1ST SEM. 2018/19

UNIVERSITY OF ESWATINI

FINAL EXAMINATION PAPER

PROGRAMME: BACHELOR OF SCIENCE IN FOOD SCIENCE, NUTRITION, AND
TECHNOLOGY

COURSE CODE: FNS303

TITLE OF PAPER: SENSORY EVALUATION

TIME ALLOWED: TWO (2) HOURS

INTRUCTIONS: ANSWER QUESTION ONE (1) AND ANY OTHER TWO (2)
QUESTIONS.

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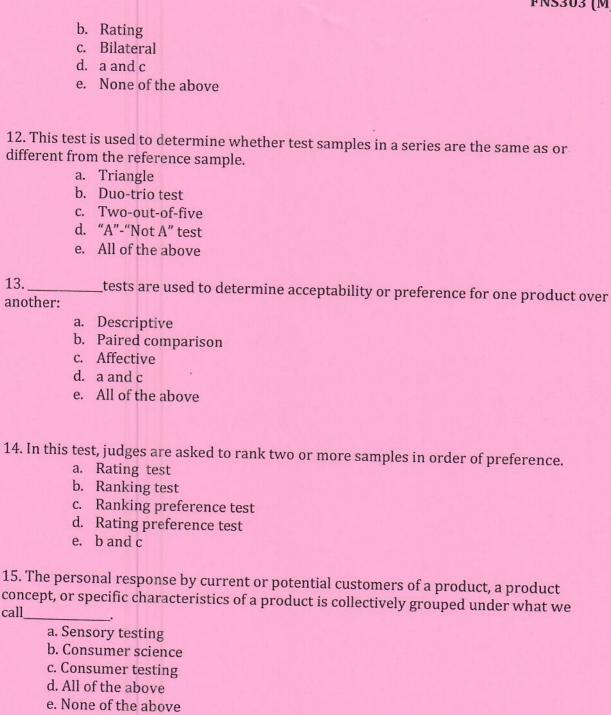
QUESTION 1 (COMPULSORY)

THERE IS ONLY ONE CORRECT ANSWER PER QUESTION. CHOOSE THE CORRECT ANSWER AND WRITE THE QUESTION NUMBER AND YOUR ANSWER CHOICE ON THE ANSWER SHEET. For example, if the answer for number 1 is "a" then you should write "1. a" on your answer sheet.

1. Sensory analysis is used in industry to discover details on:
    a. Flavour, texture
    b. Smell, appearance
    c. Sounds
    d. a and b
    e. All of the above

2. Factors affecting colour/vision assessment:
    a. Lighting
    b. Decoration
    c. Portion size and shape
    d. b and c
    e. All of the above

3. This is an error that arises due to subject's knowledge of the product.
    a. Error of habituation and anticipation
    b. Logical and leniency error
    c. Error of expectation
    d. Time-order error
    e. Error of central tendency

4. _____panellists may also be recruited from the community nearby if the sensory panel work is going to be very time consuming.
    a. Panel members
    b. External
    c. Critiques
    d. a and b
    e. all of the above

5. The initial stage of training a descriptive sensory panel involves:
    a. Cognitive development.
    b. Mental development.
    c. Vocabulary development.
    d. Psychological development.
    e. All of the above

6. Like any instrument, the performance of individual panellists as well as the panel as a whole needs to be monitored to check they are producing _____ results:
    a. Good
    b. Valid
    c. Reliable
    d. All of the above
    e. None of the above

7. If colour or appearance is important, the_____ with daylight-type fluorescent bulbs.
    a. testing area should be big and specious
    b. testing area should be well lit
    c. testing area should look nice
    d. testing area should smell nice
    e. None of the above

8. _____are required to determine whether prospective panellists will work well in a group situation as well as for the analytical approach required in descriptive testing.
    a. Individual interviews
    b. Group interviews
    c. Extensive interviews
    d. All of the above
    e. None of the above

9. This test is used to determine how a specific sensory property differs between two samples.
    a. Triangle test
    b. Rating test
    c. Ranking test
    d. Paired comparison
    e. All of the above

10. _____ test is used to place a series of three or more samples in a rank order to determine whether differences exist between samples.
    a. Bilateral
    b. Unilateral
    c. Ranking
    d. Triangle
    e. None of the above

11. The_____ test can be used to measure the perceived intensity of sensory characteristics e.g. degree of strawberry flavour in a strawberry milkshake.
    a. Unilateral

b. Rating
c. Bilateral
d. a and c
e. None of the above

12. This test is used to determine whether test samples in a series are the same as or different from the reference sample.
   a. Triangle
   b. Duo-trio test
   c. Two-out-of-five
   d. "A"-"Not A" test
   e. All of the above

13. _____ tests are used to determine acceptability or preference for one product over another:
   a. Descriptive
   b. Paired comparison
   c. Affective
   d. a and c
   e. All of the above

14. In this test, judges are asked to rank two or more samples in order of preference.
   a. Rating test
   b. Ranking test
   c. Ranking preference test
   d. Rating preference test
   e. b and c

15. The personal response by current or potential customers of a product, a product concept, or specific characteristics of a product is collectively grouped under what we call_____.
   a. Sensory testing
   b. Consumer science
   c. Consumer testing
   d. All of the above
   e. None of the above

16. There are a number of factors to consider when conducting consumer tests and these are:
   a. Test design
   b. Test subjects
   c. Test location
   d. Test questionnaire

e. All of the above

17. When we measure something (e.g. salt level in cheese) we find there is_____ in what we are measuring.
    a. Variation
    b. Difference
    c. Preference
    d. a and b
    e. All of the above

18. Measures of variability include:
    a. Mean
    b. Median
    c. Range
    d. Standard deviation
    e. c and d

19. During the_____ test, assessors are asked to evaluate one or more samples and indicate the degree of liking for the product or some characteristic of the product.

    a. Ranking preference
    b. Test comparisons
    c. Paired preference
    d. Rating preference
    e. None of the above

20. A commonly used method for comparing frequencies when there are two or more categories is the_____.
    a. Chi-square test
    b. Correlational test
    c. Paired t-test
    d. ANOVA
    e. None of the above

(20x2=40 Marks)

[TOTAL MARKS=40]

QUESTION 2

Instructions: Fill-in the correct word(s) and select the correct response to the following statements.

1. In a ranking test, samples are ranked for a specified criterion, e.g. an attribute (bitterness, crunchiness, hardness).

   a. True   b. False

2. The most common paired comparison tests are two sided (bilateral) where there is prior expectation of the result.

   a. True   b. False

3. Simple difference tests are those that have no direction or characteristic associated with the difference between the products.

   a. True   b. False

4. If information on the acceptance of the product by consumers is required, then it is not them who should do the tasting.

   a. True   b. False

5. Staff can be considered to be a representative sample of the target population.

   a. True   b. False

6. In most sensory facilities, the evaluation area should encompass a _____, a _____, and frequently, a waiting room area for the panelists.

7. One sided tests (unilateral) also exist when there is _____of the direction of difference.

8. Panellists must be taught the correct procedures for evaluating samples and ways to _____sensory adaptation.

9. Sensory analysis (or sensory evaluation) or sometime referred to as subjective evaluation is a scientific discipline that applies principles of experimental design and statistical analysis to the use of _____for the purposes of evaluating consumer products.

10. It is very important that the test _____ format is simple, unambiguous, easy to read and understand.

11. _____ or experimental error implies that there is some true measurement but because of our limitations we cannot reproduce the correct readings every time.

12. _____ allocation of treatments to samples or products ensures each sample has an equal opportunity of receiving any treatment, and that this chance is unaffected by the treatments assigned to other samples.

13. Using statistics we have rules to estimate and minimise the risk and enable us to extrapolate our results from an _____ to a more general situation.

14. The _____ the panel, the more chance there is of obtaining a significant result.

15. With sensory profiling more than two samples can be assessed _____.

(15x2=30 Marks)

[TOTAL MARKS=30]

QUESTION 3

A. Discuss the advantages and disadvantages of a duo-trio test.

(10 Marks)

B. Discuss any TWO of the three directional discrimination tests in sensory evaluation. Provide detailed information on the following: name of test and its uses, test preparation and procedure, and analysis of results.

(2x10=20 Marks)

[TOTAL MARKS=30]

QUESTION 4

A. Define the following tests and elaborate on the following: test application, and test preparation and procedure, and analysis of results.

   i) Triangle test.

   ii) Duo-trio test.

(2x10=20 Marks)

B. Describe the applications of descriptive testing.

(10 Marks)

[TOTAL MARKS=30]