



MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

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University Examinations 2022/2023

THIRD YEAR SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF EDUCATION TECHNOLOGY IN CIVIL ENGINEERING, BACHELOR OF EDUCATION TECHNOLOGY IN MECHANICAL ENGINEERING AND BACHELOR OF EDUCATION TECHNOLOGY IN ELECTRICAL AND ELECTRONIC ENGINEERING

ECT 3380: MECHANICAL ENGINEERING SUBJECT METHODS

ECT 3381: CIVIL ENGINEERING SUBJECT METHODS

ECT 3382: ELECTRICAL AND ELECTRONICS TECHNOLOGY SUBJECT METHODS

DATE: APRIL 2023

TIME: 2 HOURS

INSTRUCTIONS: Answer question *one* and any other *two* questions

QUESTION ONE (30 MARKS)

- a) Explain the meaning of the following terms used in technical training (3 marks)
 - i. Technology in education
 - ii. Technology of education
 - iii. Competency-based education
 - b) Explain any three objectives of educational technology (3 marks)
 - c) Describe any four characteristics of a good system lesson (4 marks)
 - d) Explain four factors to consider when selecting appropriate instructional resources for technical subjects (4 marks)
 - e) Explain four reasons for assessing learners in technical subjects (4 marks)
 - f) Discuss two benefits of micro teaching to a teacher trainee (4 marks)
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- g) Using a sub-topic in your area of specialization, make a 60 minutes lesson plan (8 marks)

QUESTION TWO (20 MARKS)

- a) Explain five roles of textbooks in technical courses (5 marks)
b) Explain five advantages of using online resources in technical subjects (5 marks)
c) Discuss five reasons why a technical trainer needs the curriculum when preparing to teach a technical subject (10 marks)

QUESTION THREE (20 MARKS)

- a) Discuss five effective instructional strategies used in the teaching of technical subjects (10 marks)
b) Discuss any five factors to consider when planning and preparing for teaching technical subjects (10 marks)

QUESTION FOUR (20 MARKS)

- a) Explain five benefits of the record of work covered in technical training (5 marks)
b) Explain the five core functions of KNEC in testing and evaluation (5 marks)
c) Discuss five factors to consider in selecting appropriate training strategy for technical subjects (10 marks)

QUESTION FIVE (20 MARKS)

- a) Discuss four differences between a curriculum and a syllabus (8 marks)
b) Discuss the major processes of generating scientific knowledge in technology by both trainers and trainees (6 marks)
c) Giving examples, explain the following types of assessment in technical subjects
i. Diagnostic assessment (2 marks)
ii. Formative assessment (2 marks)
iii. Summative assessment (2 marks)