

File

CIM 212



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

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## UNIVERSITY EXAMINATIONS

### 2018/2019 ACADEMIC YEAR

SECOND YEAR SECOND SEMESTER REGULAR EXAMINATION

**FOR THE DEGREE OF BACHELOR OF  
EDUCATION (SCIENCE)**

**COURSE CODE: CIM 212**

**COURSE TITLE: MATHEMATICS EDUCATION**

**DATE: 26<sup>TH</sup> APRIL, 2019**

**TIME: 2.00 PM – 5.00 PM**

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### 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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