

**M. SC. FOOD SAFETY AND
QUALITY MANAGEMENT
(MSCFSQM)**

Term-End Examination

June, 2026

**MVP-007 : EMERGING TRENDS IN FOOD
TECHNOLOGY AND SAFETY**

Time : 3 Hours

Maximum Marks : 100

Note : (i) Attempt any *five* questions.

(ii) All questions carry equal marks.

1. Explain the following (any *ten*) : 10×2=20

- (i) HPP
- (ii) Ozone treatment
- (iii) Nutraceuticals
- (iv) Nutrigenomics
- (v) Dietary supplements

- (vi) Arbovirus
- (vii) Bioactive peptide
- (viii) Antimicrobial resistance
- (ix) Biodegradable packaging
- (x) Zoonotic transmission
- (xi) Barcode
- (xii) Emerging toxins

2. Write notes on the following (any *four*) :

4×5=20

- (i) PEF
 - (ii) One health concept
 - (iii) E-commerce
 - (iv) RT-PCR
 - (v) Predictive microbiology
3. (a) Describe the processes for nanomaterial synthesis. 10
- (b) Discuss the microencapsulation of food ingredients using nanomaterials. 10

4. (a) What is Entrepreneurship ? Explain the SWOT analysis in agri-entrepreneurship. 10
- (b) Explain the functional characteristics of Blockchain technology. 10
5. (a) Discuss in detail the pulsed light technology. Mention its effect on food quality and safety. 10
- (b) Describe the components of a biosensor along with a diagram. 10
6. (a) Discuss in detail the working and instrumentation of GCMS. Enlist the various applications of GCMS. 10
- (b) Discuss the working principle of applications of NMR spectroscopy. 10

7. (a) Explain different types of indicators
used in intelligent packaging. 10
- (b) Explain the concept of TACCP and
VACCP with examples. 10

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