

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

FOURTH YEAR EXAMINATION FOR THE AWARD OF DEGREE
OF BACHELOR OF CATERING AND HOTEL MANAGEMENT

BCHM 441: QUALITY BREWING AND FINE BEER

STREAMS: BCHM(Y4S1)

TIME: 2 HOURS

DAY/DATE: TUESDAY 05/12/2017

2.30 P.M. – 4.30 P.M.

INSTRUCTIONS:

SECTION ONE (ANSWER ALL QUESTIONS) – 30 MARKS

1. (a) Distinguish between and describe the occurrence of chill haze and yeast hazes. [5 marks]
- (b) Beer is made from fermented cereals. Discuss how yeast is able to ferment cereals to yield ethyl alcohol. [5 marks]
2. (a) Mukami used wheat instead of barley to make beer. Explain the outcome of such a beer. [5 marks]
- (b) Kimani used barley to make beer but realized that the yield was lower than expected. Discuss the reason for the low yield. [5 marks]
3. Osugu, ventured into brewing industry, however he opted to use *Lactobacillus bulgariucus* as his culture. Describe the possible scenarios he is likely to encounter in his venture and explain the correct culture he should have used. [5 marks]
4. Murugi has started a new brewing industry. Describe the methods she would use in her plant for trub removal. [5 marks]

SECTION TWO (ANSWER ANY TWO QUESTIONS) - 40 MARKS

5. (a) During brewing, the initial stages include steeping. Describe steeping and explain how the structure of barley facilitates efficient steeping. [6 marks]
- (b) Wagala, a novice brewer, malted his immature barley at 16 °C. Explain the outcome of his brewing process. [6 marks]

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- (c) Maure realized that during the steeping procedure of his barley, germination was not taking place. Expound on the possible cause of this and elucidate on mitigation. [8 marks]
6. (a) Assuming that you intend to produce Munich malts. Describe the procedures you would follow highlighting colour and enzyme levels.[10 marks]
- (b) Describe the main mashing methods that have been developed to suit the equipment and materials available to the brewer. [10 marks]
7. (a) Describe the main classifications of fermentations in a brew house. [10 marks]
- (b) Describe the factors that lead to the creation of different beer styles.[10 marks]
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