

**SET-A**

**CHATTOGRAM VETERINARY AND ANIMAL SCIENCES UNIVERSITY**

**Faculty of Food Science and Technology**

**Course Title: Marketing of Food Products and Business Management (Theory)**

**Course Code: MFP-401 (T)**

**Total Marks: 35; Time: 2.0 hours**

Answer any **3 (Three)** questions from the followings where question 1 is compulsory. Figures in the right margin indicate full marks.

**Section A**

1.
  - a. Define marketing. Write the significance of marketing in Business. 3.0
  - b. What are the 4 Cs of marketing? Why do marketers need to consider those 4 Cs? 4.0
  - c. Describe the steps in marketing process. 4.0
2.
  - a. Prepare the titles of the content of a typical business plan. 4.0
  - b. Identify the merits of planning. 4.0
  - c. Predict some challenges in Processed Food Business in Bangladesh. 4.0
3.
  - a. Define satisfaction and value. 2.0
  - b. Narrate the marketing functions related to food marketing system. 5.0
  - c. Differentiate selling concept from marketing concept with examples 5.0
4.
  - a. List 5 Global and 5 national food giants. 4.0
  - b. Propose some ideas how you can add value to a food products on your own choice. 4.0
  - c. How can your marketing knowledge help you as a food science graduate? 4.0

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Chattogram Veterinary and Animal Sciences University  
Faculty of Food Science and Technology  
BFST 4<sup>th</sup> Year 1<sup>st</sup> Semester Final Examination 2020  
Course Title: Extension Communication Management  
Course Code: ECM 401

Total Marks: 18, Time: 1.0 hours.

Answer any 3(Three) questions from each section. Figures in the right margin indicate full mark.

Section: A

1. a) What do you mean by extension in view of food sciences and technology? 3.0  
b) Write down the philosophies of extension and briefly describe any two of them. 3.0
2. a) Define motivation. 2.0  
b) Describe the Maslow's need theory of motivation with neat diagram. 4.0
3. a) Define leadership. State the types of leadership with examples. 3.0  
b) Write down the importance of leadership in extension communication management. 3.0
4. a) Define extension programme and programme planning? 3.0  
b) Enumerate the principles of extension programme planning and describe any two of them. 3.0

5.

a) Define motivation.

Chattogram Veterinary and Animal Sciences University  
Faculty of Food Science and Technology  
BFST 4<sup>th</sup> Year 1<sup>st</sup> Semester Final Examination 2020  
Course Title: Extension Communication Management  
Course Code: ECM 401

**Total Marks: 17, Deadline: , 11:59 PM**

**Section – B**

<b>Assignment No.</b>	<b>Title of Assignment</b>	<b>Students Roll No.</b>
1.	Overview of food sector of Bangladesh: Prospective and constraints.	Group-1
2.	Innovations in production, processing and marketing of food products.	Group-2
3.	Post harvest loss assessment and technology to reduce post harvest loss.	Group-3
4.	Marketing system development in livestock originated food.	Group-4
5.	Entrepreneurship development in food sector (new business opportunities)	Group-5
6.	Innovation in management functions in food sector during covid-19 situation.	Group-6
7.	Comparative discussion among different agricultural extension approaches in food sector of Bangladesh.	Group-7
8.	Role of extension organizations to improve the efficiency of food sector of Bangladesh.	Group-8
9.	Public private partnership (PPP) in food sectors of Bangladesh (Case studies etc.)	Group-9
10.	Current food production and distribution policy in Bangladesh.	Group-10

Chattogram Veterinary and Animal Sciences University

FFST 4<sup>th</sup> Year 1<sup>st</sup> Semester Final Exam-2020

Course: Poultry Products Technology (Theory),

Course Code: PPT-401, Section-B

Total Marks: 17

Sl. No.	Titles of the Assignments	Assigned Students' Roll No.
01.	Which one is more nutritious? Duck egg or Chicken egg? Justify.	17/01- 17/06
02.	Problems and prospects of the "Ready to eat" poultry meat products in Bangladesh.	17/07, 17/08, 17/10 -17/13
03.	Problems and prospects of egg marketing in Bangladesh.	17/14 -17/18, 17/20
04.	Contribution of poultry meat on human nutrition around the world.	17/21 – 17/26
05.	DFD and PSE.	17/27 – 17/32
06.	HACCP in poultry industry.	17/33 – 17/36, 17/38, 17/39
07.	Spoilage of poultry products.	17/40 – 17/45
08.	Worldwide lean meat production.	17/46 – 17/51
09.	Packaging of poultry products.	17/52 – 17/55, 17/57, 17/58, 16/102
10.	Present status of poultry meat and egg production across the globe.	16/103– 16/107, 16/31, 15/38

*Dr. Nasima Akter*  
03.06.2021  
**DR. NASIMA AKTER**  
Assistant Professor  
Dept. of Dairy and Poultry Science  
Chattogram Veterinary and Animal Sciences  
University, Khulshi, Chittagong.

*Mst. Marjina Akter*  
03.06.2021  
**MST. MARJINA AKTER**  
Associate Professor  
Dept. of Dairy and Poultry Science  
Chattogram Veterinary and Animal  
Sciences University, Khulshi, Cts

*Dr. Nasima Akter*  
03.06.2021

**Chattogram Veterinary and Animal Sciences University**  
**Faculty of Food Science and Technology**  
**BFST 4<sup>th</sup> year 1<sup>st</sup> Semester Final Examination-2020**  
**Subject: Poultry Products Technology (Theory)**  
**Course Code: PPT-401**

**Full Marks: 18**

**Time: 1 hour**

**Set-01**

(Figures in the right margin indicate full mark. Answer any 3 (Three) questions)

**Section-A**

- |    |    |  |   |
|----|----|--|---|
| 1. | a) | Define: Poultry Products Technology, Broiler, Condition, Reject, Green                 | 4 |
|    |    | goose, Table egg, Meat, Layer  |   |
|    | b) | Explain-shrinkage  | 2 |
| 2. | a) | Discuss the factors determining the quality of poultry meat                            | 5 |
|    | b) | Enlist the nutritional value of duck egg   | 1 |
| 3. | a) | Name ten (10) poultry meat products  | 2 |
|    | b) | Define food additives. Name common food additives with their action, uses and examples | 4 |
| 4. | a) | Classify sausage   | 4 |
|    | b) | Differentiate CCP <sup>1</sup> and CCP <sup>2</sup>                                    | 2 |

Moderation done

**Chattogram Veterinary and Animal Sciences University (CVASU)**  
**BFST 4<sup>th</sup> Year 1<sup>st</sup> Semester Final Examination 2020: Assignment (Set B)**  
**Course Title: Refrigeration, Air Conditioning and Food Processing**  
**Course Code: RAP 401**  
**Full Marks: 35**

**List of Assignments for**  
**RAP 401: Refrigeration, Air Conditioning and Food Processing**

1. (a) Draw and explain P-H diagram with the proper identification.  
(b) Why P-H diagram is necessary in refrigeration system? Find the COP of all types of Vapor Compression refrigeration system.  
(c) The following data refer to air conditioning of a public hall:  
Outdoor conditions = 40°C DBT, 20°C WBT  
Required comfort conditions = 20°C DBT, 50% RH  
Seating capacity of hall = 1500  
Amount of outdoor air supplied = 0.4 m<sup>3</sup>/min/person  
If the required condition is achieved first by adiabatic humidifying and then cooling, find: (1) The capacity of the cooling coil and surface temperature of the coil if the by-pass factor is 0.3; and (2) The capacity of the humidifier and its efficiency.
  
2. (a) Explain three stage compression with water intercooler, liquid subcooler and flash intercooler.  
(b) How to design a building for acoustic noise management?  
(c) Air at DBT of 30 °C and 60% RH enters a cooling coil at the rate of 300 cmm. (a) Determine the refrigeration in ton needed to bring the temperature of air to the coil temperature of 23 °C and also the RH at that condition. (b) if the effective surface temperature of the cooling coil or ADP is 12 °C and the by-pass factor is 0.25, determine the refrigeration in ton needed and the mass of water condensed out at the cooling coil per minute. Determine also the sensible heat factor for the process through the coil. Use the psychrometric chart.
  
3. (a) Draw and identify different psychrometric properties in psychrometric chart.  
(b) Why two airstreams are adiabatically fixed in air-conditioning system? Explain the procedure in brief.  
(c) Determine the final DBT and RH of air washed with recirculated spray water if the air is initially at DBT 45 °C and 50% RH as it enters an air washer which has a humidifying efficiency of 75%.



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## Set 1

Chittagong Veterinary and Animal Science University

Faculty of Food Science and Technology

FST 4th Year 1st Semester Final Examination-2020

Course code: RAP: 401, Refrigeration, Air Conditioning in Food Processing (Theory)

Full marks: 35

Time: 2 hours

(Figures in the right margin indicate full marks. Answer any 4 questions, where question 1 is compulsory. Add page no in your answer script. Split answer is discouraged.)

1. Identify similarities and dissimilarities of heat engine, heat pump and refrigeration. 5
  
2. (a) Relate refrigeration and air conditioning with a diagram. 2  
(b) Describe the application of air-conditioning. 4  
(c) Express the equations to calculate the efficiency of heating and cooling coil using by-pass factor. 4
  
3. (a) Enumerate the factors that affect the performance of a simple vapor compression refrigeration (VCR) system. 1  
(b) Is subcooling expected for a simple VCRS? Justify your answer with description. 3  
(c) Draw a clear sketch of a VCRS and highlight the functions of each working parts. 6
  
4. (a) Illustrate a P-H diagram with identification of major lines and regions. 3  
(b) Apply P-H diagram to find out the COP for the cycle with superheated vapor before and after compression. 3  
(c) In a refrigerator, R-12 is used as refrigerant. The refrigerator works between  $-20^{\circ}\text{C}$  and  $+40^{\circ}\text{C}$ , the vapor being compressed dry and saturated. The refrigerant is expanded through a throttle valve at the end of condensation. In the absence of any superheating and subcooling. Determine- 4
  - i. Effective work/Refrigerating effect
  - ii. COP
  - iii. Mass flow ratehp required
  
5. (a) Point out different properties of moist air in a typical psychrometric chart. 2  
  
(b) Compare the psychrometric processes for summer and winter air conditioning. 4  
(c)  $30\text{ m}^3/\text{min}$  of moist air at  $15^{\circ}\text{C}$  dbt and  $13^{\circ}\text{C}$  wbt are mixed with  $12\text{ m}^3/\text{min}$  of moist air at  $25^{\circ}\text{C}$  dbt and  $18^{\circ}\text{C}$  wbt. Determine dbt and wbt of the mixture. Assume the barometric pressure is 1 atm. 4



Latent heat load in the room = 42 000 kJ / h

Find the sensible heat factor of the plant.

9. (a) Give an overview on different air-conditioning parts with their classification and functions.

(b) Why cascade refrigeration system is applied in frozen food industries? Explain.

(c) An air conditioned plant is to be designed for a small office room for winter conditions:

Outdoor conditions: 12°C DBT and 8°C WBT

Required indoor conditions: 22°C DBT and 60% RH

Amount of free air circulation: 0.4 m<sup>3</sup>/min/person

Seating capacity of the office: 60

The required condition is achieved first by heating and then by adiabatic humidification. Find the following-

i. Heating capacity of the coil in kW and the surface temperature required if the bypass factor of the coil is 0.32

ii. The capacity of the humidifier

10. (a) Give an overview on vapor compression and absorption refrigeration system with an comparative study.

(b) Explain Adiabatic saturation and thermodynamic wet bulb temperature.

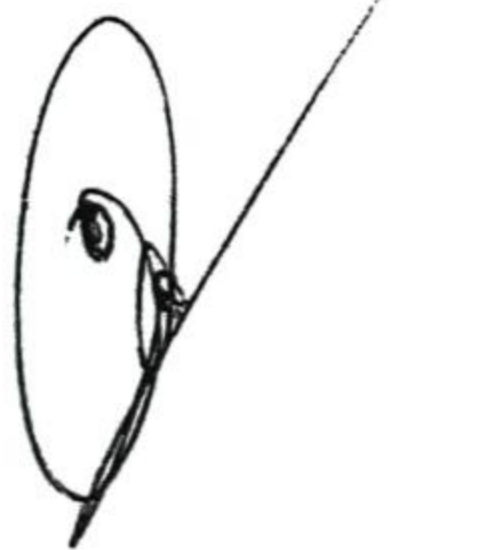
(c) A meeting room of 100 seating capacity is to be air conditioned for comfort conditions of 22°C dry bulb temperature and 55% relative humidity. The outdoor conditions are 32°C dry bulb temperature and 22°C wet bulb temperature. The quantity of air supplied is 0.3 m<sup>3</sup>/min/person. The comfort conditions are achieved first by chemical (adiabatic) dehumidification and by cooling coil. Determine i. Dry bulb temperature of air at exit of dehumidifier; ii. Capacity of dehumidifier; iii. Capacity and surface temperature of cooling coil, if the by-pass factor is 0.30.

*Shireen*  
31.5.2024

**Shireen Akther**  
Associate Professor  
Dept of FPE, CVASU

4. (a) Give an overview about different psychrometric processes.  
 (b) What is bypass factor? Find out bypass factor for heating and humidification process and cooling and dehumidification processes.  
 (c) Ten ton ammonia refrigerator works between  $-30^{\circ}\text{C}$  and  $+40^{\circ}\text{C}$ , the vapor being compressed dry and saturated. Ammonia liquid is expanded through a throttle valve at the end of condensation. In the absence of any superheating and subcooling. Determine-  
 Effective work/Refrigerating effect, COP, Mass flow rate and hp required
5. (a) Why pre-cooling is necessary before store food products in cold storage? Explain different types of pre-cooling systems.  
 (b) How to design a cold storage? Explain elaborately.  
 (c)  $40\text{ m}^3/\text{min}$  of moist air at  $15^{\circ}\text{C}$  dbt and  $13^{\circ}\text{C}$  wbt are mixed with  $15\text{ m}^3/\text{min}$  of moist air at  $25^{\circ}\text{C}$  dbt and  $18^{\circ}\text{C}$  wbt. Determine dbt and wbt of the mixture. Assume the barometric pressure is 1 atm.
6. (a) Why building survey and heat load or cooling loads estimation are necessary for air conditioning system? Which factors need to consider during survey?  
 (b) Draw and explain effective temperature with comfort chart.  
 (c) In a cooling application, moist air enters a refrigeration coil at the rate of 150 kg of dry air per minute at  $45^{\circ}\text{C}$  and 50% RH. The apparatus dew point of coil is  $15^{\circ}\text{C}$  and by-pass factor is 0.25. Determine the outlet state of moist air and cooling capacity of coil in TR.
7. (a) Overview refrigerants and their designation systems.  
 (b) How ozone depletion and global warming are related in the topic of refrigeration? Explain how it occurs and its effect on environment.  
 (c) Air at DBT of  $10^{\circ}\text{C}$  and 90% RH is to be heated and humidified to  $24.5^{\circ}\text{C}$  and 45% RH by passing through a heated water spray washer. Determine the total heating required and the makeup water required in the water spray air washer.
8. (a) Give an overview on different refrigeration parts with their classification and functions.  
 (b) What are the major troubles in refrigeration system and how to detect and fix those troubles?  
 (c) A small office hall of 55 person capacity is provided with summer air conditioning system with the following data:  
 Outside conditions =  $44^{\circ}\text{C}$  DBT and  $28^{\circ}\text{C}$  WBT  
 Inside conditions =  $34^{\circ}\text{C}$  DBT and 50% RH  
 Volume of air supplied =  $0.5\text{ m}^3 / \text{min} / \text{person}$   
 Sensible heat load in room =  $125\ 600\text{ kJ} / \text{h}$

gals.



**Chittagong Veterinary and Animal Sciences University**  
**Faculty of Food Science and Technology**  
**BFST 4<sup>th</sup> year 1<sup>st</sup> Semester Final Examination, 2020**  
**Subject: Renewable Energy in Food Processing (Theory)**  
**Course Code: RFP-401(T), Set-A**

**Full Marks: 35**

**Time: 2 hours**

(Figures in the right margin indicate full marks. Answer any **four (4)** questions where question no. **1** is compulsory. Split answer is discouraged.)

**SECTION-A**

1. a) Name some renewable energies which are extensively used in Bangladesh and also explain how they are used in different applications. 3  
b) Discuss some limitations of renewable energy. 2
2. a) Explain the working of heat transfer type solar cooker. 5  
b) Write down the name and type of different components of solar distillation system. 3  
c) Describe the parameters that influence solar still performance. 2
3. a) Explain how motion of air creates due to uneven heating of earth 3  
b) Draw a clear diagram of wind turbine and describe the details operation of wind turbine. 7
4. a) How can you determine the wind speed at any unknown height if you are given with a wind velocity of known height at the same location? 4  
b) Define: (i) Power in the wind (ii) Coefficient of performance (iii) Betz"s limit. 3×2=6
5. a) Define biomass. Why biomass is called renewable energy? - present your logic. 3  
b) Show the classification of biomass and write some of their applications. 3  
c) Describe the process of charcoal production. 4

**Chattogram Veterinary and Animal Sciences University**

**Faculty of Food Science and Technology**

**BFST 4<sup>th</sup> year 1<sup>st</sup> Semester Final Examination-2020**

**Subject: Epidemiology and Public Health (Theory)**

**Course Code: EPH-401**

**Full Marks: 35**

**Time: 2 hours**

**Set-01**

(Figures in the right margin indicate full mark. Answer any 4 (Four) questions where question no. 1 is compulsory. Split answer is not allowed.)

**Section-A**

1. a) Define epidemiology. 1  
b) Elaborate the core functions of epidemiology 4
2. a) What is epidemiological triad? 2  
b) Write down the types of agent that contribute the disease occurrence. 4  
c) Explain the four principles of medical ethics. 4
3. a) Define sufficient cause and necessary cause of diseases. 3  
b) Explain sufficient component cause model with example. 5  
c) What do you mean by confounding factor? 2
4. a) Summarize different types of carriers for infectious diseases. 5  
b) How host susceptibility influenced on disease? Explain briefly. 5
5. a) What is epidemiological error? Write down some common sources of error. 3  
b) Define information bias. Describe the types of information bias with examples. 2+5=7

**SET-A**

**CHATTOGRAM VETERINARY AND ANIMAL SCIENCES UNIVERSITY**

Faculty of Food Science and Technology

**Course Title: Leadership and Food Entrepreneurship Development (Theory)**

**Course Code: FED-401 (T)**

Total Marks: 18; Time: 1.0 hour

Answer any 3 (Three) questions from the followings. Figures in the right margin indicate full marks.

**Section A**

1. a. Define entrepreneur and entrepreneurship. Write the comparison between entrepreneur and manager. 4.0
- b. What types of characteristics of a food entrepreneur should be carryout? 2.0
2. a. Write the functions perform by a women entrepreneurship. Write the limitations of women entrepreneurship. 3.0
- b. Make comparison between professional leaders and local leaders. 3.0
3. a. What do you mean by entrepreneurial motivation? What factors influence people to go into a business? 3.0
- b. Write the major competencies of an entrepreneur. 3.0
4. a. Define small scale industry. What are the characteristics of small scale industry? 4.0
- b. Write the role of local leaders for developing small scale industries. 2.0

Chattogram Veterinary and Animal Sciences University  
Faculty of Food Science and Technology  
BFST 4<sup>th</sup> Year 1<sup>st</sup> Semester Final Examination 2020  
Course Title: Leadership and Food Entrepreneurship Development  
Course Code: FED-401  
**Total Marks: 17, Deadline: , 11:59 PM**

**Section – B**

<b>Assignment No.</b>	<b>Title of Assignment</b>	<b>Students Roll No.</b>
1.	Entrepreneurship Development Tools and Techniques in context of Bangladesh	Group-1
2.	SME Foundation of Bangladesh/Policy planning for Small-scale industries development in context of Bangladesh.	Group-2
3.	Women entrepreneurship development strategies in context of Bangladesh.	Group-3
4.	Rural entrepreneurship development strategies in context of Bangladesh.	Group-4
5.	Entrepreneurship development program in context of Bangladesh.	Group-5
6.	Leadership skills development program.	Group-6
7.	Leadership styles and Qualities in context of Food sector.	Group-7
8.	Financing system of food enterprise in context of Bangladesh.	Group-8
9.	Agricultural credit policy for dev. Small scale food industries in Context of Bangladesh.	Group-9
10.	Write in Brief: (i) Milk Vita and (ii) PRAN Dairy industry.	Group-10

**Food Quality Control and Assurance**  
**FQA-401**

Write short notes on (Assignment)		Roll No.
01.	Food Quality Control and Quality Assurance	
02.	Food Colour	
03.	Biological Hazards	
04.	Chemical Hazards	
05.	Sensory Evaluation	
06.	Common Physical Tests for Food Products	
07.	Common Chemical Tests for Food Products	
08.	Factors Affecting the Quality of Food Products	
09.	Food Adulterations	
10.	Spectroscopy	

Sincerely

**Dr. Shamsul Morshed**

Assistant Professor

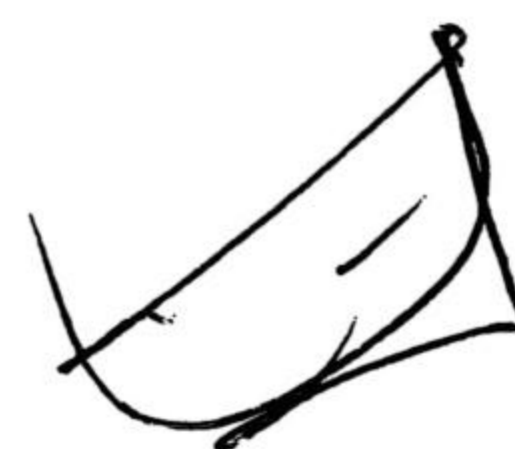
Dept. of Applied Chemistry and Chemical Technology

Faculty of Food Science and Technology

Chattogram Veterinary and Animal Sciences University

Khulshi, Chattogram-4225.

*Fahad*



**Chattogram Veterinary and Animal Sciences University**  
**Faculty of Food Science and Technology**  
**BFST 4<sup>th</sup> year 1<sup>st</sup> Semester Final Examination, 2020**  
**Subject: Food Quality Control and Assurance (Theory)**  
**Course Code: FQA-401 (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) | Draw a flow chart of Quality Control Cycle.   | 03 |
|    | b) | Mention the functions of Quality Assurance Department.                              | 02 |
| 2. | a) | Write down the differences between Quality Control (QC) and Quality Assurance (QA). | 04 |
|    | b) | Mention the causes of food adulteration.  | 03 |
|    | c) | State the mitigation measures for addressing food adulteration.                     | 03 |
| 3. | a) | What do you mean by mycotoxins?   | 02 |
|    | b) | Briefly describe the general characteristics of mycotoxins.                         | 03 |
|    | c) | How processing-induced chemicals make food safety hazards? Explain with examples.   | 05 |
| 4. | a) | State the names of approved seven food colors.                                      | 03 |
|    | b) | What are dyes and lakes? Explain with examples.                                     | 03 |
|    | c) | Mention the purpose of food coloring.   | 02 |
|    | d) | What is E number?   | 02 |
| 5. | a) | Why is sensory evaluation important?  | 03 |
|    | b) | How to conduct a sensory evaluation test for food products?                         | 05 |
|    | c) | Enlist the categories of sensory analysis tests.                                    | 02 |



**Chattogram Veterinary and Animal Sciences University (CVASU)**  
**BFAST 4<sup>th</sup> Year 1<sup>st</sup> Semester Final Examination 2020: Assignment**  
**Course Title: Epidemiology and Public Health (Theory)**  
**Course Code: EPH-401 (T)**  
**Full Marks: 35**

**Instructions and Regulations for Assignments: *Deadline!***

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 color ink only for writing the assignments.
5. Assignments should not be copied, should be clear, readable and well presented.
6. Plagiarism is strictly prohibited.

Assignment Topic	Assignment Should contain	Marks
<b>1. History and uses of Epidemiology</b>	a. How epidemiologist can help the government during pandemic situation?	20
	b. Denote some Historical Evolution of Epidemiology.	10
	c. Describe some effective measure to control communicable disease	05
<b>2. Epidemiological study</b>	a. Classify epidemiological studies	10
	b. How you Use epidemiology in public health, particularly with regard to food borne diseases.	15
	c. Epidemiology is a fundamental science of public health. Justify	10
<b>3. Epidemiology in public health</b>	a. Which study design is the best and why?	05
	b. How Epidemiology has made major contributions to improving population health.	15
	c. Discuss major steps to study the diseases on health-related problems in a population of urban slum.	15
<b>4. Epidemiology in Emerging Diseases</b>	a. How Epidemiology is essential to the process of identifying and mapping emerging diseases.	20
	b. How you handle case of salmonellosis? Explain.	15
<b>5. Field Epidemiology</b>	a. What is the confounding factor?	05
	b. Describe some varieties of measures are used to characterize the overall health of populations.	15
	c. Population health status is not fully measured in the world and this lack of information poses a major challenge for epidemiologists. Explain.	15

Assignment Topics for 4<sup>th</sup> year 1<sup>st</sup> semester Final Examination, 2020

Course Name: Renewable Energy in Food Processing

Course Code: RFP-401

Total Marks: 35 (for each group)

**Group-1:**

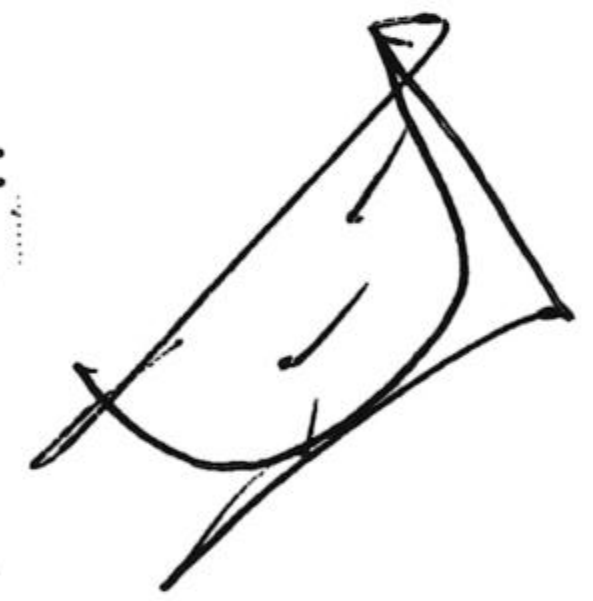
Write an assignment on **Solar Radiation** which will include the following topics:

- Solar spectrum
- Extraterrestrial radiation and radiation on the earth surface
- Global, direct and diffuse solar radiation

**Group-2:**

Write an assignment on **Solar Thermal Energy** which will include the following topics:

- Principle of solar thermal energy
- Heat gain and loss by solar energy collector
- Energy required for cooking with an example



**Group-3:**

Write an assignment on **Solar Cookers** which will include the following topics:

- Principle of cooking and how to estimate amount of energy required for cooking
- Cooking technique in box type solar cooker and describe its components
- Estimate the time required for cooking in box type cooker with an example

**Group-4:**

Write an assignment on **Solar Cookers** which will include the following topics:

- Principle of cooking and how to estimate amount of energy required for cooking
- Cooking technique in dish type solar cooker and describe its components
- Estimate the time required for cooking in dish type cooker with an example

**Group-5:**

Write an assignment on **Solar Distillation System** which will include the following topics:

- Water categories
- Operation of solar distillation
- Components and specifications of solar still

*Submit*

*Submit*  
01.06.21

Moderation ok.

**Dr. INDRAJIT SAHA**  
Head  
Dept. of Physical & Mathematical Science  
Faculty of Food Science & Technology  
Chattogram Veterinary and Animal  
Science University, Khulshi, Ctg.

*Submit*  
01.06.2021  
**Uneya Jahan Mukti**  
Assistant Professor  
Dept. of Physical & Mathematical Sciences  
Faculty of Food Science & Technology  
Chattogram Veterinary and Animal  
Science University, Khulshi, Ctg.



6. Preventive measures in public health	a. What is Ecological fallacy? b. What are the applications and disadvantages of the major epidemiological study designs? c. Describe some effective measure to minimize the incidence rate of COVID-19 in Bangladesh	05 10 20
7. Epidemiological model of disease	a. After completing the course of epidemiology, how you apply the knowledge in pandemic situation. b. What is Sufficient component cause model? explain	20 15
8. Errors in Epidemiology	a. What is epidemiological triad? b. What are the main types of systematic error in epidemiological studies and how can their effects be reduced? c. How infectious diseases can process their activity in host?	05 15 15
9. Sampling methods in Epidemiology	a. Write-down some steps in sampling. b. Classify different sampling method among them which one is best and why? c. In COVID-19 situation which sampling method is appropriate and why? Justify your answer	10 10 15
10. Epidemiology in policy development.	a. Define monitoring and its important. b. How Epidemiology is important for government policy development c. What is herd immunity? For Herd Immunity of COVID-19 what step should take by the government?	05 10 20





**Group-6:**

Write an assignment on **Wind Energy** which will include the following topics:

- a) Origin of wind
- b) Power in the wind
- c) Construction and operation of wind turbine

**Group-7:**

Write an assignment on **Biomass Energy** which will include the following topics:

- a) Introduction of biomass and its advantages and disadvantages
- b) Types of biomass and their applications
- c) Conversion process and conversion types

**Group-8:**

Write an assignment on **Biomass Energy** which will include the following topics:

- a) Charcoal production
- b) Ethanol and Methanol production
- c) Biogas production and structural details of biogas plant

**Group-9:**

Write an assignment on **PV Solar System** which will include the following topics:

- a) Photogeneration of charge carriers when a photon hits a semiconductor piece
- b) Characteristics of generalized PV module
- c) I-V characteristics with temperature

**Group-10:**

Write an assignment on **Geothermal Energy** which will include the following topics:

- a) Introductory idea of geothermal energy
- b) Geothermal fluid
- c) Geothermal energy conversion technique: Dry steam, Single Flash steam, Double Flash steam, Binary power plant

*Submit*

*Submit*  
01.06.2021

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*Submit*