

JANUARY 2024
EMA 406SW
ADVANCED STUDY OF TEACHING BASIC
SCHOOL MATHEMATICS
1 HOUR 30 MINUTES

Candidate's Index Number

IE/M4

Signature

UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
SCHOOL OF EDUCATIONAL DEVELOPMENT AND OUTREACH
INSTITUTE OF EDUCATION

FIVE-SEMESTER BACHELOR OF EDUCATION (SANDWICH) PROGRAMME
LEVEL 400, END-OF FIRST SEMESTER EXAMINATION, JANUARY 2024

9TH JANUARY 2024 ADVANCED STUDY OF TEACHING BASIC 4:30 PM - 6:00 PM
SCHOOL MATHEMATICS

SECTION B
(40 MARKS)

Answer any TWO questions from this Section.

Please, note that if you answer more than two questions, only the first two will be marked.

1.
 - a. Explain each of the following:
 - i. Instrumental understanding [2 marks]
 - ii. Relational understanding [2 marks]
 - iii. Functional understanding [2 marks]
 - iv. Schema [2 marks]
 - b. Explain four implications of the behaviourist learning theory to the mathematics teacher. [12 marks]

2.
 - a. Explain with an example in each case the main difference between assimilation and accommodation. [6 marks]
 - b.
 - i. Define learning style in mathematics education. [2 marks]
 - ii. Explain four factors that influence the learning styles of students at the basic level. [12 marks]

- 3.
- a. Explain any **three** types of participatory teaching methods. [8 marks]
 - b. Explain with an example each of the following school-based assessments:
 - i. Assessment for learning (AfL) [4 marks]
 - ii. Assessment as learning (AaL) [4 marks]
 - iii. Assessment of learning (AoL) [4 marks]
- 4.
- a. With specific examples in each case, explain **four** problem-solving strategies used in enacting the subject matter in mathematics. [16 marks]
 - b. Explain **two** ways of improving classroom questioning skills as a prospective mathematics teacher. [4 marks]