

THE PAPUA NEW GUINEA UNIVERSITY OF TECHNOLOGY

DEPARTMENT OF MINING ENGINEERING

SECOND YEAR MINING ENGINEERING

2021 SECOND SEMESTER

MN223 MINING TECHNOLOGY

OCTOBER 2021

VENUE; MN003

TIME ALLOWED; 3 HOURS

INFORMATION FOR CANDIDATES

1. You have 10 minutes to read through the instructions and questions carefully.
2. The exam is divided into two (2) sections. Part A: Short answers and Part B: Essays.
3. Calculators, biros and rulers ARE ALLOWED in the exam. Notes, mobile phones and any other electronic devices are strictly NOT ALLOWED.
4. Write ALL answers on the answer sheet provided. No other materials will be accepted.
5. Write your NAME and NUMBER on the answer book. DO THIS NOW

Part A: Short Answer

(30 Marks)

Identify only one (1) advantage of each of the advancements in mining below and explain briefly and clearly. (Note: no word limit).

- 1) Mine mechanization (5 Marks)
- 2) Microwave assisted drilling (5 Marks)
- 3) Remote drilling (5 Marks)
- 4) Lidar scanning (5 Marks)
- 5) Deep sea mining (5 Marks)
- 6) Green mining (5 Marks)

Part B: Comparative Essay

(50 Marks)

You are to select any 2 out of the 4 topics provided below for the essay.

You are to differentiate and discuss several (more than 2) advantages of the transition in technology mentioned below; (Note; word limit must be between 150-200 words and no less for each essay topic. No drawing)

- 1) Transition from line of sight to teleremote bogging (25 Marks)
- 2) Transition from wired to wireless blast initiation system (25 Marks)
- 3) Transition from underground diesel to electric trucking (25 Marks)
- 4) Transition from underground cyclic to continuous mining (25 Marks)

END of EXAM