Department of Civil Engineering

Academic Year: 2021 - 2022 (Odd Semester)

Degree, Semester & Branch: III semester B.E Civil Engineering

Course Code & Title: CE8392 & Engineering Geology

Name of the Faculty member: Mr.J.Ramprashath

Innovative Practice Description

Unit / Topic: Unit - II / Physical properties of minerals – Quartz group

- **Course Outcome:** CO2
- **Topic Learning Outcome:** TLO5
- **Activity Chosen:** Theory to Practice
- **Justification:**

  Physical Properties of minerals such as Colour, Lustre, Streak, Hardness, Specific Gravity etc. are distinct for every mineral. The above physical properties can be well recognized for a particular type of mineral using the simulation of Identification of minerals experiment in Mining Geology Virtual Laboratory. Hence, I made the students to practice the same.
- **Time Allotted for the Activity:** 30 minutes.
- **Details of the Implementation:**

  i. Theory to Practice is a very commonly used classroom assessment technique. It can be implemented in a number of ways. Here I have used Mining Geology Virtual Laboratory to implement the same.

  ii. I took all the students to Civil Cadd lab and asked the students to practice the Identification of minerals (simulation experiment) in virtual laboratory website.
- **CO – PO / PSO mapping:**

CO	PO1	PO2	PO12	PSO1	PSO2
CO1	3	1	1	1	1

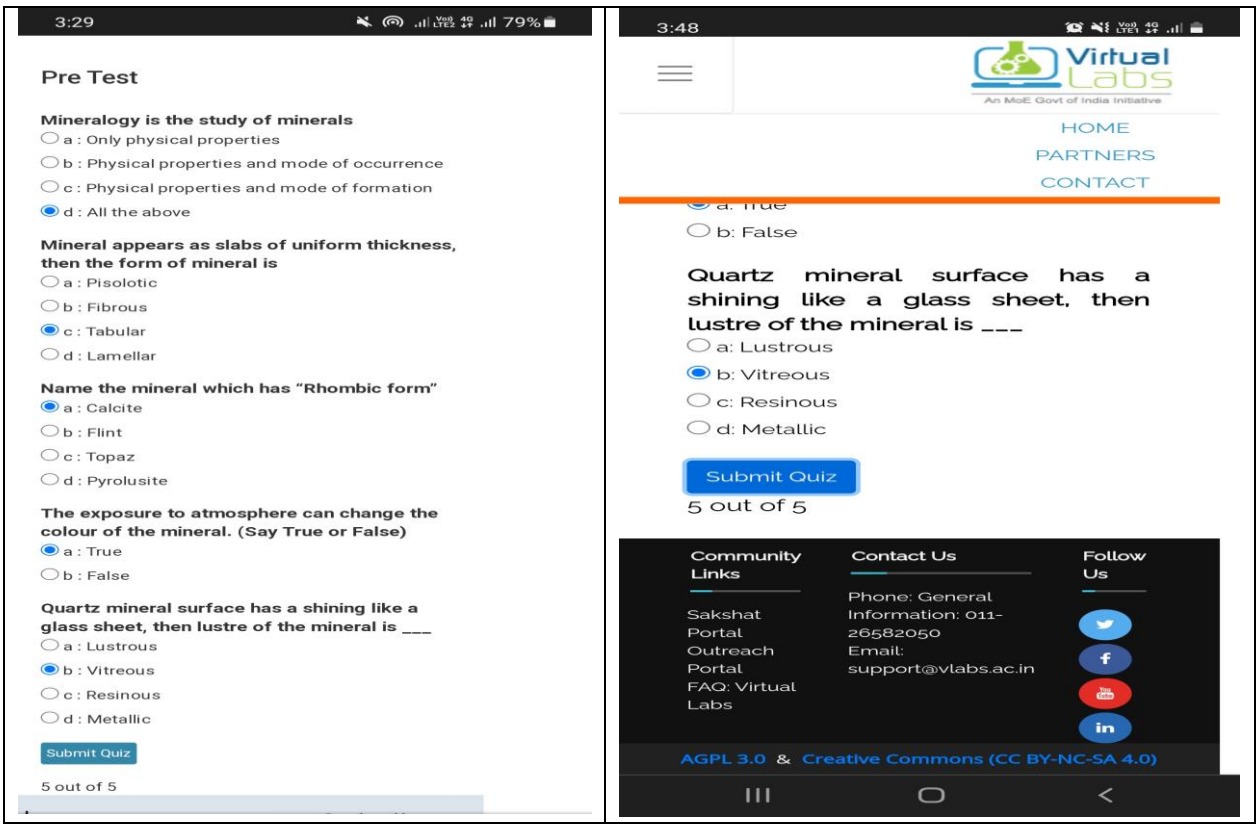
(1 – Low 2 – Moderate 3 – High)

- **PO / PSO mapped:**

Innovative practice	PO1	PO2
Justification for correlation	Knowledge on various minerals and its chemical composition is necessary for choosing the appropriate construction material for construction.	By applying the knowledge of mineralogy, certain civil engineering problems can be analyzed in a better way.
	PO12	
	As geological conditions on and below the earth are	

	subjected to periodical change, the usage of a particular mineral can be explored and investigations are done continuously to analyze the possibility of its usage for construction.	
	PSO1	**PSO2**
	Knowledge on minerals is also an important criterion for presenting the civil engineering projects effectively.	Mineralogical and geotechnical problems can be resolved using sound geological knowledge.

- **Images / Screenshot of the practice:**



- **Reflective Critique:**
  - ***Feedback of practice from students and other stakeholders:***
    The students felt easy to remember and recollect the concepts involved in the given topic which will make them to attend the questions under this topic in Internal Assessment Test.
  - ***Benefit of the practice:*** (E.g.: Outcome attainment would have increased due to innovative practice over conventional practice)
    i. Theory to Practice is an effective way of involving all students in class simultaneously.
    ii. It prompts students to reflect on the day's lesson and provides the instructor with useful feedback.
  - ***Challenges faced in implementation:***
    Initially, I have planned the activity for 30 minutes but students have taken 50 minutes to complete.

References:

- Parbin Singh. A "Text book of Engineering and General Geology", Katson publishing house, Ludhiana 2009.
- https://mg-nitk.vlabs.ac.in/exp/identification-of-minerals/