

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086
(For Candidates admitted during the academic year 2004-05 & thereafter)

SUBJECT CODE : **BT/MO/PF14**

B.Sc. DEGREE EXAMINATION NOVEMBER 2007
BRANCH V.A – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
FIRST SEMESTER

COURSE : MAJOR - OPTIONAL
PAPER : **PRESERVATION OF FRUITS & VEGETABLES**
TIME : **3 HOURS** **MAX. MARKS : 100**

SECTION -A

I Answer all the questions. (18 marks)

i. Choose the correct answer:

1. Microorganism causing wine spoilage
a. *Acetobacter* b. *Penicillium* c. *Aspergillus*
2. The desired sugar content of grapes for wine making may range from
a. 15-25% b. 5-10% c. 20-30%
3. Sulphur dioxide is used as chemical preservative in
a. Wine making c. Canning c. Bottling
4. Entry of undesirable organisms into some material is
a. Inoculation b. Incubation c. Contamination
5. A culture containing only one species of organism is called.
a. Tissue culture b. Stock culture c. Pure culture

II. Fill in the blanks:

6. In the process of brining is added.
7. is the natural inoculum in the preparation of grape wine.
8. Bacteria which have the capacity to grow under either aerobic or anaerobic condition are called
9. is the existence of different forms in the same species of microorganism
10. is a fermented beverage prepared from apple.
11. Immersing fruits and vegetables in hot water or by exposing them to live steam is called
12. Hydrolytic decomposition of fat is called

III. State whether true or false:

13. By activating the food enzymes self decomposition of food is prevented.
14. *Saccharomyces* cause spoilage in canned foods.
15. Psychrophiles will not grow at refrigerator temperature
16. CO₂ replaces the air and facilitates anaerobic conditions needed for fermentation.
17. *Clostridium botulinum* is a thermophilic anaerobe
18. Vegetables are processed at a high temperature than fruits.

- IV. Answer any six questions. Each answer not to exceed 50 words: (6x3=18)
19. Lyophilization
 20. Vacuum dryer
 21. Freezer burn
 22. Dehydrofreezing
 23. Negative acceleration
 24. TDT
 25. Irradiation
 26. Sauerkraut
 27. Headspace

SECTION -B

Answer any four questions. Each answer not to exceed 200 words.
Draw diagrams wherever necessary. (4x6=24)

28. Outline the preparation of jam.
29. Explain the use of low temperature in preservation of vegetables.
30. Write short notes on enzymic browning.
31. Give an account on preservation of dehydration. What are the advantages of dehydration over sun drying.
32. Explain the role of biological factors on food spoilage.
33. Give an account on the organic acids and their salts used in preservation.

SECTION -C

Answer any two questions. Each answer not to exceed 1000 words.
Draw diagrams wherever necessary. (2x20=40)

34. Define canning and write about the methods of canning of fruits.
35. Discuss the manufacture of pectin.
36. Give an account on the preparation, fermentation and storage and aging of grape wine.
37. Write an essay on freezing method of preservation.
