



UNIVERSITY OF ESWATINI
Faculty of Health Sciences
Department of Environmental Health Science

**BSc IN ENVIRONMENTAL HEALTH SCIENCE
FINAL EXAMINATION PAPER 2018**

TITLE OF PAPER: SENSORY EVALUATION

COURSE CODE: EHS 425

DURATION: 2 HOURS

MARKS: 100

INSTRUCTIONS: READ THE QUESTIONS & INSTRUCTIONS CAREFULLY

 ANSWER QUESTION ONE AND ANY OTHER THREE

 QUESTIONS

 EACH QUESTION CARRIES 25 MARKS

 BEGIN EACH QUESTION ON A SEPARATE SHEET OF

 PAPER

 WRITE NEATLY AND CLEARLY

**DO NOT OPEN THIS QUESTION PAPER UNTIL PERMISSION IS GRANTED
BY THE INVIGILATOR**

QUESTION ONE

- a) Physiological factors can influence a judge's response when evaluating food products. Explain the concept of enhancement/facilitation to stimuli presented simultaneously as a mixture by enhancement, synergy or suppression.
(15 Marks)
- b) What is the difference between overall and attribute difference testing? Give a specific example of both including the formulation of the test hypothesis.
(10 Marks)

(25 Total Marks)

QUESTION TWO

- a) Explain the concept of Trigeminal/Chemical Response.
(5 Marks)
- b) A cheese processing factory has decided to change some ingredient in the processing of powdered cheese in order to reduce production costs. As a Sensory Analyst employed by the cheese processing factory you are required to conduct a sensory study to determine if the new powdered cheese is different from the existing product currently being produced by the cheese factory.
Discuss the plan you would undertake to conduct the study?

(20 Marks)

(25 Total Marks)

QUESTION THREE

1. Discuss the five types of bias that may be caused by the order of presentation of samples during a sensory test.

(5 Marks)

2. Describe briefly four (4) of the following sensory tests.

(20 Marks)

- 2.1 Triangle Test
2.2 Duo-trio Test
2.3 Two-out-of-five Test
2.4 Same/Different Test/Simple Difference Test
2.5 "A"- "Not A" Test
2.6 Difference-from-Control (DFC) Test

(25 Total Marks)

QUESTION FOUR

Define Type I and Type II errors in sensory evaluation. Give a specific example to illustrate your answer. What type of error can be more costly in an industrial context? Explain your answer.

(25 Total Marks)

QUESTION FIVE

- a) Define the term "sensory threshold" and discuss the three types of sensory thresholds (Recognition, absolute and difference threshold).
(10 Marks)
- b) Describe the difference between the Quantitative Descriptive Analysis (QDA) and the Spectrum™ Descriptive Method for descriptive analysis.

(15 Marks)

(25 Total Marks)