


Assignment on Computer Application in Food Technology, CFT-301(Theory)

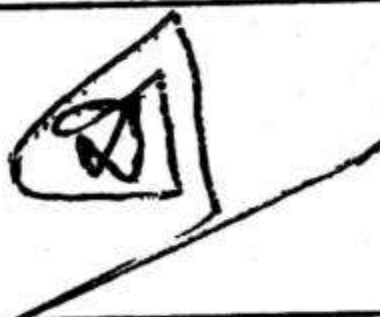
- Topic-1: Overview of Structure Programming(C Programming)
- Topic-2: Variables & Identifier, C token
- Topic-3: Data types
- Topic-4: Operators and expressions(Arithmetic, relational, Logical, assignment)
- Topic-5: Operators and expressions(Increment & decrement, conditional, bitwise, special)
- Topic-6: Precedence of arithmetic operator, type conversion
- Topic-7: Decision making and branching (if else, nested if else, else if ladder)
- Topic-8: Decision making and looping (for, while and do while)
- Topic-9: Arrays
- Topic-10: Character Array and string

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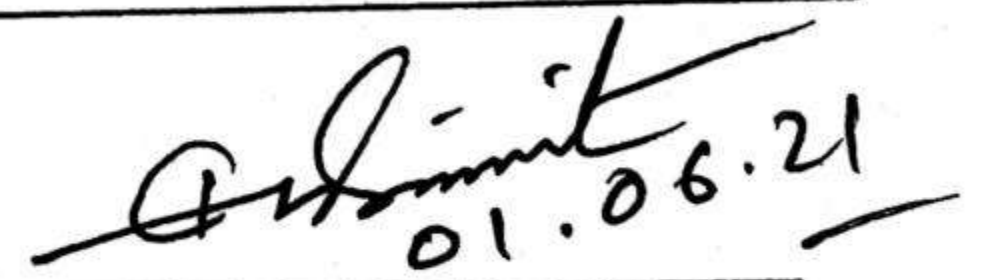


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Signature of Convenor

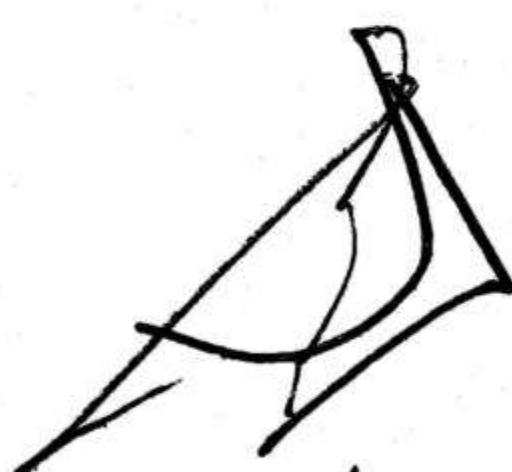


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Mediation ok.

Chattogram Veterinary and Animal Sciences University
Faculty of Food Science and Technology
BFST 3rd year 1st Semester Final Examination, 2020
Course Title: Computer Application in Food Technology (Theory)
Course Code: CFT-301 (T)

Full Marks: 35

Set: A

Time: 2 hours

[Figures in the right margin indicate full marks. Answer any 5 (Five) questions. Split answer is strongly discouraged.]

SECTION-A

1. a) What is structured programming? Briefly describe the structure of C programming. 4
b) Define C token. Explain different types of C token with examples. 3

2. a) Determine the value of each of the following logical expressions if $i = 10, j = 20, c = 30, d = 40, x = 50$ and $y = 60$. 1 × 4 = 4
(i) $2 * ((i/5) + (4 * (j - 3)) \% (i + j - 2))$
(ii) $(i - 3 * j) \% (c + 2 * d) / (x - y)$
(iii) $(x > y) \& \& ! (i > 0) \parallel (j < 5)$
(iv) $(float) ((int) 25.55 - 10 \% (int) 7.5)$
b) Explain how if else statement works with a flowchart. 3

3. a) What do you mean by backslash character constant? What are the meanings of the following backslash character constant? 1+4=5
(i) '\b' (ii) '\f' (iii) '\n' (iv) '\O'
b) What are the differences between put char () and printf ()? 2

4. a) What is an array? Give some examples where array can be used? How can we declare a two dimensional array? 3
b) Briefly describe about the fundamental data types in C. 4

5. a) Write a C program that will convert an upper case letter to lower case letter and vice versa. 4
b) Change the following for loop to do while loop: 3
for ($x = 0 ; x \leq 100 ; x = x + 1$)
{ if ($x \% 10 == 0$)
printf (" % d " , x) ;
}

6. a) Given the values of the variables p, q and r . Write a C program to rotate their values such that p has the value of ' q ', q has the value of ' r ' and r has the value of ' p '. 5
b) What is the '?' operator? Explain it with example. 2

7. a) Which of the following initialization statements are incorrect and why; rewrite the incorrect statement correctly? 6
(i) char string 1 [5] = "CVASU" ;
(ii) char string 2 [5] = "FFST" ;
(iii) char string 3 [] = "Hello" ;
(iv) float marks [5] = 0 ;
(v) int x [2, 3] = {(0, 0, 0), (0, 0, 0)} ;
(vi) int y [] [] = {0, 0, 0} ;
b) Distinguish between the following statements: 1
(i) $x = y$ (ii) $x == y$

Chattogram Veterinary and Animal Sciences University
Faculty of Food Science and Technology
BFST 3rd year 1st Semester Final Examination, 2020
Subject: Oil and Fat Technology (Theory)
Course Code: OFT-301 (T)

Full Marks: 18

Time: 2 hours

Set-2

(Figures in the right margin indicate full marks. Answer any **three questions** where question no. 1 is compulsory. Split answer is not allowed.)

Section-A

- | | | |
|----|--|----|
| 1. | Draw and briefly explain the flow diagram of olive oil production process. | 06 |
| 2. | a) Define drying and non-drying oil. | 01 |
| | b) Draw and explain the mechanisms of homogeneous and heterogenous catalyst in hydrogenation reaction. | 05 |
| 3. | a) What do you mean by winterization of oil? | 01 |
| | b) Briefly discuss the degumming process of oil. | 05 |
| 4. | a) What do you mean by neutralization of oil? | 01 |
| | b) Discuss the neutralization process of vegetable oil. | 03 |
| | c) List the positive and negative effects of hydrogenation. | 02 |

Chattogram Veterinary and Animal Sciences University
Faculty of Food Science and Technology
BFST 3rd year 1st Semester Final Examination, 2020
Subject: Oil and Fat Technology (Theory)
Course Code: OFT-301 (T)

Full Marks: 18

Time: 2 hours

Set-1

(Figures in the right margin indicate full marks. Answer any **three questions** where question no. **1** is compulsory. Split answer is not allowed.)

Section-A

- | | | |
|----|--|----|
| 1. | Draw and briefly explain the flow diagram of palm oil production process. | 06 |
| 2. | a) Define lard and suet. | 01 |
| | b) Draw a flow diagram of essential oil extraction process from seeds. | 02 |
| | c) How can you recognize the interesterification and fractionation process of oil? | 03 |
| 3. | a) What do you mean by winterization of oil? | 01 |
| | b) Briefly discuss the degumming process of oil. | 05 |
| 4. | a) What do you mean by hydrogenation of vegetable oil? | 01 |
| | b) Discuss the chemistry of hydrogenation in vegetable oil. | 03 |
| | c) List the positive and negative effects of hydrogenation. | 02 |

Chattogram Veterinary and Animal Sciences University (CVASU)
BFST 3rd Year 1st Semester Final Examination 2020: Assignment
Course Title: Clinical Nutrition (Theory)
Course Code: CLN-301 (T)
Full Marks: 17

Guidelines to answer the assignments:

1. A cover page as per the format given should be attached on the top of the set.
2. Assignment should be hand written on A4 size sheet/paper.
3. Strictly use Black color ink only for writing the assignments.
4. Assignments should not be copied, should be clear, readable and well presented.
5. Assignment should be submitted within the deadline assigned by the Dean office, FFST, CVASU.

Assignment-1: Write an assignment on “Overview of the Efficacy of DASH Diet in Lowering Blood Pressure among Hypertensive Adults”.

Explain your learning about composition of DASH diet, its complications, causes and types of hypertension.

Assignment-2: Write an assignment on “The effect of training and nutrition on the body composition and academic performance of university students”.

Explain your learning about the Motivating Behavioral Change, nutrition supplements and balance diet for graduate students. Also describe the relation between balance diet and academic performance.

Assignment-3: Write an assignment on “The effect of a nutrition education program on the performance of knowledge of nutrition, diet, body composition and perceived sport among athletes”

Describe the different types food athletes should be taken, foods increase athletic performance, foods athletes should avoid, Best diet for athletic performance.

Assignment-4: Write an assignment on “Upper Gastrointestinal Disorders- GERD and Indigestion”

Describe the physiology, etiology, causal factors and dietary guidelines for remedies of GERD and Indigestion.

Assignment-5: Write an assignment on “Upper Gastrointestinal Disorders Gastritis and Peptic Ulcer Disease”

Explain the Causes of gastritis and ulcer, Symptoms, Diagnosis, Treatment or dietary guidelines of gastritis and ulcer.

Assignment-6: Write an assignment on “Lower Gastrointestinal Disorders- Diarrhea and Constipation”



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Oil and Fat Technology
OFT-301

Serial No:	Assignment Name	Group (Roll)
01	An assignment on prospects, constraints and potentials of oil and fat industry in Bangladesh.	01-07
02	An assignment on waste management of oil industry in Bangladesh.	08-14
03	An assignment on oxidation mechanisms of lipid.	15-21
04	An assignment on degumming process of vegetable oil.	22-28
05	An assignment on marine lipids and its importance on human diet.	29-35
06	An assignment on importance of food lipid in human body.	36-42
07	An assignment on modification of triglyceride oil.	43-49
08	An assignment on risk factors of trans fatty acids.	50-56
09	An assignment on utilization of lipid in food industry.	57-63
10	An assignment on antioxidant mechanisms of lipid.	64-75

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Chattogram Veterinary and Animal Sciences University

Faculty of Food Science and Technology

BFST 3rd year 1st Semester Final Examination-2020

Subject: Clinical Nutrition (Theory)

Course Code: CLN-301

Full Marks: 18 Time: 1 hour

Set-02

(Figures in the right margin indicate full mark. Answer any 3 (Three) questions. Split answer is not allowed.)

Section- A

1. a) Mention the common causes and risk factors of lactose intolerance. 3
b) How do you counteract the effect of lactose intolerance? 3
2. a) Write down the symptoms and causes of IBS. 3
b) What types of food and life-style should be changed for someone with IBS? 3
3. a) Explain the pathophysiology of allergic rhinitis. 4
b) Illustrate the clinical evaluation and diagnostic studies of food allergy. 2
4. a) List out the symptoms and risk factors of Crohn's disease. 3
b) Explain the pathophysiology of IBD. 3

Explain the Symptoms of the diseases, Types, Causes, Prevention and dietary management of Diarrhea and constipation

Assignment-7: Write an assignment on “**Lower Gastrointestinal Disorders- Celiac Disease and Lactose Intolerance**”

Explain the Symptoms of the diseases, Types, Causes, Prevention and dietary management of Celiac Disease and Lactose Intolerance.

Assignment-8: Write an assignment on “**Rheumatic Disorder- Arthritis and Gout**”

Explain the Symptoms of the diseases, Types, Causes, Prevention and dietary management of Arthritis and Gout.

Assignment-9: Write an assignment on “**Overview of Food Allergy**”

Explain the Pathogenesis, Causes, Risk factors and Dietary management of food allergy.

Assignment-10: Write an assignment on “**Overview of Autism Spectrum Disorder**”

Explain the Pathogenesis, Causes, Risk factors and Dietary management of Autism Spectrum Disorder.

W. Deval
31-05-2021

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Chattogram Veterinary and Animal Sciences University

Faculty of Food Science and Technology

BFST 3rd year 1st Semester Final Examination-2020

Subject: Clinical Nutrition (Theory)

Course Code: CLN-301

Full Marks: 18 Time: 1 hour

Set-01

(Figures in the right margin indicate full mark. Answer any 3 (Three) questions. Split answer is not allowed.)

Section- A

1. a) Write down the importance of healthy dietary patterns for health promotion. 3
b) Sketch out the clinical nutrition patient encounter process. 3
2. a) Differentiate between guidance and counseling. 3
b) Briefly describe the stages of trans-theoretical model of change. 3
3. a) What are the common symptoms and causes of dyspepsia? 3
b) How do you stop indigestion by maintaining lifestyle and dietary modification? 3
4. a) Summarize the causes and complications of constipation. 3
b) How do you improve bowel movement by diet and lifestyle changes? 3

BFST 3rd Year 1st semester Final Exam-2020
Course Title: Market Milk Processing Technology
Course Code: MMP-301 (T)
Total Marks : 18
Time : 1 hour
Section -A (Set-1)

Answer any three questions from the following; Figures in the right margin indicate full marks

1. a) What do you mean by platform test ? Mention these 3
b) Why is chilling important for preserving milk commercially in Bangladesh 3

2. a) Show the steps of processing market milk by flow diagram 3
b) Mention the merits of HTST method of milk preservation 3

3. a) What are methods of buying milk throughout the world ? Which one is more accepted to you and why ? 4
b) List some milk borne diseases 2

4. a) What is toned milk? Discuss the manufacturing process of toned milk 4
b) List the merits of toned milk 2

BFST 3rd Year 1st semester Final Exam-2020
Course Title: Market Milk Processing Technology
Course Code: MMP-301 (T)
Total Marks : 18
Time : 1 hour
Section -A (Set-2)

Answer any three questions from the following; Figures in the right margin indicate full marks

- 1. Discuss briefly factors affecting quality and quantity of milk production 6**

- 2. a) Classify CIP chemical with examples 2**
b) Write the CIP procedure of a bulk milk cooler 4

- 3. Discuss the manufacturing methods of chocolate milk 6**

- 4. How will you manufacture the acidophilus milk ? 6**

পাঠ্য পুস্তক বা অন্য কোন পুস্তক হইতে গৃহীত উক্তি ও উদ্ধৃতির পূর্ণ বিবরণ, সংস্করণ এবং পৃষ্ঠা নম্বর পত্রের উপরিভাগে সন্নিবেশিত করিতে হইবে।

FST 3rd year 1st semester Final **পরীক্ষা, ২০২০**
বিষয় Fish Processing Technology

পত্রের পূর্ণ শিরোনাম FPT: 301, Fish Processing Technology (Theory Assignment)

পূর্ণমান 35 সময় ঘন্টা

*যে কোন প্রশ্নের উত্তর দিতে হইবে

*বিশেষ নির্দেশ (প্রয়োজনবোধে) All instructions should be followed, which will be provided from Dean office.

		নম্বর
1.	a. Utilization of byproducts and waste materials from fish processing industries b. Traditional and improved fish processing technologies in developed and developing countries	
2.	a. Fish processing by-products as a potential source of gelatin b. Value chain of fish and fishery products: origin, functions and application in developed and developing country markets	
3.	a. Recent advances in processing and packaging of fishery products b. Fish spoilage mechanisms and preservation techniques	

*অপ্রয়োজনীয় অংশ কেটে দিন।

Billu
Dr. Afroza Sultana
প্রশ্নকারীর নাম

Dr. Afroza Sultana
Associate Professor
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Set 1

Chattogram Veterinary and Animal Sciences University
Faculty of Food Science and Technology
BFST 3rd year 1st semester Final Exam., 2020
Course Title: Fish Processing Technology, Course code: FPT-301

Full marks: 35

Time: 2 hours

(Figure in right margin indicates full marks. Answer any four questions where question no. 1 is compulsory.)

1. Explain in brief the effect of rigor mortis on frozen whole fish & frozen fillet. 5
2. a. Clarify the changes associated with freezing & cold storage of fish. 6
b. Indicate the criteria of packaging to export fish by freezing. 4
3. a. Briefly discuss the principal changes in fish muscle after the death of fish. 5
b. Systematically illustrate the characteristics pattern of fish deterioration during storage in ice. 5
4. a. Identify the problems associated with traditional fish drying in Bangladesh. 5
b. How can you improve the traditional drying technique? - mention your suggestions. 5
5. a. Why deterioration occurred in fish during handling and transportation in marketing system? 4
b. Investigate the problems and way to improve the existing marketing system of fish. 6

Set 2

Chattogram Veterinary and Animal Sciences University
Faculty of Food Science and Technology
BFST 3rd year 1st semester Final Exam., 2020
Course Title: Fish Processing Technology, Course code: FPT-301

Full marks: 35

Time: 2 hours

(Figure in right margin indicates full marks. Answer any four questions where question no. 1 is compulsory.)

1. In the context of Bangladesh, discover the importance of fish processing? 5
2.
 - a. Make a list of nine main world fishery classes. 3
 - b. Define fish processing. Demonstrate the objectives and scope of fish processing. 4
 - c. Provide a brief list of fishery products and by-products. 3
3.
 - a. Recommend the benefits of quick freezing over slow freezing. 3
 - b. How much energy have to remove to freeze 1000kg fish from temperature 30°C to - 30°C? 3
 - c. Disclose the factors that affecting freezing time of fish. 4
4.
 - a. Distinguish between drying and dehydration. 2
 - b. Expose the factors that influences the rate of fish drying. 4
 - c. Write down the advantages & disadvantages of traditional fish drying in Bangladesh 4
5. Write short notes on : (any four) 2.5 X 4= 10
 - i) Thawing ; ii) Fish freezing; iii) Traditional fish processing techniques; iv) Marketing channels of fish; v) Fresh fish vs stale fish

		নম্বর
4	a. Fish marketing system in southern Bangladesh: recommendations for efficient marketing b. Postmortem physical, bacteriological and biochemical changes and evaluation of the freshness in the muscle of tilapia during the storage in ice and frozen condition	
5	a. Marketing system of marine fish in Bangladesh and role of middlemen and Co-operatives in the production and marketing of fish b. Glazing of frozen fish: analytical and economic challenges	
6	a. Consumer attitudes toward fresh and frozen fish b. Marketing system of traditional dried and semi-fermented fish product (cheap shutki) and socio-economic condition of the retailers in local market of Bangladesh	
7	a. The connective tissues of fish: Gaping of fish muscle under various conditions of freezing, cold storage, and thawing b. Marketing and value chain system of marine frozen fish in Bangladesh	
8	a. Consumer preferences and demand for fish products in Bangladesh and developed countries b. Fish drying and socio-economic condition of dried fish producers in the coastal region of Bangladesh	
9	a. Drying and dehydration of marine and fresh water fishes using different drier in Bangladesh b. Production and export of shrimp of Bangladesh: Challenges and opportunities	
10	a. Current constraints and future possibilities for Bangladesh fisheries and fish products b. Evaluation of traditional and solar fish drying systems towards enhancing fish storage and preservation in developing countries	

Billo
Dr. Afroza Sultana
প্রণয়কারীর নাম

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Chattogram Veterinary and Animal Sciences University

Faculty of Food Science and Technology

BFST 3rd year 1st Semester Final Examination, 2020

Subject: Fish and Sea Food Technology (Theory)

Course Code: FSF-301 (T)

Full Marks: 35

Time: 2 hours

Set-1

(Figures in the right margin indicate full marks. Answer any **Four** questions where question no.1 is compulsory)

Section-A

1. a) Write down the significance of fish and sea-food in functional foods 5
2. a) What do you mean by fishing craft and gear? Is there any difference between them? 4
b) Define fishing. Illustrate the difference fishing methods. 6
3. a) Discuss about mechanism and manifestation of spoilage in fish and sea food. 6
b) Write down the chemical treatments and bio-preservatives in fish and sea food preservation. 4
4. a) Discuss about the operations involved in fish salting. 5
b) Write down the short note on "Marine Peptides". 5
5. a) How can you differentiate fresh fish and spoiled fish? 5
b) Sketch the distribution channel of frozen fish. 5

Chattogram Veterinary and Animal Sciences University

Faculty of Food Science and Technology

BFST 3rd year 1st Semester Final Examination, 2020

Subject: Fish and Sea Food Technology (Theory)

Course Code: FSF-301 (T)

Full Marks: 35

Time: 2 hours

Set-2

(Figures in the right margin indicate full marks. Answer any **Four** questions where question no.1 is compulsory)

Section-A


1. a) State the functions and use of additives in fish processing. 5
2. a) What is sensory assessment? How sensory assessment operates in practice? 5
b) Sketch a descriptive guide to EEC grades of freshness of white fish. 5
3. a) Demonstrate the marketing channels of ribbon fish. 5
b) Give an outline of current inspection programs of sea-food safety. 5
4. a) Write down the principles of HACCP. 4
b) Enumerate the application of HACCP in sea food. 6
5. a) Briefly describe the steps of fish smoking. 5
b) Describe different types of marine toxin poisoning. 5

Chattogram Veterinary and Animal Sciences University (CVASU)
BFST 3rd Year 1st Semester Final Examination 2020: Assignment (Set B)
Course Title: Fish and Seafood Technology (Theory)
Course Code: FSF – 301
Full Marks: 35

Instructions and Regulations for Assignments:

1. Assignment should be submitted within the deadline assigned by the Dean office, FFST, CVASU.
2. A cover page as per the format given should be attached on the top of the set.
3. Assignment should be hand written on A4 size sheet/paper.
4. Strictly use Black colour ink only for writing the assignments.
5. Assignments should not be copied, should be clear, readable and well presented.
6. Plagiarism is strictly prohibited.

SL. NO.	ASSIGNMENT TOPICS
1.	Fish and seafood consumption and trade.
2.	Utilization of advanced equipment in fish and seafood processing.
3.	Processing and preservation of different fish and seafood products.
4.	The future of fish and seafood byproducts.
5.	Advanced packaging technologies of fish and seafood products.
6.	Global fish and seafood supply chain.
7.	Fish and seafood quality and safety.
8.	Implementation of HACCP and US FDA safety regulations in fish and seafood industry.
9.	Considerations for harvesting and handling of fish and seafood.
10.	Waste management strategy of fish and seafood processing industry in Bangladesh.


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Chattogram Veterinary and Animal Sciences University

Faculty of Food Science and Technology

BFST 3rd year 1st Semester Final Examination, 2020

Subject: Technology of Fruits and Vegetable products (Theory)

Course Code: FVP-301 (T)

Full Marks: 35

Time: 2 hours

Set-1

(Figures in the right margin indicate full marks. Answer any **Four** questions where question no.1 is compulsory, Split answer is not allowed)

Section-A

1. a) Define fruits and vegetables. 2
b) Write down the contribution of fruits and vegetables to human nutrition. 3
2. a) What is ripening? Imagine you are given some mangoes, how can you identify whether they are ripe or unripe? 2+3=5
b) State the different chemical and bio-chemical changes of fruits and vegetables. 5
3. a) Sketch the processing steps of jelly. 5
b) Why pectin is used for jam or jelly? Discuss about the mechanism of gel formation. 2+3=5
4. a) Write down the principle of food preservation. 2
b) What are the ideal characteristics of preservatives that you should consider before using? 3
c) Illustrate the importance of chemical preservatives. 5
5. a) Demonstrate the steps involved in vinegar production. 5
b) Give an outline of preparation and preservation of unfermented fruit beverages. 5

Waste Management and Environmental Science

Topics for Assignment

Instructions: Students should write approximately 500 words in individual assigned topics.

1. Application of microbial fuel cells for wastewater treatment.
2. Industrial development and relative consequences of pollution in our environment.
3. Arsenic contamination in ground water throughout Bangladesh.
4. Management of food industrial waste for sustainable development.
5. Municipal wastewater treatment methods.
6. Environmental impact assessment and environmental management plans for sustainable industrial development.
7. Micro-pollutants in wastewater and methods of organic micro-pollutants removal.
8. Sources of Greenhouses Gases (GHG) emissions in air and their relative problems associated with GHGs.
9. Prospects of rain water as a source of drinking water.
10. Reuse and recycling of grey water in households.



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Chattogram Veterinary and Animal Sciences University (CVASU)
BFST 3rd Year 1st Semester Final Examination 2020: Assignment (Set B)
Course Title: Technology of Fruits and Vegetable Products
Course Code: TFV – 301
Full Marks: 35

SL. NO.	ASSIGNMENT TOPICS
1.	SCOPE AND STATUS OF FRUITS AND VEGETABLES PROCESSING INDUSTRIES IN BANGLADESH.
2.	METHODS OF POST HARVEST HANDLING OF FRUITS AND VEGETABLES.
3.	DETERIORATION FACTORS OF FRUITS AND VEGETABLES AND ITS CONTROL.
4.	NON-THERMAL TECHNOLOGIES FOR FRUITS AND VEGETABLE PRODUCTS.
5.	ADVANCED PACKAGING TECHNOLOGIES OF FRUITS AND VEGETABLE PRODUCTS (INCLUDING ACTIVE AND INTELIGENT).
6.	GLOBAL FRUITS AND VEGETABLE SUPPLY CHAIN. (INCLUDING MARKETING CHANNEL)
7.	PRESERVATION TECNIQUES OF FRUITS AND VEGETABLES (FRESH CUT AND PROCESSED).
8.	BYPRODUCT UTILIZATION IN FRUITS AND VEGETABLE PROCESSING INDUSTRY.
9.	DEVELOP A MODEL TO IMPLEMENT HACCP SYSTEM IN FRUITS AND VEGETABLE PROCESSING INDUSTRY.
10.	ELABORATIVE DESCRIPTION OF BIOACTIVE COMPOUNDS AND NUTRACEUTICALS FOUND IN FRUITS AND VEGETABLES (NATURE, CHEMICAL NATURE, COMPOSITION, FUNCTIONAL PROPERTIES, MEDICINAL PROPERTIES, HEALTH BENEFITS, SIDE EFFECTS etc.)

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Shireen
11.7.21

Shireen
31.5.2021
Shireen Akther
Associate Professor
Dept of FPE, CVASU

Chattogram Veterinary and Animal Sciences University
Faculty of Food Science and Technology
BFST 3rd year 1st Semester Final Examination, 2020
Subject: Waste Management and Environmental Science (Theory)
Course Code: WME-301 (T)

Full Marks: 18

Time: 1 hours

Set-1

(Figures in the right margin indicate full marks. Answer any **Four** questions)

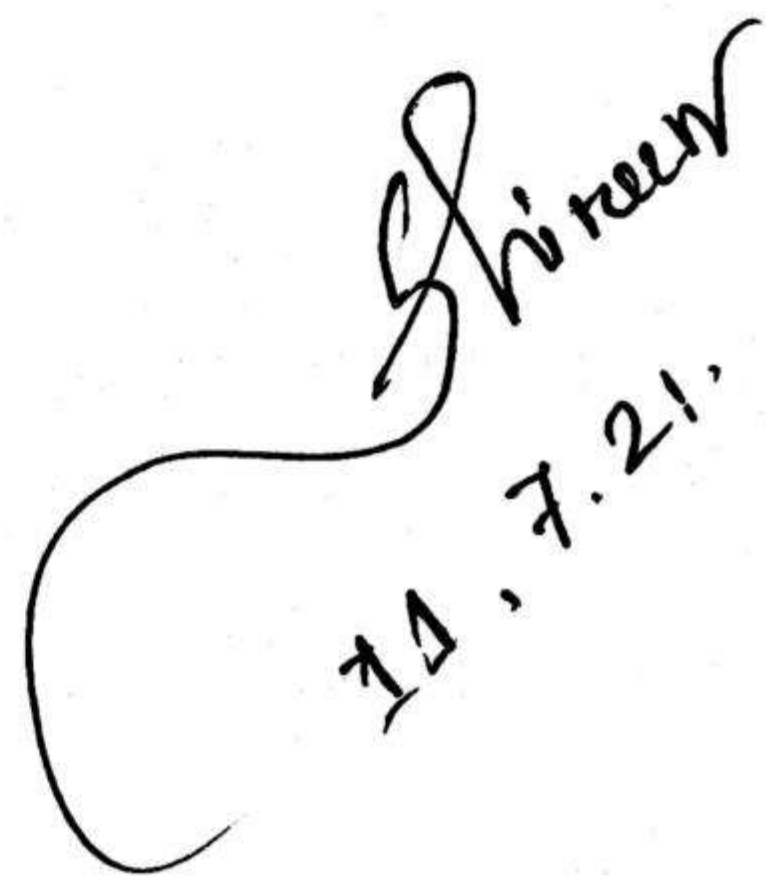
Section-A


- | | | |
|----|---|-----|
| 1. | a) What are primary and secondary air pollutants? | 2.5 |
| | b) Enlist the components of our environment. | 02 |
| 2. | a) Why activated sludge treatment process is used widely in waste water treatment plants? | 1.5 |
| | b) Sketch the flow diagram of an activated sludge treatment process. | 03 |
| 3. | a) What do you mean by soft and hard water? | 1.5 |
| | b) Write the reactions involved in lime soda process. | 03 |
| 4. | a) What quality parameters are considered for air quality assessment? | 1.5 |
| | b) Write the sources of sulfur emission and it's relative consequences to the atmosphere. | 03 |
| 5. | a) Outline the main steps of Environmental Impact Assessment (EIA). | 02 |
| | b) How mitigation measures can be implemented in EIA system? | 2.5 |

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3. Assignment should be hand written on A4 size sheet/paper.
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5. ~~Assignments should not be copied, should be clear, readable and well presented.~~


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Chattogram Veterinary and Animal Sciences University (CVASU)
BFST 3rd Year 1st Semester Final Examination 2020: Assignment
Course Title: Food Biotechnology (Theory)
Course Code: FBT-301 (T)
Full Marks: 35

Instructions and regulations for assignments:

- a. Assignment should be submitted within the deadline assigned by the Dean office, FFST, CVASU.
- b. A cover page as per the format given by Dean office, FFST, CVASU should be attached on the top of the set.
- c. Assignment should be hand written on A4 size sheet/paper.
- d. Strictly use Black colour ink only for writing the assignments.
- e. Assignments should not be copied, should be clear, readable and well presented.
- f. Plagiarism is strictly prohibited.

Assignment

1

Sl	Task	Marks
a	Give an honest comprehensive self-assessment of your skills and knowledge about "Fundamental of Food Biotechnology" before and after completion of the course. You should aim to write between 150-200 words/1-2 pages.	5
b	To what extent do you agree or disagree with following statement? "For centuries, foods have been improved by techniques that select for the most desirable traits in plants and animals" Give reasons for your answer and any relevant examples from your acquired knowledge from "Food Biotechnology" course. You should aim to write between 250-300 words/2-3 pages.	10
c	Explain your learning about the past, present and future of food biotechnology. You should aim to write below 500 words (Not more than 5 pages)	20

2

Sl	Task	Marks
a	Give an honest comprehensive self-assessment of your skills and knowledge about "Bioprocessing" before and after completion of the course. You should aim to write between 150-200 words/1-2pages.	5
b	To what extent do you agree or disagree with following statement? "People with food allergies should take extra caution when eating foods produced using biotechnology because the food may contain a hidden allergen." Give reasons for your answer and any relevant examples from your acquired knowledge from "Food Biotechnology" course. You should aim to write between 250-300 words/2-3 pages.	10
c	Explain your learning about the roles of biotechnology for enhancing nutrient profile of food. You should aim to write below 500 words (Not more than 5 pages)	20

3

Sl	Task	Marks
a	Give an honest comprehensive self-assessment of your skills and knowledge about "Molecular Biology" before and after completion of the course. You should aim to write between 150-200 words/1-2pages.	5
b	To what extent do you agree or disagree with following statement? "In addition to being more resistant to disease, crops produced through biotechnology can produce food that is more nutritious and stays fresh." Give reasons for your answer and any relevant examples from your acquired knowledge from "Food Biotechnology" course. You should aim to write between 250-300 words/2-3 pages.	10

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Chattogram Veterinary and Animal Sciences University (CVASU)

Faculty of Food Science and Technology

BFST 3rd Year 1st Semester Final Examination 2020

Course Title: Food Biotechnology

Course Code: FBT-301

Total Marks: 35 Time: 2 hours

Figures in the right margin indicate full marks. Answer any four (4) questions where 1 is compulsory. The split answer is discouraged.

- 1 Draw a neat-labelled diagram of a stirred tank bioreactor. 5

- 2 a. What is the first step of gene expression? Briefly describe the phases of “Central Dogma”. 1+4=5
b. Write a short note on any two of the followings: 2.5×2=5
 - i. Strain development strategy
 - ii. Solid-substrate fermentations
 - iii. Upstream processing

- 3 a. Enumerate the four stages of the beer brewing process. 5
b. Briefly describe the ranges of fermentation processes. 6

- 4 a. What is western blotting? Briefly describe the principle behind the technique and elaborate on its procedure, and application in molecular biology. 1+5=6
b. What do you understand by polymerase chain reaction? Briefly describe the different steps of a typical polymerase chain reaction. 1+3=4

- 5 a. Why GM foods are produced? How screening and identification of genetically modified foods is done? 1+4=5
b. Briefly explain the “Symba” and “Puteen” process of single-cell protein bioprocessing. 5

b	<p>Explain as if writing for an educated but non-expert audience: "Crops and food produced through biotechnology are similar to crops and food produced through traditional agricultural methods."</p> <p>Give reasons for your answer and any relevant examples from your acquired knowledge from "Food Biotechnology" course.</p> <p>You should aim to write between 250-300 words/2-3 pages.</p>	10
c	<p>Explain your learning about the three generations of GM Crops: purposes and commonly modified traits.</p> <p>You should aim to write below 500 words (Not more than 5 pages)</p>	20

8

Sl	Task	Marks
a	<p>Give an honest comprehensive self-assessment of your skills and knowledge about "Plant Tissue Culture" before and after completion of the course.</p> <p>You should aim to write between 150-200 words/1-2 pages.</p>	5
b	<p>To what extent do you agree or disagree with following statement? "Future uses of food biotechnology may include the creation of foods that are more nutritious."</p> <p>Give reasons for your answer and any relevant examples from your acquired knowledge from "Food Biotechnology" course.</p> <p>You should aim to write between 250-300 words/2-3 pages.</p>	10
c	<p>Explain your learning about the roles of biotechnology for enhancing nutrient profile of food.</p> <p>You should aim to write below 500 words (Not more than 5 pages)</p>	20

9

Sl	Task	Marks
a	<p>Give an honest comprehensive self-assessment of your skills and knowledge about "Ethics and safety of food biotechnology products" before and after completion of the course.</p> <p>You should aim to write between 150-200 words/1-2 pages.</p>	5
b	<p>To what extent do you agree or disagree with following statement? "Biotechnology can provide tools to help alleviate hunger and malnutrition worldwide."</p> <p>Give reasons for your answer and any relevant examples from your acquired knowledge from "Food Biotechnology" course.</p> <p>You should aim to write between 250-300 words/2-3 pages.</p>	10
c	<p>Explain your learning about the plant transformation techniques.</p> <p>You should aim to write below 500 words (Not more than 5 pages)</p>	20

10

Sl	Task	Marks
a	<p>Give an honest comprehensive self-assessment of your skills and knowledge about "Future Prospects of Food Biotechnology" before and after completion of the course.</p> <p>You should aim to write between 150-200 words/1-2pages.</p>	5
b	<p>To what extent do you agree or disagree with following statement? "Crops produced using biotechnology have negative effects on the human health"</p> <p>Give reasons for your answer and any relevant examples from your acquired knowledge from "Food Biotechnology" course.</p> <p>You should aim to write between 250-300 words/2-3 pages.</p>	10
c	<p>Explain your learning about the human health risk assessment.</p> <p>You should aim to write below 500 words (Not more than 5 pages)</p>	20

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c	Explain your learning about the principles, manufacturing process, and current uses and applications of wine. You should aim to write below 500 words (Not more than 5 pages)	20
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4

Sl	Task	Marks
a	Give an honest comprehensive self-assessment of your skills and knowledge about "Genetic Engineering" before and after completion of the course. You should aim to write between 150-200 words/1-2pages.	5
b	To what extent do you agree or disagree with following statement? "Strain improvement is a vital part of process development in most fermentation industries" Give reasons for your answer and any relevant examples from your acquired knowledge from "Food Biotechnology" course. You should aim to write between 250-300 words/2-3 pages.	10
c	Explain your learning about the principles, manufacturing process, and current uses and applications of single cell protein. You should aim to write below 500 words (Not more than 5 pages)	20

5

Sl	Task	Marks
a	Give an honest comprehensive self-assessment of your skills and knowledge about "Enzymes" before and after completion of the course. You should aim to write between 150-200 words/1-2pages.	5
b	To what extent do you agree or disagree with following statement? "Food biotechnology provides far greater benefits to food producers than to consumers." Give reasons for your answer and any relevant examples from your acquired knowledge from "Food Biotechnology" course. You should aim to write between 250-300 words/2-3 pages.	10
c	Explain your learning about the principles, manufacturing process, and current uses and applications of Beer. You should aim to write below 500 words (Not more than 5 pages)	20

6

Sl	Task	Marks
a	Give an honest comprehensive self-assessment of your skills and knowledge about "Genetically Modified Foods" before and after completion of the course. You should aim to write between 150-200 words/1-2page.	5
b	To what extent do you agree or disagree with following statement? "Although there is no such thing as "zero risk," consumers can be assured that foods produced using biotechnology are held to the same standards of safety as other foods." Give reasons for your answer and any relevant examples from your acquired knowledge from "Food Biotechnology" course. You should aim to write between 250-300 words/2-3 pages.	10
c	Explain your learning about the principles, manufacturing process, and current uses and applications of citric acid. You should aim to write below 500 words (Not more than 5 pages)	20

7

Sl	Task	Marks
a	Give an honest comprehensive self-assessment of your skills and knowledge about "Industrial Food Biotechnology" before and after completion of the course. You should aim to write between 150-200 words/1-2page.	5