



MACHAKOS UNIVERSITY

University Examinations 2019/2020 Academic year

SCHOOL OF HEALTH SCIENCES

DEPARTMENT OF PUBLIC AND COMMUNITY HEALTH

SECOND YEAR SECOND SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE IN PUBLIC HEALTH.

HPH218: BUILDING CONSTRUCTION AND TECHNOLOGY I

DATE: 25/11/2020

TIME: 2:00 – 4:00 PM

INSTRUCTIONS

This paper consists of two sections A and B

SECTION A

Specific Instructions

- This section has one question
- The question is **COMPULSORY**
- The question is **30 marks**.

QUESTION ONE (30 MARKS)

- Explain the methods of thermal insulation of buildings (3 marks)
- State three (3) causes of dampness in buildings (3 marks)
- Explain why timber is seasoned before use (3 marks)
- Highlight factors that affect heat loss from the human body in relation to buildings (3 marks)
- Explain the characteristics of a good building stone (3 marks)
- Highlight the characteristics of good lighting in a house or building (3 marks)
- Outline duties of a public health officer in building and construction (3 marks)
- Explain the physical properties of clay as a building material (3 marks)
- Highlight the principles of a good drainage system in a high rise building (3 marks)

- j) Explain the problems that hinder the provision of good housing in Kenya (3 marks)

SECTION B

Specific Instructions

- **This section has four (4) questions**
- **Answer any two (2) questions**
- **Each question is 20 marks**

QUESTION TWO (20 MARKS)

- a) Explain the factors to be considered when scrutinizing a building plan for approval purposes. (10 marks)
- b) Describe the different methods of seasoning and preservation of timber as a building material (10 marks)

QUESTION THREE (20 MARKS)

- a) Explain the methods of manufacture of cement as a building material (10 marks)
- b) Machakos County government has just finished the construction of affordable houses. The houses are ready for occupation. As the public health officer tasked with inspection of buildings before issuance of a certificate of occupation, explain the factors you would look for before signing the said certificate. (10 marks)

QUESTION FOUR (20 MARKS)

- a) Discuss settlement in buildings in relation to the properties of soil that you should put in mind while inspecting a building site for approval (10 marks)
- b) Discuss the effects of poor housing on human health and environment (10 marks)

QUESTION FIVE (20 MARKS)

- a) A six storey building collapsed at Tassia Estate in Embakasi in Nairobi county. As a public health officer, explain the factors that could have led to the incident that led to loss of lives.
- b) Explain the health and safety requirements that should be considered when investigating a building site (10 marks)