



RAS

Rajasthan Administrative Services

Pre & Mains

Rajasthan Public Service Commission

Volume - 3

Geography of Rajasthan

RAS

Geography of Rajasthan

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PREVIOUS YEAR QUESTIONS

- Q1. The state flower of Rajasthan is - (2021)
- (1) Kachnar (2) Rohida
(3) Sunflower (4) Nag Kesar
- Q2. Arrange the following districts of Rajasthan in correct order from East to West: (2016)
- A. Bundi B. Ajmer
C. Udaipur D. Nagaur
- (1) A, B, C, D (2) B, A, C, D
(3) A, B, D, C (4) A, C, B, D
- Q3. How much percentage of the total land mass area of India is in Rajasthan? (2016)
- (1) 10.4% (2) 7.9%
(3) 13.3% (4) 11.4%

Analysis – The previous RAS exam questions on the "General Introduction of Rajasthan" chapter show a consistent trend, with at least one question typically asked every alternate year. They are typically factual in nature focusing on state symbols, district locations and other general facts. Given the likelihood of similar questions reappearing, it's important to focus on the general facts related to Rajasthan.

Rajasthan is the largest state in India by area. Shape of Rajasthan: Rhombus or similar to a kite.

Capital: Jaipur

Districts: 50

Divisions: 10

Area: 3,42,239 Sq km (10.41% of India's Area)

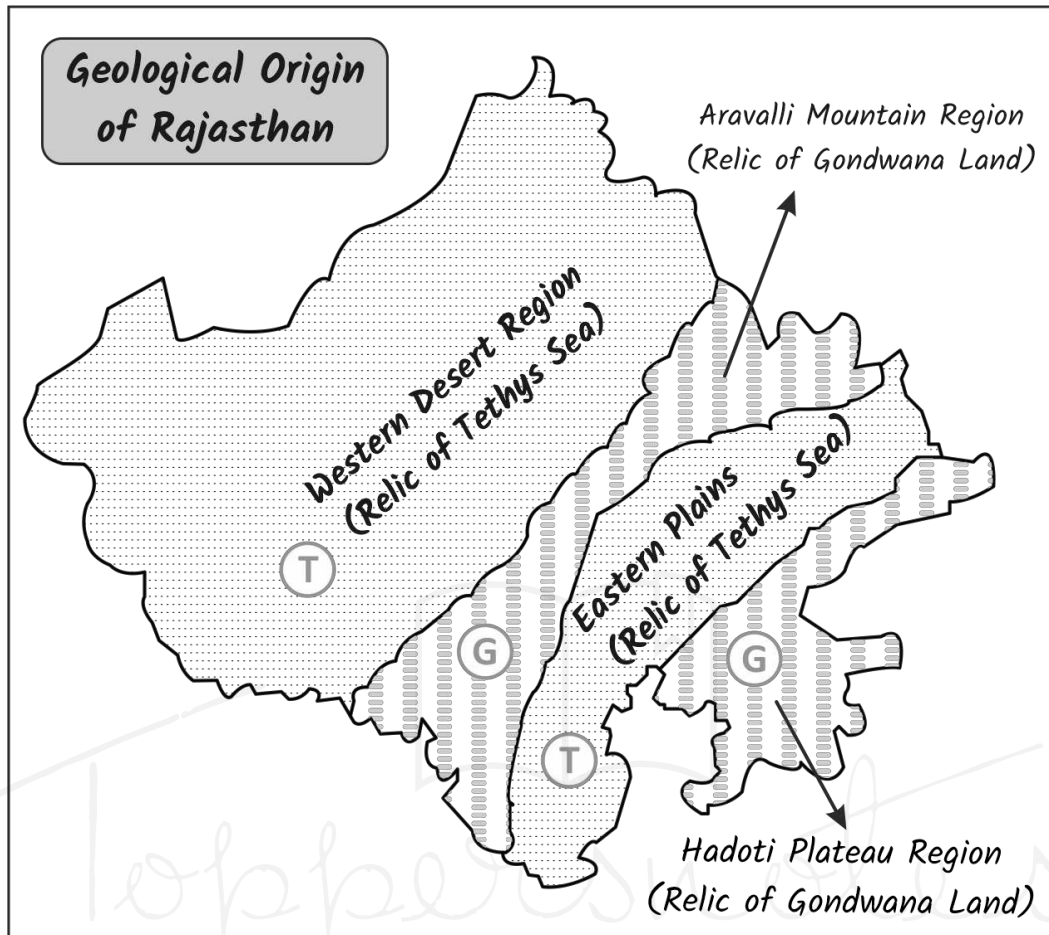
➤ According to the 2011 census

- ✓ **Total population:** 6,85,48,437 (5.67% of the India's population); Ranks seventh in the country in terms of population.

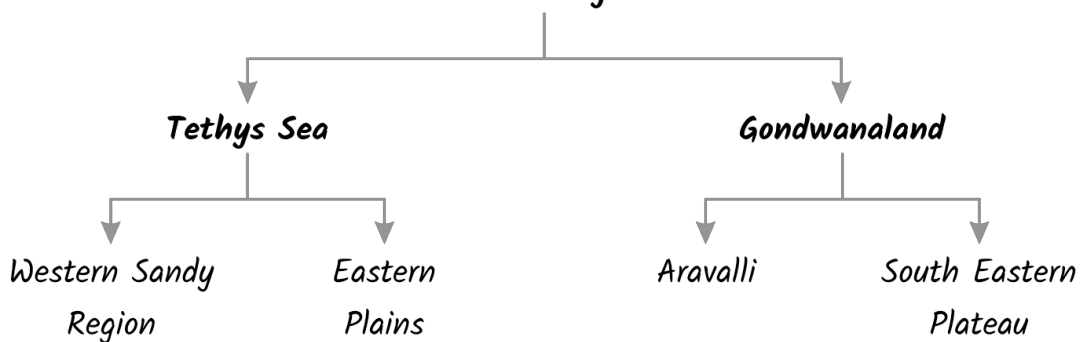
State Tree	Khejri
State Flower	Flower of Rohida tree
State Animal	Chinkara and Camel
State Bird	Godavan
State Dance	Ghoomar

1. Geological Origin of Rajasthan

- Rajasthan's geological structure is uniquely distinct from other Indian states. It is formed from Gondwanaland and Tethys Sea.



Formation of Rajasthan



2. Geographical Location of Rajasthan

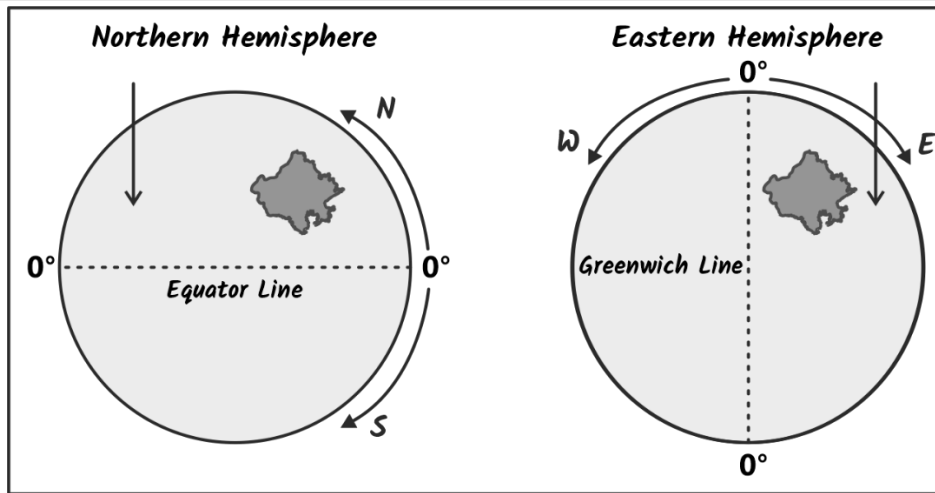
Latitude: 23°03'N to 30°12'N

Longitude: 69° 30'E to 78°17'E

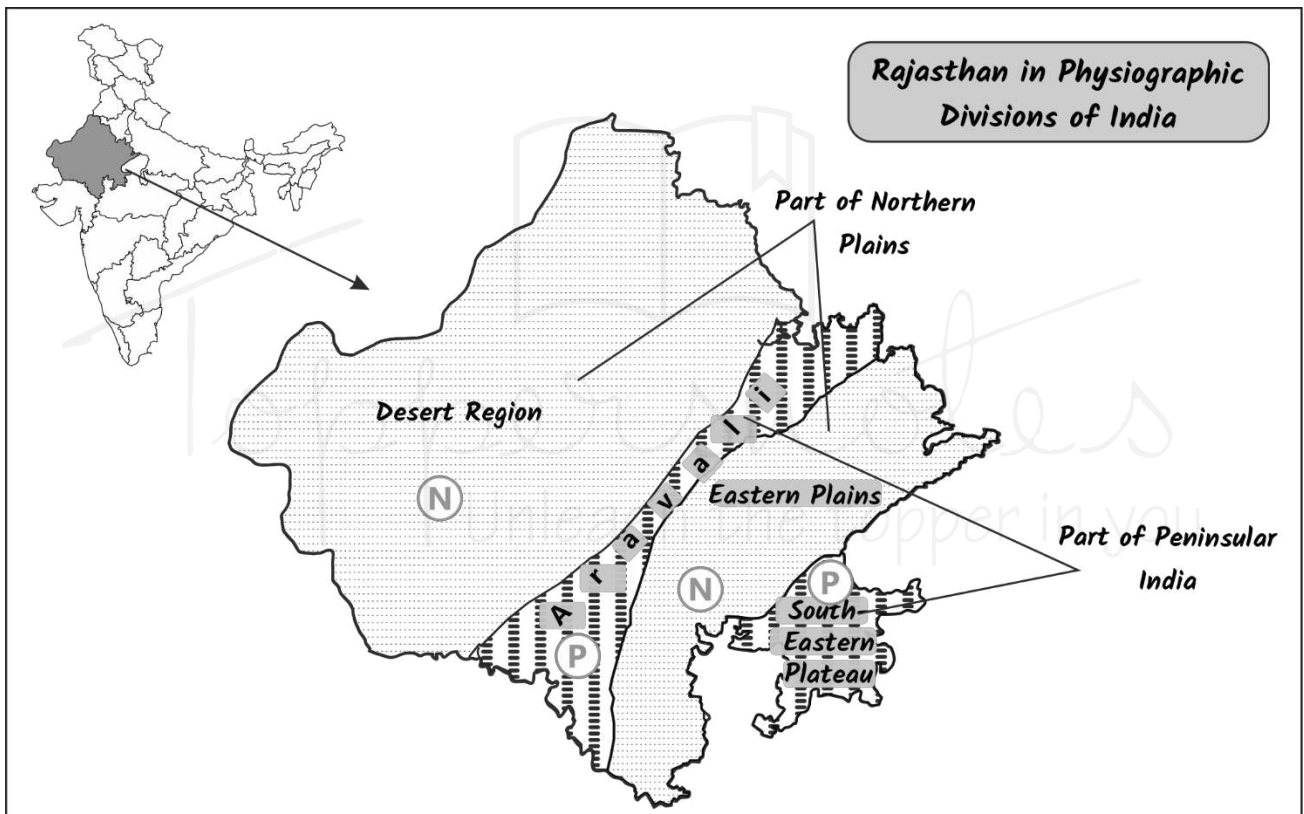
Latitude Gap: 7°09'

Longitude Gap: 8°47'

- Rajasthan lies in the Northern Hemisphere by latitude and the Eastern Hemisphere by longitude, placing it in the North-East on the global map.



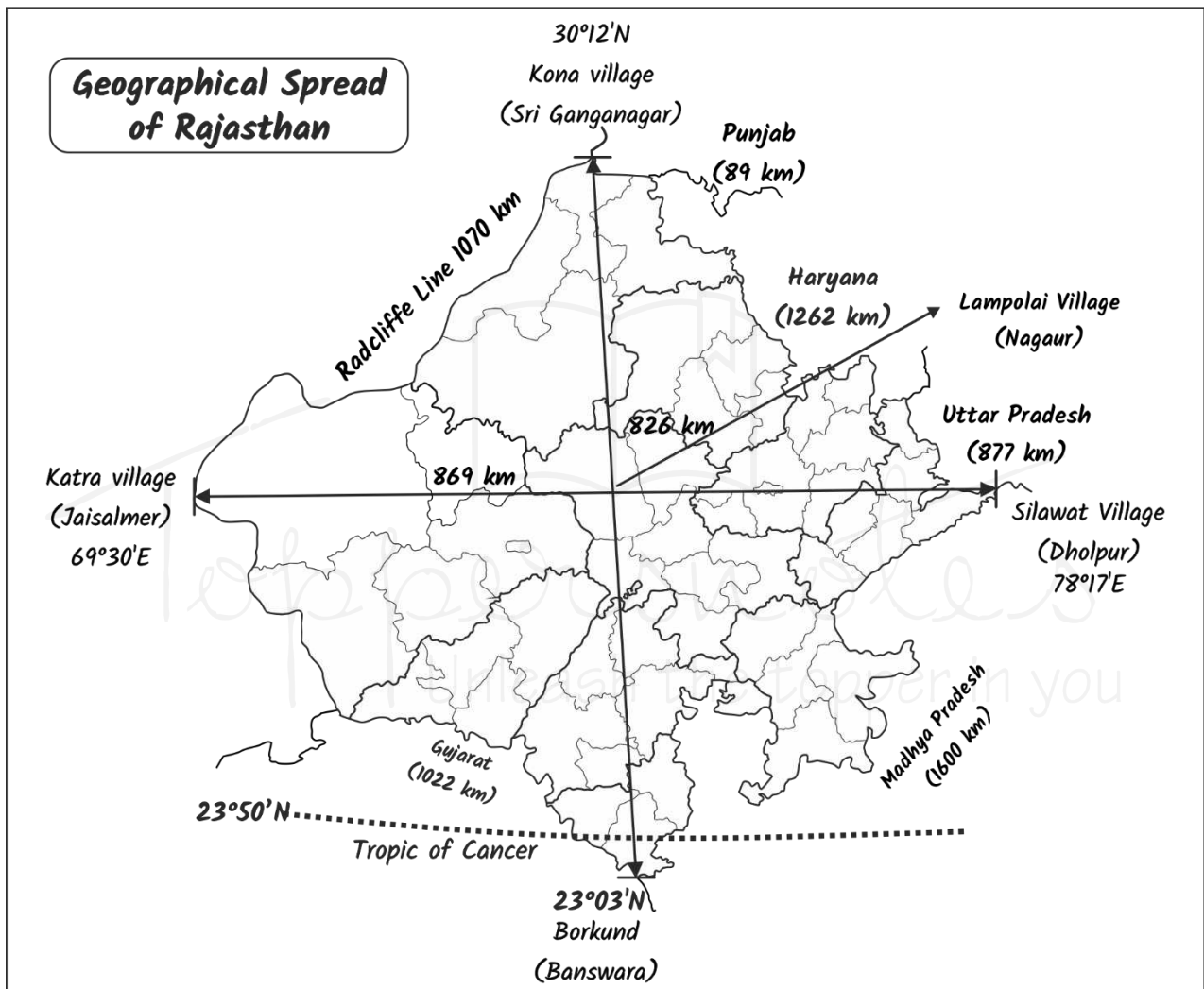
- Rajasthan is positioned in the North-West region of India.
- The Aravallis and the southeastern plateau are part of the Peninsular Plateau of India. The desert and the eastern plain are part of the Northern Plains.



Geographical Spread of Rajasthan

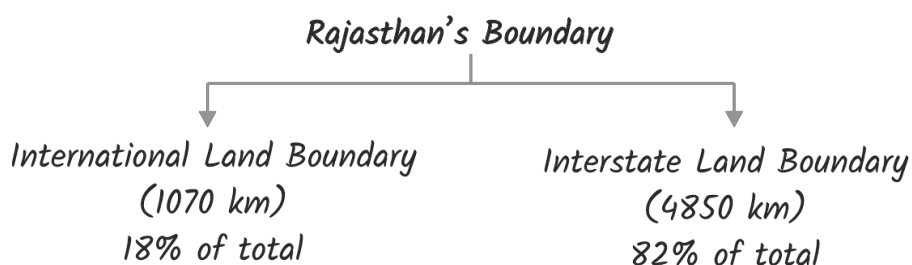
- Major part of Rajasthan lies North of the Tropic of Cancer ($23^{\circ}50'N$).
- Expanse of Rajasthan
 - ✓ North to South: 826 km
 - ✓ East to West: 869 km
- The difference in length between Rajasthan's east-west and north-south dimensions is 43 km.
- The time difference between Dholpur (easternmost point) and Jaisalmer (westernmost point) is 35 min 08 sec.

- Extreme Points of Rajasthan
 - ✓ Northernmost: Kona (Sri Ganganagar)
 - ✓ Southernmost: Borkund (Banswara)
 - ✓ Westernmost: Katra (Jaisalmer)
 - ✓ Easternmost: Silawat (Dholpur)
- Central point of Rajasthan: Lampolai village (Nagaur).
- The Tropic of Cancer (26 km) passes through the Banswara and Dungarpur districts of Rajasthan.



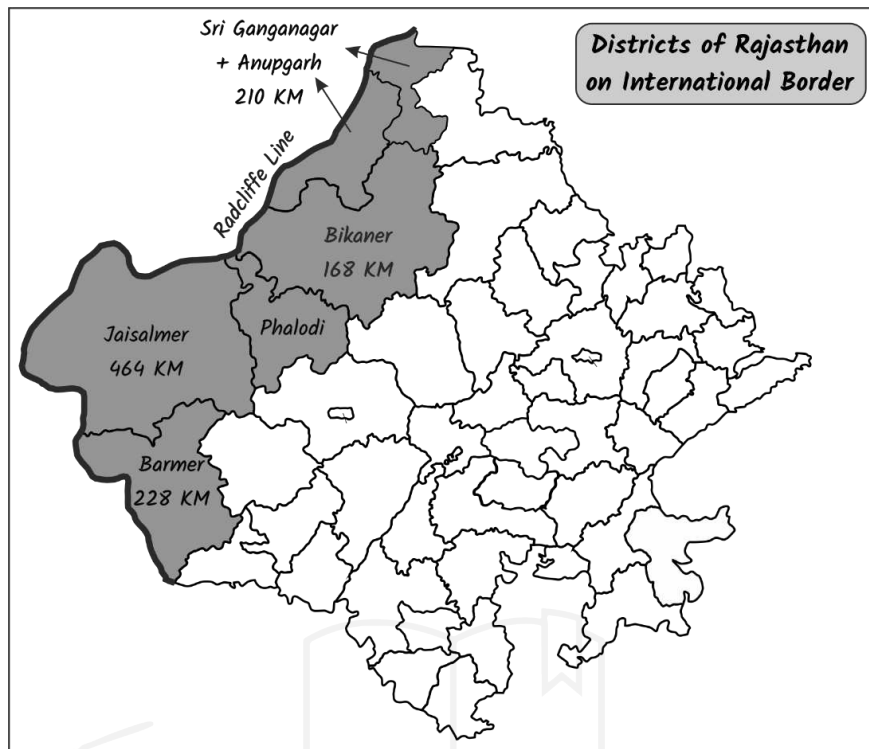
Boundary Extension of Rajasthan

- The total length of Rajasthan's land boundary is 5,920 km. Rajasthan's boundary line is divided into two parts -

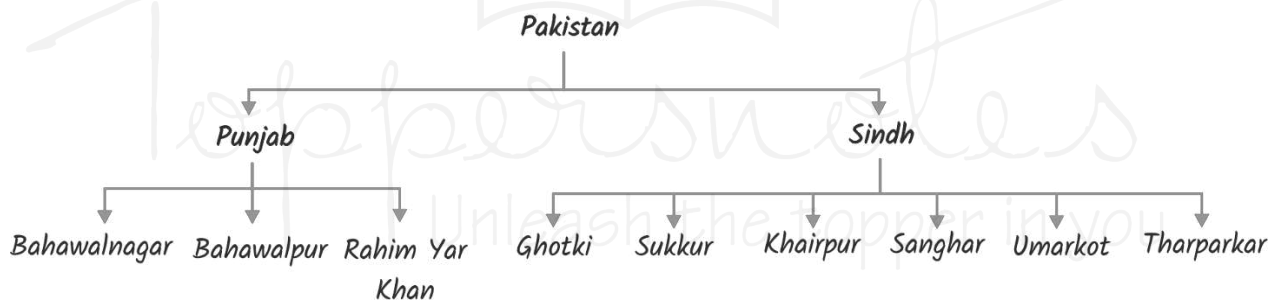


(i) International Land Boundary

➤ The India-Pakistan border, known as the Radcliffe Line, spans 3,323 km (Rajasthan 1070 km). It extends from Hindumal Kot (Sri Ganganagar) to Shahgarh (Barmer).



➤ Provinces of Pakistan that border Rajasthan - Punjab and Sindh



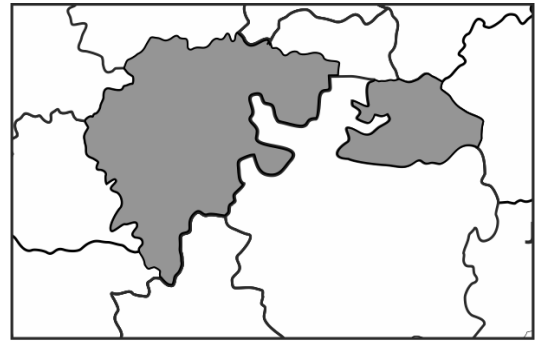
(ii) Interstate Land Boundary

➤ The total length of Rajasthan's interstate land boundary is 4,850 km (bordering 5 Indian states).

Neighboring States of Rajasthan	Districts	Bordering Districts of Rajasthan
Punjab (89 km)	2	Sri Ganganagar, Hanumangarh
Haryana (1262 km)	8	Hanumangarh, Churu, Jhunjhunu, Neem ka Thana, Kotputli-Behror, Khairthal-Tijara, Alwar and Deeg
Uttar Pradesh (877 km)	3	Deeg, Bharatpur, Dholpur
Madhya Pradesh (1600 km)	10	Dholpur, Karauli, Sawai Madhopur, Kota, Baran, Jhalawar, Chittorgarh, Bhilwara, Pratapgarh and Banswara
Gujarat (1022 km)	6	Banswara, Dungarpur, Udaipur, Sirohi, Sanchore and Barmer

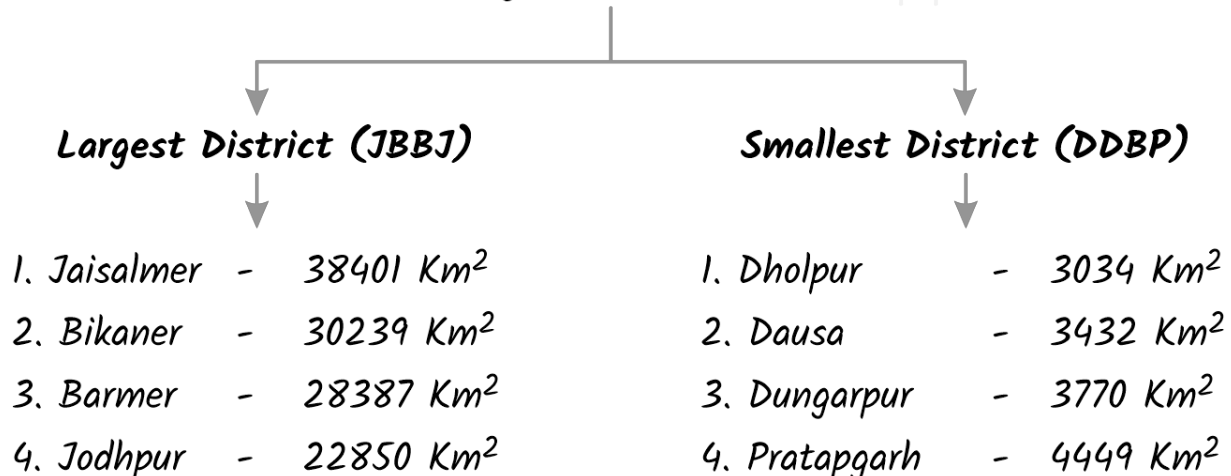
Important Facts (Only with reference to Rajasthan)

- Jaisalmer has the longest boundary on the Radcliffe Line.
- Anupgarh is the nearest district HQ to the Radcliffe Line.
- Currently, Chittorgarh is the only fragmented district (Ajmer ceased to be one after reorganization)
- Border Dispute – Ongoing dispute between Rajasthan and Gujarat over Mangarh (Banswara)
- Total number of districts with interstate border- 25
- Districts with both interstate and international borders- 2 (Sriganganagar, Barmer)
- Districts with only interstate borders- 23
- Districts with only international borders – 4 (Anupgarh, Bikaner, Jaisalmer, Phalodi)
- 21 districts don't share a border with any state or country.
- 4 districts of Rajasthan share borders with two states
 - a. Hanumangarh: Punjab + Haryana
 - b. Deeg: Haryana + Uttar Pradesh
 - c. Dholpur: Uttar Pradesh + Madhya Pradesh
 - d. Banswara: Madhya Pradesh + Gujarat
- **District bordering most districts – Jaipur Rural (11 districts)**



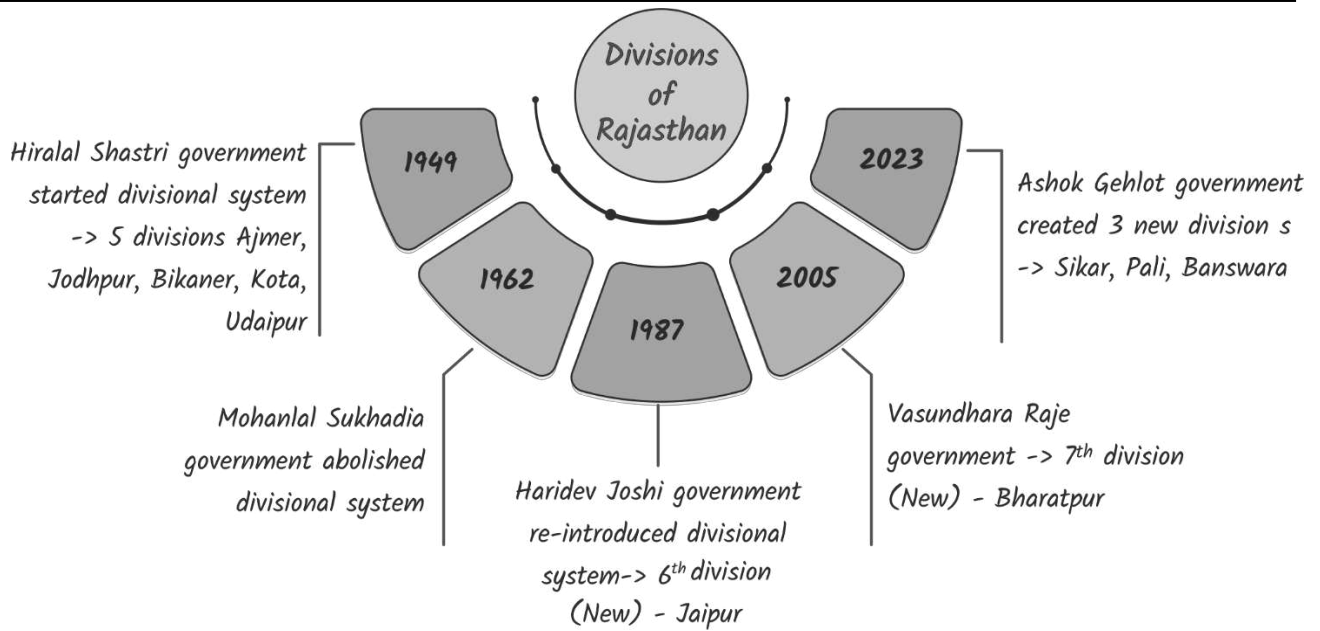
Chittorgarh

Rajasthan State



3. Divisions and Districts of Rajasthan

- On March 17, 2023, Chief Minister Shri Ashok Gehlot announced the creation of **3 new divisions** and **19 new districts** based on the **Ramlubhaya Committee's** recommendations.



- **New Divisions** - Sikar, Banswara, Pali
- **New Districts** - Anupgarh, Gangapur City, Kotputli, Balotra, Jaipur Urban, Jaipur Rural, Khairthal, Beawar, Neemkathana, Deeg, Jodhpur Urban, Jodhpur Rural, Phalodi, Deedwana, Salumbar, Duda, Kekri, Sanchore and Shahpura.

Note- Lalit k. Panwar committee formed by CM Bhajan lal sharma(2024) for reviewing newly formed districts.



- At present, Rajasthan ranks **third** in the country in terms of the highest number of districts after Uttar Pradesh (75) and Madhya Pradesh (55).

Sr. No.	Divisions	Year of Formation	Districts
1	Jodhpur	1949	Jodhpur Urban, Jodhpur Rural, Phalodi, Jaisalmer, Barmer, Balotra (6 districts)
2	Bikaner	1949	Bikaner, Anupgarh, Hanumangarh, Ganganagar (4 districts)
3	Udaipur	1949	Udaipur, Bhilwara, Rajsamand, Chittorgarh, Salumber (5 districts)
4	Kota	1949	Kota, Bundi, Baran, Jhalawar (4 districts)
5	Ajmer	1956	Ajmer, Beawar, Kekri, Nagaur, Tonk, Deedwana-Kuchaman, Shahpura (7 districts)
6	Jaipur	1987	Jaipur Urban, Jaipur Rural, Dudu, Kotputli-Behror, Dausa, Khairthal-Tijara, Alwar (7 Districts)
7	Bharatpur	2005	Bharatpur, Dholpur, Karauli, Sawai Madhopur, Deeg, Gangapur City (6 districts)
8	Pali	2023	Pali, Sanchore, Jalore, Sirohi (4 districts)
9	Banswara	2023	Banswara, Dungarpur, Pratapgarh (3 districts)
10	Sikar	2023	Sikar, Jhunjhunu, Churu, Neem ka Thana (4 districts)

NOTE:

- In 1956, the Ajmer division was created, and the Jaipur division was dissolved, keeping the total number of divisions in Rajasthan unchanged at 5.
- **Divisions with most districts:** Jaipur (7), Ajmer (7), Jodhpur (6), Bharatpur (6), Udaipur (5)
- **Divisions with least districts:** Banswara (3), Kota (4), Pali (4), Sikar (4) Bikaner (4)

PREVIOUS YEAR QUESTIONS

- Q1. Which is the incorrect pair? (2023)
- (1) Satur - Central Aravalli (2) Katada - Southern Aravalli
 (3) Dur-Marayaji - Central Aravalli (4) Manoharpura - Northern Aravalli
 (5) Question not attempted
- Q2. Which among the following are parts of Thar desert? (2021)
- (A) Godwar Tract (B) Shekhawati Tract
 (C) Banas Plain (D) Ghaggar Plain
 (1) (A) and (B) (2) (B) and (C)
 (3) (A), (B) and (D) (4) (A), (C), and (D)
- Q3. Match List I with List II and select the correct answer using code given below: (2018)
- | List-I
(Districts) | List-II
(Mountains) |
|-----------------------|------------------------|
| A. Jalore | (i) Barwada |
| B. Jaipur | (ii) Jharola |
| C. Alwar | (iii) Raghunathgarh |
| D. Sikar | (iv) Bhangarh |
- Codes:**
- (1) A-(ii) B-(i) C-(iv) D-(iii) (2) A-(i) B-(ii) C-(iii) D-(iv)
 (3) A-(iv) B-(iii) C-(ii) D-(i) (4) A-(iii) B-(ii) C-(i) D-(iv)
- Q4. Which of the given hills is an extension of vindhyan ranges in Rajasthan? (2018)
- (1) Mukandara hills (2) Dora mountain
 (3) Alwar hills (4) Girwa hills
- Q5. Which of the following groups represent the correct sequence of mountain peaks of Rajasthan in descending order of their height? (2016)
- (1) Delwara, Sajjangarh, Jarga, Taragarh (2) Ser, Jarga, Sajjangarh, Taragarh
 (3) Jarga, Ser, Sajjangarh, Taragarh (4) Jarga, Delwara, Taragarh, Sajjangarh

Q6. Consider the following statements:

(2016)

- A. Aravalli restricts the eastward expansion of desert.
- B. All the rivers of Rajasthan have their origin from Aravalli.
- C. Distributional pattern of rainfall in Rajasthan is not affected by Aravalli.
- D. Aravalli region is rich in metallic minerals.

Select the correct answer using code given below:

Codes:

- (1) A, B and C are correct.
- (2) B, C and D are correct.
- (3) Only C and D are correct.
- (4) Only A and D are correct.

Q7. How much of Thar Desert in India falls in Rajasthan?

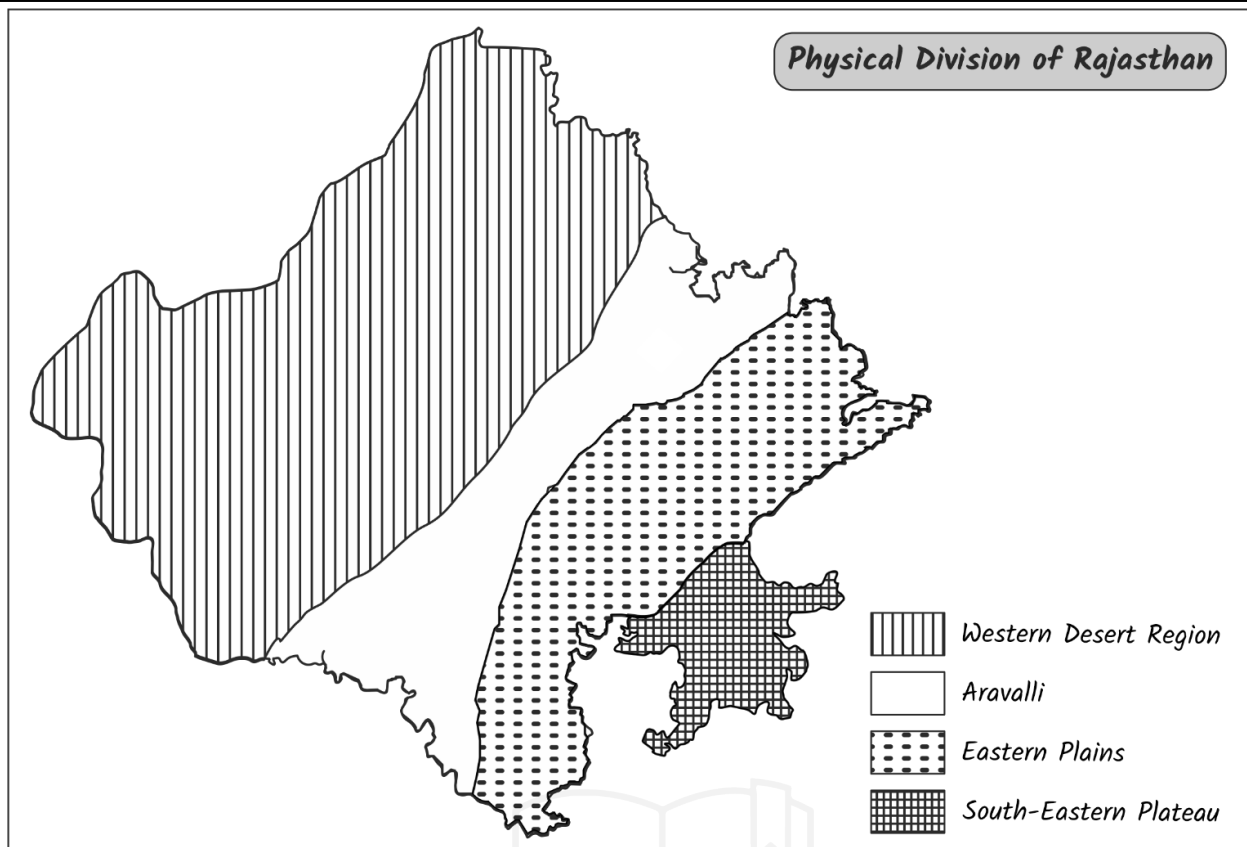
(2016)

- (1) 40%
- (2) 60%
- (3) 80%
- (4) 90%

Analysis – The “Physiography of Rajasthan” chapter has consistently featured questions in past RAS exams, with at least one question every year. They are mostly factual in nature and primarily focused on the Mountains, especially Aravalli and Thar Desert. Given the high probability of a question reappearing, concentrating on Aravallis, location of peaks and Thar desert would be beneficial.

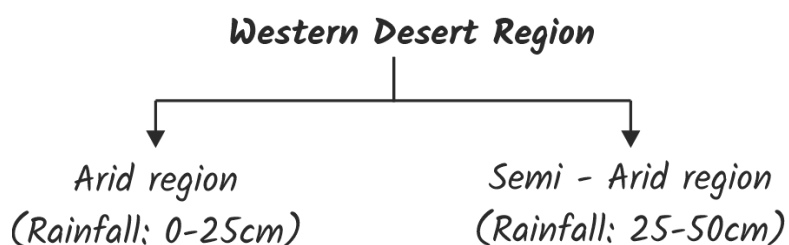
Rajasthan is a land of huge physiographic diversity, encompassing from mountains, plateaus, plains and deserts. It can be divided into the following four physical divisions -

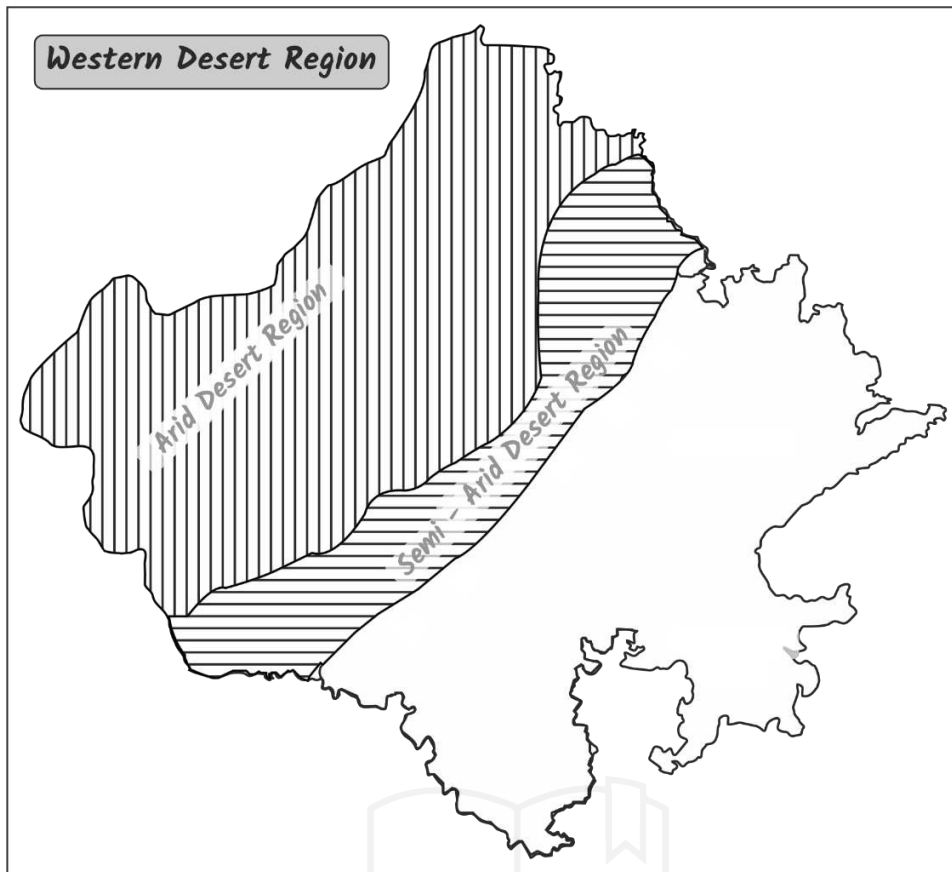
Physical Divisions of Rajasthan				
	Western Desert Region	Aravalli Mountain Region	Eastern Plains Region	South Eastern Plateau Region
Area	61.11%	9%	23%	6.89%
Population	40%	10%	39%	11%
District	20	22	17	7
Divisions	1. Arid Desert region 2. Semi -arid desert region	1. Northern Aravalli Region 2. Central Aravalli Region 3. South Aravalli Region	1. Chambal Basin Region 2. Banas Basin Region 3. Mahi Basin Region	1. Vindhyan Scarpland 2. Deccan Lava Plateau 3. Hadoti Plateau
Formation	Quaternary period, Pleistocene epoch and Cenozoic era.	Pre-Cambrian period	Pleistocene epoch	Cretaceous period
Climate	Arid + Semi -arid	Sub -Humid	Humid	Very humid
Soil	Sandy	Mountain/Forest Soil	Alluvial Soil	Black /Regur Soil



1. Western Desert Region

- Located in the north and north-western parts of Rajasthan, it is the youngest physical division. It is considered a remnant of the Tethys Sea.
- General Slope: From North east to south-west.
- Western boundary of this region is marked by Radcliffe line and eastern boundary is demarcated by Aravalli region.
- Due to the predominance of tertiary sedimentary rocks, fossil fuels such as coal, petroleum, limestone, natural gas etc. are found in this region.
- It contains both conventional energy resources and non-conventional energy resources. Therefore, it is also called the "Power House of the World".
- Xerophytic vegetation is found here.
- The Chandan Tubewell, located in this region, is famously called the "Thar ka Ghada".
- Based on rainfall (with a 25 cm isohyet), Rajasthan's desert is divided into the following two regions-





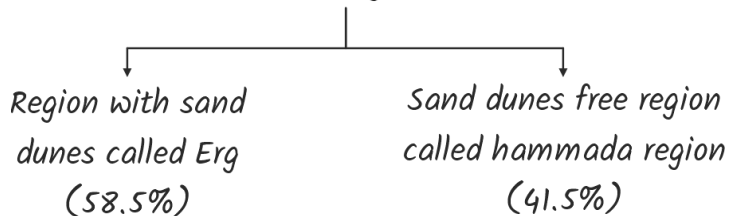
Arid Desert Region

- This region experiences an **arid, tropical desert** climate.
- It is also called **Thar desert**. About 85% of Thar desert is located in India and the remaining 15% in Pakistan. More than 60% of the desert lies in Rajasthan

Thar Desert (4 States)



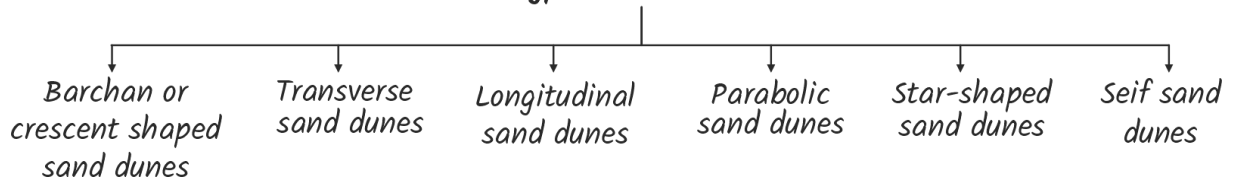
Arid Region

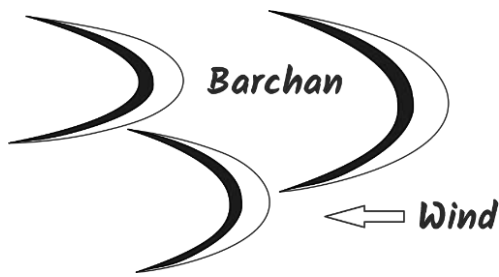


(i) Regions with sand dunes

- In the western desert region, undulating landforms formed by wind-blown sand deposits are called sand dunes. Only river of this region - Kankani/Masurdi river
- Types of Sand Dunes -

Types of Sand Dunes



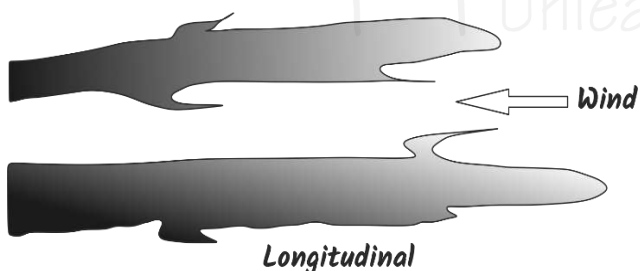
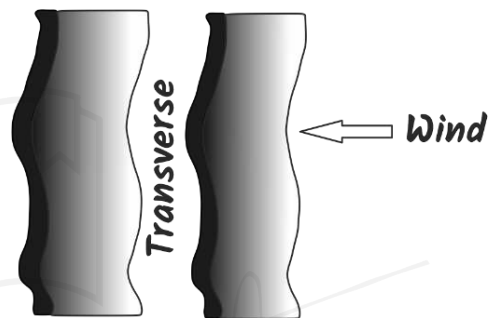


➤ **Barchan or Crescent shaped sand dunes**

- ✓ These crescent shaped sand dunes that are found in clusters.
- ✓ They form in desert regions where the wind blows from the same direction throughout the year.
- ✓ They are the most common sand dunes in Rajasthan.
- ✓ Maximum: Churu
- ✓ Maximum contribution to desertification

➤ **Transverse Sand Dunes**

- ✓ When sand deposition occurs perpendicular (at right angles) to the wind direction, the resulting landform is called transverse sand dune.
- ✓ Mostly found at Barmer, Jodhpur

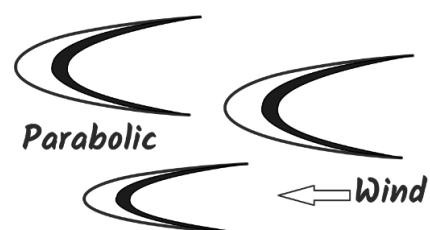


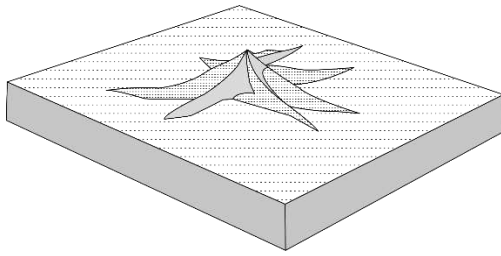
➤ **Longitudinal/ Linear Sand Dunes**

- ✓ When soil gets deposited parallel to wind direction, this type of sand dunes are formed.
- ✓ These dunes are typically found near basins, and commonly found in Jaisalmer and Suratgarh.

➤ **Parabolic Sand Dunes**

- ✓ Sand dunes that are found opposite to barchan sand dunes.
- ✓ Their shape resembles a hairpin.
- ✓ They form between areas of vegetation and flat plains.
- ✓ Maximum found in Rajasthan state.



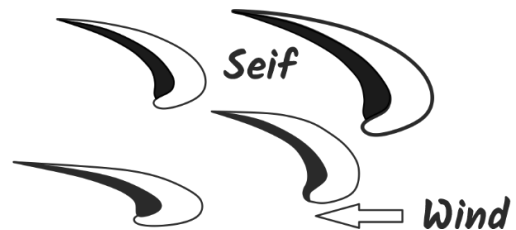


➤ Star-shaped Sand Dunes

- ✓ These sand dunes are formed by irregular winds.
- ✓ Such dunes are most commonly found in Jaisalmer, Suratgarh, and Bikaner

➤ Seif Sand Dunes

- ✓ When the wind direction changes during the formation of barchan, then one arm of barchan gets extended and forms seif sand dune.
- ✓ Also called Longitudinal seif dune.



NOTE

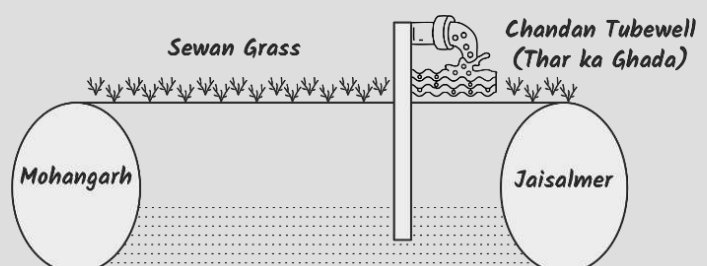
- Sand dunes that form around vegetation or back side of bushes is called Nebkha/ Shrub coppice.
- All types of sand dunes are found in Jodhpur.

(ii) Sand Dune Free Region

- This region is covered with sedimentary rocks and due to presence of rocky desert it is called 'Hammada'. Its maximum expansion is in Jaisalmer.
- The National Desert Park (Akal Wood Fossil Park) of Jaisalmer and Barmer is located here.
- The region is made of limestone, and at 'Sanu' (Jaisalmer) best quality of limestone is mined here.

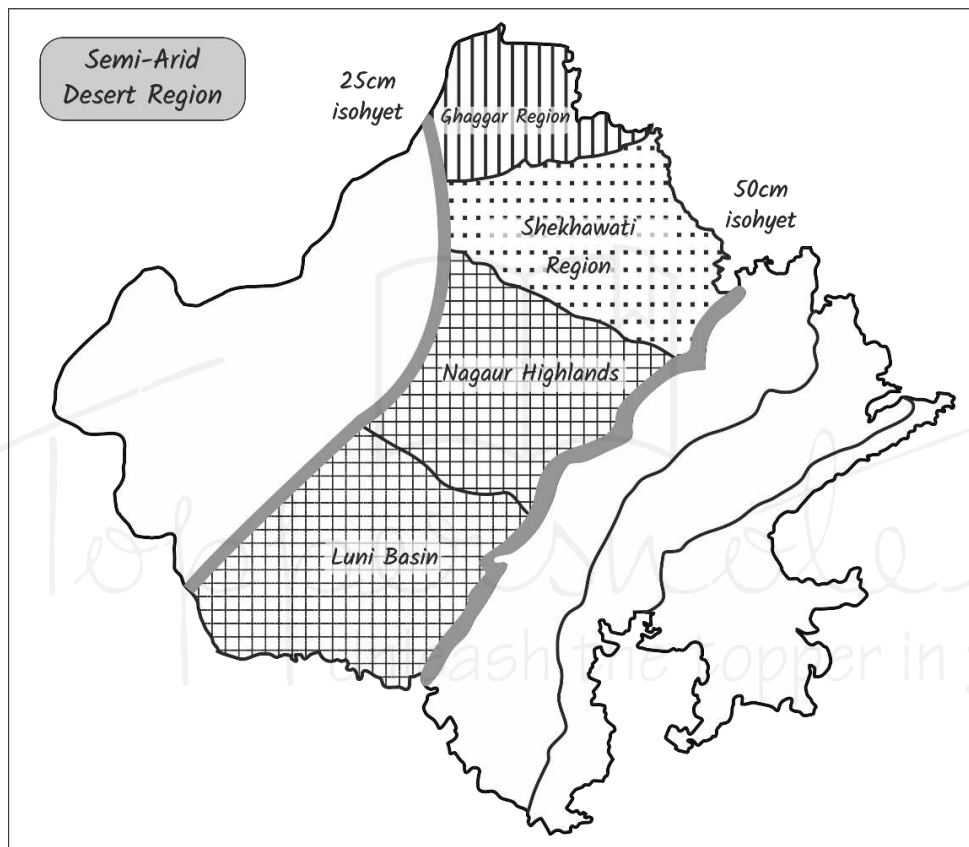
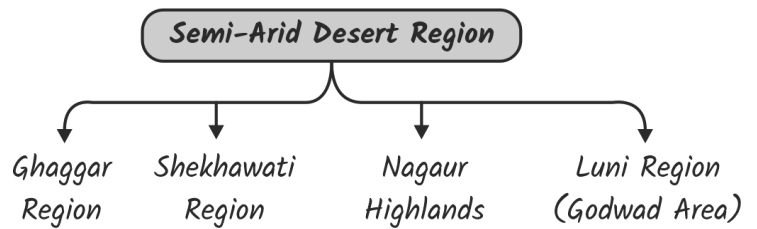
NOTE

- **Lathi Series Area** - An underground water belt found in sedimentary rocks, stretching from Jaisalmer to Mohangarh (through Pokaran). Sewan grasslands are found here which is highly nutritious for animals.
- **Reg** - mixed terrain of rocky & sandy desert is called reg.
- **Erg** - It is a broad, flat area of desert covered in sand swept by the wind with little or no vegetative cover. Also known as sand sea / sand sheet / dunes sea.



Semi-Arid Desert Region

- This region is located to the east of the arid desert region and west of the Aravalli hills, within the drainage basin of the Luni River. It is an area of inland drainage.
- It lies between 25 - 50 cm isohyet line.
Average annual rainfall: 20-40 cm. It is characterized by thorny bushes and tropical grasslands.
- It is also called 'Bangar region' as it is made of old alluvial soil.
- It is divided into the following four parts -



(i) Ghaggar Region

- The drainage basin of the Ghaggar river includes districts such as Sri Ganganagar, Hanumangarh
- A loamy and fertile soil found in this basin is called Kathi / Baggi.
- Archaeological sites like Rang Mahal, Kalibangan, Pilibanga are found here.
- The presence of the Indira Gandhi Canal Project (IGNP) in this region has led to a significant problem of waterlogging.

(ii) Shekhawati Region

- Named after the Shekhawat Rajputs, the Shekhawati region is located in the northern part of Rajasthan encompassing Sikar, Jhunjhunu and Churu districts.

-
- Major rivers - Kantli and Khandela. The drainage area of Kantli is called 'Torawati'.
 - The highest peak of the Northern Aravallis, Raghunathgarh, is located here.
 - The Shekhawati region is an important part of Rajasthan in terms of mineral resources, with metallic minerals like copper, iron, pyrite, and atomic minerals like uranium being found here.
 - Maximum concentration of sand dunes (especially the barchan sand dunes).

NOTE

- ✓ In this region, areas where rainwater collects amidst sand dunes are called "Sar" or "Sarovar". Example Manasar, Salasar etc.
- ✓ Wells are constructed for water access, known locally as Johad.
- ✓ Pasture lands are called Beed in the local language.

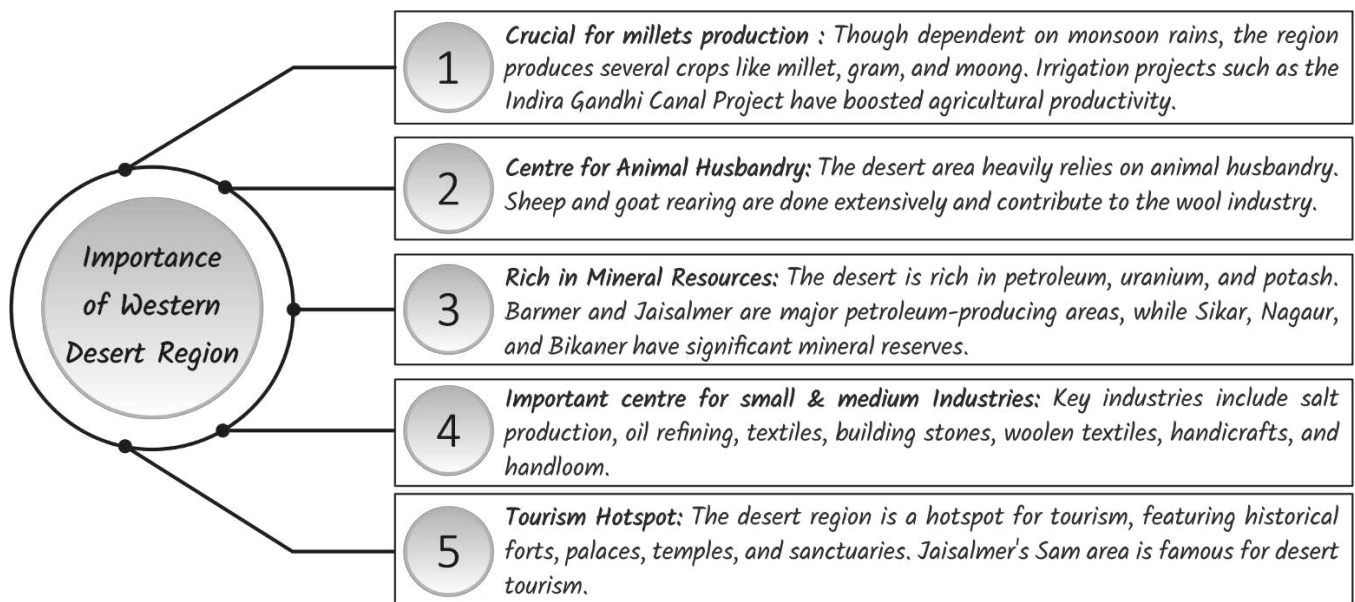
(iii) Nagauri Highlands

- South of Shekhawati region, the central part of Bangar region is known as the Nagaur highland (300-500 meters), Mostly flat area.
- It is the most affected by fluoride contamination, leading to prevalence of fluorosis disease. Hence, it is also called "Hump/Banka Belt".
- Due to the high salt content in the soil, the area is barren and sandy.
- It is famous for minerals like tungsten and marble. It is also known for its brine water lakes-
 - ✓ Sambhar
 - ✓ Didwana
 - ✓ Kuchaman

(iv) Luni Region (Godwad Basin)

- Southern most part of the semi-arid desert, extending across the districts of Pali, Jalore, Balotra, Sirohi, Sanchore, Jodhpur Rural, Beawar and the southern parts of Nagaur.
- The plain formed by the Luni river and its tributaries. The water of the Luni river remains sweet until Balotra, after which it turns salty.
- **Important Sites:**
 - ✓ Siwana Hills (Balotra)
 - ✓ Rann of Nehar (Jalore)
 - ✓ Kala Bhura Dungar (Pali)
- Largest dam in this region: Jawai Dam (Pali) on the tributary of Luni river. Important Irrigation Project: Narmada Irrigation Project.

- *Jawai Lake, also known as Ummed Sagar Lake, is also located in this region.*
- *The Rohi Plains (fertile plains dispersed in this region) are found here.*



Important Terminologies related to Desert

1. Khadeen/Playa Lakes

- *Temporary lakes are called Khadeen/Playa lakes in northern Jaisalmer.*
- *In these lakes khadeen agriculture was started by Paliwal Brahmins.*

2. Rann/Taat

- *Marshy, saline and infertile land in the desert is called rann/taat.*
- *Maximum found at Jaisalmer and Barmer.*

3. Baap Boulder - Sediments and large stones/boulders formed by deposition from glaciers/ice sheets. Mostly found in Jodhpur.

4. Dhore and Dharian - Shifting sand dunes are known as Dharian and wavy sand dunes are known as Dhore. Mainly found in Jaisalmer.

5. Oasis - A place in the desert where water is present and plants can grow is called an oasis.

6. Peevna - A species of snake with yellow colour mainly found in Jaisalmer.

7. March of Desert - Shifting of desert (which is moving from Rajasthan to Haryana) is known as 'March of Desert'.

8. Bolsos - Water basin or lakes found in the middle of the mountains in the desert. Example: Sambhar lake

2. Aravalli Mountain Region

- Also known as 'Adawala mountains' in Rajasthan, the Aravalli Range (part of the Gondwana landmass) is one of the oldest folded mountain ranges (now residual).
- It extends over the Indian states of Gujarat, Rajasthan, Haryana and Delhi. In Rajasthan, it spans from the north-east (Khetri-Neem Ka Thana) to the south-west (Sirohi).
 - ✓ It stretches from Palanpur in Gujarat to Raisina Hill in Delhi (Rashtrapati Bhavan is situated on this hill).
- It divides Rajasthan into two unequal parts and serves as the Great Indian Water Divide Line.
- Total Length: 692 kilometers, out of which 550 km (79.49%) lies in Rajasthan.
- Average Height: 930 meters. The width and height of the range are greater in the southwest, gradually decreasing towards the northeast.
- The highest elevation of the Aravalli is in Sirohi, while the lowest is in Ajmer.
- Formed primarily of granite gneiss and schist, the range originates from the Delhi Supergroup. Granite rocks from the Dharwar group are found here, containing metallic mineral deposits.

NOTE

- ✓ **Peidmont** - A gently sloping surface (occurs at the base of a mountain) that is formed by erosion. Located in Devgarh, Rajsamand.
- Udaipur city is located in **Girwa hills**.

- The Aravalli Range is mainly divided into the following **three parts** -

Division of Aravallis	Location	Highest Peak
Southern Aravalli	Between Sirohi and Rajsamand	Gurushikhar (1722m)
Central Aravalli	Between Rajsamand and Jaipur	Todgarh (934m)
Northern Aravalli	Between Jaipur and Jhunjhunu	Raghunathgarh (1055m)