

B.Voc. DEGREE EXAMINATION-APRIL 2024
FOOD PROCESSING AND QUALITY CONTROL
SIXTH SEMESTER

COURSE : MAJOR CORE
PAPER : EMERGING TRENDS IN FOOD PROCESSING AND TECHNOLOGY
SUBJECT CODE : 16VF/VM/PT66
TIME : 3 HOURS MAX.MARKS: 100

SECTION – A

Answer all the questions:

(20 x 1=20)

I. Choose the correct answer:

1. The feasibility of _____ in the combination with minimal processing to reduce the no. of Salmonella and Escherichia coli in lettuce.
(a) Microwaving (b) Heating (c) Freezing (d) Gamma radiation
2. Yeasts are more sensitive than bacteria due to
(a) Reduced size (b) large size (c) pH (d) redox potential
3. Air bubbles are removed by
(a) Aeration (b) vacuum degassing (c) high temperature (d) heating
4. The mechanism of microbial inactivation in Ohmic heating are
(a) Thermal (b) Non-thermal (c) Both a & b (d) None of the above
5. The Shelf life of microwave-processed product is
(a) 1-2 years (b) 2-3 years (c) 12 months (d) 15 days
6. Ultrasound assisted freezing is used during _____.
(a) Evaporation of fluid food (b) Condensation of solid food
(c) Solidification of fluid food (d) Freezing of solid food

II. Fill in the blanks:

7. Oscillatory _____ are least efficient for microbial inactivation.
8. Vacuum cooling is a type of _____ cooling.
9. Sitzmann reported a reduction of _____ in milk after pre-treatment.
10. Ohmic heating is also known as _____.
11. The chamber used for vacuum cooling is called _____.
12. Anti-freeze protein was first isolated by _____.

III. State whether True or False:

13. Microfiltration involves semi permeable membrane.
14. Thermal hysteresis is measured with a Thermometer.
15. Water activity is calculated to know the possibility of growth of microorganisms.
16. Principle of vacuum cooling is based on condensation.
17. Cavitation results in occurrence of Hydro streaming.

IV. Expand the following:

18. PPO
19. FCC
20. HPP

SECTION – B**Answer any four questions:****(4 x 10 = 40)**

21. What are chemical methods used for decontamination of packaging material?
22. List the steps involved in the production of minimally processed foods.
23. How can antifreeze be useful in the food processing and preservation?
24. Enumerate the mechanism and application of Food Irradiation.
25. Write in detail the process of microwave processing. Give its advantages and disadvantages. Explain its applications in the food industry.
26. PEF is an effective treatment for food quality and safety- Justify.

SECTION – C**Answer any two questions:****(2x 20 = 40)**

27. Explain in detail the process and application of minimal processing in the fruits and vegetable Industry.
28. Elucidate the principle and application for the following processing techniques.
a. High Pressure Freezing b. Vacuum Cooling c. Microwave Processing
29. How is pulsed electric field applied in the fruit processing and meat industry? Write about the consumer acceptance of pulse electric fields.
30. How are anti-freeze proteins obtained? What is the need to use antifreeze proteins? Explain its process and applications in the food industry.
