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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.

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Generic Marking Principles

These generic 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 the 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 (use of the full mark range, however, 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)	The following labelled in the correct locations: • Afghanistan – to west of Pakistan; • India – to east of Pakistan; • Longitude 70 °E – middle line of the three on map. 3 @ 1 mark	3
1(a)(ii)	• Accurately drawn line for position of Tropic of Cancer; • Accurate label. 2 @ 1 mark	2
1(a)(iii)	• Western part of South Asia; • India to the East / South East / North East; • China to the North / North East; • Afghanistan to the North West / West; • Iran to the West / South West; • Between / shares border with / neighbouring country with China / India / Afghanistan / Iran; • Compass direction to any of the following non-conjoining countries in South and Central Asia ONLY: Nepal / Tajikistan / Kyrgyzstan / Turkmenistan / Uzbekistan / Sri Lanka / Bangladesh / Maldives / Burma (Myanmar); • Distance to any the following non-conjoining countries in South and Central Asia ONLY: Nepal / Tajikistan / Kyrgyzstan / Turkmenistan / Uzbekistan / Sri Lanka / Bangladesh / Maldives / Burma (Myanmar). 3 @ 1 mark	3
1(b)(i)	• Sand / sandy; • Sand dunes / ridges / hills / hilly; • Large area / expanse / plain / plains; • Sparse / scant vegetation / not much greenery / few trees / lack of trees; • Small bushes / thorny bushes / scrub / rakh / shrubs; • Barren / bare / dry; • Oasis. 3 @ 1 mark	3

Question	Answer	Marks
1(b)(ii)	Challenges such as: • High temperatures / hot (during day) / cold at night / uncomfortable living conditions; • Lack of / little / unreliable rainfall; • Difficult to grow crops / carry out agriculture; • Difficult to rear animals; • Lack of water / travel long distance to find water / low water table; • Dust / sandstorms; • Infertile soils / lack of nutrients / lack of humus produced; • Reliable food supply; • Isolated / far from urban areas / remote; • Inaccessible / poor / lack of roads; • Wild / poisonous animals. 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(b)(iii)	• Cold / cool / low temperatures / freezing temperatures; • Relief rainfall; • Snow (capped peaks) / blizzards; • Ice / hail; • Windy; • Dry; • Sunny / bright / clear skies OR few sunny days / cloudy. 2 @ 1 mark	2
1(c)	• The further north (from the equator) the cooler it is / north is cold; • The closer to the equator the warmer it is / southern Pakistan is warmer / south Pakistan is hot; • In the south / the closer to the equator the more convectional rainfall / more thunderstorms; • More concentrated / direct rays of sunshine / higher angle of sun nearer equator (so higher temperatures). 2 @ 1 mark	2

Question	Answer	Marks
1(d)	Levels marking No valid response 0 Level 1 1–2 Simple point addressing any view (1) Simple points addressing any view (2) Level 2 3–4 Developed point(s) explaining one view (3) Developed point(s) explaining both views (4) No evaluation Level 3 5–6 Developed points explaining both views Evaluation giving clear support to one view or appropriate example (5) Evaluation giving clear support to one view and appropriate example (6) Content Guide Answers are likely to refer to: Description of the topography in the north of Pakistan compared to other areas. <u>Limits to human activity and development</u> Availability of flat land; Impact of topography on climate; Restrictions to developing named examples of industry / farming / other named examples of human activity and economic development; Restrictions to developing named examples of infrastructure, e.g. roads / telecommunications / internet / other named examples of human activity and economic development. <u>Encourages human activity and development</u> Transhumance; HEP / Hydel / dams; Cottage industries; Tourism. Etc.	6

Question	Answer	Marks
2(a)(i)	- Forest type A – Coniferous; - Forest type B – Subtropical scrub / subtropical dry / subtropical thorn / dry thorn scrub; - Forest type C – Tropical thorn / rakh. 3 @ 1 mark	3
2(a)(ii)	- Coastal areas of Sindh / Indus Delta; - Coastal areas of Balochistan / Sonmiani Bay; - Along the coastline of / near the Arabian Sea. 2 @ 1 mark	2
2(b)(i)	- Broad / big leaves / leaves have drip tips; - Leaves are leathery / have reduced number of stomata; <u>Low</u> trees and shrubs; - Height 3–8 m; - Can survive in salty water; - Roots filter salt / have aerial roots / have prop roots / roots stick up out of water; - Prefer clean / unpolluted water. 2 @ 1 mark	2
2(b)(ii)	- Protect soil from erosion / being blown away; - Lower the temperature / provide shade / create a more pleasant environment; - Provide humus to fertilise the soil; - Provide raw materials / named example, e.g. timber (for industry) / furniture / medicines / firewood; - Many jobs depend on forests / examples of jobs; - Recreational value / promote tourism / provide scenic beauty; - Prevent floods; - Take in CO₂ / release O₂; - Provide habitat for wildlife; - Increase / encourage rainfall / create transpiration; - Help with desalination (Eucalyptus trees). 2 @ 1 mark	2
2(b)(iii)	- Altitude, e.g. high altitude = fir / spruce / alpine; - Precipitation, e.g. dry areas = thorny bushes / scrub; - Precipitation, e.g. high precipitation = coniferous / evergreen forests; - Soil type / edaphic factors, e.g. salty areas = mangroves / fertile soil = high density; - Temperature, e.g. low / cold = alpine; - Temperature, e.g. high / hot / warm = tropical scrub; - Presence of rivers = riverain / bela; - Presence of oases = individual trees / palms. 3 @ 1 mark	3

Question	Answer	Marks
2(c)(i)	Ideas showing how the tree has adapted to the climate such as: • Evergreen – no need to renew leaves / short growing season; • Compact conical shape – stabilises the tree in windy conditions / releases snow / prevents snow accumulation; • Needles instead of leaves – reduces moisture loss; • Tall / straight trunk – in order to grow straight towards sunlight; • Cones – protect seeds during cold months; • Downward pointing branches – allows snow to easily fall off; • Shallow root system – as soils are thin / subsoil is frozen for most of the year; • Long / wide spreading roots – helps to anchor the tree against strong winds; • Thick bark – protects from cold winds. 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
2(c)(ii)	• For farming / agriculture / growing crops / irrigation; • Urbanisation / growth of settlements; • Construction of roads / railways; • Industrialisation / growth / spread of industries; • Use of wood in industry / to sell / examples of use of wood, e.g. timber / furniture; • Mining / extraction of raw materials; • For fuelwood / cooking / heating; • Overgrazing causes more trees to be cleared for cattle; • Fire; • Flooding; • Reservoirs for dams. 3 @ 1 mark	3

Question	Answer	Marks
2(d)	Levels marking No valid response 0 Level 1 1–2 Simple point addressing any view (1) Simple points addressing any view (2) Level 2 3–4 Developed point(s) explaining one view (3) Developed point(s) explaining both views (4) No evaluation Level 3 5–6 Developed points explaining both views Evaluation giving clear support to one view or appropriate example (5) Evaluation giving clear support to one view and appropriate example (6) Content Guide Answers are likely to refer to: <u>Importance of forests</u> Protect against soil erosion important for the future of agriculture; Protect areas against flooding important for settlements and industry; A valuable resource for industry; Without forests other industries / example(s) of industries will not succeed; Help to regulate the climate / carbon sink; Mangroves protect against tropical cyclones / without mangroves industry and housing can be lost; Development of tourism / ecotourism / sustainable tourism. <u>Importance of other uses of land</u> Needs to be used for developing industry / land too valuable for growing trees; Land is limited; Growing population needs new settlements / construction of settlements; More food needs to be grown for growing population and for export; Trees take a long time to grow so have to wait for a capital return on them; For named infrastructure development, e.g. roads / electricity grid. Etc.	6

Question	Answer	Marks
3(a)(i)	The rearing / taking care / feeding / keeping of animals. 1 @ 1 mark	1
3(a)(ii)	- Pulling a cart / draught power; - Ploughing / preparing field / threshing; - Irrigation / Persian Wheel; - Milking; - Herding; - Carrying loads / transporting goods / people; - Breeding; - Producing of manure / (natural) fertiliser. 2 @ 1 mark	2
3(b)(i)	- Fig 3.1 – Cows / cattle; - Fig 3.2 – Sheep / lambs. 2 @ 1 mark	2
3(b)(ii)	- Milk / cream / cheese / yoghurt / ghee; - Meat / beef; - Skin / leather. 2 @ 1 mark	2
3(b)(iii)	- Cattle / cows seen as pride / prestige for farmers; - Can be reared in most areas / in arid areas / in marginal areas; - Food source / meat for families / subsistence; - Wool used to make clothes / rugs / leather to make belts / shoes; - Animal products sold for money / profit / contributes to GDP / export ; - Waste / manure fertilises land / manure burnt as fuel; - Sheep are sure footed and can survive in mountainous areas; - Do not need large grazing fields; - Can eat thin grass; - Sheep preferred over goats / sheep less likely to overgraze; - Nomadic people can travel with their sheep / cattle / can use in transhumance / easy to move; - Can use products all year round. 3 @ 1 mark	3
3(c)(i)	<u>Only</u> in Sindh <u>and</u> Punjab; - Mostly in a line along the eastern border of Pakistan / mostly in Punjab / in eastern Punjab; - One region in south east / Central Sindh / <u>around</u> Hyderabad; - Upper Indus Plain; - Along rivers / canals / near named rivers; - On flatter land / where land not rugged. 3 @ 1 mark	3

Question	Answer	Marks
3(c)(ii)	• Prefer to be in water most of the time / can cool down in water; • Canal irrigated areas / areas where water plentiful; • Lowland climate / mild temperature / where climate is not too extreme / cold / hot; • Where higher demand for buffalo products / examples of products; • Buffalo cannot climb hills / survive in mountainous / hilly areas / rugged landscape. 2 @ 1 mark	2
3(c)(iii)	Natural factors such as: • Weather / climate – cannot tolerate cold weather so buffaloes die; • Availability of water – like to spend most of their time in water, otherwise will dehydrate / give poor quality meat and milk; • Topography – limits where buffalo can be reared; • Poor soils – will produce poor quality grazing / buffalo become undernourished; • Disease – cost of vaccination / vet fees; • Flooding – results in drowning / loss of animals; • Lack of tree cover – no shade for animals and farmer has to build sheds / plant trees. 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
3(d)	Levels marking No valid response 0 Level 1 1–2 Simple point addressing any challenge or strategy (1) Simple points addressing any challenge or strategy (2) Level 2 3–4 Developed point(s) explaining one challenge or strategy (3) Developed point(s) explaining any challenge and strategy (4) No evaluation Level 3 5–6 Developed points explaining challenges and strategies Evaluation giving clear support to one challenge or strategy or appropriate example (5) Evaluation giving clear support to one challenge or strategy and appropriate example (6) Content Guide Answers are likely to refer to: <u>Challenges</u> Increased demand for poultry products – reasons for this, e.g. increased population / preference for white meat; Diseases; Air pollution / methane; High production costs / feed; High prices of meat / falling demand; Power shortages; Closure of farms; Ban on poultry export to Afghanistan. <u>Strategies</u> Government help through; Improving power supply; Legislation / guidelines for rearing poultry; Securing international markets / free trade agreements; Vaccination programmes to prevent disease; Incentives for farmers; Lowering price of feed; Use of poultry manure for fertiliser / in fish farms. Etc.	6

Question	Answer	Marks
4(a)(i)	• X = Hyderabad; • Y = Karachi; • Z = Faisalabad. 3 @ 1 mark	3
4(a)(ii)	Karachi is: • In south of Pakistan; • Next to the coast / near sea / Arabian Sea; • In the province Sindh; • Close to border with Balochistan; • At centre of three cotton areas; • Distance from named feature, e.g. within 100 km of other textile centres / cotton areas; • Direction from named feature, e.g. west / southwest of X. 2 @ 1 mark	2
4(b)(i)	• Industry that converts raw materials into commodities / products (for the consumer) / manufacturing industry / where raw materials are manufactured / made / processed into a product. 1 @ 1 mark	1
4(b)(ii)	A cottage industry is: • where the owner and family work with no hired labour / in homes / mostly women and children work / small investment / low output / informal; A small-scale industry is: • where up to 10 hired labourers work / medium investment / up to R10mn invested / formal <u>or</u> informal / in workshops / (small) factories; A large-scale industry is: • where there is no limit to the number of people employed / unlimited investment / high capital / standardised / skilled labour / multinational / registered / formal sector / mechanised / in (large) factories. 3 @ 1 mark	3
4(b)(iii)	• Near a port / dry ports for imports / exports; • Close to cotton belts of Pakistan / close to raw materials; • Near to large population centres for skilled / unskilled labour; • Near to markets; • Favourable / stable government policies / in tax exempt areas; • Agglomeration / near to each other to share ideas / materials; • Near to / uninterrupted power supply; • Near to named infrastructure, e.g. roads / rail. 3 @ 1 mark	3

Question	Answer	Marks
4(c)(i)	• A: Opening / bales of cotton laid down uniformly in layer / rollers used to flatten cotton fibres / smooth out folds / straighten fibres / spread out fibres; • B: Carding / sorts fibres to produce a continuous web or slivers / teasing wires produce loose bundles of fibres (web / slivers) / the fibres (web / slivers) are divided into threads; • C: Drawing / fibres are straightened / the combined sliver (threads) is collected in moving cylinders where fast and slow rollers further divide slivers / slivers stretched / twisted / pulled out further. 3 @ 1 mark	3
4(c)(ii)	• Largest sector of the economy / large-scale production; • Great export potential / demand; • Is 60–65% / most of export earnings; • Improves balance of trade; • Employs a large number of people; • Unskilled and skilled labour; • Contributes approx. 7% of GDP; • Textiles are value added products; • Earn more foreign exchange than raw cotton; • Uses local raw materials; • Reduces dependence on imports; • Large domestic demand. 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 addressing any view (1) Simple points addressing any view (2) Level 2 3–4 Developed point(s) explaining one view (3) Developed point(s) explaining both views (4) No evaluation Level 3 5–6 Developed points explaining both views Evaluation giving clear support to one view or appropriate example (5) Evaluation giving clear support to one view and appropriate example (6) Content Guide Answers are likely to refer to: <u>Load-shedding</u> Production comes to a standstill; Orders cannot be completed; Workers may be sent home / not paid; Deadlines cannot be met; Lose market share if trading partners cannot rely on Pakistan. <u>Skilled labour shortage</u> Government need to invest in education and training; Current employees are overworked; Full capacity of cotton production cannot be met; Cotton production may decline in the future if there are no skilled workers to fill the vacancies. Etc.	6

Question	Answer	Marks
5(a)(i)	Total population / population growth. 1 @ 1 mark	1
5(a)(ii)	- Birth rate increases <u>slightly</u> then decreases <u>slightly</u> / overall <u>slight</u> decrease; - Death rate falls (rapidly); - Natural increase is at its highest / steeply rises / increases; (Total) population grows / increases (rapidly). 2 @ 1 mark	2
5(b)(i)	- High infant mortality rate / children die from disease; - High maternal death rate; <u>Spread of</u> diseases such as diarrhoea / cholera / malaria; - Food shortages / lack of food / traditional farming methods / unreliable rainfall / drought; - Poor hygiene facilities / lack of sewage disposal / lack of sanitation; - Little development of medicines / drugs such as antibiotics / statins / limited availability of treatments for disease / vaccinations; - Limited hospital / medical facilities / doctors / access to health facilities; - Use of traditional practitioners / medicines; - Natural disasters such as earthquakes / floods / mudslides; - Insufficient knowledge on healthy diets / healthy living / exercise / health hazards of smoking; - Unsafe / polluted drinking water. 3 @ 1 mark	3
5(b)(ii)	- Family planning programmes / named examples, e.g. subz-sitara clinics / Chabi ka Nishan; - People aware of benefits of / desire smaller families; - People have knowledge of problems of / understand issues of overpopulation; - Increased literacy rates / people become educated; - More women working / career orientated; - Mechanisation of farming / fewer workers needed on farms; - Later marriages; - Decreased span of reproductivity; - Desire for material possessions, e.g. cars rather than having children; - Internal migration / international migration; - Men leave / families fractured. 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)	Number of people per square kilometre / square mile / hectare / acre / <u>unit</u> area. 1 @ 1 mark	1

Question	Answer	Marks
5(c)(ii)	- Varied / uneven distribution; - Small number of areas high density / high density areas are scattered; <u>More</u> densely populated in South East / East / Sindh / KPK / Punjab; <u>Less</u> densely populated / in South West / West / North / Balochistan / Gilgit / Northern areas; - Moderate density in central areas. 3 @ 1 mark	3
5(c)(iii)	Reasons for variations in population density such as: - Topography (flat v rugged); - Climate (no extremes); - Natural vegetation (type / abundance); - Soil (farming); - Natural resources / raw materials (availability); - Water supply / near rivers (availability); - Natural routes / valleys / natural corridors / named infrastructure; - Power supply (availability / security); - Economic / availability of jobs / income / industries; - Political / stable government / government investment; - Social / schools / healthcare / migration. Etc. 5 @ 1 mark or development	5

Question	Answer	Marks
5(d)	Levels marking No valid response 0 Level 1 1–2 Simple point addressing any view (1) Simple points addressing any view (2) Level 2 3–4 Developed point(s) explaining one view (3) Developed point(s) explaining both views (4) No evaluation Level 3 5–6 Developed points explaining both views Evaluation giving clear support to one view or appropriate example (5) Evaluation giving clear support to one view and appropriate example (6) Content Guide Answers are likely to refer to: <u>Possible</u> Government help through; Encouraging use of contraception; Introducing population policies; Educating people about family planning / contraception; Developing pre-natal care to reduce infant mortality rates; Reducing the unemployment rate / create jobs; Ensuring incentives are given to farmers to ensure demand for food is met; As the country further develops / industrialises there will be more money in the economy and further investments can be made in healthcare / education / housing / food production. <u>Not possible</u> Insufficient food to feed the population now; Limited healthcare; High infant mortality rates; School places in short supply / not all children can go to school; Unemployment levels high; Housing shortage / shanty towns developed; Crime / discontent / racism / discrimination. Etc.	6