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**CHUKA**



**UNIVERSITY**

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**UNIVERSITY EXAMINATIONS**

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

**AGEN 0342: FARM STRUCTURES**

**STREAMS: DIP ANHE Y3S2**

**TIME: 2 HOURS**

**DAY/DATE: WEDNESDAY 11/12/2019**

**2.30 P.M – 4.30 P.M**

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**INSTRUCTIONS**

**This paper contains seven questions**

**Answer all questions in section A and any TWO in section B**

**SECTION A (40 MARKS)**

- (a) Give three reasons why drawings are essential in building construction. [3 marks]
- (b) Describe three weaknesses of earth as a building material. [3 marks]
- (c) Discuss two soil stabilizers used to increase the soils' resistance to destructive weather conditions. [4 marks]

**QUESTION TWO**

- (a) List six main components of standard Portland cement, and give percentages of each component. [6 marks]
- (b) (i) Describe mortar as used in building construction. [2 marks]
- (ii) Give two types of mortar used in building construction. [2 marks]

**QUESTION THREE**

- (a) Describe the following types of doors:
  - (i) Flush door
  - (ii) Double door [2 marks]
  - (iii) Framed doors [2 marks]

- (iv) Zone planning can be useful tool when planning a new farmstead. With the aid of a diagram, name five zones in zone planning which form the nucleus of the farm operations. [4 marks]

#### QUESTION FOUR

- (a) Discuss four factors to consider when planning a farm stead. [4 marks]
- (b) As grain dries, it releases its moisture into the drying air and consequently loses weight if 2000 kg of peas at 32% moisture content are dried to 19% moisture content, calculate the weight of the dried peas. [6 marks]

#### SECTION B

#### QUESTION FIVE

- (a) Describe four functional requirements for different rooms and spaces in a family house. [5 marks]
- (b) Draw the cross –section of a cattle dip and name the basic sections. [5 marks]
- (c) Describe the qualities for a good land to construct a cattle dip. [5 marks]

#### QUESTION SIX (15 MARKS)

- (a) Name five types of wire fences most common on farms. [5 marks]
- (b) With the aid of a diagram, name the basic parts of a dairy zero grazing unit.[5 marks]
- (c) Describe five desirable characteristics for surfacing materials for pitch roofs. [5 marks]

#### QUESTION SEVEN (15 MARKS)

- (a) Discuss the importance of footings and foundations in building construction. [5 marks]
- (b) Describe the following types of loads on building components:
- (i) Dead loads [2 marks]

(ii) Live loads

[2 marks]

(c) List six factors to be considered in choosing the materials for construction job. [5 marks]

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