port Qasim (dev); • Provides facilities; like container yards/warehouses/railway sidings / cargo-handling equipment / administrative services / for export or import purposes / everything is in one place (dev); • Speeds up / saves time / more convenient for businesses; as they do not have to transport their goods all the way to the sea port (dev); • Efficient managerial staff; saves time and money/paperwork completed quickly / smooth collection of revenue for government (dev); • Refrigeration facilities provided; for perishable items, e.g. fruit and vegetables (dev); • Employment opportunities provided / warehousing / customs (dev); • Allows trade away from sea port / allows all regions to be productive / encourages foreign trade in each region (dev); • Saves money for exporters; makes more profit (dev); Etc. Note: One mark for identification of appropriate idea and a further mark for development (in parentheses). Note: Max. 2 marks if no development. 2 @ 2 marks	4

Question	Answer	Marks
4(d)	Levels marking No valid response 0 Level 1 1–2 Simple point referring to one view (1) Simple points referring to any view (2) Level 2 3–4 Developed point referring to one view (3) Developed points referring to both views (4) 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) Content Guide Answers are likely to refer to: <u>Develop rail network in Balochistan</u> • Balochistan is one of the least developed areas with low population density / few opportunities for trade; • Direct links to Gwadar or Pasni ports would help develop trade and industry; • The rail network in the central area of Balochistan is virtually undeveloped / currently runs around the outskirts of the province; • Towns and cities would be more accessible and less isolated; • It would reduce the amount of migration from the area; • Further links into Iran and / or Afghanistan could be developed; Etc. <u>Develop rail network through the Northern Regions</u> • The Northern Regions are one of the least developed areas with low population density / few opportunities for trade; • A rail route through to China would provide increased revenue for the country, and save journey time; • Raw materials from the Northern areas could be transported to other parts of Pakistan more efficiently; • Tunnels through the Himalayas would reduce the environmental impact and will reduce the risk to the railway from landslides and avalanches; • Tourism can be developed more in this area; • People can commute; • May reduce rural to urban migration; • Attract businesses and industries to the region / improve cottage industries; Etc.	6

Question	Answer	Marks
4(d)	<u>Ideas against further development</u> • High cost of developing infrastructure; • Availability of funding / increase debt; • Availability of technical knowledge and / or equipment; • Difficulty of building railways due to topography and difficult landscape; • People might not want to live or work there and would still migrate; • Businesses and industries would need more to attract them to these areas, e.g. incentives; • Other countries may benefit more than Pakistan; • Climate challenges; • Local people in northern regions might not benefit; Etc.	
5(a)(i)	• 2.0 for 2016 • joining up of the line 2 @ 1 mark	2
5(a)(ii)	A= 2008 B= 1980 C= decreased 3 @ 1 mark	3
5(a)(iii)	• Better (access to) medical facilities / Improved transport to doctors / more clinics / more hospitals; • Improvements in medical care / more doctors / more nurses; • Leading a healthy lifestyle; • Control of diseases or examples: cholera / malaria / typhoid / cures for diseases / medication; • Immunisations; • Improved diets / food production; • Improved sanitation / hygiene; • Clean / safe water supplies; • Fall in infant mortality. 2 @ 1 mark	2
5(b)(i)	Overpopulation is when the number of people is too many / large for the available resources. 1 @ 1 mark	1

Question	Answer	Marks
5(b)(ii)	• Introduction of population welfare programmes; e.g. women's association / Behbud association / green star clinics and child welfare association (dev); • Non-governmental agencies working with the government; for population welfare (dev); • Improving literacy rate / education; so that people know about family planning / understand the benefits of smaller families (dev); • Support of Ulemas; to distribute knowledge that family planning benefitting maternal and infant health is within Islamic principles (dev); • More schools for females; so as to increase the age of marriage which will reduce the birth rate (dev); • Access to / use of contraception / free contraception; decreases birth rate (dev); • Increased education on family planning; prefer careers to having a family (dev); • Improvements in healthcare; • Reduced infant mortality rate; • Population policies to reduce number of people / anti-natalist policy; no more than two children allowed / fined if failed to follow policies (dev); • Provide pensions; so that children do not have to look after them when they get old (dev); • Prohibit child labour; so, no need for more children to earn for family (dev); • Fewer early marriages; as women focus on careers / reduce span of reproductivity (dev); Etc. Note: One mark for identification of appropriate idea and a further mark for development (in parentheses). Note: Max. 2 marks if no development. 2 @ 2 marks	4
5(c)(i)	• Generation of enough economic opportunities for skilled and unskilled workforce / not enough jobs for everyone; • Competition from people from other countries; • Migrants / refugees moving into the country; • Rate of population growth; • Mechanisation in agriculture or industry / less manual labour; • Increased use of ICT; • Cultural traditions / restraints; • Mismatch in supply and demand of labour force / rural-urban migration adds to numbers of unemployed; • Security issues discourage investment; • Underemployment / many part time jobs; • Literacy rates / availability of education / skill levels. 4 @ 1 mark	4

Question	Answer	Marks
5(c)(ii)	• Government investment for small businesses / open more businesses or factories or industries; • Support for new businesses; • Inward foreign investment or named examples; • Incentives to encourage foreign companies; • Expansion of industry; • Development of service industry/tourism; • Non-governmental agencies or named examples; • Bank loans; • Community projects / self-help schemes or named examples; • Invest in public sector. 3 @ 1 mark	3

Question	Answer	Marks
5(d)	Levels marking No valid response 0 Level 1 1–2 Simple point referring to one view (1) Simple points referring to any view (2) Level 2 3–4 Developed point referring to one view (3) Developed points referring to both views (4) 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) Content Guide Answers are likely to refer to: <u>Encourage economy and development</u> • A lower birth rate puts less pressure on the economic resources. e.g. education, healthcare, food and housing; • A low birth rate means a lower dependency ratio; • Lower birth rate allows greater investment in areas such as agriculture, industry, transport, trade etc., which eventually leads to economic growth (fewer resources spent supporting younger people, e.g. education / child healthcare etc.); • A decreasing death rate means a larger active population (15–60) available for work and can contribute to increasing the revenue of the country / pay taxes. This will lead to more expenditure increasing development; • A lower death rate means that the increasing number of elderly people can help with child care / pass on wisdom, knowledge and expertise to younger generations; Etc. <u>Limit economy and development</u> • Lower death rates will mean there are more people living longer, which leads to an ageing dependent population / may offset possible development benefits of a lower birth rate; • A higher proportion of elderly people will increase the need for investment in healthcare, care homes, pensions etc.; • There will be an increased dependency ratio of older people to younger people and who contribute less to economic growth; • A lower death rate will mean there is a larger proportion of economically active people available to work (15–60) but this may create an economic burden if there are not sufficient economic opportunities available for the increased workforce; Etc.	6