



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI - 600 034

DEGREE EXAMINATION - FOOD CHEMISTRY AND FOOD PROCESSING

THIRD SEMESTER - APRIL 2014

FP 3875 - FOOD PROCESSING TECHNOLOGY

Date : 08/04/2014
Time : 01:00-04:00

Dept. No.

Max. : 100 Marks

PART - A

(20 marks)

Answer all the questions

I. Choose the best answer:

(5 x 1 = 5 marks)

- (1) Pulses are deficient in _____ containing amino acids
(a) lysine (b) sulphur (c) tryptophan (d) valine
- (2) A separation process in which a microporous hydrophobic membrane separates the two aqueous solutions having different solute concentrations.
(a) Reverse osmosis (b) osmotic membrane distillation (c) Ultrafiltration (d) Evaporation
- (3) Living organisms that cause biodeterioration are called
(a) Microbes (b) Deteriogens (c) Algae (d) Biodeteriogens
- (4) Most common refrigerant used in cryogenic freezers are
(a) CO (b) CH₃ (c) liquid CO₂ (d) CO₂
- (5) Rojak sauce is made from
(a) Cereals (b) Oats (c) Fruits (d) None of the Above

II. State whether the following are true or false, if false give reason (5 x 1 = 5 marks)

- (6) Phytins are complexes which make protein and minerals biologically unavailable to humans.
- (7) Blanching activates enzymes in fruits and vegetables.
- (8) Putrefaction is caused by *Proteus*.
- (9) Radiation in microwave oven is generated by magnetrons.
- (10) Fluidized bed freezers are modified blast freezers.

III. Complete the following:

(5 x 1 = 5 marks)

- (11) Centrifugal separation of microorganisms from milk is called _____.
- (12) The activity of the _____ in fresh rice is probably responsible for its sticky consistency after cooking.
- (13) Ready to eat foods are sterilised at temperature of _____.
- (14) _____ is a key enzyme in homolactic fermentation of glucose
- (15) IQF stands for _____.

IV. Answer the following, each within 50 words only

(5 x 1 = 5marks)

- (16) What is meant by pickling?
- (17) List the products of soybean.
- (18) Briefly discuss the work of Louis Pasteur.
- (19) Expand a) HCFC b) ROP c) CFC d) MAP
- (20) Define the term biofouling.

PART - B

(5×8 = 40 marks)

**Answer the following questions, each in about 500 words only.
Draw diagrams wherever necessary.**

21(a) Give short notes on the following:

- (i) Microbial biodeterioration
- (ii) Separation techniques in unit operation

OR

(b) Describe the following:

- (i) Autolysis and Lypolysis
- (ii) Size Reduction, pumping and mixing

22(a) Write briefly on Freeze concentration

OR

(b) What is gas packed refrigerated foods? Give some examples

23(a) Enumerate the different factors affecting sterilization and explain how continuous plate heat exchange sterilization is done.

OR

(b) Write a note on the following:

- (i) Retort processing of ready to eat foods
- (ii) Osmotic Dehydration process

24(a) Give an account of enzymes used in bread making.

OR

(b) Enlist the advantages and disadvantages of using preservatives based on their classification

25(a) Write a note on post harvest physiology and biochemical changes in fruits.

OR

(b) Explain the process of pasteurization of milk

PART - C

**Answer any TWO of the following questions, each in about 1500 words; (2×20 = 40 marks)
Draw diagrams wherever necessary.**

- (26) Discuss the following: Homolactic and heterolactic fermentation of glucose.
- (27) Write elaborately on the different types of dryers used in food processing.
- (28) Give a detailed account on cocoa processing.
- (29) Describe the process of producing dairy products by fermentation technology.