OFFICE OF THE DEPUTY PRINCIPAL
ACADEMICS, RESEARCH AND STUDENTS' AFFAIRS

UNIVERSITY EXAMINATIONS

2018/2019 ACADEMIC YEAR

SECOND YEAR SECOND SEMESTER REGULAREXAMINATION

FOR THE DEGREE OF BACHELOR OF EDUCATION (SCIENCE)

COURSE CODE: **CIM 212**

COURSE TITLE: **MATHEMATICS EDUCATION**

DATE: 26TH APRIL, 2019 **TIME: 2.00 PM – 5.00 PM**

INSTRUCTION TO CANDIDATES

- **SEE INSIDE**

THIS PAPER CONSISTS OF 3 PRINTED PAGES **PLEASE TURN OVER**

CIM 212: MATHEMATICS EDUCATION

STREAM: BED **DURATION: 3 Hours**

INSTRUCTIONS TO CANDIDATES

*i. Answer Question **ONE** and any other **TWO** questions.*

ii. Do not write on the question paper

Question One

i. Explain **four** General goals of teaching Mathematics. (8 Marks)

ii. State and explain **four** importance of instructional objectives (8 Marks)

iii. a) Differentiate between cognitive and stimulus-Response theories. (2 Marks)

b) With examples each differentiate between deductive and inductive approach of teaching Mathematics. (4 Marks)

c) Describe **three** fixed response methods of learning mathematics (3 Marks)

iv. Explain the **two** roles of a teacher in the small group work approach of teaching mathematics. (2 Marks)

v. Outline **three** importance of a lesson plan (3 Marks)

Question Two

a) Bruner says that although there are **three** modes of representation, there are some other cognitive impulses that begin to evolve within the human being called cognitive entities .Explain **four** cognitive entities according to him
(8Marks)

b) State and explain **four** implications of Bruner's cognitive theory of learning (8 Marks)

c) Show the applications of stimulus response theories in mathematics teaching with emphasis on Gagne (4 Marks)

Question Three

a) Explain **four** roles of laboratories in the teaching of mathematics (8 Marks)

b) Explain **four** ways in which a teacher can make materials in the laboratory useful (4Marks)

c) Name **three** categories of materials that should be kept in the laboratories (3 Marks)

d) What is the role of a teacher in free discovery method of learning? (2 Marks)

e) Explain **three** importance of problem solving (3 Marks)

Question Four

a) Explain **five** roles of a mathematics textbook in the classroom (10 Marks)

b) Describe **four** considerations when judging a good mathematics textbook (8 Marks)

c) Explain **two** dangers of textbook teaching in mathematics (2 Marks)

Question Five

a) Write and explain **five** importance of drawing a scheme of work (10 Marks)

b) Outline **six** factors to be considered in designing a qualitative mathematics scheme of work (6Marks)

c) Write **eight** components of a scheme of work (4Marks)

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