

PRE-REQUISITE: F.Sc. or equivalent

LEARNING OUTCOMES

- This course will provide an introduction to the Geology to the students.
- The students will learn about the Rocks and Minerals.
- They will have the knowledge about the occurrences and importance of Geology.
- The students will get used to the different Geological Features.

CONTENTS

Unit-I: Practical-1

- 1.1. Identification of Minerals in Hand Specimen
- 1.2. Identification of rocks in Hand Specimen

Unit- II: Practical-2

- 2.1. Identification of Igneous rocks
- 2.2. Identification of Sedimentary rocks
- 2.3. Metamorphic Rocks in Hand Specimen.

Unit- III: Practical-3

- 3.1. Polarizing Microscope
- 3.2. Parts and Functions of microscope.

Unit- IV: Practical-4

- 1.1. Preparations of Thin Sections of Igneous, Sedimentary and Metamorphic Rocks in Laboratory.

Unit- V: Practical-5

- 5.1. Microscopic Study of Different Minerals

Unit- VI: Practical-6

- 1.1. Microscopic study of Igneous, Sedimentary and Metamorphic Rocks.

Unit- VII: Practical-7

- 7.1. Graphic Plotting of Igneous, Sedimentary, Metamorphic Rocks.

Unit- VIII: Practical-8

- 8.1. Salt Range, Stratigraphic Sequence of Salt Range.

Unit- IX: Practical-9

- 9.1. Detailed study of different Formations presents in Salt Range

Unit- X Practical-10

- 10.1. Maps, Geological and Topographic Maps, Contour Lines, Different Landforms

TEACHING – LEARNING STRATEGIES

- Lecture based examination
- Presentation/seminars
- Class discussion
- Quizzes

ASSIGNMENTS – TYPE AND NUMBER WITH CALENDAR

It is continuous assessment. The weightage of Assignments will be 25% before and after midterm assessment. It includes:

- classroom participation,
- attendance, assignments and presentation,
- homework
- attitude and behavior,
- hands-on-activities,
- short tests, quizzes etc.

RECOMMENDED TEXT BOOKS / SUGGESTED READINGS

2. Adams, A.E., Mackenzie, W.S., Guilford, C., (2014) *Atlas of Sedimentary Rocks under the Microscope*, Routledge, USA, pp.
3. Mackenzie, W.S. and Adams, A.E. (2011) *A Color Atlas of Rocks and Minerals in Thin Sections*, Manson Publishing, U.K., pp.1-189.
4. Heta, R.N. (2011) *Practical Approach to Petrology*, CBC Publishers & Distributors Pvt Ltd., pp.1-126.

Further Reading: As suggested by the Instructor.