

3<sup>rd</sup> year B.Sc.  
Paper 3<sup>rd</sup>  
Geology of Rajasthan  
**Paper Code 483\_3123**

By

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# Syllabus: UNIT 1

- Geomorphologic divisions of Rajasthan and their characteristics.
- Geological time scale and its equivalents in Rajasthan.
- Banded Gneissic Complex, Aravalli and Delhi Supergroups their distribution, classification, lithology and igneous intrusives

## UNIT 2

- Younger Precambrian Formations of Rajasthan: Sirohi Group, Sindreth Group and Malani Igneous Suite.
- Vindhyan and Marwar Supergroups of Rajasthan, their distribution, classification, lithology, fossil content and economic importance

## UNIT 3

- Palaeozoic, Mesozoic, Tertiary and Quaternary Geology of Rajasthan their distribution, classification, lithology, fossil content and economic importance.

# UNIT 4

- Source and origin of groundwater.
- Hydrologic Cycle.
- Hydrological properties of rocks: Types of aquifers, porosity, permeability, transmissibility, storage coefficient, specific yield and specific retention.
- Water table and Artesian Well.
- Occurrence of groundwater in igneous, sedimentary and metamorphic rocks.

## UNIT 5

- Groundwater prospecting methods.
- Prospecting and Groundwater resources in Rajasthan

### PRACTICALS:

- Map Plotting, Hand Specimen identification

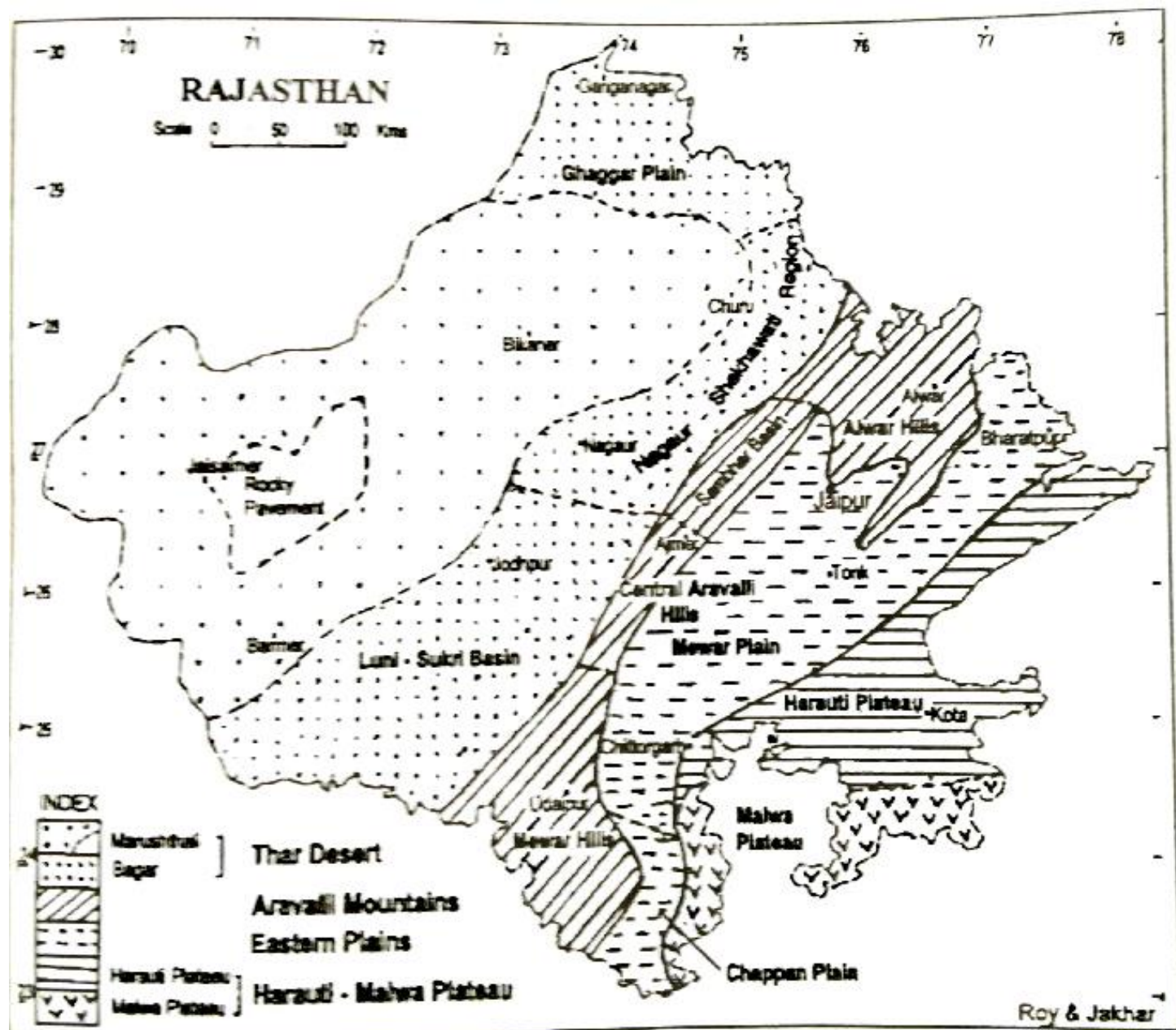
# Books recommended:

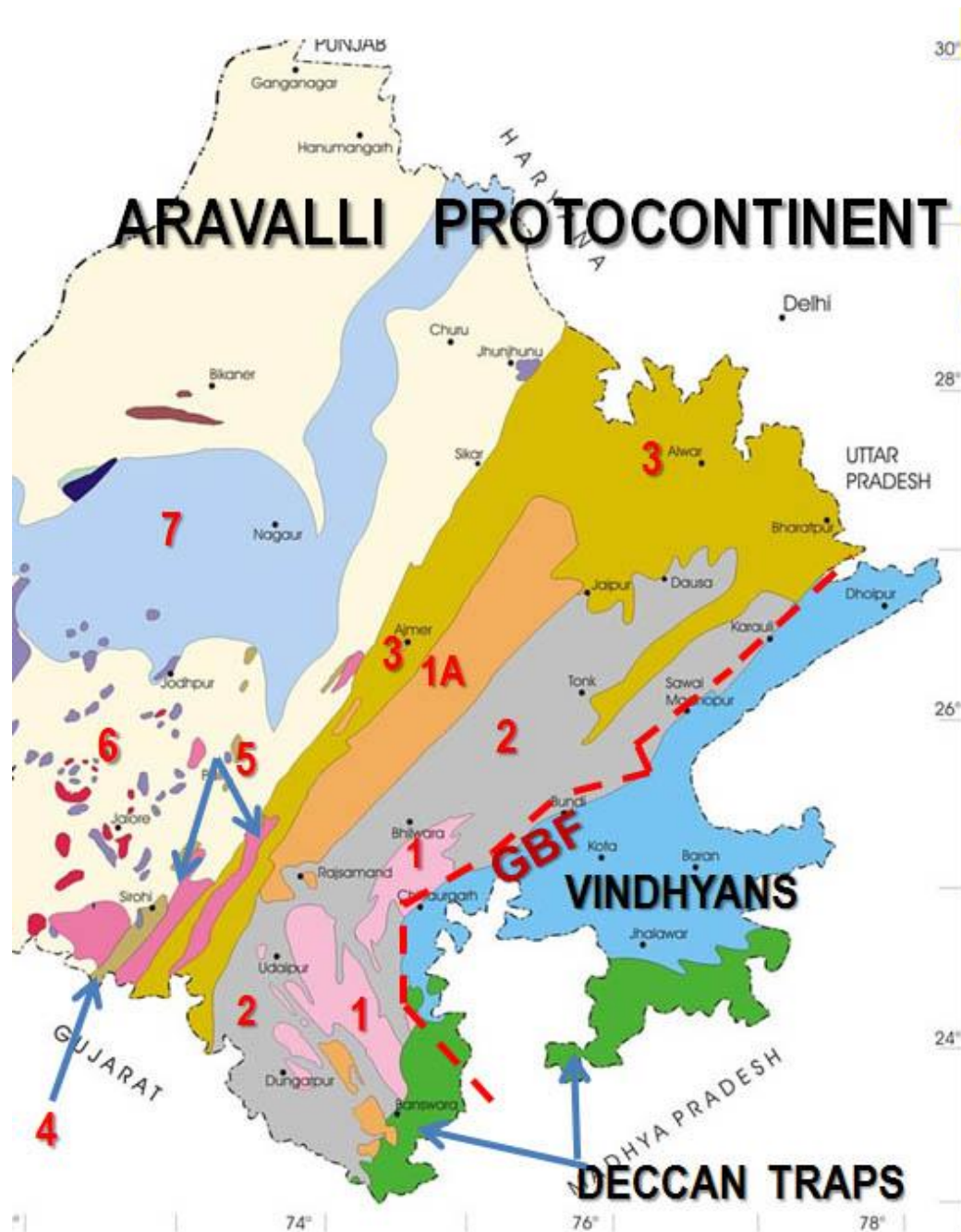
- 1. Geology of Rajasthan (Northwest India) Precambrian to Recent by A.B. Roy and S.R. Jakhar
- 2. Geology of Rajasthan by S. Sinha and M. Mohanty
- 3. Ground water Geology by Todd
- 4. Rajasthan Ka Bhuvigyan by R. P. Vijayvergiya
  
- Previous years question papers from Library

# Geomorphologic divisions of Rajasthan

- Three geomorphologic divisions broadly:
  - 1. The western Thar Desert: Barmer, Jaisalmer, Bikaner, Nagaur, Jodhpur, Jalore, Sirohi and Pali mainly
  - 2. The Aravalli Mountain Belt: Udaipur, Dingarpur, Banswara, Rajsamand, Ajmer, Bhilwara, Alwar, and parts of Jaipur, Bharatpur, Dausa, Chittore
  - 3. The Eastern Plains: Kota, Jhalawar, Baran, Bundi, Karuli, Sawaimadhopur, Dholpur and parts of Tonk and Chittore







Aravalli Protocontinent  
constitutes of -

7. Marwar Supergroup
6. Malani Group
5. Erinpura Granite
4. Sirohi Group
3. Delhi Supergroup
2. Aravalli Supergroup
- 1, 1A Archaean Basement  
(partially reconstituted)