

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

CLASS: IMSC
BRANCH: FT

SEMESTER : IV
SESSION : SP/2023

SUBJECT: FT209 FOOD ANALYSIS

TIME: 3 Hours

FULL MARKS: 50

INSTRUCTIONS:

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
 2. Attempt all questions.
 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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		CO	BL
Q.1(a)	Explain Accuracy and Precision with suitable examples. Write the possible reasons for poor precision.	[5] I	II
Q.1(b)	Describe Le Chatelier Principle and its applicability in chemical reactions.	[5] I	II
Q.2(a)	Compare volumetric and gravimetric analysis for food samples.	[5] III	VI
Q.2(b)	Describe the Lambert-Beer's Law. Formulate optical density from this law.	[5] IV	II
Q.3(a)	Explain the principle of thin-layer chromatography and ion-exchange chromatography.	[5] V	II
Q.3(b)	Outline gel filtration chromatographic process used to separate proteins	[5] II	IV
Q.4(a)	Compare ultrafiltration and ultracentrifugation techniques in food processing.	[5] II	VI
Q.4(b)	State the principals involved in sedimentation and electrophoresis processes.	[5] III	IV
Q.5(a)	Discuss the PCR analysis in detection of allergens in food samples.	[5] VI	II
Q.5(b)	Write the advantages of PCR technique over other conventional methods.	[5] II	III

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