



MACHAKOS UNIVERSITY

University Examinations for 2020/2021 Academic Year

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF BUILDING AND CIVIL ENGINEERING

THIRD YEAR FIRST SEMESTER EXAMINATION FOR

DIPLOMA IN CIVIL ENGINEERING

BCE CD 305: RESEARCH METHODOLOGY AND PROJECT I

DATE: 17/8/2021

TIME: 8.30-10.30 AM

INSTRUCTIONS

- This paper comprises of five questions. Answer **three** questions
- Question one is **compulsory** and carry 30 marks
- Answer any other **two** questions.

QUESTION ONE (30 MARKS)

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|----|--|-----------|
| a) | Define the term research | (2 marks) |
| b) | Discuss 3 methods of collecting data in a research | (7 marks) |
| c) | Outline 5 characteristics of a good surveying | (5 marks) |
| d) | Discuss 4 characteristics of good research | (8 marks) |
| e) | Explain 4 functions of good research design | (8 marks) |

QUESTION TWO (20 MARKS)

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|----|------------------------------------|-----------|
| a) | Define the term hypothesis | (2 marks) |
| b) | Discuss 3 types hypothesis | (9 marks) |
| c) | Discuss 3 importance of hypothesis | (9 marks) |

QUESTION THREE (20 MARKS)

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|----|--|------------|
| a) | Outline 5 purpose of literature review | (10 marks) |
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- b) Discuss the following type of research
 - i. Survey research
 - ii. Comparative research (6 marks)
- c) State four sources of a research topic . (4 marks)

QUESTION FOUR (20 MARKS)

- a) Define the term sampling (2 marks)
- b) State 3 advantages and 3 disadvantages of sampling (6 marks)
- c) Discuss the following types of probability sampling
 - i. Simple random sampling
 - ii. Interval or systematic sampling
 - iii. Stratified sampling (12 marks)

QUESTION FIVE (20 MARKS)

Outline the procedural guideline on research process