

The Papua New Guinea University of Technology
Department of Mining Engineering



Fourth Year Mining Engineering

MN 414 – MINE LEGISLATION

DATE: FRIDAY 5th NOVEMBER 2021

TIME: 12:50 PM

TIME ALLOWED 3 HOURS

INFORMATION FOR CANDIDATES

1. You have ten minutes to read this question paper. You must not begin writing during this period
2. Answer all questions in each PART and marks are indicated beside each question
3. ALL answers must be provided on the answer book provided. No other written materials will be accepted
4. Write your NAME and STUDENT NUMBER clearly on the answer book. This must be done first
5. This is an OPEN BOOK exam. Students may use lecture notes and any materials available
6. There are 8 Questions of equal marks. Choose and ANSWER ALL QUESTIONS

QUESTION 1

What are the two main purposes of the Mining Act (1992)? [10 marks]

QUESTION 2

What is the overall regulatory function of the Mining Act, as per the contents of the Act? [10 marks]

QUESTION 3

What are the necessary steps and activities that to lead to granting a: [10 marks]

- (i) Exploration Lease (EL)
- (ii) Special Mining Lease (SML)

QUESTION 4

What are the two critical safety issues that directly, become mine design challenges facing an underground mine and describe how each of these are addressed in an underground mine design? [10 marks]

QUESTION 5

What are the differences between (i) incidents and accidents; and (ii) residual risks? Give an example of each. Also state how each of the scenarios above could be prevented at a mine site. [10 marks]

QUESTION 6

Given the Table below, interpret the profit and loss statement of the company. Use your mineral economics knowledge to describe what is happening when a 10-year tax holiday is given to a mining company. [10 marks]

Table 1: Profit and loss statement of a mining company

	Year	0	1	2	3	4	5	6	7	8	9	10
Gross Revenue		1,838	1,893	1,949	2,008	2,068	2,130	2,194	2,260	2,328	2,398	
Royalty (5%)		-92	-95	-97	-100	-103	-107	-110	-113	-116	-120	
Operating Cost		0	-2000	-2000	-2000	-2000	-2000	-612	-630	-649	-668	-688
Depreciation (Straight Line)		0	-175	-175	-175	-175	-175	-175	-175	-175	-175	-175
Net Income Before Tax		429	-377	-323	-267	-210	-1237	1280	1323	1368	1415	
Tax (35%) [10-year tax holiday]	→	0	0	0	0	0	0	0	0	0	0	0
Net after tax		429	-377	-323	-267	-210	-1237	1280	1323	1368	1415	

Note: the company is making a loss in year 1-5 and profit year 6 to 10

What is happening starting in year 6, in relation to what has happened in year 1 to 5 as a result of a tax holiday?

[Make a very concise statement only (no need for a long essay)]

QUESTION 7

What is the economic definition of royalty? Consistent with your explanation, in what ways the royalty proceeds could be put to good use? [10 marks]

QUESTION 8

What are the purposes of the following and the stakeholders involved in each of the social bargaining processes? [10 marks]

- i) Mining Development Contract (MDC)
- ii) Mining Forum (MF)
- iii) Memorandum of Understanding (MoA)

THE END

EDUCATION IS NOT ABOUT EASY COPYING OF FACTS WITHOUT THINKING, RATHER, IT IS ABOUT ACTIVATING THE BRAIN TO THINK TO CRITIQUE, TO ANALYSE AND TO INNOVATE.