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MVP-007

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

Term-End Examination

June, 2024

**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*) : $10 \times 2 = 20$

- (i) Supercritical fluid
- (ii) Cold plasma
- (iii) Probiotics
- (iv) Dietary supplement
- (v) Zoonotic disease
- (vi) Predictive microbiology
- (vii) Biodegradable packaging

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- (viii) Bioactive packaging
 - (ix) Nanosensors
 - (x) Infrared spectroscopy
 - (xi) TACCP
 - (xii) Nutrigenomics
2. Write notes on the following (any *four*) : $4 \times 5 = 20$
- (i) High pressure processing
 - (ii) Antimicrobial resistance
 - (iii) Antimicrobial packaging
 - (iv) Raman spectroscopy
 - (v) Real time PCR
3. Enlist the novel food processing technologies. Give principles and application of any *two* such technologies in food processing. Mention their effects on food quality and safety. $2+10+8$
4. (a) Define functional foods and give their advantages and disadvantages. 10
- (b) What are the most common types of emerging pathogens ? What are their implications on public health ? 10

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5. (i) Describe the process for nanomaterial synthesis. 10
- (ii) Describe the components of a biosensor along with a diagram. 10
6. (a) Enlist the nucleic acid based methods for detection of food pathogen and discuss any *one* such method in brief. 10
- (b) Discuss the intelligent packaging systems in brief. 10
7. (a) How blockchain technology can be used in sustainable traceability management ? 10
- (b) Describe the mitigation strategies for food fraud. 10