**PG.GOVT COLLEGE FOR GIRLS, SECTOR-42, CHANDIGARH**

**Teaching Plan Session Even Semester**

**(2017-18)**

**Class: BTH-VI semester**

**Name of the Teacher: Mrs Sonia Chauhan**

**Subject: Bioprocess Engg. & Technology**

**Period: IV period(1,2,4); III period(3)**

**Paper: Bioprocess Engg. & Technology Room No : 301**

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| **S. No** | **Date From** | **Date Upto** | | **Topics to be covered** |
| Week 1 | Jan 08, 2018 | Jan 13, 2018 | | General Introduction to the subject; syllabus discussion, Fundamental principles of biochemical engineering |
| Week 2 | Jan 15, 2018 | Jan 20, 2018 | | Simple kinetics of microbial growth, yield coefficient, doubling time, specific growth rate(batch fermentation) |
| Week 3 | Jan 22, 2018 | Jan 27, 2018 | | substrate inhibition kinetics, product inhibition kinetics; Class test |
| Week 4 | Jan 29, 2018 | Feb 3, 2018 | | internal and external feed back systems, metabolic and Biomass  productivities, effect of temperature and pH on the product formation |
| Week 5 | Feb 5, 2018 | Feb 10, 2018 | | Sterilization of air and media sterilization,(Theory), design of batch sterilization Process; Del factor, sterilization cycle; class test |
| Week 6 | Feb 12, 2018 | Feb 17, 2018 | | continuous sterilization process, sterilization of fermenters, filter design |
| Week 7 | Feb 19, 2018 | Feb 24, 2018 | | Introduction: Design of fermenter |
| Week 8 | Feb 26, 2018 | Mar 03 , 2018 | | Types of fermenters, Aseptic operation of fermenters |
| **2nd week March (Mid Semester Exam)** | | | | |
| Week 9 | March 12, 2018 | | March 17, 2018 | Control and measurement equipments of fermenters |
| Week 10 | March 19 , 2018 | | March 24, 2018 | Removal of microbial cells and opther solid materials, foam separation |
| Week 11 | March 26, 2018 | | March 31, 2018 | Flocculation, filtration,ultrafiltration |
| Week 12 | April 02, 2018 | | April 07, 2018 | Centrifugation, ultracentrifugation |
| Week 13 | April 09, 2018 | | April 14 , 2018 | Chromatographic methods DSP: cell disruptions, |
| Week 14 | April 16, 2018 | | April 21, 2018 | Two phase aqueous separations, solvent-solvent extractions |
| Week 15 | April 23, 2018 | | April 28, 2018 | Pre-treatment, crystallization, super critical extraction, whole broth process |
| Week 16 | April 30, 2018 | | May 05, 2018 | Waste-water treatment for fermentation process |