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**FOOD PROCESSING MANAGEMENT/
FOOD PROCESSING TECHNOLOGY**

QP : Food Microbiologist

Paper : FPM/FPT-VC-4016

(Modern Methods in Food Processing)

Full Marks : 60

Time : 3 hours

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

- 1.** Answer the following questions : 1×7=7
- (a) What is Ohmic heating?
 - (b) What is sublimation?
 - (c) Write the full form of TBHQ.
 - (d) Write the full form of HTST.
 - (e) What is meant by irradiation?
 - (f) What is the full form of ELISA?
 - (g) Write the time-temperature combination of wet heat sterilization.

(2)

2. Very short answer-type questions : $2 \times 4 = 8$

(a) Write any two advantages of Ohmic heating in food processing.

(b) What is cold sterilization?

(c) What is PEF processing?

(d) Write the name of two instruments used for sterilization purposes.

3. Write short notes on any *three* of the following : $5 \times 3 = 15$

(a) SEM and TEM

(b) Tetra pack

(c) Aseptic packaging

(d) Vacuum packaging

(e) Ultrasonication—a tool in food preservation

4. Essay-type questions (any *three*) : $10 \times 3 = 30$

(a) What is freeze drying? Write the working principles of freeze drying. What are the different stages of freeze drying? Explain. Write two advantages and disadvantages of freeze drying.

(3)

(b) Explain HPP with a suitable diagram. Write two advantages and disadvantages of HPP.

(c) What is chromatography? What are stationary and mobile phase? Explain the major components of HPLC with a schematic diagram.

(d) What is edible coating? What is the importance of edible coating? Write about the materials used in edible coating along with any two processes to do edible coating over food.

(e) Write the methodology for serial dilution, pour plate, streak plate and spread plate methods.
