UNIVERSITY OF JOHANNESBURG

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

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 Stoping 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]**