**8th Semester (Batch: 30th)**

**1. Subject:** Analytical Microbiology (Microbiol.4803)

**Subject Teacher**: Najmun Nahar

**Assignment Topic:**

1. Electrophoretic techniques.
2. Chromatographic techniques.

**2. Subject:** Genetic Engineering (Microbiol.4805)

**Subject Teacher**: Najmun Nahar

**Assignment Topic:**

1. Manipulation of Purified DNA & Introduction of DNA into Living Cells
2. Vectors for Gene Cloning**.**

**3. Subject:** Quality control of food fish and beverages

**Subject Teacher**: Md. Shah Alam

**Assignment Topic:**

1. Manufacture of antibody and the production of the immunological product.
2. Quality control of Fish.

**4. Subject:** Microbial Biotechnology

**Subject Teacher**: Shamsun Nahar

**Assignment Topic:**

1.'**Microbial Fuel Cell'**

1. Definition of Microbial Fuel Cell
2. History of the development of Microbial Fuel Cell
3. How does a microbial fuel cell work? Illustrate with a diagram.
4. Differentiate between mediator microbial fuel cell and mediator-free microbial fuel cell.
5. Give a list of Microbial-based fuel cells.
6. Give a presentation of the soil-based microbial fuel cell.
7. Discuss the applications of Microbial fuel cells in different sectors (Power generation, Education, Biosensor, Brewery wastewater treatment, Sewage treatment, Desalination, Hydrogen Production, Remote power source and Cleansing polluted lakes and river).

**2. SINGLE CELL PROTEIN (SCP)**

1. Definition of single-cell protein.
2. Discuss the development history of SCP.
3. Discuss the production process of SCP
4. Give the list of Microorganisms used as SCP.
5. Name the microorganism and substrate used for single-cell protein production
6. State the advantages of SCP production
7. State the advantages of Production of SCP from microorganism
8. Point the disadvantages of Single Cell Protein
9. State the applications of SCP
10. Give a description of mycoprotein with advantages.

**3. CEREAL PRODUCTS**

Name of the main cereal grains

Ingredients of the production of bread

Bread production procedure

**4. FERMENTATED FOOD**

Give a short description about different oriental fermented food (Soy sauce, Tamari, Miso and Natto) based on the following points:

1. Nutrient value
2. Production process
3. Importance
4. Involvement of microorganisms

 **5."ALCOHOLIC BEVERAGE"**

1.       Mention the name of organisms involved in alcoholic fermentations.

2.       Outline the production of beer and wine production

3.       What is cider?

4.       Differences in making red & white wine

5.       Differences in making blush & sparkling wines

6.       Making fortified wine

7.       Production and uses of vinegar and sprit

*Y****ou have to prepare the assignment by your own handwriting.***

**Typing or photocopy is not acceptable.**

**You have to submit it on the opening day of the University.**

If you face any difficulties preparing the assignment don't hesitate to call me over mobile.

Stay home. Stay safe.

**5. Subject:** Diagnostic Microbiology

**Subject Teacher**: Dr. Syed Anwar Hussain

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**Assignment Topic:**

1. ASO Titer.
2. Eliza test.
3. P.C.R

NB; Everything about these topics.

**\***Assignment must be different for each student and it should be handwritten.

\*\*\*You have to submit all the assignments on the opening day of the University after the coronavirus outbreak. If anybody faces any difficulties to prepare the assignment don't hesitate to contact the subject teacher over the phone or through email. **#Stay Home. #Stay Safe.**