

**D.K.M.COLLEGE FOR WOMEN (AUTONOMOUS),VELLORE-1.**

**SUB: INDUSTRIAL AND PHARMACEUTICAL MICROBIOLOGY (15CPMB3B)**

**UNIT I      SECTION-A**

1. Write about the industrial important microorganisms.
2. Describe primary screening.
3. Write a short note on secondary screening.
4. A short note on mutation and rDNA technology.

**SECTION-B**

1. Explain about the screening techniques.
2. Write about the detection and assay of fermentation products.

**UNIT II      SECTION-A**

1. Write about the body construction of a fermenter.
2. A short note on oxygen transfer.
3. Briefly explain about scale up.
4. Write about the temperature, pH and foam control.
5. Write a short note on computers in fermentation technology.

**SECTION B**

1. Explain about the fermenter designs.
2. Explain about the Newtonian and non-newtonian fluids.

**UNIT III      SECTION A**

1. Write about the submerged fermentation.
2. Write about the solid-state fermentation.

**SECTION B**

1. Explain about the DSP.

#### **UNIT- IV    SECTION A**

1. Describe the steps involved in production of wine.
2. Describe about the production of beer.
3. Write about the production of lactic acid.
4. Write about the penicillin production.
5. Explain the amylase production.
6. Write about the SCP production.

#### **SECTION B**

1. Explain the production of citric acid.
2. Explain about the streptomycin production.
3. Explain the steps involved in alkaline protease production.

#### **UNIT V    SECTION A**

1. Describe about the toxoids production.
2. Write about the production of antisera and their standardisation.
3. A short note on sterility testing.
4. Write about the pyrogen testing.

#### **SECTION B**

1. Explain about the disinfectants and their standardization.
2. Explain the vaccine production and their quality control.