



UNIVERSITY OF EMBU

2016/2017 ACADEMIC YEAR

FIRST SEMESTER EXAMINATION

THIRD YEAR EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN
HORTICULTURE

ACH 304: FLORICULTURE 1

DATE: NOVEMBER 30, 2016

TIME: 8:30-10:30AM

INSTRUCTIONS:

Answer Question ONE and ANY other TWO Questions

QUESTION ONE (30 MARKS)

- a) Distinguish between the following rose flower variety types: T-hybrids, intermediates and sweethearts (3 marks)
- b) Mention why Potassium supplement at flowering time is important in production of Alstroemeria (1 mark)
- c) Florigen stimulus is believed to be transported from the leaves to flower buds through the phloem. Give one reason why you believe that this may not be its only pathway (2 marks)
- d) Discuss how you can ensure good cut flower quality (long stem and big sized heads) in chrysanthemum if your flower farm is based in Naivasha, Kenya (5 marks)
- e) Distinguish between standard and spray carnations (2 marks)
- f) Differentiate between intermittent and interrupted lighting in floriculture industry (2 marks)
- g) State three (3) advantages of harvesting roses at bud stage (3 marks)

- h) As a production manager, explain how you can use DIF technology to time the growth of carnation so that your peak season coincides with the mother's day (5 marks)
- i) Explain the importance of soil temperature in production of Alstroemeria (2 marks)
- j) State the best cutting stage for *Ornithogalum* (1 mark)
- k) Mention four (4) characteristics of end of vaselife/display life in vase flowers (4 marks)

QUESTION TWO (20 MARKS)

- a) Explain why chrysanthemum with a critical day length of 15 hours is a short day plant while carnation with a relatively shorter day length of 13 hours is a long day plant with respect to flowering (4 marks)
- b) Outline the causes of blockage of the conductive vessels of rehydrated cut flowers (6 marks)
- c) Citing relevant examples, discuss temperature related flower malformations (10 marks)

QUESTION THREE (20 MARKS)

- a) Describe the two types of inflorescences found in chrysanthemum (2 marks)
- b) Describe the four (4) pinching methods applicable to carnation (8 marks)
- c) Discuss the five (5) predisposing factors for calyx splitting in carnation (10 marks)

QUESTION FOUR (20 MARKS)

- a) Outline the general advantages of a soilless culture in flower production (8 marks)
- b) Discuss the economic value of tuberose (12 marks)

QUESTION FIVE (20 MARKS)

- a) Discuss the breeding programme of roses (8 marks)
- b) Discuss six (6) common physiological disorders in roses (12 marks)

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