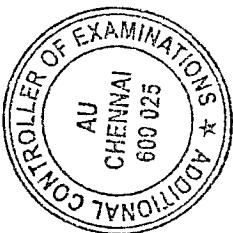


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Roll No.

ANNA UNIVERSITY (UNIVERSITY DEPARTMENTS)

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



MINING ENGINEERING  
Semester - IV  
AG5401 Geology for Mining - II

(Regulation 2019)

Max. Marks: 100

Time: 3 hrs

CO1	Formation of Ore Deposits
CO2	Ore Geology
CO3	Fuel Geology
CO4	Geoprospecting
CO5	Remote Sensing and GIS

BL - Bloom's Taxonomy Levels  
(L1-Remembering, L2-Understanding, L3-Applying, L4-Analysing, L5-Evaluating, L6-Creating)

**PART- A (10x2 = 20 Marks)**  
(Answer all Questions)

Q.No	Questions	Marks	CO	BL
1	Mention the different types of ore shoots	2	1	1
2	What are early magmatic deposits?	2	1	1
3	List out the minerals used in cement industry	2	2	2
4	Mention any four copper ores	2	2	1
5	What are gas hydrates?	2	3	2
6	Write a short note on uranium deposits in India	2	3	2
7	Mention the role of GPR survey in mining industry	2	4	2
8	What is litho-logging?	2	4	1
9	What are the components of electromagnetic spectrum?	2	5	1
10	What is buffering in GIS? Give one example	2	5	2

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

Q.No	Questions	Marks	CO	BL
11 (a)	Explain in detail about oxidation and supergene enrichment deposits with neat sketches	13	1	3
OR				
11 (b)	Explain in detail about process of formation of residual deposits with neat sketches	13	1	3
12 (a)	Write the properties and varieties of Iron ores. Mention their occurrence in India	13	2	3
OR				
12 (b)	List out the minerals used in abrasive industry and provide their significant properties	13	2	3

13 (a)	Give a detailed account on different types of coal and their significant properties and uses	13	3	3
<b>OR</b>				
13 (b)	Explain the migration and accumulation of hydrocarbon with neat sketches	13	3	3
14 (a)	Discuss in detail about electrical resistivity method of subsurface exploration	13	4	4
<b>OR</b>				
14 (b)	Elaborate on gravity method of subsurface exploration with neat sketches	13	4	4
15 (a)	Explain vertical and oblique aerial photographic techniques with neat sketches. Mention their advantages and disadvantages	13	5	4
15 (b)	Give a detailed account on raster and vector GIS	13	5	4

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

Q.No	Questions	Marks	CO	BL
16. (i)	What is the role of remote sensing and GIS in mineral targeting and mining?	7	5	5
(ii)	Explain the direct methods of subsurface exploration with neat sketches	8	4	6

