

Total No. of printed pages = 4

19/2nd Sem/PFET 203

2022

**RECENT TRENDS IN FOOD SAFETY AND
QUALITY MANAGEMENT**

Full Marks – 100

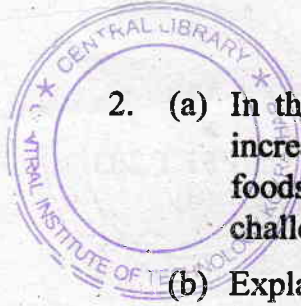
Time – Three hours

The figures in the margin indicate full marks
for the questions.

Answer any *five* questions.

1. (a) Describe Juran's trilogy to describe his concept on quality management system. 9
- (b) Describe the PDCA / PDSA cycle. How can it be used to achieve continuous improvement in quality ? 4+2=6
- (c) Define Food Safety Management System (FSMS). Explain the differences between "quality control" and "quality assurance". 2+3=5

[Turn over



2. (a) In the 21st century, food chain has become increasingly complex, and ensuring safe foods to consumers has become increasingly challenging. Explain. 5

(b) Explain with diagram the antibiotic resistance mechanisms of 5×3=15

(i) β -lactamase

(ii) Lipopolysaccharide modification

(iii) Efflux pump.

3. (a) What is lag phase of growth, and explain any two major factors, on which the lag time for a particular bacterial species depends? 2+3=5

(b) What is six-sigma? The following data set represents the number of defects produced by an ice cream manufacturing line every day of a week during a month. Prepare a check-sheet along with a frequency distribution with the following data ranges : 0 – 1, 2 – 3, 4 – 5, 6 – 7, 8 – 9, 10 – 11 3+7=10

Day :	Mon	Tue	Wed	Thu	Fri	Sat	Sun
	3	8	0	9	4	6	1
	11	1	7	2	5	8	10
	0	5	6	4	3	11	9
	10	3	0	2	7	1	4



(c) Write short notes on :

- (i) Intoxication
- (ii) Infection.

4. (a) What is The Global Standard for Food Safety / Global Food Safety Initiative and its standard focus ? What are the salient features of BRCG ? 10
- (b) How CCP are calculated for HACCP implementation ? 5
- (c) State the differences between Quality control and Quality assurance. 5
5. (a) What is Total Quality Management ? State the role of TQM in food safety. 6
- (b) State the relationships of ISO9000, ISO22000-FSMS and HACCP. 4
- (c) What are the prerequisite programmes required for implementation of HACCP ? 3
- (d) State the relationships of different elements present in food safety system. How Food safety and Quality system can be improved ? 7

6. (a) Write a note on FSSAI with its general structure and functions for food safety. 8

(b) Write short notes on : 4×3=12

(i) CAS

(ii) PFA

(iii) BIS.

