Sl. No.

21MNP1C1L

M.Tech. I Semester Degree Examination, April/May - 2023
MINERAL PROCESSING
Mineralogy
(CBCS)

Time : 3 Hours   Maximum Marks : 70

Note : *Answer **any five** of the following questions. Q.No.**1** is **compulsory**. Each question carries **equal** marks.*

1.	(a)	Define Interfacial angle and Goniometry.	**4**
	(b)	Explain the classification of crystal systems.	**5**
	(c)	What are twin crystals ? Explain types of twinning.	**5**
2.	(a)	Define Mineral and forms of Minerals.	**6**
	(b)	Discuss the crystal properties.	**8**
3.	(a)	Illustrate the method of determination of specific gravity.	**8**
	(b)	Describe any three physical properties of a mineral.	**6**
4.	(a)	Add a note on non-silicate groups of minerals.	**7**
	(b)	Discuss oxides, carbonates, and native minerals.	**7**
5.	(a)	Differentiate the uniaxial and biaxial minerals.	**6**
	(b)	What is double refraction ? Discuss the optical properties of minerals that are observed in polarized light.	**8**
6.	(a)	Define amorphous states of minerals and crystalline aggregates.	**4**
	(b)	How to determine the hardness of minerals and add a note on Mohs hardness scale.	**5**
	(c)	Explain the mineral properties depend upon the magnetism.	**5**
7.		Write a note on :	
	(a)	Feldspar groups of minerals.	**5**
	(b)	Isotropic minerals.	**4**
	(c)	Extinction angle.	**5**
8.	(a)	Demonstrate the following minerals with their physical properties, occurrence, and use. Hematite, and Muscovite.	**7**
	(b)	Give an account of, physical and optical properties of Quartz and bauxite.	**7**

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