

Total number of printed pages—4

53 (FPT 701) FHPS

2019

**FOOD HYGIENE AND
PLANT SANITATION**

Paper : FPT 701

Full Marks : 100

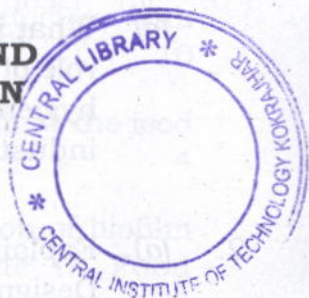
Time : Three hours

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

Answer ***any five*** questions.

1. (a) Define Food Hygiene in accordance with the current use. 2
- (b) Mention the *two* directives for Hygiene Design principles and requirements in Food processing industries. 2
- (c) What are the aims and benefits of Food Hygiene ? Hygiene Design is mentioned in _____ . 3+1

Contd.



(d) State the Codex General Principles of Food Hygiene. What are the hygienic control measures to be taken in Food processing industries? 2+4

(e) What is Personal hygiene? What is the role of personal hygiene in maintaining hygienic condition in Food processing industries? 6

2. (a) Explain the ten principles of Sanitary Design. 10

(b) Explain the COP system in brief. What are the advantages of CIP over COP? 7+3

3. (a) Explain the Food safety objectives to manage microbial risks in food plant. 7

(b) How many types of contamination carriers are there? 3

(c) What is the Temperature Danger Zone? What are the ranges of temperature for vegetables to maintain the shelf-life? 3

(d) How hazards can be characterized? Mention the risk categories based on ranking by hazard characteristics. 7

4. (a) Explain the working of Autoclave with a neat sketch. 10

(b) What is Food poisoning? Show the food poisoning chain. 4

(c) How sampling and detection of biofilm formations can be done in Food processing sites? 6

5. (a) Explain the cycle of CIP system. Mention the factors affecting cleaning performance. 4+4

(b) Write two examples of each with composition of the following cleaners: 2x4

(i) Alkaline cleaners with medium

(ii) Low concentration of sodium

(iii) Enzyme-based

(iv) Potassium and sodium blends

- (c) Enzyme cleaners have more advantages over traditional caustic or acid cleaning regions. Explain. 4
6. (a) Define biofilm. Explain the formation of biofilm. What are the factors that affect the formation of biofilms? 10
- (b) Explain the operation of high pressure water pumps and portable high pressure, low volume cleaning equipment. 5×2
7. (a) What is Integrated pest management? What are the goals and merits of Integrated pest management? Explain NPMA. 4+4+2
- (b) Explain the mode of action of sequestrants. 5
- (c) Mention the cleaning characteristics of the following Alkaline cleaning compounds: 5
- (i) Sodium hydroxide
 - (ii) Sodium carbonate
 - (iii) Tetrasodium orthosilicate
 - (iv) Sodium bicarbonate.