

**B.Sc.(Hons) FNS Sem.-7 Examination****FNS-413****Advances in Food Science & Technology****Time : 2.30 Hours]****December-2025****[Max.Marks : 70**

**Instructions:** Illustrate your answers with neat diagrams wherever necessary.

**Q.1 Write the following**

- (i) Explain the impacts of processing on nutritional quality. (7 Marks)
- (ii) What are the advances in thermal and non-thermal food processing techniques? Explain in detail. (7 Marks)

**OR**

- (i) Write a note on nanotechnology in food processing. (7 Marks)
- (ii) Give the overview of traditional and modern food processing methods. (7 Marks)

**Q.2 Write the following**

- (i) What are the recent developments in food safety protocols? (7 Marks)
- (ii) Write a detailed note on HACCP. (7 Marks)

**OR**

- (i) Write a note on role of biotechnology in ensuring food safety. (7 Marks)
- (ii) What are the advances in food quality testing methods. (7 Marks)

**Q.3 Write the following**

- (i) Define NPD. Explain steps involved in NPD. (7 Marks)
- (ii) Describe objectives, importance and types of NPD. (7 Marks)

**OR**

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- (i) Explain the challenges in NPD. (7 Marks)
- (ii) What are the emerging trends in NPD. (7 Marks)

**Q. 4 Write the following**

- (i) Describe environmental impact of food processing Industries? (7 Marks)
- (ii) Explain different types of Eco-friendly packaging? (7 Marks)

**OR**

- (i) Explain innovative food technology used for food processing in food Industries? (7 Marks)
- (ii) How sustainable foods processing methods can helps in reducing food loss and waste throughout entire food system? (7 Marks)

**Q 5. Attempt any seven out of twelve**

(14 Marks)

- (i) What are the effects thermal processing?
- (ii) What are the effects milling and grinding?
- (iii) what are the full forms of HTST AND UHT.
- (iv) Write a short note on sun drying.
- (v) Write the full form of FOPL.
- (vi) In how many categories the eggs have been graded?
- (vii) What are the types of hazards controlled by HACCP?
- (viii) What are the benefits of record keeping in HACCP?
- (ix) Define Pulse Electric Field?
- (x) Define Greentech?
- (xi) Define sustainable food processing?
- (xii) Define nanotechnology?