Discipline: Mining Engineering	Semester: 6TH semester	Name of the Teaching Faculty:1) MRS.SAMAPIKA DASH 2) SAZIYA KHURSHID		
Subject: Mining Geology-II Sub code: Th.2	No of days /week class allotted:04	Semester from Date:10.03.2022 to 10.06.2022 No of weeks:15		
Week	**Class Day**	**Theory topics**	**Practical topics**	**Remarks**
1st	1st	**Stratigraphy** Stratigraphy and types of stratigraphy.	Megascopic identification of Igneous rocks in hand specimens.	Samapika Dash
	2nd	Principles of Stratigraphy. • Principle of Uniformitarianism • Principle of Original horizontality • Principle of Superposition • Principle of Original Lateral Continuity	Megascopic identification of Igneous rocks in hand specimens.	Samapika Dash
	3rd	Principles of Stratigraphy. • Principle of Cross-Cutting Relationships • Principle of Inclusion • Principle of Faunal Succession	Megascopic identification of Igneous rocks in hand specimens.	Samapika Dash
	4th	Geological time scale. • Pre-Cambrian	Megascopic identification of Igneous rocks in hand specimens.	Samapika Dash
2nd	1st	Geological time scale. • Paleozoic • Mesozoic • Cenozoic	Megascopic identification of Igneous rocks in hand specimens.	Samapika Dash
	2nd	Stratigraphy sequence, lithology of Iron Ore Series..	Megascopic identification of Igneous rocks in hand specimens.	Saziya
	3rd	Distribution and economic minerals deposit of Iron Ore Series	Megascopic identification of Igneous rocks in hand specimens.	Saziya
	4th	Stratigraphy sequence, lithology of gondwana supergroup	Megascopic identification of Igneous rocks in hand specimens.	Saziya
3rd	1st	Two fold classification of gondwana supergroup.	Megascopic identification of Igneous rocks in hand specimens.	Saziya
	2nd	Three fold classification of gondwana supergroup	Megascopic identification of Igneous rocks in hand specimens.	Saziya
	3rd	Distribution and economic minerals deposit of Gondwana Supergroup and different lower gondwana coal fields	Megascopic identification of Igneous rocks in hand specimens.	Saziya

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		in India.		
	4th	Stratigraphy sequence, lithology of Cuddapah Supergroup	Megascopic identification of Igneous rocks in hand specimens.	Saziya
4th	1st	Distribution and economic minerals deposit of Cuddapah Supergroup.	Megascopic identification of Igneous rocks in hand specimens.	Saziya
	2nd	Stratigraphy sequence, lithology of Vindhyan Supergroup.	Megascopic identification of Igneous rocks in hand specimens.	Saziya
	3rd	Distribution and economic minerals deposit of Vindhyan Supergroup.	Megascopic identification of Igneous rocks in hand specimens.	Saziya
	4th	**Economic Geology** Definition of ore, ore minerals with examples.	Megascopic identification of Igneous rocks in hand specimens.	Samapika Dash
5th	1st	Gangue, tenors & grade with examples.	Megascopic identification of Sedimentary rocks in hand specimens	Samapika Dash
	2nd	Important ore minerals of IRON ore.	Megascopic identification of Sedimentary rocks in hand specimens	Samapika Dash
	3rd	Mode of occurance of Iron deposits in India.	Megascopic identification of Sedimentary rocks in hand specimens	Samapika Dash
	4th	Distribution and uses of Iron deposits in India.	Megascopic identification of Sedimentary rocks in hand specimens	Samapika Dash
6th	1st	Description of mineralogy of Copper deposits.	Megascopic identification of Sedimentary rocks in hand specimens	Samapika Dash
	2nd	Mode of occurance and origin of copper ore.	Megascopic identification of Metamorphic rocks in hand specimens	Samapika Dash
	3rd	Distribution and uses of Copper ore deposit.	Megascopic identification of Sedimentary rocks in hand specimens	Samapika Dash
	4th	Description of mineralogy of Lead & Zinc deposits.	Megascopic identification of Sedimentary rocks in hand specimens	Samapika Dash
7th	1st	Origin and mode of occurance of Lead	Megascopic identification of	Samapika Dash

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		and Zinc deposits.	Metamorphic rocks in hand specimens	Samapika Dash
	2nd	Distribution and uses of Lead & Zinc deposits.	Megascopic identification of Metamorphic rocks in hand specimens	Samapika Dash
	3rd	Mineralogy , origin and mode of occurance of Chromite deposits	Megascopic identification of Metamorphic rocks in hand specimens	Samapika Dash
	4th	Distribution and uses of Chromite deposits in India.	Megascopic identification of Metamorphic rocks in hand specimens	Samapika Dash
8th	1st	UNFC code of classification of reserves	Megascopic identification of Metamorphic rocks in hand specimens	Samapika Dash
	2nd	UNFC code of classification of reserves	Megascopic identification of Metamorphic rocks in hand specimens	Samapika Dash
	3rd	**Fossil fuels**Coal & the different ranks of coal. 1)Peat 2)Lignite 3)Sub bituminous 4)Bituminous 5)Anthracite	Megascopic identification of Metamorphic rocks in hand specimens	Saziya
	4th	Different grades of coal viz.A,B,C,D	Megascopic identification of Metamorphic rocks in hand specimens	Saziya
9th	1st	**Chemical properties of coal.** 1)moisture content 2)volatile matter 3)fixed carbon 4)fuel ratio	Interpretation of contour maps and preparation of the profile section for it.	Saziya
	2nd	**Chemical properties of coal** 5)ash content 6)sulfur content 7)calorific value	Interpretation of contour maps and preparation of the profile section for it.	Saziya
	3rd	In-situ theories accounting for the origin of coal	Interpretation of contour maps and preparation of the profile section for it.	Saziya
	4th	Drift theories accounting for the origin of coal	Interpretation of contour maps and preparation of the profile section for it.	Saziya
10th	1st	Description of different lower gondwana coal fields of India.	Interpretation of contour maps and preparation of the profile section for it.	Saziya
	2nd	Petroleum and its composition.	Interpretation of contour maps and preparation of the profile section for it.	Saziya

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	3rd	Organic theories accounting for the origin of petroleum.	Interpretation of contour maps and preparation of the profile section for it.	Saziya
	4th	Inorganic theories accounting for the origin of petroleum	Interpretation of contour maps and preparation of the profile section for it.	Saziya
11th	1st	Migration of petroleum.	Interpretation of contour maps and preparation of the profile section for it.	Saziya
	2nd	Oil traps, its formation and types of oil traps.	Interpretation of contour maps and preparation of the profile section for it.	Saziya
	3rd	Oil pool and its formation.	Interpretation of contour maps and preparation of the profile section for it.	Saziya
	4th	Process of accumulation of oil.	Interpretation of contour maps and preparation of the profile section for it.	Saziya
11th	1st	Description of different important oil fields of India.	Interpretation of geological maps and preparation of the profile section for it.	Saziya
	2nd	**Prospecting and exploration** Definition of Prospecting and exploration & difference between exploration and prospecting.	Interpretation of geological maps and preparation of the profile section for it.	Saziya
	3rd	Use of Multishot camera for Borehole direction test.	Interpretation of geological maps and preparation of the profile section for it.	Saziya
	4th	Geological exploration	Interpretation of geological maps and preparation of the profile section for it.	Saziya
12th	1st	Description of various criteria for geological exploration	Interpretation of geological maps and preparation of the profile section for it.	Saziya
	2nd	Geophysical prospecting and Different methods of geophysical prospecting.	Interpretation of geological maps and preparation of the profile section for it.	Saziya
	3rd	Different methods of geophysical prospecting.	Interpretation of geological maps and preparation of the profile section for it.	Saziya
	4th	Geo chemical prospecting and methods	Interpretation of geological maps and preparation of the profile section for it.	Saziya

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	1st	Bio-geochemical & Geo botanical Prospecting.	Describe the specific gravity of small specimen by Joley's spring balance.	Saziya
	2nd	Sampling and assaying	Describe the specific gravity of small specimen by Joley's spring balance.	Saziya
	3rd	Methods of preparation of sample assay	Describe the specific gravity of small specimen by Joley's spring balance.	Saziya
	4th	**TYPES OF SAMPLING** • Grab Sampling • Chip Sampling • Channel Sampling	Describe the specific gravity of small specimen by Joley's spring balance.	Saziya
14th	1st	**TYPES OF SAMPLING** • Bulk Sampling • Dump Sampling • Trench Sampling	Describe the specific gravity of small specimen by Joley's spring balance.	Saziya
	2nd	Different methods of sampling outlined by BIS	Field visit(Gr-1)	Dash
	3rd	Different methods of sampling outlined by BIS	Field visit(Gr-2)	Dash
	4th	DOUBT CLEARING CLASS	TEST	Dash
15th	1st	DOUBT CLEARING CLASS	TEST	Dash
	2nd	MOCK TEST	TEST	Dash
	3rd	MOCK TEST	TEST	Dash
	4th	MOCK TEST	TEST	Dash

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