

Name:	
Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, December, 2019

Programme Name: B. Tech (Mining Engineering)

Semester : VIII

Course Name : Mine Management

Time : 03 h

Course Code : MIEG 413

Max. Marks : 100

Nos. of page(s) : 2 (two)

Instructions: Use figure wherever it is required.

SECTION A

S. No.		Marks	CO
1.	What is Production Assurance Concept?	3	CO1
2.	What are the necessary activities in Planned Maintenance Management?	3	CO2
3.	Using suitable example, apply the concept of ' <i>task detailing</i> '?	3	CO1
4.	What are the essential conditions required in Production Planning?	3	CO1
5.	How MIS is useful in Mining Management?	3	CO4
6.	Explain Business Operating Cycle in Mining Industry?	3	CO1
7.	What is the role of Disaster Management in Mining Industry?	3	CO2
8.	What is the difference between Fixed Assets and Working Capital?	3	CO2
9.	List suggestions to Trade Unions on Safety Management?	3	CO1
10.	What are the measures needed to control Mining Project failures?	3	CO3

SECTION B

11.	Apply Social Intelligence skill in Mining Industry, and support how social conflicts be identified, negotiated and managed?	10	CO4
12.	How Time Horizons of Workforce Planning Strategies is possible in Mining industry?	10	CO4
13a.	Statement: The goal of adopting lean in the mining sector is to eliminate activities that do not add value Identify the activities that do not add value? Design needed strategies to meet lean practices?	3+7	CO1 + CO4

(OR)

13b.	List Lean's 8 wastes in Mining Industry? How the terms 'unnecessary', 'excess', 'over' and 'incorrect' are relevant in lean Mining industry?	3+7	CO1 + CO4
(OR)			
14a.	Explain importance of Failure Mode Effect and Criticality Analysis (FMECA) in Mining Industry?	10	CO4
(OR)			
14b.	Apply Design type of Failure Mode Effect and Criticality Analysis (FMECA) to Mining Industry and show how Transport related failures are managed?	10	CO4
(OR)			
15a.	What is the importance of Life Cycle Assessment (LCA) in Coal Mining Industry?	10	CO3
(OR)			
15b.	Examine Socio-economic assessment in Coal Mining Industry?	10	CO3
SECTION-C			
<p>The following text (edited) is taken from Research Article, Naworyta, W. et. al., (2015) Planning for Reliable Coal Quality Delivery Considering Geological Variability: A Case Study in Polish Lignite Mining, Journal of Quality and Reliability Engineering Volume 2015, Article ID 941879, 9 pages. Link: http://dx.doi.org/10.1155/2015/941879 for academic propose.</p> <p>The aim of coal quality control in coal mines is to supply power plants daily with extracted raw material within certain coal quality constraints. On the example of a selected part of a lignite deposit, the problem of quality control for the runoff-mine lignite stream is discussed. The main goal is to understand potential fluctuations and deviations from production targets dependent on design options before an investment is done. A single quality parameter of the deposit is selected for this analysis—the calorific value of raw lignite. The approach requires an integrated analysis of deposit inherent variability, the extraction sequence, and the blending option during material transportation. Based on drill-hole data models capturing of spatial variability of the attribute of consideration are generated. An analysis based on two modelling approaches, Kriging and sequential Gaussian simulation, reveals advantages and disadvantages lead to conclusions about their suitability for the control of raw material quality. In a second step, based on a production schedule, the variability of the calorific value in the lignite stream has been analysed. In a third step the effect of different design options, multiple excavators and a blending bed, was investigated.</p>			
16.	What functions of Materials Management are identifiable from the text? Explain?	4+6	CO1+ CO4
17.	Critically examine challenges with the variability of the calorific value in the case?	10	CO4