

The Land of Pakistan (Location, topography and climate) 2059 questions
Compiled by: Mustafa Asif

a) Location of Pakistan

Candidates should be able to identify the following on a map:

- the Tropic of Cancer, latitudes 30°N, 36°N, longitudes 64°E, 70°E and 76°E
- the Arabian Sea
- the countries sharing a border with Pakistan, and Pakistan's position in relation to others in South and Central Asia.

b) Location of provinces and cities

Candidates should be able to identify the following on a map:

- the provinces, Northern Areas (Gilgit–Baltistan) and FATA
- named cities: Islamabad, Muree, Rawalpindi, Gujranwala, Lahore, Faisalabad, Multan, Sialkot, Peshawar, Chitral, Gilgit, Hyderabad, Karachi, Quetta and Gwadar.

c) The natural topography, including drainage

Candidates should be able to identify the following on a map:

- named landforms: Balochistan Plateau, Sulaiman Range, Safed Koh, Potwar Plateau, Salt Range, Hindu Kush, Karakoram and Himalaya mountain ranges
- named rivers: Indus, Jhelum, Chenab, Ravi, Sutlej, Kabul, Hab and Dasht
- named deserts: Thar, Thal and Kharan.

Candidates should be able to:

- use the appropriate vocabulary when describing the distinguishing features of mountains, plateaux, floodplains and deserts (*knowledge of the formation of the natural topography of Pakistan is **not** required*)
- identify and name the above features on a photograph or drawing
- understand the influence of the natural topography on human activities:
 - steep slopes and flat land on the way that the land is used
 - mountains and deserts on the road and rail networks.

d) Climate

Candidates should:

- know the distribution of temperature and rainfall, including monsoon, depressions and convectional rain
- know seasonal and regional variations, and the factors contributing to them, including depressions, thunderstorms and cyclones (typhoons)
- understand the causes of the monsoon (*knowledge of the causes of other types of rain is **not** required*)
- describe and explain the characteristics of the climate of the arid, semi-arid, humid and highland regions, including seasonal variations
- know the influence of latitude and longitude on day length and climate
- understand the influence of the climate (both the benefits it brings and the problems it causes) on the economy and on the lives of the people:
 - the influence of low temperature, ice and snow on the lives of people in the mountains
 - the influence of rain storms and flooding on agriculture, industry and communications
 - the problems caused by drought and shortage of water supply on agriculture and industry.

The Land of Pakistan (Location, topography and climate) 2059 questions
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M/J18/P2/Q1

(a) Study Fig. 1.1, a map of Pakistan.

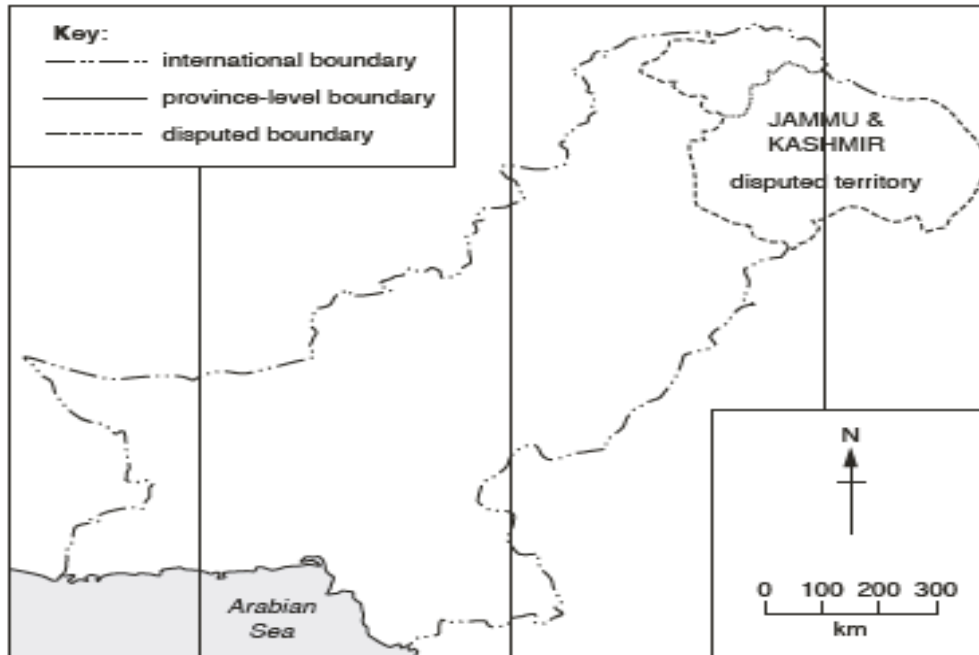


Fig. 1.1

- (i) On Fig. 1.1, label the following: Afghanistan; India; Line of longitude 70°E
You should write the name in the correct location on the map. [3]
- (ii) On Fig. 1.1, draw and label the Tropic of Cancer. [2]
- (iii) Describe Pakistan's location in relation to other countries in South and Central Asia.
.....
.....
.....
.....
.....
..... [3]

INSERT

Fig. 1.2 for Question 1



Fig. 1.3 for Question 1



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- (b) (i) Study Fig. 1.2 (Insert). Describe the main features of the desert area shown in the photograph.

.....

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.....[3]

- (ii) Explain the challenges of living in a desert area, such as that shown in Fig. 1.2. You should develop your answer.

.....

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.....

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.....

.....

.....[4]

- (iii) Study Fig. 1.3 (Insert). State two features of the climate typical of the environment shown in the photograph.

1

2[2]

- (c) Suggest two ways in which latitude affects the climate of Pakistan.

.....

.....

.....

.....[2]

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[illegible]

[TOTAL: 25]

O/N17/P2/Q4(A)

(a) Study Fig. 5, which is a map of southern Pakistan.

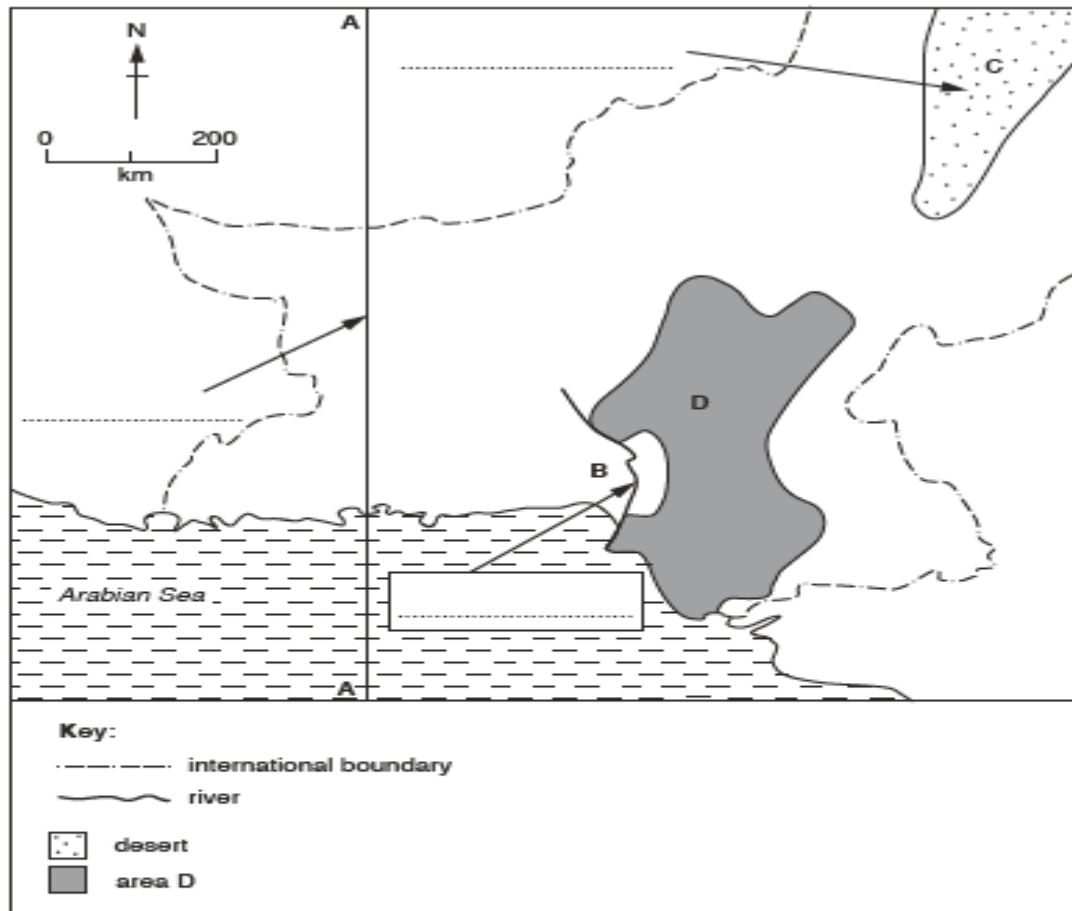


Fig. 5

- (i) On the map name the following: Line of longitude A–A; River B; Desert C. [3]
- (ii) Describe the natural topography (relief) of Area D on the map. [3]
- (iii) Give reasons why the Indus River floods. [2]

O/N17/P2/Q5(A)

(a) Study Fig. 7, which shows climate data for Lahore, Punjab. Lahore has a monsoon climate.

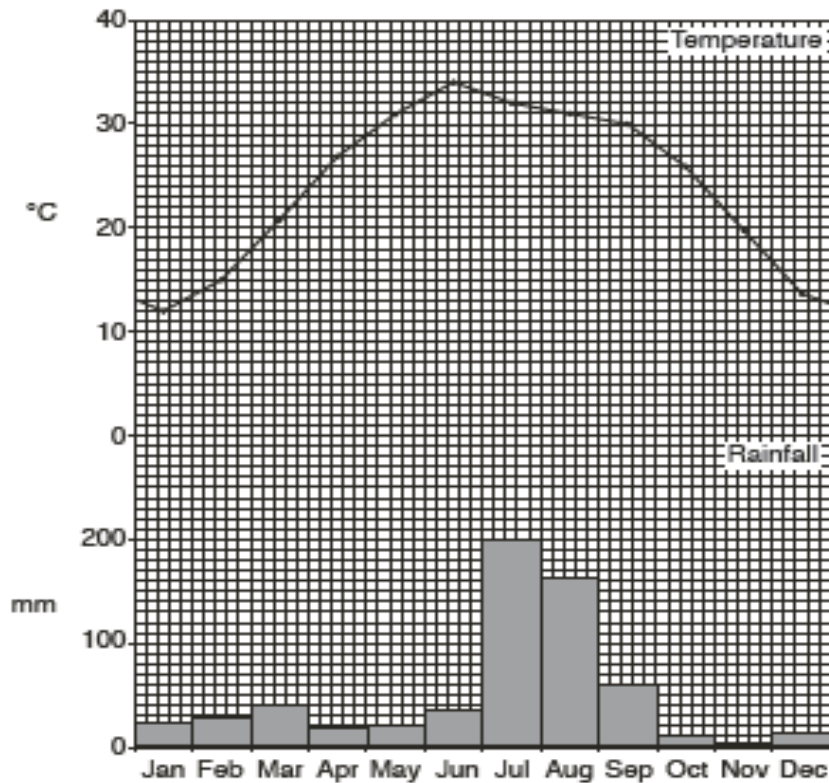


Fig. 7

(i) What is meant by the term 'monsoon'?

.....
.....[1]

(ii) How does Fig. 7 show that the climate in Lahore is typical of a monsoon climate?

.....
.....
.....
.....[2]

(iii) Give reasons why Lahore has more rainfall in July than in December.

.....
.....
.....
.....[2]

The Land of Pakistan (Location, topography and climate) 2059 questions
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O/N16/P2/Q1(A AND B)

(a) Study Fig. 1 which shows the distribution of monthly rainfall in Karachi.

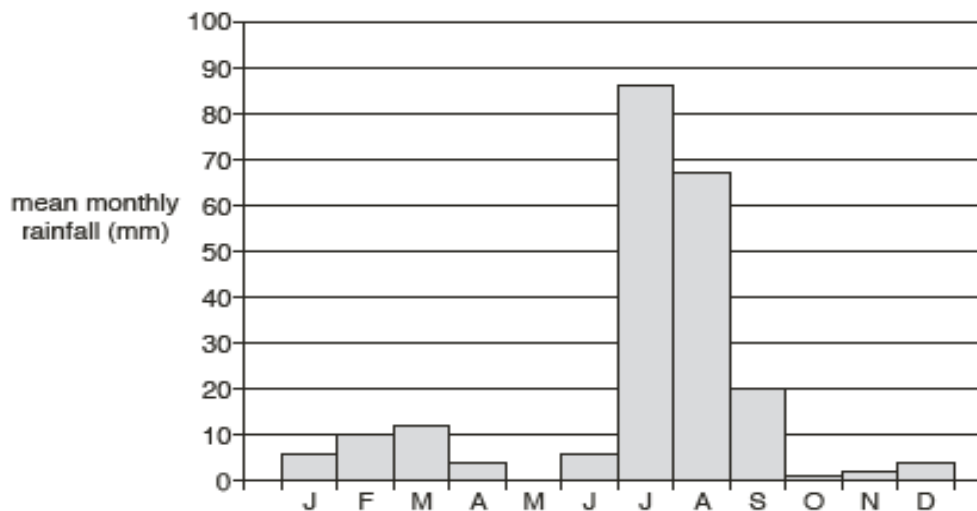


Fig. 1

(i) A For how many months does Karachi experience less than 10mm rainfall?

.....

B Estimate the total rainfall in Karachi for the period July to September.

.....[2]

(ii) Describe briefly the climatic region in which Karachi is located.

.....[1]

(iii) What is the main source of rainfall in Karachi? From which direction do the rain-bearing winds come?

Source

Direction[2]

(iv) Describe the effects of tropical cyclones on cities such as Karachi.

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.....

.....

.....[4]

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INSERT



Photograph B for Question 1



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- [4]

(a) Study Fig. 1 which is a map of northern Pakistan.



- [3]

- ---

The Land of Pakistan (Location, topography and climate) 2059 questions
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M/J16/P2/Q5(A)

(a) Study Fig. 9 which is a map of southern Pakistan.

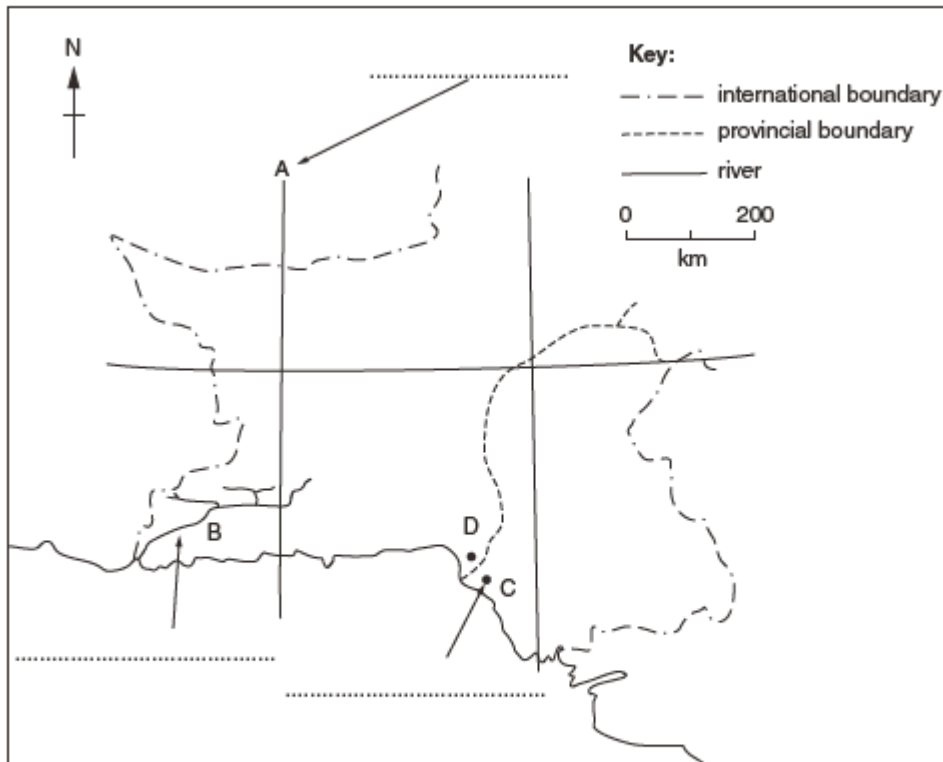


Fig. 9

(i) On the map name the following:

- Line of longitude A
- River B
- City C

[3]

The Land of Pakistan (Location, topography and climate) 2059 questions
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M/J15/P2/Q1(B)

(b) (i) Study Fig. 2 which shows rainfall data for two cities on the River Indus.

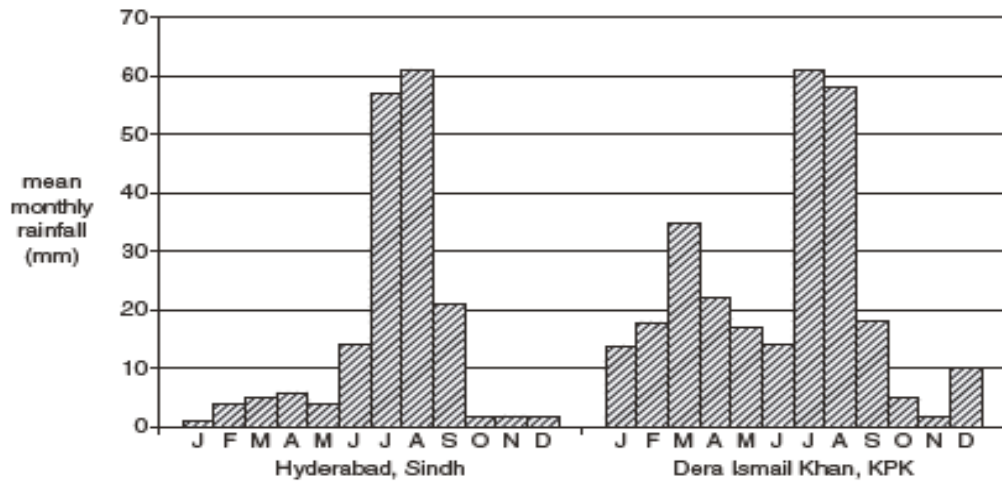


Fig. 2

A. Compare the amount and pattern of monthly rainfall in Hyderabad with that of Dera Ismail Khan.

.....

.....

.....

.....

.....

.....[3]

B. Give **three** reasons for any similarities or differences in the two patterns of rainfall.

1

.....

2

.....

3

.....[3]

(ii) Explain the effect of flooding on the local economy and transport links in communities along the River Indus.

.....

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.....

.....

.....

.....

.....

.....[4]

The Land of Pakistan (Location, topography and climate) 2059 questions
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O/N14/P2/Q3(A)

(a) Study Fig. 3, a graph showing rainfall in Dir, Khyber Pakhtunkhwa.

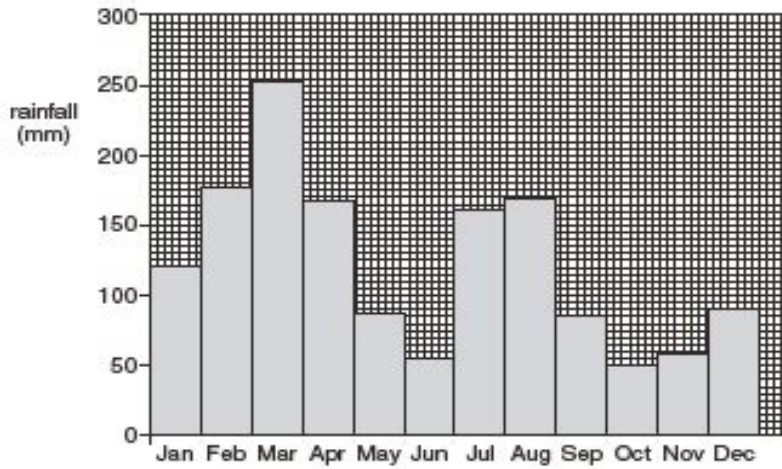


Fig. 3

- (i) What is the minimum rainfall, and when does it occur?
.....
.....[2]
- (ii) What is the maximum rainfall, and when does it occur?
.....
.....[2]
- (iii) For how many months between October and June is the rainfall above 80 mm?
.....[1]
- (iv) Give two causes of high rainfall between October and June at Dir.
.....
.....[2]
- (v) What is the main cause of summer rainfall at Dir?
.....[1]

The Land of Pakistan (Location, topography and climate) 2059 questions
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M/J14/P2/Q3(A)

(a) Study the map Fig. 5.

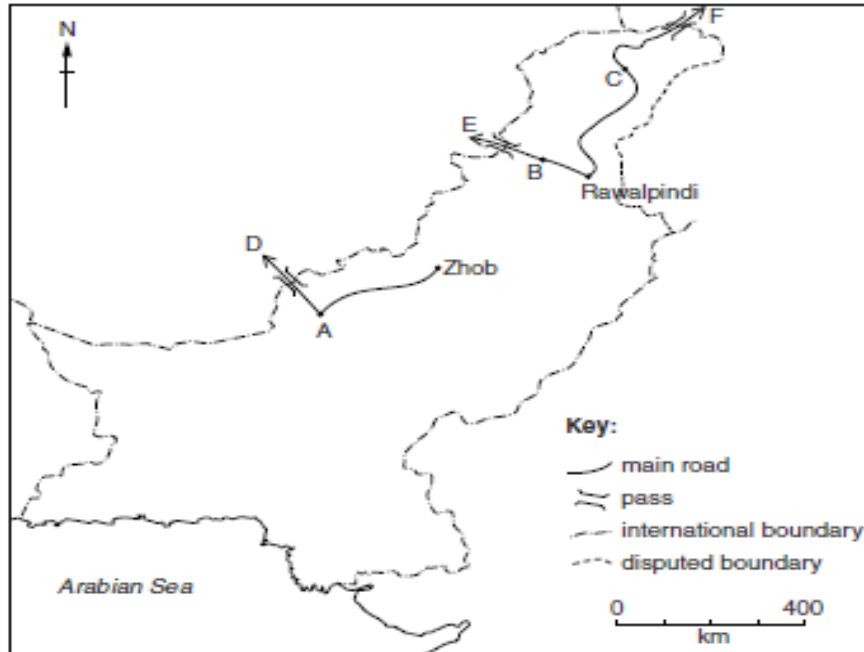


Fig. 5

(I) Name the towns A, B and C.

A B

C [3]

(II) Name **one** of the passes D, E and F shown on Fig. 5, and name the country that it links to Pakistan.

Letter Name Country [2]

(III) Give **two** reasons why air transport is used to carry lightweight or valuable goods to other countries instead of roads.

1

2 [2]

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O/N13/P2/Q3(C AND D)

(c) Study Fig. 5, a map of Pakistan.

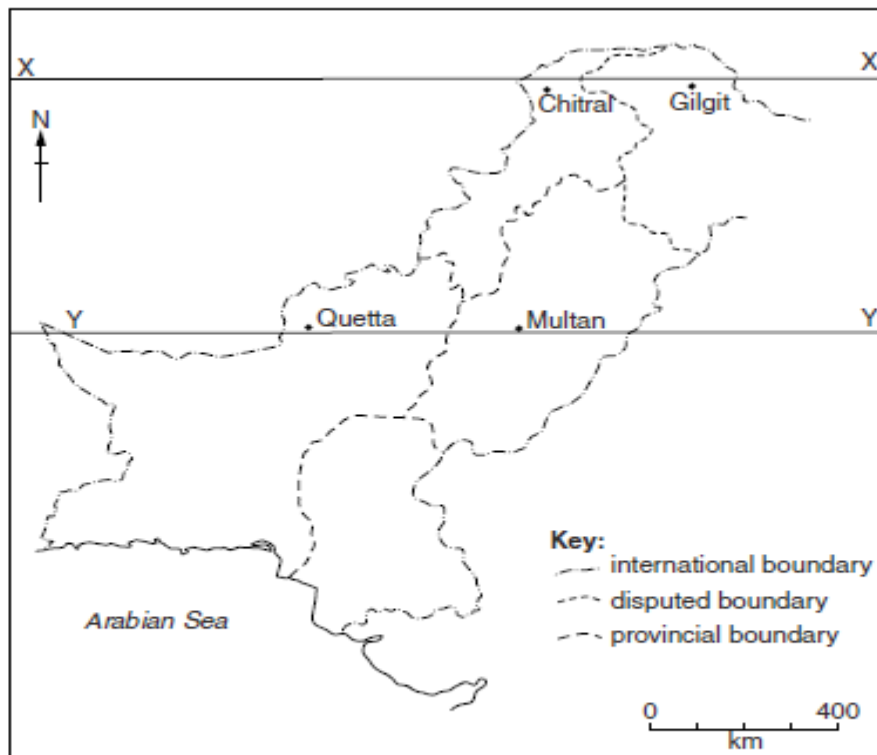


Fig. 5

(i) Give the latitude of the lines X – X and Y – Y.

X Y [2]

(ii) Explain the effect of latitude on

Temperature
.....
.....
.....
Day length
.....
.....
..... [4]

INSERT



(d) (i) Study Photograph C.

Name **three** attractions to tourists shown in the photograph.

1

2

3

[3]

(ii) Explain how local people can gain income from tourism in mountain areas.

.....

.....

.....

.....

.....

.....

[3]

M/J13/P2/Q1(A,B AND C)

1 (a) Study Fig. 1, which shows the rainfall of three cities in northern Pakistan.

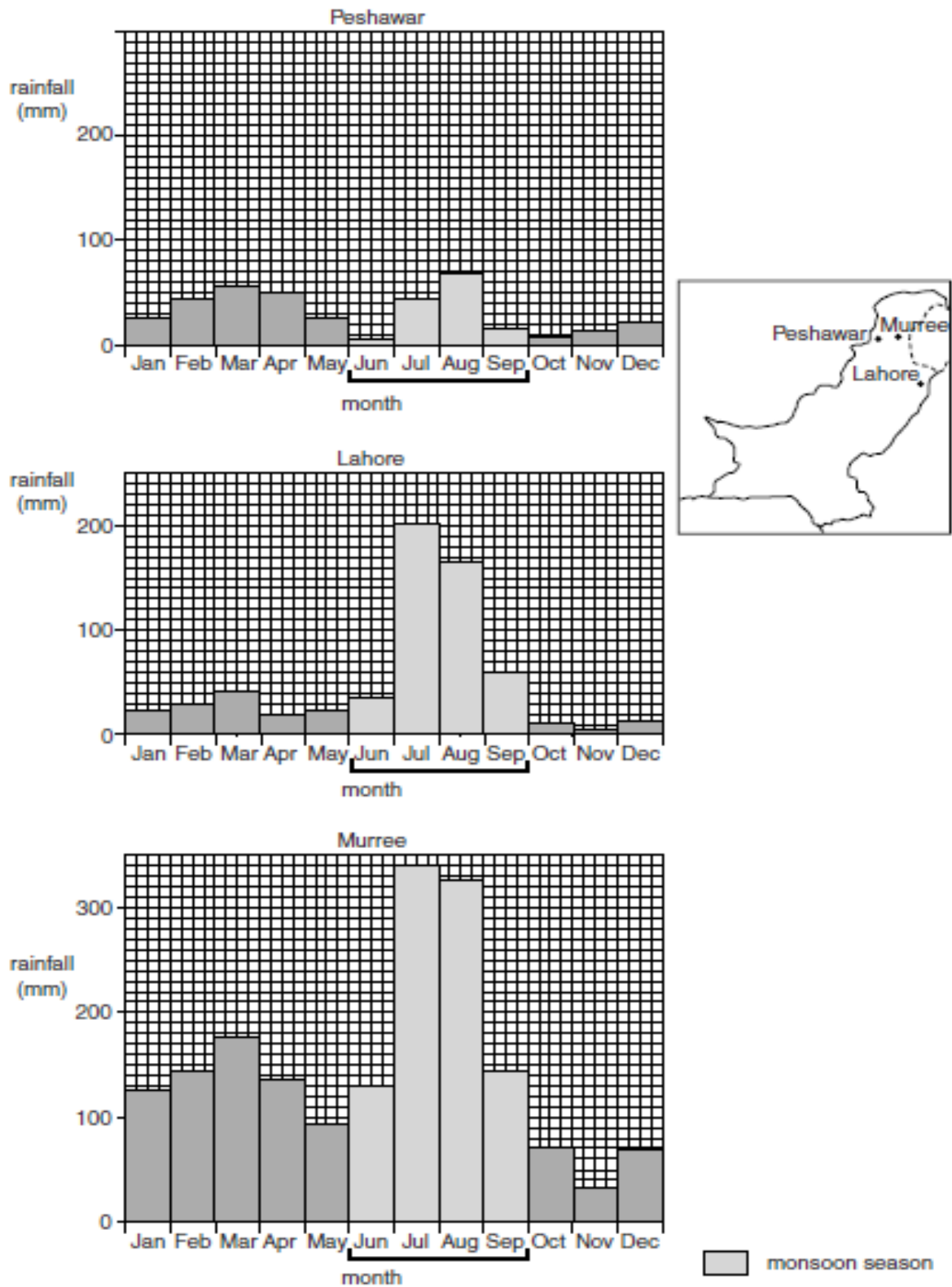


Fig. 1

The Land of Pakistan (Location, topography and climate) 2059 questions
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- (I) For each of the following cities state the maximum rainfall and the month in which it falls.

Peshawar	rainfall	month	
Lahore	rainfall	month	
Murree	rainfall	month	[3]

- (II) Compare the amount and pattern of rainfall in Lahore and Peshawar during the monsoon season.

.....

.....

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.....

.....

..... [3]

- (III) Explain how the monsoon winds bring rainfall to northern Pakistan.

.....

.....

.....

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.....

..... [4]

- (IV) Suggest **two** reasons why Murree has a higher rainfall than Lahore and Peshawar.

reason 1

.....

reason 2

..... [2]

- (b) (I) Circle **three** of the phrases below that describe a semi-arid climate.

HIGH EVAPOTRANSPIRATION	HIGH HUMIDITY
HOT DAYS AND COLD NIGHTS	RELIABLE RAINFALL
THUNDERSTORMS	LOW EVAPOTRANSPIRATION

[3]

INSERT



Photograph A for Question 1

(ii) Study Photograph A (Insert).

Explain how the ground surface and the vegetation show that this is an area of low rainfall.

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... [4]

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M/J13/42/Q1(A)

(a) Study Fig. 1, which shows the climate of Quetta.

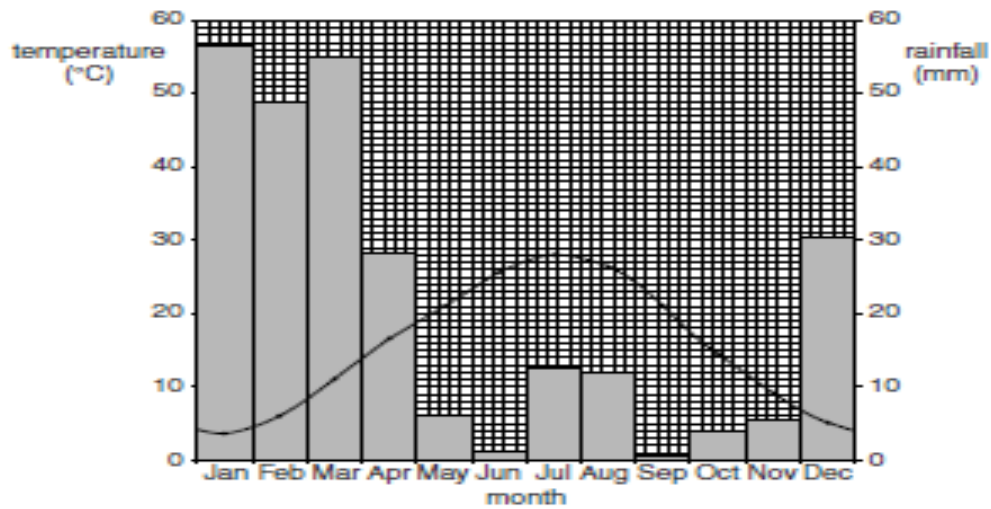


Fig. 1

(i) Describe the annual distribution of rainfall at Quetta.

.....

.....

.....

.....

.....

[3]

(ii) State **two** causes of rainfall at Quetta and name the months when each occurs.

Cause 1

Months

Cause 2

Months

[4]

(iii) What are the maximum and minimum temperatures at Quetta, and when do they occur?

Maximum..... Month.....

Minimum..... Month.....

[2]

(iv) Give **two** reasons why temperatures are higher in the summer than in the winter at Quetta.

1

.....

2

.....

[2]

M/J12/P2/Q2(A AND B)

(a) Study Fig. 3 which shows the climate of Karachi.

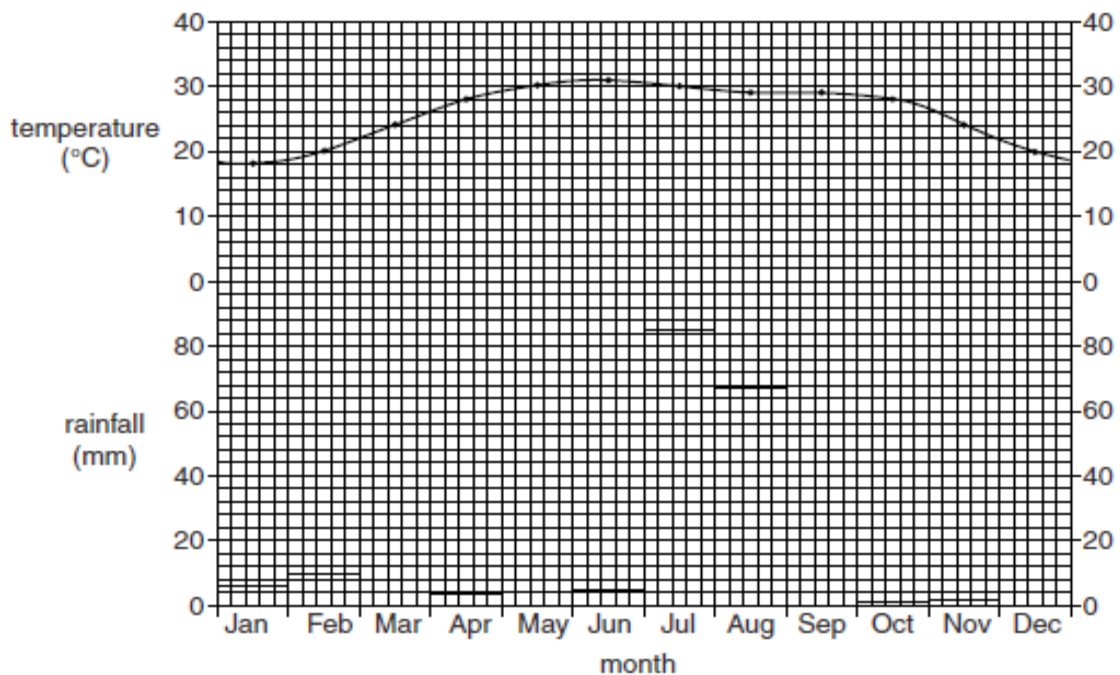


Fig. 3

(i) By how much does the temperature rise from January to May?

..... [1]

(ii) Describe the pattern of rainfall during the winter season from October to March.

.....
.....
.....
..... [2]

[4]

[4]

[illegible]

The Land of Pakistan (Location, topography and climate) 2059 questions
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M/J12/P2/Q2(A,B AND C)

(a) Study Fig. 2 and name the following:

(i) the line of latitude A;

.....

(ii) the mountain pass B;

.....

(iii) the road C;

.....

(iv) the province D.

..... [4]

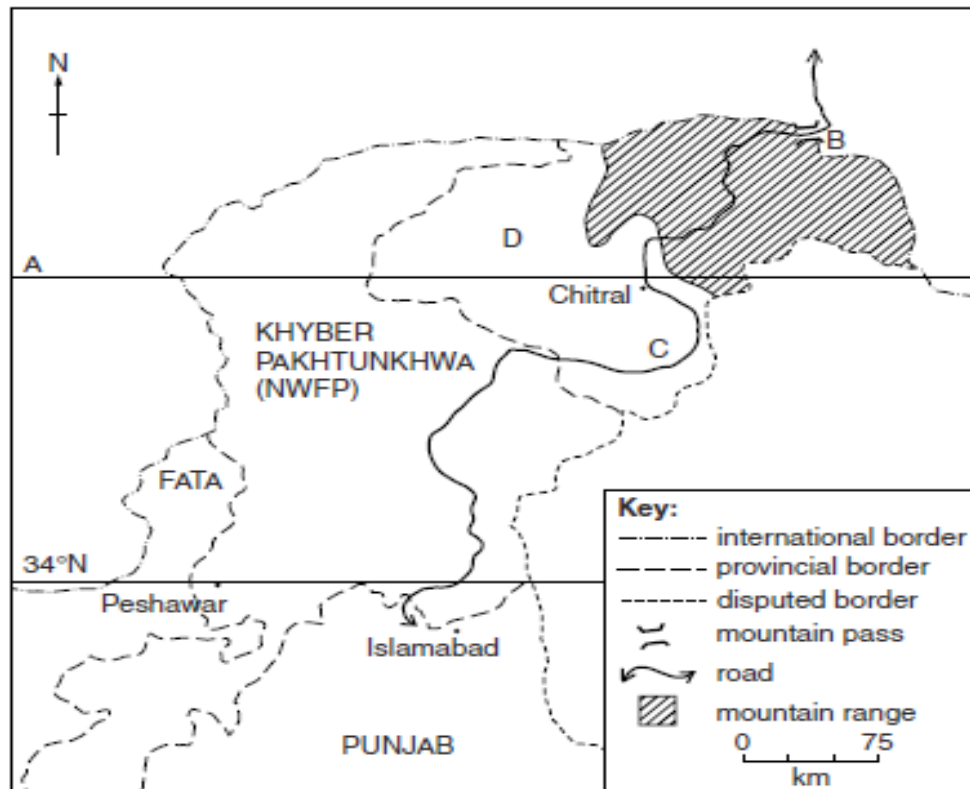


Fig. 2

(b) Study Fig. 3, which shows the climate of Gilgit.

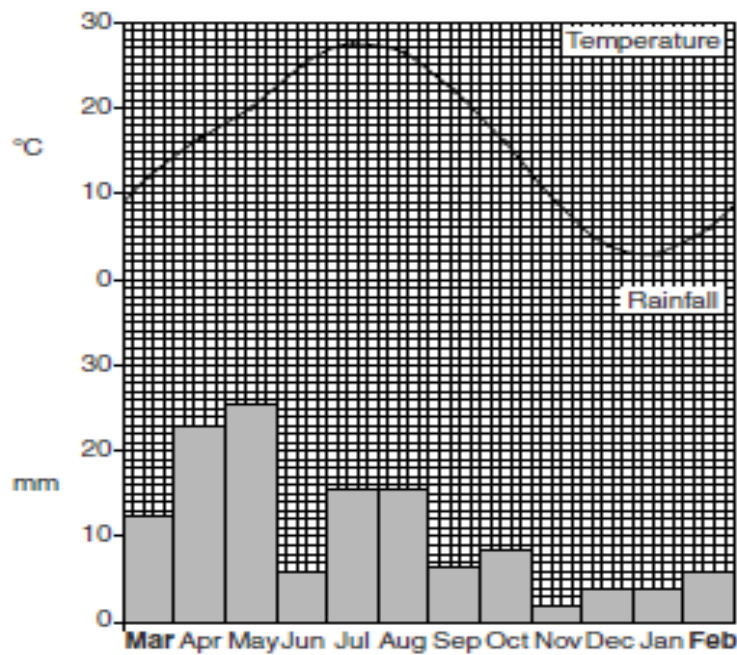


Fig. 3

- (I) What is the maximum temperature, and in which month does it occur?
.....[2]
- (II) In which season of the year is the rainfall highest?
.....[1]
- (III) Compare the climate of the months from May to September with the months from November to February.
.....
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.....
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.....
.....
.....[4]

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[6]

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O/N11/P2/Q5(A,B AND C)

(a) Study Fig. 8, which shows January temperatures in Pakistan.

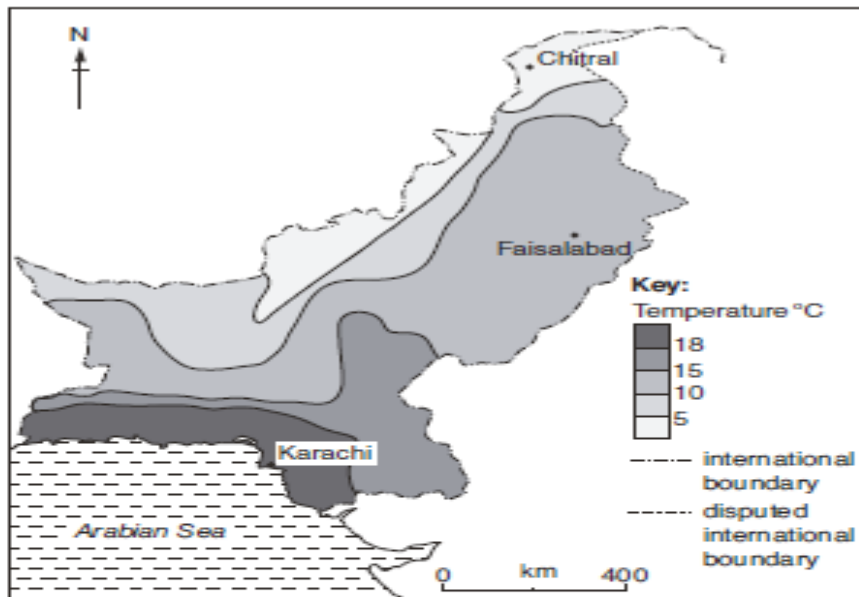


Fig. 8

- (I) What is the temperature at:
- Karachi? °C
- Faisalabad? °C
- Chitral? °C [3]
- (II) Do the temperatures increase or decrease:
- from south to north? [2]
- from east to west? [2]

(III) Explain **two** factors that affect winter temperatures in Pakistan.

- 1
-
-
-
- 2
-
-
-
-[4]

(b) Study Fig. 9, which shows the distribution of monsoon rainfall in Pakistan.

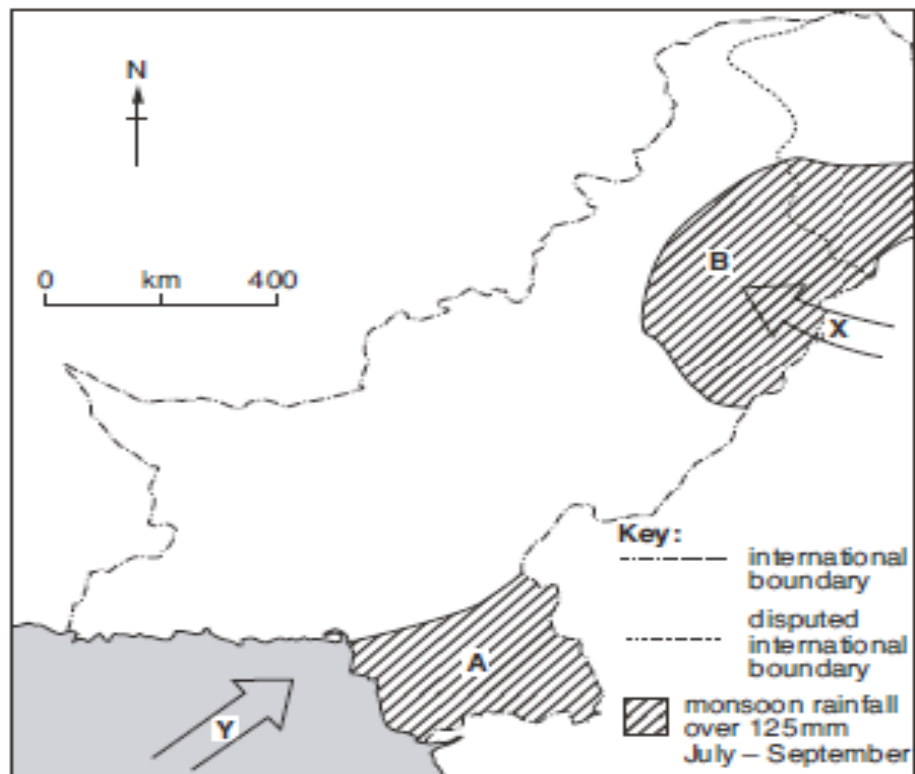


Fig. 9

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A

[illegible]

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M/J11/P2/Q5

(a) Describe the route of the main monsoon across Pakistan.

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.....

.....

.....[3]

(b) Study Fig. 4, which shows the rainfall of Peshawar and Lahore.

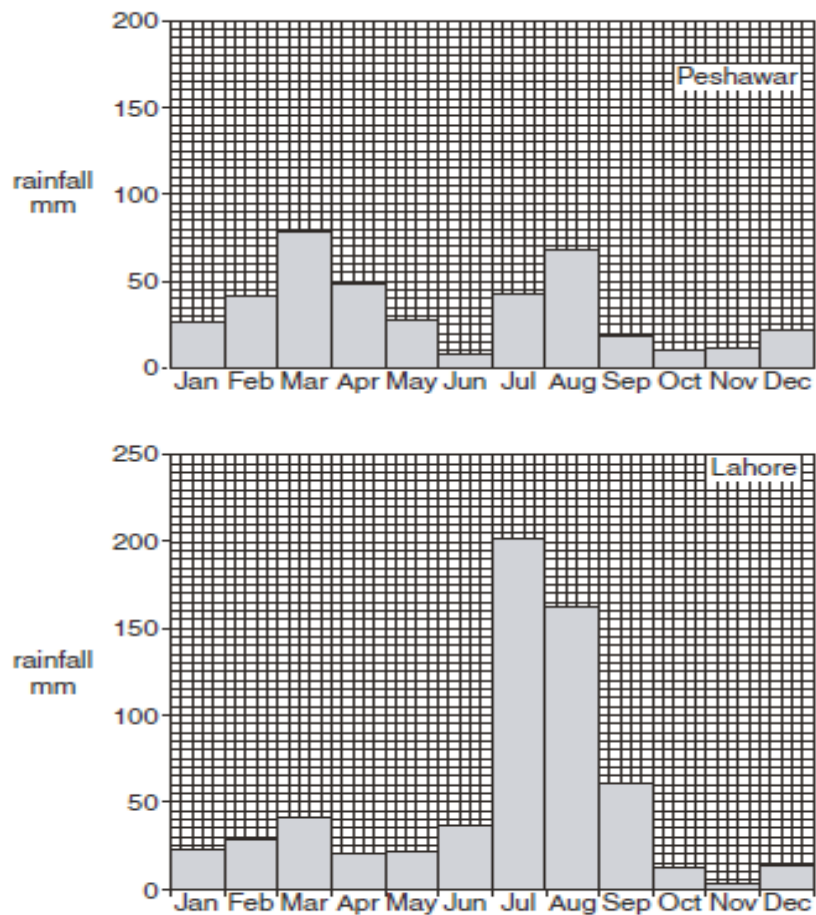


Fig. 4

- (i) Using figures from Fig. 4 in your answer, compare the distribution of rainfall from June to September at Lahore and Peshawar.

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.....[4]

- (ii) Explain why there are differences in amounts of rainfall caused by the monsoon in different areas of Pakistan.

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.....[4]

(c) Study Figs 5A and 5B, which show rainfall distribution in Pakistan.

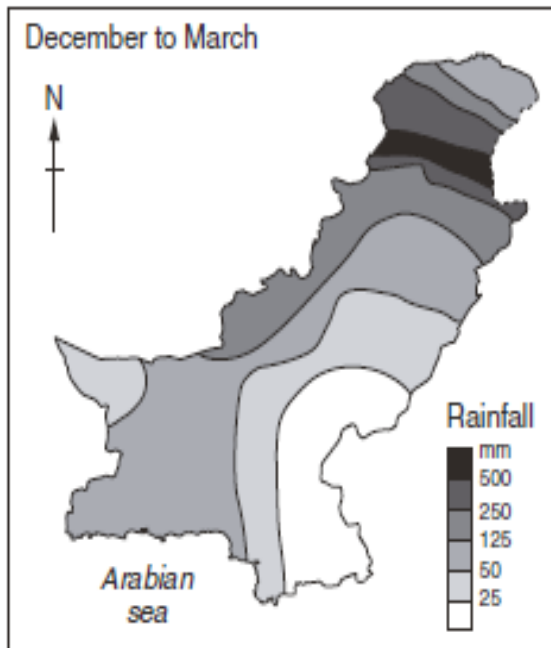


Fig. 5A

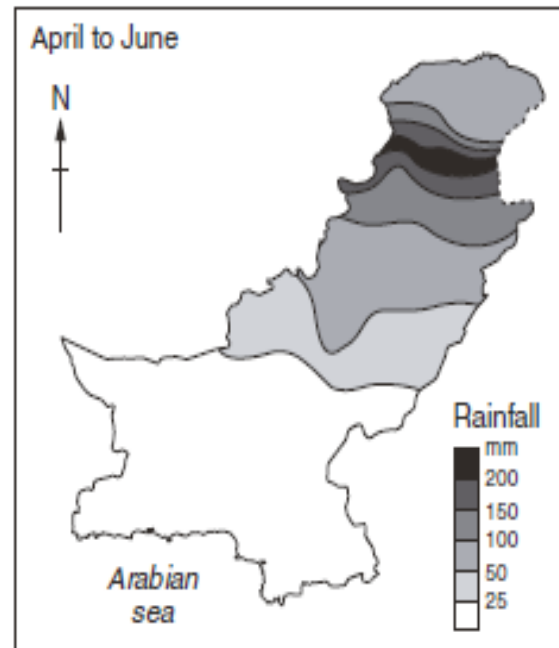


Fig. 5B

Key
 ----- disputed international boundary

(i) What is the main cause of rainfall from:

A December to March?

.....

B April to June?

.....[2]

(ii) Name **one** area which receives high rainfall in both seasons A and B.

.....[1]

(iii) Which area receives the highest rainfall from December to March?

.....[1]

The Land of Pakistan (Location, topography and climate) 2059 questions
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- (iv) What are the advantages and disadvantages of winter rainfall in Northern Pakistan?

Advantages

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Disadvantages

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[6]

- (d) Explain the importance of the arrival of the monsoon to people who live and work in urban areas.

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.....

.....

[4]

[Total: 25]

The Land of Pakistan (Location, topography and climate) 2059 questions
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Answer Key-Mark Scheme

M/J18/P2/Q1

Question	Answer	Marks
1(a)(i)	<p>The following labelled in the correct locations:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Afghanistan – to west of Pakistan; <input type="checkbox"/> India – to east of Pakistan; <input type="checkbox"/> Longitude 70 °E – middle line of the three on map. <p style="text-align: right;">3 @ 1 mark</p>	3
1(a)(ii)	<ul style="list-style-type: none"> <input type="checkbox"/> Accurately drawn line for position of Tropic of Cancer; <input type="checkbox"/> Accurate label. <p style="text-align: right;">2 @ 1 mark</p>	2
1(a)(iii)	<ul style="list-style-type: none"> <input type="checkbox"/> Western part of South Asia; <input type="checkbox"/> India to the East / South East / North East; <input type="checkbox"/> China to the North / North East; <input type="checkbox"/> Afghanistan to the North West / West; <input type="checkbox"/> Iran to the West / South West; <input type="checkbox"/> Between / shares border with / neighbouring country with China / India / Afghanistan / Iran; <input type="checkbox"/> 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); <input type="checkbox"/> 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). <p style="text-align: right;">3 @ 1 mark</p>	3
1(b)(i)	<ul style="list-style-type: none"> <input type="checkbox"/> Sand / sandy; <input type="checkbox"/> Sand dunes / ridges / hills / hilly; <input type="checkbox"/> Large area / expanse / plain / plains; <input type="checkbox"/> Sparse / scant vegetation / not much greenery / few trees / lack of trees; <input type="checkbox"/> Small bushes / thorny bushes / scrub / rakh / shrubs; <input type="checkbox"/> Barren / bare / dry; <input type="checkbox"/> Oasis. <p style="text-align: right;">3 @ 1 mark</p>	3

Question	Answer	Marks
1(b)(ii)	<p>Challenges such as:</p> <ul style="list-style-type: none"> <input type="checkbox"/> High temperatures / hot (during day) / cold at night / uncomfortable living conditions; <input type="checkbox"/> Lack of / little / unreliable rainfall; <input type="checkbox"/> Difficult to grow crops / carry out agriculture; <input type="checkbox"/> Difficult to rear animals; <input type="checkbox"/> Lack of water / travel long distance to find water / low water table; <input type="checkbox"/> Dust / sandstorms; <input type="checkbox"/> Infertile soils / lack of nutrients / lack of humus produced; <input type="checkbox"/> Reliable food supply; <input type="checkbox"/> Isolated / far from urban areas / remote; <input type="checkbox"/> Inaccessible / poor / lack of roads; <input type="checkbox"/> Wild / poisonous animals. <p>Etc.</p> <p>Note: One mark for identification of appropriate idea and a further mark for development (in parentheses).</p> <p>Note: Max. 2 marks if no development.</p> <p style="text-align: right;">2 @ 2 marks</p>	4
1(b)(iii)	<ul style="list-style-type: none"> <input type="checkbox"/> Cold / cool / low temperatures / freezing temperatures; <input type="checkbox"/> Relief rainfall; <input type="checkbox"/> Snow (capped peaks) / blizzards; <input type="checkbox"/> Ice / hail; <input type="checkbox"/> Windy; <input type="checkbox"/> Dry; <input type="checkbox"/> Sunny / bright / clear skies OR few sunny days / cloudy. <p style="text-align: right;">2 @ 1 mark</p>	2
1(c)	<ul style="list-style-type: none"> <input type="checkbox"/> The further north (from the equator) the cooler it is / north is cold; <input type="checkbox"/> The closer to the equator the warmer it is / southern Pakistan is warmer / south Pakistan is hot; <input type="checkbox"/> In the south / the closer to the equator the more convectional rainfall / more thunderstorms; <input type="checkbox"/> More concentrated / direct rays of sunshine / higher angle of sun nearer equator (so higher temperatures). <p style="text-align: right;">2 @ 1 mark</p>	2

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Question	Answer	Marks
1(d)	<p>Levels marking</p> <p>No valid response 0</p> <p>Level 1 1–2 Simple point addressing any view (1) Simple points addressing any view (2)</p> <p>Level 2 3–4 Developed point(s) explaining one view (3) Developed point(s) explaining both views (4) No evaluation</p> <p>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)</p> <p>Content Guide Answers are likely to refer to:</p> <p>Description of the topography in the north of Pakistan compared to other areas.</p> <p><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.</p> <p><u>Encourages human activity and development</u> Transhumance; HEP / Hydel / dams; Cottage industries; Tourism. Etc.</p>	6

O/N17/P2/Q4(A)

4(a)(i)	<p>A 64°E B Hab C Thal</p> <p style="text-align: right;">3 @ 1 mark</p>	3
4(a)(ii)	<p><input type="checkbox"/> Flat or gentle sloping land; <input type="checkbox"/> Lower Indus Plain / low altitude; <input type="checkbox"/> Flood plain / active floodplain (bet) / old floodplain; <input type="checkbox"/> Delta; <input type="checkbox"/> Limestone cliffs at Hyderabad (Ganjo Takkar Hills) / escarpment / cuesta; <input type="checkbox"/> Doab / sand dunes (tibbas); <input type="checkbox"/> Piedmont plains with alluvial fans.</p> <p style="text-align: right;">3 @ 1 mark</p>	3
4(a)(iii)	<p><input type="checkbox"/> Heavy (high) rainfall / monsoon rainfall; <input type="checkbox"/> Monsoon winds (strong wind) / SW monsoon / weather pattern from India / Arabian Sea; <input type="checkbox"/> Rapid snow melt (in Himalayas / Karokoram / Hindu Kush / Tibet); <input type="checkbox"/> Melting of glaciers (in Himalayas / Karokoram / Hindu Kush / Tibet).</p> <p style="text-align: right;">2 @ 1 mark</p>	2

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O/N17/P2/Q5(A)

5(a)(i)	<input type="checkbox"/> Season / seasonal; <input type="checkbox"/> Seasonal wind / weather pattern; <input type="checkbox"/> Short period of heavy rain / a wet season (Jul to Sept). <div style="text-align: right;">1 @ 1 mark</div>	1
5(a)(ii)	<input type="checkbox"/> Rainfall concentrated in Jul–Sept / wet season Jul–Sept; <input type="checkbox"/> Little rainfall Oct–Jun / dry season Oct–Jan / Apr–May; <input type="checkbox"/> High annual temperature / 30 °C–34 °C; <input type="checkbox"/> Highest temperature in Jun just before wet season starts. <div style="text-align: right;">2 @ 1 mark</div>	2
5(a)(iii)	<input type="checkbox"/> July low pressure on land / central Asia. December high pressure on land / central Asia or July lower pressure on land / central Asia than December; <input type="checkbox"/> July moist air / rain bearing winds from sea / Indian Ocean / Bay of Bengal: December dry winds blow from land to sea / winds reverse from July SW to December NE; <input type="checkbox"/> July tail end of monsoon winds reach northern / north-eastern Pakistan / December little moisture reaches eastern / north-eastern Pakistan; <input type="checkbox"/> July has high (higher, warmer) temps with more humidity / December has low (lower, cooler) temps with less humidity. <div style="text-align: right;">2 @ 1 mark</div>	2

O/N16/P2/Q1(A AND B)

1 (a) Study Fig. 1 which shows the distribution of monthly rainfall in Karachi.

(i) A For how many months does Karachi experience less than 10 mm rainfall?

B Estimate the total rainfall in Karachi for the period July to September. [2]

A 7 (may simply list the 7 months)

B 173 mm *Tolerance 171–175 mm*

(ii) Describe briefly the climatic region in which Karachi is located. [1]

Arid / coastal (maritime) / warm summer, mild winter

(iii) What is the main source of rainfall in Karachi? From which direction do the rainbearing winds come? [2]

Source: [Secondary] monsoon

Direction: SW

(iv) Describe the effects of tropical cyclones on cities such as Karachi. [4]

Widespread / great / huge / much / many / a lot of – damage

[Flash] floods / blocked drains / sewers

Lives lost / injuries / people missing

Damage to / loss of homes / belongings / slums

Damage to named transport – e.g. roads, railways, ports, airports so people unable to get to work

Damage to named services – e.g. schools / hospitals / clinics

Damage to workplaces / industry - e.g. the fishing industry destroyed so no source of income or loss of income / disrupts exports

Loss to local economy – e.g. through damaged industry / cost of rebuilding / loss of jobs

Damage to transmission lines / power stations / lack of power

Damage to communication – e.g. lack of telecommunications / telephone lines / internet / social media

Shortage / contamination – drinking water / food causing disease to spread

(b) Study Photographs A and B (Insert) which show parts of the lower Indus valley.

Using

the photographs and your own knowledge, explain the advantages for agriculture in areas like this. [4]

Near to river / lake / water source (for ease of irrigation / plentiful water for sugar cane or cotton)

[Active / old] flood plain (allows floods to spread over a large area)

River floods regularly / every 1–8 years (e.g. depositing alluvium / providing water and nutrients / which is useful for rice / suitable for Buffalo to wallow idea)

Alluvium / fertile soil (to increase crop yields)

Wide area / floodplain / space / up to 40 km wide (which provides large area of land for intensive cropping)

Flat (e.g. for ease of cultivation / easy to grow crops / easy to use machinery / easy for cattle to graze) (2 + 2)

Maximum of 2 + 2 (mark + development mark)

M/J16/P2/Q1

1 (a) Study Fig. 1 which is a map of northern Pakistan.

(i) On the map name the following: Mountain range A; City B; River C [3]

A: Himalaya(s)

B: Murree

C: Jhelum

(ii) Explain the causes of high rainfall at city B. [4]

Receives rainfall in all seasons /throughout year

Monsoon (from Bay of Bengal) (via N India)

Western depressions (from Mediterranean) (from Afghanistan/Iran)

Relief rainfall (air rises over mountains and cools/condenses)

Thunderstorm / convection / convectional rain/currents (hot air rises [in summer] and cools)

M/J16/P2/Q5(A)

5 (a) Study Fig. 9 which is a map of southern Pakistan.

(i) On the map name the following: Line of longitude A; River B; City C [3]

A: – 64E

B: – Dasht

C: – Karachi

M/J15/P2/Q1(B)

(b) (i) Study Fig. 2 which shows rainfall data for two cities on the River Indus.

A Compare the amount and pattern of monthly rainfall in Hyderabad with that of Dera Ismail Khan. [3]

Amount

Both high Jul and Aug

Both identical Jun/Nov

Both low Oct/Nov

For Dera Ismail Khan (accept converses for Hyderabad)

Greater total

274 mm as opposed to 179 mm

Higher in all months except Aug and Sep/any named month / lower in

Aug/Sep

A pair of stats to illustrate for any month (e.g. May H – 4 mm, DIK –17 mm)

Max 1

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Tolerances: ± 1 mm

Pattern

Both maximum Jul–Aug

For Dera Ismail Khan (accept converses for Hyderabad)

Has double maximum Jul–Aug and Mar (H – one maximum)

Has more evenly distributed rainfall over the year (H – more variable)

B Give three reasons for any similarities or differences in the two patterns of rainfall. [3]

Both experience monsoon rainfall [Jul–Sep]

Dera Ismail Khan experiences rainfall from western depressions [Dec–Mar]

Dera Ismail Khan experiences some thunderstorm rainfall [Apr–Jun]

Accept converses for Hyderabad

(ii) Explain the effect of flooding on the local economy and transport links in communities along the River Indus. [4]

Local economy

Livestock/crops/farm equipment/fisheries lost (causing loss of income)

Factories/workplaces temporarily closed (causing damage/unemployment/loss of production/income/profit)

Electricity supply disrupted (factories closed)

Build up of silt behind dams (less water storage/effect on HEP production)

Alluvium/nutrients deposited by flood water (fertilises soil)

Transport Links

Bridges washed away (limiting ability to trade)

Roads/railways destroyed/damaged/flooded (making journeys longer/slower/more dangerous)

Rivers become unnavigable (communications cut/villages cut off)

Allow development of points illustrated by information in parentheses

O/N14/P2/Q3(A)

3 (a) Study Fig.3, a graph showing rainfall in Dir, Khyber Pakhtunkhwa.

(i) What is the minimum rainfall, and when does it occur? [2]

50–52 mm

October

(ii) What is the maximum rainfall, and when does it occur? [2]

253 / 254mm

March

(iii) For how many months between October and June is the rainfall above 80mm? [1]

6

(iv) Give two causes of high rainfall between October and June at Dir. [2]

Western / winter depressions / disturbances

Relief rainfall

Convectional rainfall / currents

Thunderstorm

(v) What is the main cause of summer rainfall at Dir? [1]

Monsoon

M/J14/P2/Q3(A)

3 (a) Study the map Fig.5

(i) Name the towns A, B and C [3]

A – Quetta

B – Peshawar

C – Gilgit

(ii) Name one of the passes D, E and F shown on Fig. 5, and name the country that it links to Pakistan. [2]

D – Khojak pass – Afghanistan

E – Khyber pass – Afghanistan

F – Khunjerab pass – China

(iii) Give two reasons why air transport is used to carry lightweight or valuable goods to other countries instead of roads. [2]

Safety / less likely to be damaged / stolen / less risk of accidents

Speed

O/N13/P2/Q3(C AND D)

(c) Study Fig 5, a map of Pakistan.

(i) Give the latitude of the lines X – X and Y – Y [2]

X – X 36 °N

Y – Y 30 °N

(ii) Explain the effect of latitude on temperature and day length. [4]

Temperature

Greater heating/warming effects lower latitudes/nearer equator/lower heating/cooling effect higher latitudes

Lower latitudes more direct rays of the sun (Accept converse)

Higher or lower angle of the sun/high latitude lower angle of sun/low latitude higher angle of sun

High latitudes less insolation/more rays absorbed by the atmosphere/rays spread over larger area(Accept converse)

Day length

High latitudes days shorter in winter and longer in summer/the higher the latitude the shorter the days in winter/low latitudes days and nights more equal in length

Earth is tilted on its axis

Hemisphere experiencing summer points towards the sun / N hemisphere points toward sun in summer and away from sun in winter

(d) (i) Study Photograph C.

Name three attractions to tourists shown in the photograph. [3]

Valleys

Rivers/rapids

Mountains/hills

Greenery/lush vegetation/meadows/pastures

Forest/trees

Terraces

Tracks/trails

(ii) Explain how local people can gain income from tourism in mountain areas. [3]

Making/sale of crafts

Opening shops in village

Guides (on tracks/trails)

Named services e.g. hotels/restaurants

Named transport services

Offering accommodation in own home

Construction of tourist facilities

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M/J13/P2/Q1(A,B AND C)

1 (a) (i) For each of the following cities state the maximum rainfall and the month in which it falls.

Peshawar 68/69 mm, August

Lahore 201/202 mm, July

Murree 340 mm, July [3]

(ii) Compare the amount and pattern of rainfall in Lahore and Peshawar during the monsoon season.

Lahore

more rain/higher maximum

increase then decrease

earlier maximum/max in July

tails off more slowly

comparative figures (other than those from (i))

Peshawar

Credit comparison of above [3]

(iii) Explain how the monsoon winds bring rainfall to northern Pakistan.

from the sea/Bay of Bengal/Indian Ocean

this increases the moisture content

rise over land

air cools

condensation [4]

(iv) Suggest two reasons why Murree has a higher rainfall than Lahore and Peshawar.

higher altitude/mountainous

more thunderstorms

more western depressions

windward slope

more vegetation/forests [2]

(b) (i) Circle three of the phrases below that describe a semi-arid climate.

HIGH EVAPOTRANSPIRATION

HOT DAYS AND COLD NIGHTS

THUNDERSTORMS [3]

(ii) Study Photograph A (Insert)

Explain how the ground surface and the vegetation show that this is an area of low rainfall.

Ground (res. 1)

bare/barren ground

sand

small stones

Vegetation (res. 1)

scattered, e.g. sparse/scanty

lack of greenery/pale brown/not green

low bushes/shrubs/scrub/not tall

adaptations seen in photograph, e.g. thorns/thin leaves etc. [4]

M/J13/42/Q1(A)

1 (a) (i) winter maximum

most from December to April

second max in July and August

none in September [3]

(ii) western depressions December to April

monsoon July and August [4]

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- (iii) maximum 28 °C July
minimum 4 °C January [2]
- (iv) Sun higher in the sky / higher angle of insolation
Longer hours of daylight
Less cloud [2]

M/J12/P2/Q2(A AND B)

2 (a) Study Fig. 3, showing the climate of Karachi.

(i) By how much does the temperature rise from January to May? [1]

12°C

(ii) How does the amount of rainfall change from October to March? [2]

Increases

Steady / constant / regular

1 – 12mm / by 2mm per month

(iii) With reference to Fig. 3 describe the climate of the months June to September. [4]

Temperature

High / warm hot

29 – 31°C / average 30°C

Highest in June

Little change in temperature

Rainfall

High (accept July-September)

20 – 85mm

Large increase in July / July max

Decreasing after July

Total 170-185 mms

Allow a mark for 'temperature drops (in July) when rainfall increases'

(b) Explain the causes of the monsoon at Karachi. [4]

Low pressure develops over land mass / air rises over land

Draws in wind from high pressure area

From the Arabian Sea

Moisture-bearing / wet winds / carrying rain / humid

Rise over land

Cools

Moisture condenses / clouds form

(c) (i) Name the violent storms that form over the sea and that may affect Karachi. [1]

Cyclones / Typhoons / Hurricanes

(ii) In which months may these occur? [1]

April / May / June / Sept / Oct / November

(iii) Explain how storms such as these may affect industry and communications in urban areas. [6]

NB. Answer must refer to storms in urban areas, therefore no ref. to farming or its products

No reserves

Flooding / heavy rain / high waves/ high tides}

Strong winds } Weather associated with the storm

Lightning strike }

Damage or closure of buildings / roads / bridges / airports

Lack of deliveries port activity

Loss of production / work stops

Lack of labour / cannot get to work

Lack of experts / investors linked to airports being closed

Lack of (tele)communication

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M/J12/P2/Q2(A,B AND C)

2 (a) Study Fig. 2 and name

(i) the line of latitude A

36 °N

(ii) the mountain pass B

Khunjerab

(iii) the road C

Karakoram Highway / KKH / Silk Road

(iv) the province D(4)

Northern Area(s) / FANA / Gilgit – Baltistan

(b) Study Fig. 3 showing the climate of Gilgit.

(i) What is the maximum temperature, and in which month does it occur? [2]

27.5 °C

July

(ii) In which season of the year is the rainfall highest? [1]

Spring / early summer / March to May

(iii) Compare the climate of the months May to September with the months from November to February. [4]

May to September November to February

Hotter Colder

Over 18 °C / 18–27.5 °C Under 12 °C / 3–12 °C

Wetter Drier

Variable rain low/increasing rain/snow fall

6–26 mm 2–6 mm

All figures must be comparative, and accurate

(c) In what ways does the winter climate make life difficult for people who live in mountainous area? [6]

snow covers ground (or reference to snow)

water shortage / water freezes

no farming in winter / nothing grows / need to store food / no fishing

live indoors / cannot work outside

animals kept in sheds / need feeding / no pasture

roads or railways blocked / closed / no travel / communication

damage to buildings eg. by avalanches, landslides, frozen pipes / death of people

fog / no air travel

power lines cut

telephone lines cut / no telecommunication

no tourism

need to keep warm / need for heating

long nights / short days

less income / less work / less trade / economic activity stops

O/N11/P2/Q5(A,B AND C)

5 (a) Study Fig. 8, which shows January temperatures in Pakistan.

(i) What is the temperature at: [3]

Karachi – over 18/ any figure between 18 and 30

Faisalabad – 10–15 or any figure between these

Chitral – 5 or under, or any figure from –10 to + 5

Or credit a temperature within the range

(ii) Do the temperatures increase or decrease: [2]

A from south to north – decrease

B from east to west – decrease (allow increase only if stated 'in the south')

(iii) Explain two factors that affect winter temperatures in Pakistan. [4]

Insolation / angle of the sun

As the overhead sun moves to the southern hemisphere / over Tropic of Capricorn, rays spread over a larger area

Altitude / height of the land

As this increases temperatures decrease

Air is less dense so holds less heat / heat radiated from the surface decreases with altitude

Continental / maritime effect

Land loses heat in winter

No moderating sea winds

2 marks for each factor

(b) Study Fig. 9, which shows the distribution of monsoon rainfall in Pakistan.

(i) Name the areas of high rainfall A and B. [2]

A – South / lower / south-east Sindh

B – North / upper / central Punjab

(ii) Name the body of water that is the source of moisture for the monsoon winds X and Y. [2]

X – Bay of Bengal

Y – Arabian Sea

(c) Explain why the lack of monsoon rainfall in the Southern Punjab and Sindh causes problems for farmers. [6]

Poor crop growth / difficult to grow crops

Low profits / incomes / farm economy

Unreliable / variable rainfall

Little or no other sources of rain / western depressions, relief etc.

Low humidity

High evaporation / evapotranspiration

Due to high temperatures

Need for irrigation / expensive to irrigate / depends on rivers and canals

Irrigation water already used by North Punjab and other users

Poor farmers cannot afford tubewells etc.

Can be soil erosion / blowing

M/J11/P2/Q5

5 (a) Describe the route of the main monsoon across Pakistan. [3]

East to west / from NE / from East

From Bay of Bengal / Northern India

Across Punjab / upper Indus Plain

Towards the Northern Areas / mountains / interior Asia

(b) Study Fig. 4, which shows the rainfall of Peshawar and Lahore.

(i) Using figures from Fig. 4 in your answer, compare the distribution of rainfall from June to September at Lahore and Peshawar. [4]

Comparative figures (res. 1)

Max 68 mms in Peshawar, 202 mms in Lahore

Totals June – September

Figures for any one month with comparative word

Comparisons

Less in Peshawar

Maximum later in Peshawar

Max in Aug in Peshawar, July in Lahore

Annual minimum in June in Peshawar but not Lahore

NB candidates must write about distribution of rain over the period.

(ii) Explain why there are differences in amounts of rainfall caused by the monsoon in different areas of Pakistan. [4]

Depends on moisture content / humidity

Loses moisture / drier as it crosses the land / Pakistan is at the tail end

More rain as it rises over hills

Condensation / clouds caused by cooling of rising air

Rain shadow effect on lee slopes

Climate change with reason e.g. global warming, ozone layer (max 1)

(c) Study Figs 5A and 5B, which show rainfall distribution in Pakistan.

(i) What is the main cause of rainfall from: [2]

A December to March?

Western depressions

B April to June?

Convection currents / thunderstorms

(ii) Name one area which receives high rainfall in both seasons A and B. [1]

N Punjab / central NWFP / Peshawar

See atlas for a named district in these areas

(iii) Which area receives the highest rainfall from December to March? [1]

More than in summer – Western borders / Quetta

More than rest of Pakistan – N Punjab / central NWFP / Peshawar

See atlas for a named district in these areas

(iv) What are the advantages and disadvantages of winter rainfall in Northern Pakistan? [6]

Advantages (res. 2)

Fills reservoirs / rivers / more storage

Water for irrigation

Water for HEP

Water for barani crops

Water for kharif / winter crops / fruit trees

Water when everything else is frozen

Lighter form of rain – can soak in

Snow for tourism

Disadvantages (res. 2)

May fall as snow }

Rivers / lakes frozen } so of little use

Temperatures too cold for growth }

Damage to environment – landslides, mudslides, floods etc. (allow avalanches) (max 1)

Damage to roads – blockage, slippery etc.

Silt collects in reservoirs / dams

Difficulties meaning farmers must do transhumance/ nomadism

(d) Explain the importance of the arrival of the monsoon to people who live and work in urban areas. [4]

Benefits

Cooler – better working and living conditions / pleasant climate

Fresher – less dust, pollution, cleaner air

Water supply – for drinking, factories, market gardens, buffalo (not rural farming)

Problems

Flooding (up to 2 marks)

People cannot get to work

Loss of production

NB. Urban areas only

Max 2 marks for any line [Total: 25]

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