Cambridge O Level

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Cambridge Ordinary Level

PAKISTAN STUDIES **2059/02**

Paper 2 Environment of Pakistan **October/November 2018**

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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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)	Fig. 1.1 = Rice Fig. 1.2 = Sugar cane Fig. 1.3 = Cotton Fig. 1.4 = Wheat 4 @ 1 mark	**4**
1(a)(ii)	Rice – used for exports / foreign exchange / food / flour; Sugar cane – making sugar / brown sugar / gur / fuel / by products or e.g. molasses / bagasse; Cotton – making clothes / soft furnishings / bed linen / making fibre / yarn / fabric; Wheat – making of bread and other baked products / feed for livestock / flour. 2 @ 1 mark	**2**
1(b)(i)	Ideal temperature is 25–35 °C (e.g. so crop grows well / without these temperatures crop will not grow well); Mild (moderate) night time temperature / not too cold at night (e.g. so crop is not damaged or spoilt by frost); Dry sunny days (e.g. so harvest is productive / high yielding / ripening); 500–1000 mm rainfall / plenty (ample) of rainfall (e.g. to avoid extra irrigation / high yielding); (Medium) loam soil / loamy (e.g. fertile soil / high in nutrients / high yielding); Natural manure (e.g. cheaper / easily available / maintain fertility / avoid crop rotation / high yields); Flat land / level land / terraces (e.g. allows use of mechanisation / easy to plough, sow or harvest); 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)(ii)	Rain at harvesting time (will spoil the boll); Sensitive to frost; Leaf curl virus; Drought / lack of rainfall / lack of water; Flood / heavy rainfall; Sudden changes in temperature / too hot / too cold; Pest or insect attack; Strong winds; Salinity / waterlogging. 4 @ 1 mark	**4**

Question	Answer	Marks
1(c)(i)	Shade on the map **at least two** of the following provinces: Sindh, Punjab, KPK or Balochistan (must shade entire province) Name any two of the named provinces above accurately, i.e. in the correct location. 3 @ 1 mark	**3**
1(c)(ii)	Tolerant of a range of climate conditions / can grow in a wide range of different climates / fertile soil or nutrient rich soil / flat land; Time of year (Rabi crop) / grown over winter; Land needed for more high value crops in summer; Irrigation system / water from river Indus; Domestic market or example; Industrial uses or example; Animal fodder. 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: Increase food production for the domestic market: Positive ideas for improving wheat production as a staple food source for the population of Pakistan; Food is more important than producing cash crops; Do not want to rely on other countries for food imports; Incentives for farmers; People able to work as have more energy; Imported food is more expensive than home grown food; Wider variety of products grown domestically; Improve balance of payments / reduces imports; May provide more jobs in farming; Provide incentives to farmers to grow the oilseed rather than import it; Etc. increase food imports for the domestic market; Increase number of trade partners; Can use the land in Pakistan for producing higher value goods / crops for export; Wider variety of foods can be imported; Wider / more varied diets available; Can eat foods all year round e.g. do not have to wait for them to be in season; People can work in manufacturing or service industries which are higher paying and less labour intensive; Fewer people will need to be subsistence farmers; Etc.	**6**

Question	Answer	Marks
2(a)(i)	Hydel power is electricity generated by using the fast flow of water to move turbines which drive generators. 1 @ 1 mark	**1**
2(a)(ii)	Some areas have less rainfall e.g. Gilgit and Chitral (e.g. cannot generate electricity if not enough water); Rain shadow areas; More precipitation in highland areas (e.g. where most dams are located); Less rainfall in winter / more snow / stored as snow and / or ice in mountains; Less rainfall means less water in rivers (e.g. so more difficult to generate electricity); Rainfall not evenly spread throughout Pakistan (e.g. rainfall is unpredictable); Very high temperatures – lead to evapotranspiration, less water available; Very low temperatures – lead to freezing, less water available. **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(b)(i)	World uses more (41%) coal than Pakistan (1%); Pakistan (37%) uses more oil than the world (5%); Pakistan (28%) uses more (20%) gas than the world; World (13%) uses more nuclear than Pakistan (3%). 2 @ 1 mark	**2**
2(b)(ii)	Expensive to build or develop own renewable energy / limited funding available; Limited education / skills / know how to develop these technologies; Want to use up coal / gas reserves first / cheaper to use coal / gas; Reliant on other countries to help develop renewable sources; Demand of growing population difficult to meet / not enough electricity can be produced; Areas suitable for large scale production are distant from centres of population; Etc. 3 @ 1 mark	**3**
2(b)(iii)	Solar panels can be located anywhere / portable; Do not need to be connected to the national power gird; Energy can be produced on site / in-situ / does not have to be transported through cables; Easy to set up small scale scheme / independent schemes / every house will have their own solar panel; Limitless / will not run out; Etc. 2 @ 1 mark	**2**

Question	Answer	Marks
2(c)(i)	Sketch of a wind turbine, labels can include: Generator Rotor Blades / fans Tower / pole Gear box Transformer Cables Etc. 3 @ 1 mark	**3**
2(c)(ii)	**Advantages:** Wind is renewable / does not run out; Does not pollute the atmosphere or water or environmentally friendly (clean or green); Plenty of wind available in Pakistan; Wind is free / cheap to run; Can be deployed locally / remotely; Wind turbines improve electricity supply in rural areas; Wind farms attract tourists; Wind turbines vary in size depending on requirements; Wind energy can be generated at night unlike solar; Etc. **Disadvantages:** Expensive to build; Wind is not constantly blowing / variable wind speed; Stop working during storms; Many turbines are needed to generate enough power for a town or city / low output individually; Need a large area to construct wind farm / can take land which could be used for agriculture; Can kill birds; Perceived as an eyesore; Noise pollution; Interfere with radio / TV signals; Limited sites where wind is reliable; Etc. 4 @ 1 mark	**4**

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: More sustainable because: Boosts economy; Can bridge the gap with energy shortages / deficiencies in oil and gas; Can be used near the coast to provide energy to nearby industries; Assists development; Provides jobs; A small quantity of uranium can generate a large amount of energy; Less than half kg of uranium contains 3 million more times energy than the same weight of coal; The chances of accidents in nuclear power stations is low / there have been fewer accidents in nuclear power stations than any other kind of power station; Nuclear power can help speed up the process of industrialisation; Nuclear power contributes less to the greenhouse effect and acid rain compared to fossil fuels; Etc. Less sustainable because: Expensive to build so may have to borrow money or seek investment from other countries / economic burden; Will take up valuable land space needed for more important development projects / or example; Renewable energy schemes such as solar energy / wind power are more appropriate; Have many coal reserves that can still be exploited; Only provides jobs in the short term whilst building them; Probably built in other countries so negative multiplier effect; Fuel rods in reactors produce dangerous rays which are cancer causing; Nuclear waste remains radioactive for many years; Finding suitable locations for storing radioactive waste is a problem; Etc.	**6**

Question	Answer	Marks
3(a)(i)	Accurate completion of percentage bar chart. 4@ 1 mark	**4**
3(a)(ii)	Primary = farmer, miner, fisherman; Secondary = factory worker, builder, chef; Tertiary = teacher, nurse, train driver. 3 @ 1 mark	**3**
3(b)(i)	Accurate shading and labels for 2 countries. Afghanistan Australia Bangladesh Belgium Egypt Canada China / Hong Kong Denmark France Germany India Japan Kenya Kuwait Malaysia Holland Poland Portugal Russia South Africa South Korea Saudi Arabia Spain Sri Lanka Switzerland Sweden Tanzania Turkey Thailand United Arab Emirates United Kingdom United States of America Yemen 2 @ 1 mark	**2**

Question	Answer	Marks
3(b)(ii)	Machinery / computers Electrical appliances / electronics Wheat Mineral oil / petroleum / crude oil Tea Oil seeds Vegetables Vegetable oils / edible oils / animal fats / waxes Coal Vehicles Iron / steel / metals Chemicals Plastics 3 @ 1 mark	**3**
3(c)(i)	Trade deficit is a negative balance of trade where the **value** of imports exceeds the **value** of the exports. 1 @ 1 mark	**1**
3(c)(ii)	1979–1980: 23 519 Increased 2 @ 1 mark	**2**
3(c)(iii)	Ideas such as: Value of imports is greater than exports (import of higher value goods compared with goods for export which are lower value); Export a small variety of goods (e.g. cotton, rice, sports goods, leather goods, carpets and rugs); Import food items (e.g. not completely self – sufficient in food); weather-related points, (e.g. bad storms, heavy rain etc. leading to failed harvests); Trade barriers / restrictions on exports (e.g. child labour, environmental and health standards); Tough world market competitors / competition (e.g. Pakistan does not belong to major trade organisations, lack of standardisation / quality) Limited range of specialist / niche products that other countries need or want (e.g. standardisation / produce cheaper goods / have to import luxury items); Instability (deters foreign investment); Shortage of skilled / knowledgeable people to manage products; 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: To increase exports: Exports with higher value-added element encouraged; Develop cottage and small-scale industries – especially using local raw materials; Increase variety of exports; Develop EPZ – export processing zones; Reduce taxes on exports; Boost industrialisation by developing export agencies e.g. Export Promotion Bureau; Strict quality control; Etc. To restrict imports: Tertiary sector – less reliance on foreign employees, train Pakistani workers; More goods produced in Pakistan – both low and high value goods; Less reliance on other countries / use home produced raw materials if possible; More food could easily be produced in Pakistan; Improves local economy; Etc. **Note:** Candidates may suggest that both ideas work hand in hand, i.e. by reducing imports and increasing exports the development of EPZs would be a logical step.	**6**

Question	Answer	Marks
4(a)(i)	X = Balochistan Y = Punjab Z = Sindh 3 @ 1 mark	**3**
4(a)(ii)	Iran India 2 @ 1 mark	**2**
4(a)(iii)	Northern Pakistan / FATA has no / few rail networks; Dense network in Punjab; Sparse network in Balochistan / South / Southwest / one line in Balochistan; There are two lines in central KPK; Medium / moderate network in Sindh; More around major cities; More railways in East / more railways in North East (or opposites). 3 @ 1 mark	**3**
4(b)(i)	Recent developments include: New services on different routes; Constructing a track to Gwadar linked to the port; Computerised ticketing system; One window ticketing system; Dual tracks; More electrification; Karakoram Express / Shalimar Express / Magno Train / new routes / more lines; Air-conditioned coaches; Public address system; More spacious coaches with more seats / berths; Greater safety; More privatisation – provides more comfortable coaches. 1 @ 1 mark	**1**

Question	Answer	Marks
4(b)(ii)	Ideas such as: To encourage more people to use railways; The network needed improving / was outdated; To carry more passengers / large amount of people on one journey; To enhance the transport of goods / people or examples within the country; To provide a service to neighbouring countries / international links; To improve trade links / connect more industrial areas / connect dry port to sea port / connect remote areas to developed areas/market; To assist business / economic growth / income for government; More environmentally friendly; To be able to travel longer distances; Faster than road; Cheaper than air; Better security / safer than roads; Provides opportunities for tourism or named examples; Etc. 4 @ 1 mark	**4**
4(c)(i)	Few people have mobile phones / computers in rural areas; Limited internet connection / internet infrastructure in rural areas; Limited access to internet; Electrical devices are expensive; Limited electricity; Lower literacy levels; Any valid reason(s) why internet is used in rural areas, e.g. farmers' weather forecasting / education. 2 @ 1 mark	**2**
4(c)(ii)	Assists research / websites; Develops skills for an ever-increasing technological world; Provides opportunities for learning beyond the classroom; Widens horizons / develops an interest in the wider world; Provides opportunities for future employment prospects / apply online; Can get information on any topic; Can access more information than in a library; Women can learn from home / online learning / distance learning; Increase knowledge of a subject; Can ask experts / interaction / receive answers in minutes; Up to date information; Assists homework assignments; 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: improving internet access in major cities: More people will benefit; More schools and children are more likely to go to school in the urban areas as opposed to the rural areas (where they may have to work); More businesses which would benefit; Etc. extending internet access to rural areas: Reduces isolation; May help and encourage small businesses to grow or set up there; May reduce rural to urban migration if opportunities are provided in rural areas; Etc.	**6**

Question	Answer	Marks
5(a)(i)	Accurate completion of population pyramid graph. 1 @ 1 mark	**1**
5(a)(ii)	Large number of young dependents 0–19; Small proportion of elderly dependents 60+; Gradual decline through the older age groups / economically active decline 20+; Economically active are the biggest sector; More females in <u>older</u> age groups / less males in <u>older</u> age groups; More males in young dependents. 3 @ 1 mark	**3**
5(b)(i)	Birth rate – the number of babies' births / born per 000 of the population per year. 2 @ 1 mark	**2**
5(b)(ii)	Natural Increase = birth rate – death rate 26.80 – 7.00 = 19.8 (per thousand) 2 @ 1 mark	**2**
5(b)(iii)	Too many people; Not enough resources, e.g. food / shelter / water; Rapid population growth. 3 @ 1 mark	**3**
5(c)(i)	Benefits of having a small number of children: Have more food to go around; More disposable income / less outgoings; Can afford education; Will be healthier; More opportunities for employment; Better standard of living / quality of life; Less overcrowding; Less burden on services e.g. housing; More quality time for family; Etc. Problems of having a small number of children: Children needed to work (on the farms or other examples) / sent away to work so less money coming in / more work to be done by fewer people; High infant mortality rate so children may not survive to adulthood; May not have a son to carry on the family name; May not have a child to take care of parents in old age; Have to pay others to work / less income earned; Etc. 4 @ 1 mark	**4**

Question	Answer	Marks
5(c)(ii)	How: Death rate is falling / decreasing / declining / lower; (decreased from 30 in 1947 to 7.2 per 1000 in 2012); Why: Due to improved access to healthcare / more doctors / nurses; Improved medical facilities / more or better or improved hospitals / clinics / faster emergency services; Diseases like cholera / malaria / typhoid have been brought under control; Vaccinations; Improvements in food production / hygienic food / improved diets or examples; Education about healthy living / lifestyle / exercise; Improved hygiene / sanitation / sewerage; Safer / cleaner drinking water / water supply; Infant mortality rate decreasing; 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
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: Low birth and death rates may assist future development because: Lead to population / economic stability; A lower birth rate puts less pressure on the economic resources, e.g. education and healthcare, food and housing; A low birth rate means a lower dependency ratio; Lower birth rate allows greater investment into agriculture, trade, industry, transport etc. which will eventually lead to economic growth; A larger proportion of 15–60-year olds will mean that there is a large proportion of the population available for work / economically active to contribute to increasing the revenue of the country / pay taxes; Lower death rate means that elderly people can help with child care / pass on wisdom / knowledge to younger generations; Etc. Low birth and death rates may limit / hinder future development because: Lower death rate will mean there are more people living longer, which leads to an ageing dependent population may offset possible development from 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 the economic growth of the country; A larger proportion of 15–60-year olds will mean that there is a large proportion of the population available for work / economically active but this could lead to high unemployment levels if there are not enough jobs available putting a further economic burden on the government; Etc. Examples / ideas of how to reduce birth rates e.g. Subs-Sitara Clinics / Chabi ka Nishan	**6**