

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)**

**CLASS: IMSC
BRANCH: FOOD TECHNOLOGY**

**SEMESTER : IX
SESSION : MO/18**

**SUBJECT: SAF3005 FOOD PRODUCT DEVELOPMENT AND SENSORY EVALUATION
TIME: 3 HRS.**

FULL MARKS: 60

INSTRUCTIONS:

1. The question paper contains 7 questions each of 12 marks and total 84 marks.
 2. Candidates may attempt any 5 questions maximum of 60 marks.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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- Q.1(a) Describe the term 'Company Image'. [2]
- Q.1(b) What are the goals of modern food manufacturing/product development? [4]
- Q.1(c) What do you mean Economic environment and how Economic factors can affects food product development? [6]
- Q.2(a) What do you mean by Food pills and Leaf protein concentrate? [2]
- Q.2(b) What conditions should be satisfied by the satisfactory packing? [4]
- Q.2(c) Describe the terms "Product Line Extension", "Brand Extension" and their advantages. [6]
- Q.3(a) What do you mean by Secondary Processing? [2]
- Q.3(b) Write about Product specific packaging requirements with suitable examples. [4]
- Q.3(c) Write about Food Processing Industry and its different categories (on the basis of turnover). [6]
- Q.4(a) Define the word "Papilla" and enlist the different types of papillae. [2]
- Q.4(b) Write the process of hearing and make a labeled diagram of Ear. [4]
- Q.4(c) Write about Olfactory system of sense and disorders of Olfaction. [6]
- Q.5(a) What is descriptive tests and why is to be conducted? [2]
- Q.5(b) Describe the different types of sensory panelists. [4]
- Q.5(c) What are the qualification for screening a panelist and role of panelist in sensory evaluation of a food product? [6]
- Q.6(a) What do you mean by 9-point Hedonic scale? [2]
- Q.6(b) Differentiate between Labeled Affective Magnitude Scale (LAM) and Line scales. [4]
- Q.6(c) Describe the designing of an area for sensory evaluation (as per ISO 8589-1988) which will be dedicated solely to taste panel. [6]
- Q.7(a) Why do we need statistics in sensory evaluation? [2]
- Q.7(b) How can we convert our sensory data in the form of statistical data? [4]
- Q.7(c) Calculate the d^2 and t value from the data given in table as intensity scores for texture of two products measured by 10 panellists on a 25 point. Compare the quality of Product A from Product B on the basis of calculated t value. [6]

Panellist	Sample ID		Difference (d)	d^2
	Product A	Product B		
1	20	22	5	
2	18	19	1	
3	19	17	-2	
4	22	18	-4	
5	17	21	4	
6	20	23	3	
7	19	19	0	
8	16	20	4	
9	21	22	1	
10	19	20	1	