

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

**SECOND YEAR EXAMINATION FOR THE AWARD OF DIPLOMA
IN ANIMAL HEALTH**

AGEN 0342: FARM STRUCTURES

STREAMS: DIP. ANHE (Y2S2) (Y3S2)

TIME: 2 HOURS

DAY/DATE: WEDNESDAY 06/12/2017

11.30 A.M. – 1.30 P.M.

INSTRUCTIONS:

- **THIS PAPER CONTAINS SEVEN QUESTIONS**
- **ANSWER ALL QUESTIONS IN SECTION A AND ANY OTHER TWO QUESTIONS IN SECTION B**

SECTION A

QUESTION ONE

- (a) Name three types of natural stones in building construction. [3 marks]
- (b) Describe four types of defects in wood to watch for in selecting timber for a construction job. [4 marks]
- (c) Describe the following types of nails used in building construction
- (i) Concrete nails [1 mark]
 - (ii) Clout nails [1 mark]
 - (iii) Roofing nails [1 mark]

QUESTION TWO

- (a) List three functions of paints. [3 marks]
- (b) Describe three types of paints used on building surfaces. [6 marks]
- (c) Describe the term “batching” as used in concrete mix [1 mark]

QUESTION THREE

- (a) Discuss the importance of drawings in building construction [5 marks]
- (b) Draw a structural framework of a truss and indicate the members subjected to compression stress and the members subjected to tensile stress. [5 marks]

QUESTION FOUR

- (a) Discuss five advantages of galvanized steel sheets as a building roofing material. [5 marks]
- (b) Briefly describe the general housing requirement for cattle. [5 marks]

SECTION B

QUESTION FIVE

- (a) A dairy farmer is to construct a concrete floor slab using naturally moist aggregates and adding 62 litres of water. The nominal mix is 1:3:5 cement – sand – ballast.

Determine the following

- (i) The volume of the aggregate in the mix [2 marks]
- (ii) The weight of the aggregate in the mix [4 marks]
- (iii) The amount of water contained in the mix [4 marks]
- (b) With the aid of a diagram name the basic parts of a sheep/goat pen (house) with gumpole rails instead of masonry walls for better ventilation. [5 marks]

QUESTION SIX

- (a) List five types of wire fences commonly used in livestock management. [5 marks]
- (b) (i) Draw and explain the purpose of a man pass on a fence. [3 marks]
- (ii) Explain two functions of ventilation in farm buildings. [2 marks]
- (c) Briefly describe five functional requirements for different rooms and spaces in a family house. [5 marks]

QUESTION SEVEN

- (a) Illustrate zone planning when planning farmstead on a new farm. [5 marks]
- (b) Describe five factors to consider in farmstead planning. [5 marks]
- (c) List five environmental factors that affect the physiological functions of domestic animals. [5 marks]