

Name:	 UPES
Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, May, 2020

Programme Name: B. Tech (Mining Engineering)	Semester : VIII
Course Name : Collaborative Mining and Legal Due-Diligence	Time : 03 h
Course Code : MIEG462	Max. Marks : 100
Nos. of page(s) : 3 (three)	
Instructions: Internal Choice for Questions 9, 10 and 11	

SECTION A

S. No.		Marks	CO
1.	<p>Statement: Deloitte Australia national mining leader Nicki Ivory believes a key way mining companies can also foster collaboration is through focusing on the <i>societal outcomes</i> of their projects or community efforts.</p> <p>Question: Among the given below choices of social outcomes, which one (select one option) has more relevance for States like Rajasthan or Afghanistan? Give one-line answer on how collaboration is possible either to mitigate/ improve current state?</p> <p>a) Displacement of Indigenous Communities, b) Revenue towards Social Conflicts, c) Wealth Distribution & Prosperity d) Financial Empowerment among communities</p>	5	CO3
2.	Suggest three examples for Mining Companies that might lead to collaborate with Government on its policies of a) local b) regional and c) national development?	5	CO2
3.	Some challenges for Mining Industry to remain profitable is a) depleting mineral resources, b) lower grade deposits and c) in locating new deposits. Suggest 3-different modes for collaboration to address above challenges?	5	CO4
4.	Adoption of Artificial Intelligence (AI) in Mining Industry through collaboration with Technology industry is the need of the hour. List 5 benefits that AI shall make to Mine Workers?	5	CO4
5.	From mining/ mineral processing industry, what is ' <i>Side-stream</i> ' Linkages?	5	CO2
6.	CVRD purchased a 75.66% stake in Inco (2006-07) and changed the name to Vale Inco the following year. Is this an example of alliance? Explain?	5	CO4

SECTION B

7.	Give Comparative analysis of Strategic Alliances and Merger & Acquisition? Laurentian Goldfields Signs \$1,500,000 Strategic Exploration Alliance Agreement with Antofagasta Minerals. From this agreement, what could be the outcome if a property is declined as a Designated Property?	10	CO4
8.	Among Exploration, Development, Construction, Production, and Mine Closure, where Economies of Scale is better achieved through Joint Ventures in Mining Industry?	10	CO1
9a.	Explain Two Fitness parameters on the Performance of Joint Alliances?	10	CO3
(OR)			
9b.	Compare Vertical Symmetrical Alliance vs Vertical Asymmetrical Alliance in Mining Industry?	10	CO3
10a.	Design Intellectual Due Diligence report for a Mining Industry?	10	CO4
(OR)			
10b.	Develop suitable structure for Financial Due Diligence of a Coal Mining Industry?	10	CO4
11a.	Explain Legal Due Diligence Check List?	10	CO2
(OR)			
11b.	Explain Market Competition Due Diligence Check List?	10	CO2

SECTION-C

The following text has been taken from <http://geovale.com/case-studies-mandakini-coal-block-pre-auction-assesment/>

Mandakini Coal Block pre-auction assessment

Project by Services – Due Diligence/ Geological Resource Modeling/ Mineral Analytics/ Mine Planning

Project by Mineral – Coal; Project by Country – India; Project by Regions – Asia

Heading – Technical Due Diligence of “Mandakini-A” Coal Block for Pre-bid Assessment

A large independent power producer in India, who has already acquired some big thermal coal mines in Australia, want to take up the opportunity for winning some coal blocks in India from the auction route to feed their power plants. The approached Geovale detailed assessment of suitability of Mandakini A coal block which they selected to bid for.

Geovale carried out detail resource and reserve estimation through resource modeling software and mine pit designing and selection of operation corresponding operational cost environment and infrastructure study for Mandakini A coal block.

Geovale executed the project with three groups of experts, jointly worked on Resource, Mining and Financial model.

Broadly the scope of work was

Resource modeling and estimation

Selection of mining method and type of mechanization

Ultimate pit/UG mine and arrive at extractable coal quantities with quality and after dilution

Production capacity and phasing

Requirement of equipment, manpower, infrastructure, utilities and washing needs.

Logistics for transport to mine loading station

Assessment of major environment issues, land needs

Diversion, protection of surface features. Rehabilitation needs

Project clearance and pre-operative work needs.

Estimation of Capex and Opex and sensibility study

Risk assessment

12.	Give scores to different types of Due Diligence Geovale’s has carried-out and evaluate Due Diligence Report utility value?	20	CO4
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