



1ST SEM. 2011/2012

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UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

PROGRAMME : FOOD SCIENCE, NUTRITION AND TECHNOLOGY YEAR II

COURSE CODE : FSNT 202

TITLE OF PAPER : SENSORY EVALUATION

TIME ALLOWED : TWO (2) HOURS

**INSTRUCTIONS : ANSWER QUESTION ONE (1)
AND ANY OTHER (2) QUESTIONS**

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GRANTED BY THE CHIEF INVIGILATOR**

QUESTION 1 [COMPULSORY]

- a) Define sensory evaluation. Briefly explain the meaning of the definition.
[4 marks]
- b) Discuss points you would consider when assessing the following sensory characteristics of food.
i. Colour
ii. Odour
iii. Taste
[18 marks]
- c) Discuss the four errors that may influence results in sensory evaluation. Also explain how these errors could be minimized.
[16 marks]
- d) Define texture.
[2 marks]

[Total = 40 marks]

QUESTION 2

- a) Using advantages and disadvantages compare the three locations which could be used when conducting sensory evaluation.
[12 marks]
- b) Explain how the mind and the body work together in the process of sensory analysis, giving examples where appropriate.
[8 marks]
- c) State the importance of climate control in sensory evaluation area.
[3 marks]
- d) A panel of 30 assessors is offered two drinks A (753) and B (934) in a Paired Preference test (acceptance test). 17 Panelists preferred A and 13 Panelists preferred B. State the null hypotheses and using the attached statistical table, interpret the meaning of these results (at 5% level of significance).
[7 Marks]

[Total = 30 marks]

QUESTION 3

- a) As a sensory specialist, you are to conduct a sensory test of two cola sodas, one from Coca-Cola Company (Coke) and the other from Pepsi (Pepsi Cola). Explain in detail how you would ensure that bias does not take place in the preparation and serving of the two colas in a Paired Comparison Test.

[20 marks]

- b) Discuss the points to consider when designing the following:

- i. Booth Area
- ii. Waiting Area

[10 marks]

[Total = 30 marks]

QUESTION 4

- a) A confectionery company is replacing sugar for honey in one of their biscuit products. This company wants to do sensory evaluation of this biscuit together with the original one to determine if consumers will detect the difference. As a Sensory specialist, you have been tasked to do the sensory evaluation for this confectionery company.

- i. Describe the method you would use to perform the evaluation

[4 marks]

- ii. Give three examples of tests which could be used for this evaluation.

[3 marks]

- iii. Pick a suitable test of your choice and prepare a questionnaire you would use when conducting the evaluation.

[13 marks]

- b) Describe how a quantitative descriptive analysis is performed.

[10 marks]

[Total = 30 marks]

Statistical Tables for Sensory Tests

Table A

Critical Values for difference tests

n α	Directional difference or Duo-trio				Triangle test	
	One-sided		Two-sided			
	0.05	0.01	0.05	0.01	0.05	0.01
1	-	-	-	-	-	-
2	-	-	-	-	-	-
3	-	-	-	-	-	-
4	-	-	-	-	-	-
5	5	-	-	-	4	-
6	6	-	6	-	5	-
7	7	7	7	-	5	6
8	7	8	8	8	6	7
9	8	9	8	9	6	7
10	9	10	9	10	7	8
11	9	10	10	11	7	8
12	10	11	10	11	8	9
13	10	12	11	12	8	9
14	11	12	12	13	9	10
15	12	13	12	13	9	10
16	12	14	13	14	9	11
17	13	14	13	15	10	11
18	13	15	14	15	10	12
19	14	15	15	16	11	12
20	15	16	15	17	11	13
25	18	19	18	20	13	15
30	20	22	21	23	15	17
35	23	25	24	26	17	19
40	26	28	27	29	19	21
45	29	31	30	32	21	23
50	32	34	33	35	23	25
60	37	40	39	41	27	29
70	43	46	44	47	31	33
80	48	51	50	52	34	37
90	54	57	55	58	38	41
100	59	63	61	64	42	45