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## ANNA UNIVERSITY (UNIVERSITY DEPARTMENTS)

B.E. /B.Tech / B. Arch (Full Time) - END SEMESTER ARREAR EXAMINATIONS, MAY/JUNE 2024

**MINING ENGINEERING**  
**Semester - III**  
**AG5306 Geology for Mining - I**

(Regulation 2019)

Time:3 hrs

Max.Marks: 100

CO1	General Geology
CO2	Landforms & Stratigraphy
CO3	Mineralogy
CO4	Petrology
CO5	Structural Geology

**BL – Bloom's Taxonomy Levels**

(L1-Remembering, L2-Understanding, L3-Applying, L4-Analysing, L5-Evaluating, L6-Creating)

**PART- A (10 x 2 = 20 Marks)**  
(Answer all Questions)

Q.No	Questions	Marks	CO	BL
1	How does aquitard differ from aquifuge?	2	1	2
2	What is the difference between magnitude and intensity of an earthquake?	2	1	2
3	Write the geological time scale	2	2	1
4	Write a short note on geology of Neyveli region in Tamil Nadu	2	2	2
5	Mention any four uses of calcite	2	3	1
6	What are the different types of luster seen in minerals?	2	3	1
7	Mention about different types of metamorphism	2	4	1
8	What is uniaxial compressive strength?	2	4	2
9	What are mural joints?	2	5	1
10	Mention about different types of unconformities	2	5	1

**PART- B (5 x 13 = 65 Marks)**  
(Restrict to a maximum of 2 subdivisions)

Q.No	Questions	Marks	CO	BL
11 (a)	Elaborate on different types of weathering and grade of weathered rocks	13	1	3
<b>OR</b>				
11 (b)	Explain in detail about role of geology in mining engineering	13	1	3
12 (a)	Discuss in detail about various coastal landforms	13	2	4
<b>OR</b>				
12 (b)	Give a detailed account on geology of Tamil Nadu and major mineral deposits in Tamil Nadu	13	2	4
13 (a)	Explain the physical properties and industrial uses of quartz group of minerals	13	3	3
<b>OR</b>				

13 (b)	Write the properties and uses of clay minerals	13	3	3
14 (a)	Write the megascopic properties and uses of Granite, Quartzite, Breccia and Limestone	13	4	3
<b>OR</b>				
14 (b)	Discuss in detail about the engineering properties of rocks	13	4	3
15 (a)	Elaborate on different types of faults and their significance in mineral occurrence	13	5	4
<b>OR</b>				
15 (b)	Give a detailed account on measurement of strike, true dip direction and true dip amount in the field	13	5	4

**PART- C (1 x 15 = 15 Marks)**  
(Q.No.16 is compulsory)

Q.No	Questions	Marks	CO	BL
16. (i)	Discuss in detail about mineral deposits in ocean and sea bed mining	8	2	6
(ii)	Strike of the ore body measured on the outcrop is N 42° E S 42° W. Dip of the ore body is 42° W. The terrain is more or less flat. Where (distance from the outcrop) will you locate 30 m vertical pit to meet the ore body?	7	5	5

