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# KIRIRI WOMEN'S UNIVERSITY OF SCIENCE AND TECHNOLOGY UNIVERSITY EXAMINATION, 2024/2025 ACADEMIC YEAR THIRD YEAR, SEMESTER TWO EXAMINATION BACHELOR OF EDUCATION (ARTS) KET 2304: SUBJECT METHODS IN MATHEMATICS STUDY

Date: 13th December 2024 Time: 8.30am-10.30am

#### <u>INSTRUCTIONS TO CANDIDATES</u> <u>ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS</u> <u>QUESTION ONE (30 MARKS)</u>

| a) | State <b>four</b> objectives from secondary school mathematics curriculum                             | (4 marks)      |
|----|---|----------------|
| b) | Discuss three ways you can integrate ICT in the teaching and learning of Mathematics in the           | Mathematics    |
|    | classroom   | (6 marks)      |
| c) | Explain three advantages of using models as a resource in Mathematics teaching                        | (6 marks)      |
| d) | In an effort to assist those who may dropout after primary school, explain with four concrete         | examples how   |
|    | you would make the content taught be useful to these pupils   | (8 marks)      |
| e) | Discuss any three out of class activities that a Mathematics teacher can utilize to help motiva       | te learners in |
|    | grasping various Mathematics concepts   | (6 marks)      |
|    |   |                |
|    | <b>QUESTION TWO (20 MARKS)</b>  |                |
| a) | Explain six's rationale for problem solving in Mathematics teaching                                   | (6 marks)      |
| b) | Discuss different techniques that can be used to effectively integrate problem solving in Mathematics |                |
|    | classroom   | (7 marks)      |
| c) | Explain the contribution of Jean Piaget to the teaching and learning of Mathematics                   | (7 marks)      |
|    |   |                |

## **QUESTION THREE (20 MARKS)**

| a) | Discuss four factors to consider when scheming in Mathematics | (8 marks) |
|----|---|-----------|
|----|---|-----------|

- b) State **four** basic rules to be considered while constructing tests in Mathematics (4 marks)
- c) Explain **four** factors to be considered while analyzing the quality of Mathematics textbooks (8 marks)

### **QUESTION FOUR (20 MARKS)**

Every year when KCPE results are released, performance is one of the issues in the teaching and learning of Mathematics in Kenya primary schools.

- a) Discuss any **six** factors that lead to poor performance in Mathematics in primary schools (12 marks)
- b) Explain **four** steps you would take to prepare pupils adequately for secondary school Mathematics

(8 marks)

## **QUESTION FIVE (20 MARKS)**

- a) Discuss **five** benefits of Mathematics club, in secondary schools in promoting the teaching and learning of Mathematics (10 marks)
- b) Explain **five** roles of Mathematics textbook as a resource in teaching and learning of Mathematics

(10 marks)