



Department of Food Technology  
School of Interdisciplinary Sciences and Technology  
Jamia Hamdard, New Delhi-110062

8.12.25  
B.Tech.  
5<sup>th</sup> Sem.  
End Sem.  
Roll No.....

**END SEMESTER EXAMINATION (December, 2025).  
BTech Food Technology (V Sem)**

**Paper Title: Techniques in Food Analysis  
Paper Code: BFTG-506**

**Time allotted: 2Hrs 30Min**

**Max Marks: 60**

*Important: At the END, mention how many questions from each section you have attempted.  
Note: Write to the point. Do not insert margins in the answer sheet. Before answering make sure you have mentioned the Question No. & Section. No continuation sheets will be provided.*

**Section-A (2 Marks each, Attempt All)**

**Questions**

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- |                                                                              |             |
|------------------------------------------------------------------------------|-------------|
| Q1. How is angular velocity implied in Centrifugation?                       | PO1: /CO:1  |
| Q2. How is Agarose different from Nutrient Agar?                             | PO4: /CO:3  |
| Q3. Full form of the following techniques                                    | PO3: /CO: 3 |
| a. LCMS                                                                      |             |
| b. FID                                                                       |             |
| c. PCR                                                                       |             |
| d. RCF                                                                       |             |
| Q4. Equipment used to analyse in-depth structure of macro molecules in food? | PO1: /CO:2  |
| Q5. How is absorption rate related to Spectroscopy?                          | PO4: /CO:3  |

**Section- B (Attempt any 6) (5 Marks Each)**

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|---------------------------------------------------------------------|-------------|
| Q6. Write a short note on Microscopic Techniques in Food Analysis.  | PO:4 /CO:4  |
| Q7. Difference between Gas and Liquid Chromatography (diagram)      | PO:3/CO:3   |
| Q8. What are the various types of Sampling used in Food Industries? | PO:4 /CO:4  |
| Q9. Explain in detail working of ELISA (With diagram).              | PO:1 /CO:2  |
| Q10. What are the two different detectors used in Chromatography?   | PO:3 /CO:4  |
| Q11. Explain Column chromatography with diagram.                    | PO:4 /CO:3  |
| Q12. Illustrate working principle of Centrifugation.                | PO:2 /CO: 3 |

**PTO**

**Section C (Attempt any 2) (10 Marks Each)**

Q13. Explain in detail the working, need, and applications of FTIR, MALDI, DSC (with diagram).

PO:1 /CO:1

Q14. Illustrate and comprehensively explain the situation based various types of Sampling techniques used in food Industries.

PO:3/CO: 2

Q15. Explain in detail Chromatography and its various types. (with diagram).

PO:2 /CO:3

Q16. Discuss in detail the importance of Microscopic Food Analysis and discuss following techniques (with diagram)

PO:4 /CO:4

a) Compound Microscopy

b) SEM & TEM