



PROGRAM : BACHELOR OF ENGINEERING TECHNOLOGY
(MINING ENGINEERING)

SUBJECT : MINING METAL 2A

CODE : MMEMNA2

DATE : 16 JULY 2019
SUPPLEMENTARY EXAMINATION

DURATION : 3 HOURS (15H00 - 18H00)

TOTAL MARKS : 100

EXAMINERS : T MMOLA

MODERATOR : S NHLEKO

NUMBER OF PAGES : 3 PAGES incl. COVER PAGE

REQUIREMENTS

1. ONE ANSWER SCRIPT

INSTRUCTIONS

1. ANSWER ALL QUESTIONS
 2. UNDERLINE AFTER EACH QUESTION
 3. SUBMIT QUESTION PAPER WITH ANSWER SCRIPT
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QUESTION 1

- 1.1 Explain the system of classifying mining stopes and name two mining methods for each category of mining method (12)
- 1.2 Name three variations of room-and-pillar mining (3)
- 1.3 With the aid of a diagram, describe the development layout of a Sub-level Stopping mine. (15)

[30]

QUESTION 2

- 2.1 Name the various forms of backfill. (4)
- 2.2 Give a brief description of the Cut-and-Fill mining method (5)
- 2.3 Indicate the type of conditions in which Cut-and-fill can generally be applied. (6)

[15]

QUESTION 3

- 3.1 Discuss the phases of stoping in conventional breast mining. (20)
- 3.2 What are the advantages and disadvantages of scattered mining. (8)
- 3.3 What is a remnant and what are the reasons for creating remnants in underground metal mining? (2)

[30]

QUESTION 4

- 4.1 Name five strategies that can be used for dilution control in Sublevel Caving. (5)
- 4.2 Describe the block caving mining method with a focus on the activities that take place under the four major horizontal operating levels i.e. undercut level, extraction level, haulage level, ventilation level. (20)
- [25]**

TOTAL	[100]
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