

Chittagong Veterinary and Animal Sciences University
MS in Food Processing and Engineering
July- December Semester 2017 Final Exam
Course Title: Fermentation and Food Biotechnology
Course code: FFB- 502

Total Marks: 40

Time: 2 hour

Answer any four (04) questions. Figures in the right margin indicate full marks.

1. a. Briefly describe the influence of physical factors on microbial environment? 04
b. Give an overview about the basic principles involved in the operation of microbial processes? 06
2. a. Discuss the application of biotechnology in food and beverage sectors? 06
b. Explain the requirements for designing a fermentor? 04
3. a. Appraise the role of repartitioning agents in quality meat production? 05
b. Explain bioconversion and secondary metabolite production? 05
4. a. Restate RFLP? Discuss the role of PCR for food quality improvements? 05
b. Assess the influence of consumer on food quality? 05
5. a. Give an overview about the application of biosensors? 05
b. Briefly describe the features of fluidized bed reactor? 05

Chittagong Veterinary and Animal Sciences University
MS in Food Processing and Engineering Final Examination, 2017
July -December Semester, 2017

Course Title: Advanced Unit Operations in Process and Food Engineering

Course Code: AUP-502, Full mark: 40, Time: 2 hours

Answer any four (4) questions. Figures in the right margin indicate full marks.

1. a. Differentiate between fluid statics and fluid dynamics. Discuss the concept of D-value and concept of Z-value. 4
b. i) Categorize the intrinsic energy changes of fluid flow. (3x2=6)
ii) Enumerate in brief the mixing classification and different mixing equipment.

2. a. Define pump. Explain the operating principle of a centrifugal pump with advantages. 4
b. Enumerate in brief the concept of commercial sterility. Explain the improved general methods for thermal process calculation of canned foods. 6

3. a. Mention the objectives of Size Reduction. Write down factors affecting size reduction. 4
b. Enumerate in brief the basic concept of following process : 6
 - i) pasteurization process,
 - ii) evaporation process and
 - iii) suppressed boiling type evaporation.

4. a. Define slurry, filter medium, filter cake and filtrate. Explain different types of filter media. 5
b. Illustrate the following terms (any two): i) solid liquid equilibrium process , (2.5x2=5)
ii) differential extraction process and
iii) crystallization process.

5. a. Write down the following terms (any four) : (2.5x4)=10
 - i) Enzyme immunoassays.
 - ii) Principle of atomic absorption spectroscopy,
 - iii) principle of Flame photometry,
 - iv) principle of Mass Spectroscopy,
 - v) various methods of sampling,

Chittagong Veterinary and Animal Sciences University
MS in Food Processing and Engineering Final Examination 2017
July- December Semester, 2017

Course Code: RFL-502

Course Title: Risk assessment and International Food Legislations

Full mark: 40

Time: 2 hours

Answer any four (4) questions. A figure in the right margin indicates full marks.

1. a. Enumerate in brief the sensory properties of food. 6
b. Explain briefly the following terms : i) Aerobic Colony Count (ACC) and 4
ii) Microbiological Criteria.
2. a. Mention the main function of BSTI (Bangladesh Standard Testing Institute). 4
b. Give a general outline of raw material inspection procedure. 6
3. a. Enumerate in brief the seven principle of HACCP. What is the Certification process 5
of ISO?
b. Enumerate the basic quality management principles of ISO 9000 series. 5
4. a. Illustrate the appropriate process of designation of food additives. Mention some 5
disadvantages of Food Additives.
b. Illuminate the importance of product information and consumer awareness. Discuss 5
the process of halal certification.
5. a. Shortly explain the important activities sectors of FDA and show the activities of 5
WHO in food safety.
b. Show the structure of ISO 9001:2015. Which sectors are benefited by ISO? 5

Chittagong Veterinary and Animal Sciences University
MS in Food Processing and Engineering
July- December Semester 2017 Final Exam
Course Title: Nutraceuticals and Functional Foods
Course code: NFF- 502

Total Marks: 40

Time: 2 hour

Answer any four (04) questions. Figures in the right margin indicate full marks.

1. a. Define bioactive compounds? Briefly describe the isolation of phytochemicals from plant origin? 07
- b. Explain the role of nutraceuticals to prevent cancer? 03
2. a. Categories nutraceuticals? Give an overview about the nutraceuticals as new dietary ingredients? 06
- b. Differentiate between: (i) Nutraceuticals vs Functional Foods 04
(ii) Prebiotic vs Probiotic
3. a. Explain the the mechanism of antioxidant activity of nutraceuticals? 05
- b. Appraise the role of phytoestrogens and phytosterols? 05
4. a. Analyze the effect of pH on food components? 05
- b. Appraise the preamble of nitrites as anti-microbial? 05
5. a. Give an overview about the natural anti-microbial of plant origin? 06
- b. Briefly explain the functional and sensory properties of nitrites? 04

Chittagong Veterinary and Animal Sciences University
MS in Food Processing and Engineering Final Examination, 2017
July-December Semester, 2017
Course Title: Novel Food Processing Techniques
Course Code: NFP-502
Full mark: 40, Time: 2 hours

Answer any four (4) questions. Figures in the right margin indicate full marks.

1. a. Enumerate in brief the principle of organic farming. Mention the basic steps of organic farm certification. 5
b. List the coating materials which are used in matrix encapsulation. Shortly describe the encapsulated ingredients with application. 5
2. a. Define High Pressure Processing and describe the Principles of High Pressure Processing with application. 5
b. Explain with flow chart the principle of Pulse Electric Field processing. Outline the main processing parameter of Pulse Electric Field Processing. 5
3. a. Write down the sequence of surface treatment and edible coatings process with application. 5
b. Show in tabular form of hybrid drying technologies classification scheme. 5
4. a. Define Osmotic Membrane Distillation (OMD). Enumerate in brief the effect of different process parameters on mass transfer during osmotic dehydration. 5
b. How Radio Frequency Electric Field chamber can be configured for food processing? Show in tabular form the applications of Ultrasound in Food Processing. 5
5. a. Discuss the principle and application of microwave heating for food. Give a brief description on fundamentals of Ohmic Heating. 5
b. Give the standard definition of special products. Discuss the role of applying novel food processing techniques for preserving nutritive value of food. 5

Chittagong Veterinary and Animal Sciences University
MS in Food Processing and Engineering
July- December Semester 2017 Final Exam
Course Title: Advanced Technology of Animal products
Course code: ATA- 502

Total Marks: 40

Time: 2 hour

Answer any four (04) questions. Figures in the right margin indicate full marks.

1. a. Define aging? Briefly describe the steaming process of meat? 04
b. Give an overview about the physical properties of meat? 06
2. a. Discuss the problems associated with chilling of fish by ice? 06
b. Short note: (i) Fish gelatin 04
(ii) Set style yogurt vs stirred style yogurt
3. a. Define curing? Explain the effect of fish and fishery products during? 05
b. Appraise the fish spoilage mechanisms? 05
4. a. Summarize the internal quality evaluation of egg 05
b. Define homogenization? Assess the role of homogenization in milk processing? 05
5. a. Give an overview about the novel thermal generating procedures of meat? 05
b. Analyze the palatability and eating quality of meat and meat products? 05

Chittagong Veterinary and Animal Sciences University

Dept. of Applied Food Science and Nutrition

MS in Applied Human Nutrition and Dietetics

July- December Final Examination, 2016

Course Name: Nutrition in Emergencies

Course Code: NUE-502

Full Marks: 40, Time: 2 hours

Answer any Four (4) questions from the listed below

1. a) Define Nutritional Emergency. 2
- b) What are the causes of Nutritional Emergency in our country? 3
- c) Give an account of historical perspectives of the disaster situation in context of Bangladesh. 5
2. a) Discuss the role of nutritional, health and socioeconomic data on early warning. 5
- b) Draw and narrate the framework for disaster relief-needs assessment. 5
3. a) What is disaster management? 2
- b) Enumerate the role of a Nutritionist in Disaster Management. 3
- c) Outline a design of a nutrition intervention program in a community. 5
4. a) List out the name of different types of emergency feeding program. 2
- b) Give a summary of General Food distribution and Therapeutic Feeding. 3+3
- c) What types of nutrient deficiencies may be occurred during emergency? 2
5. a) How do you can assess nutritional status of mass people during emergency? 3
- b) Describe the role of government and non – government organization in mitigating nutrient deficiency in a disaster prone area. 7