

**SONIKA BIOTECHNOLOGY DEPARTEMENT**  
**TEACHING PLAN (odd SEMESTER 2020-2021)**  
**SUBJECT-ANIMAL TISSUE CULTURE**

**Week 1**

Day 1, Date 15<sup>th</sup> OCTOBER 2020  
TOPIC: Introduction, Principles & practice

Day2, Date 16<sup>th</sup> OCTOBER 2020  
TOPIC: History and Development

Day 3, Date 17<sup>th</sup> OCTOBER 2020  
TOPIC: Scope and Applications

**Week 2**

Day 1, Date 22<sup>nd</sup> OCTOBER 2020  
TOPIC: Culture Media

Day2, Date 23<sup>rd</sup> OCTOBER 2020  
TOPIC: : Media components

Day 3, Date 24<sup>th</sup> OCTOBER 2020  
TOPIC: Serum containing and serum free media

**Week 3**

Day 1, Date 29<sup>th</sup> OCTOBER 2020  
TOPIC: Plasma clot, biological fluids, tissue extracts

Day2, Date 30<sup>th</sup> OCTOBER 2020  
TOPIC: Growth factors required for proliferation of animal

Day 3, Date 31<sup>th</sup> OCTOBER 2020  
TOPIC: Chemically defined media

**Week 4**

Day 1, Date 5<sup>th</sup> NOVEMBER 2020  
TOPIC: balanced salt solution

Day 2, Date 6<sup>th</sup> NOVEMBER 2020  
TOPIC: Washing, drying, sterilization practices

Day 3, Date 7<sup>th</sup> NOVEMBER 2020  
TOPIC: various instrument

**Week 5**

Day 1, Date 12<sup>th</sup> NOVEMBER 2020  
TOPIC: . Isolation of tissue explants

Day 2, Date 13<sup>th</sup> NOVEMBER 2020  
TOPIC: Primary Cell Culture techniques

Day 3, Date 14<sup>th</sup> NOVEMBER 2020  
TOPIC: a, balanced salt solutions

preparation and sterilization

**Week 6**

Day 1, Date 19<sup>th</sup> NOVEMBER 2020

TOPIC: disaggregation

Day 2, Date 20<sup>th</sup> NOVEMBER 2020

TOPIC: - enzyme disaggregation

Day 3, Date 21<sup>th</sup> NOVEMBER 2020

TOPIC: mechanical disaggregation of the tissue

**Week 7**

Day 1, Date 26<sup>th</sup> NOVEMBER 2020

TOPIC: development of primary cultur

Day 2, Date 27<sup>th</sup> NOVEMBER 2020

TOPIC: Subculture

Day 3, Date 28<sup>th</sup> NOVEMBER 2020

TOPIC: Suspension culture

**Week 8**

Day 1, Date 3<sup>rd</sup> DECEMBER 2020

TOPIC: Growth curve of animal cells in culture.

Day 2, Date 4<sup>th</sup> DECEMBER 2020

TOPIC: . Suspension culture

Day 3, Date 5<sup>th</sup> DECEMBER 2020

TOPIC: Secondary cell culture – t

**Week 9**

Day 1, Date 10<sup>th</sup> DECEMBER 2020

TOPIC: transformed cell and continuous cell lines

Day 2, Date 11<sup>th</sup> DECEMBER 2020

TOPIC: Cell lines: Insect and animal cells

Day 3, Date 12<sup>th</sup> DECEMBER 2020

TOPIC: Karyotyping,

**Week 10**

Day 1, Date 17<sup>th</sup> DECEMBER 2020

TOPIC: Artificial skin

Day 2, Date 18<sup>th</sup> DECEMBER 2020

TOPIC: Organ Culture:

Day 3, Date 19<sup>th</sup> DECEMBER 2020

TOPIC: advantages, applications and limitations.

**Week 11**

Day 1, Date 24<sup>th</sup> DECEMBER 2020

TOPIC: Transfection of animal cells

Day 2, Date 25<sup>th</sup> DECEMBER 2020 **HOLIDAY**

TOPIC: transfection method

Day 3, Date 26<sup>th</sup> DECEMBER 2020

TOPIC: HAT selection and Antibiotic resistance

**Week 12**

Day 1, Date 1st JAN 2021

TOPIC: Hybridoma Technolog

Day 2, Date 2<sup>nd</sup> JAN 2021

TOPIC: Expression vectors

Day 3, Date 3<sup>rd</sup> JAN 2021

TOPIC: Production of vaccines in animal cells

**Week 13**

Day 1, Date 7<sup>th</sup> JAN 2021

TOPIC: expressed proteins

Day 2, Date 8<sup>th</sup> JAN 2021

TOPIC: HAT selection

Day 3, Date 9<sup>th</sup> JAN 2021

TOPIC: Production of vaccines in animal cells

**Week 14**

Day 1, Date 14<sup>th</sup> JAN 2021

TOPIC: Cloning

Day 2, Date 15<sup>th</sup> JAN 2021

TOPIC: expression of foreign genes in animal cells

Day 3, Date 16<sup>th</sup> JAN 2021

TOPIC: Artificial skin.

**Week 15**

Day 1, Date 21<sup>th</sup> JAN 2021

TOPIC: Embryo transfer technology

Day 2, Date 22<sup>th</sup> JAN 2021

TOPIC: technique, its application

Day 3, Date 23<sup>th</sup> JAN 2021

TOPIC: Artificial insemination.

**Week 16**

Day 1, Date 28<sup>th</sup> JAN 2021

TOPIC: Animal clones.

Day 2, Date 29<sup>th</sup> JAN 2021

TOPIC: Transgenic Animals

Day 3, Date 30<sup>th</sup> JAN 2021

Topic-Transgenic Animals

**Week 17**

Day 1, Date 4<sup>th</sup> FEB 2021

TOPIC: Production of transgenic mice,

Day 2, Date 5<sup>th</sup> FEB 2021

TOPIC: ES cells can be used for gene targeting in mice,

Day 3, Date 6<sup>th</sup> FEB 2021

Topic-ES cells can be used for gene targeting in mice,

**Week 18**

Day 1, Date 11<sup>th</sup> FEB 2021

TOPIC: Gene Therapy: i

Day 2, Date 12<sup>th</sup> FEB 2021

TOPIC: Therapeutic product

Day 3, Date 13<sup>th</sup> FEB 2021

Topic-blood proteins,

**Week 19**

Day 1, Date 18<sup>th</sup> FEB 2021

TOPIC: insulin, growth hormone

Day 2, Date 19<sup>th</sup> FEB 2021

TOPIC: insulin, growth hormone

Day 3, Date 20<sup>th</sup> FEB 2021

Topic-Gene therapy

**Week 20**

Day 1, Date 25<sup>th</sup> FEB 2021

TOPIC: ES cells can be used for gene targeting in mice,

Day 2, Date 26<sup>th</sup> FEB 2021

TOPIC: Production of transgenic mice

Day 3, Date 27<sup>th</sup> FEB 2021

TOPIC-Transgenic Animals: transgenic sheep, cow, pig, goat etc

**Week 21**

Day 1, Date 4<sup>th</sup> MARCH 2021

TOPIC: Transgenic Animals: transgenic sheep, cow, pig, goat etc

Day 2, Date 5<sup>th</sup> MARCH 2021

TOPIC: Production of vaccines in animal cells.

Day 3, Date 6<sup>th</sup> MARCH 2021

TOPIC-: Expression vectors

**Semester - III Paper BT-116 Microbial Biotechnology(ODD SEMESTER)**

**SONIKA-BIOTECHNOLOGY DEPARTEMENT**

**Week 01**

**Day 1,Date12th October 2020**

TOPIC Microbial Biotechnology: Scopes a

**Day 2,Date13th October , 2020**

Topic- Application and challenges

**DAY 3 ,Date 14<sup>th</sup> October ,2020**

Topic- Preservation and improvement

**Day 4,date 15<sup>th</sup> October 2020**

TOPIC- Kinetics of microbial growth

**Day 5,date 16<sup>th</sup> October 2020**

**Topic-** batch and continuous system

**Week 02**

**Day 1,Date19th October 2020**

TOPIC- fed batch system

**Day 2,Date 21th october** multistage system

**DAY 3 ,Date 21<sup>h</sup> October ,2020**

Topic- state fermentation

**Day 4,date 22<sup>th</sup> October 2020**

TOPIC- Overproduction of primary metabolites

**Day 5,date 23<sup>th</sup> October 2020**

**Topic-** Secondary metabolites.

**Week 03**

**Day 1,Date 26<sup>th</sup> th October 2020**

TOPIC- Fermentation raw materials

**Day 2,Date27 th October , 2020**

Topic- Media for industrial fermentations;

**DAY 3 ,Date 28<sup>th</sup> October ,2020**

Topic- media formulation

**Day 4,date 29<sup>th</sup> October 2020**

TOPIC- stirred tank reactor

**Day 5,date 30<sup>th</sup> October 2020**

**Topic-** packed bed reactor,

#### **Week 04**

**Day 1, Date 2<sup>nd</sup> November, 2020**

**Topic-** mass transfer.

**Day 2, Date 3<sup>rd</sup> November, 2020**

Topic- Foam formation

**DAY 3 ,Date 4<sup>th</sup> November ,2020**

Topic- agitation

**Day 5, date 6<sup>th</sup> November 2020**

**Topic-** Aeration

**Day 6, date 7<sup>th</sup> November 2020**

TOPIC- Mass transfer

#### **Week 05**

**Day 1, Date 9<sup>nd</sup> November, 2020**

**Topic-** Industrial production of alcohol

**Day 2, Date 10<sup>th</sup> November, 2020**

Topic- Production of antibiotics

**DAY 3 ,Date 11<sup>th</sup> November ,2020**

Topic- Penicillin

**Day 4, date 12<sup>th</sup> November 2020**

TOPIC- cephalosporin

**Day 5, date 13<sup>th</sup> November 2020**

**Topic-** Microbial polysaccharides

#### **Week 06**

**Day 1, Date 16<sup>nd</sup> November, 2020**

**Topic-** fermentative production of xanthan gum

**Day 2, Date 17<sup>th</sup> November, 2020**

Topic- Bacterial bioplastics,

**DAY 3 ,Date 18<sup>th</sup> November ,2020**

Topic- genetic engineering of microorganism

**Day 5, date 20<sup>th</sup> November 2020**

**Topic-** production of poly-3 hydroxyalkanoates.

**Day 6, date 21<sup>th</sup> November 2020**

**Topic-** Microbial inoculants

**Week 07**

**Day 1, Date 23<sup>rd</sup> November, 2020**

**Topic-** production of poly-3 hydroxyalkanoate

**Day 2, Date 24<sup>th</sup> November, 2020**

**Topic-** fermentative production of xanthan gum

**DAY 3 , Date 26<sup>th</sup> November ,2020**

**Topic-** Biomass production:

**Day 5, date 27<sup>th</sup> November 2020**

**Topic-** inoculants

**Day 6, date 28<sup>th</sup> November 2020**

**Topic-**

Microbial transformation of steroids and sterols.

**Week 08**

**Day 1, Date 30<sup>nd</sup> November, 2020**

**Topic-** production of acids

**Day 2, Date 1<sup>st</sup> December <sup>th</sup> 2020**

**Topic-** citric acid,

**DAY 3 , Date 2<sup>nd</sup> December ,2020**

**Topic-** acetic

**Day 4, date 3<sup>rd</sup> December 2020**

**Topic-** solvents

**Day 5, date 4<sup>th</sup> December 2020**

**Topic-** glutamic acid)

**Day 6, date 5<sup>th</sup> December 2020**

**Topic-** biosynthesis pathway

**Week 09**

**Day 1, Date 7<sup>th</sup> December ,2020**

**Topic-** Foam formatio

**Day 2, Date 8<sup>th</sup> December <sup>th</sup> 2020**

**Topic-** continuous system

**DAY 3 , Date 9<sup>th</sup> December ,2020**

**Topic-** ethanol

**Day 4, date 10<sup>th</sup> December 2020**

**Topic-** wine

**Day 5,date 11<sup>th</sup> December 2020**

**Topic-** beer

**Day 6,date 12<sup>th</sup> December 2020**

**Topic-** aminoacids

**Week 10**

**Day 1,Date 14<sup>th</sup> December ,2020**

**Topic-** yeast,

**Day 2,Date 15<sup>th</sup> December <sup>th</sup> 2020**

Topic- meat starter cultures

**DAY 3 ,Date16th December ,2020**

Topic- trickle bed reactor,

**Day 4,date 17<sup>th</sup> December 2020**

**Topic-** antibiotics

**Day 5,date 18<sup>th</sup> December 2020**

**Topic-** antibiotics types

**Day 6,date 19<sup>th</sup> December 2020**

**Topic-** antibiotics production method

**Week 12**

**Day 1,Date 28<sup>th</sup>December ,2020**

**Topic-**kinetics batch fermentation

**Day 2,Date 29<sup>th</sup> December <sup>th</sup> 2020**

Topic- kinetics of fed batch

**DAY 3 ,Date30th December ,2020**

Topic- kinetics of continous culture

**Day 4,date 31<sup>th</sup> December 2020**

**Topic-** kinetics overall ravision

**Day 6,date 1st jan, 2021**

**Topic-** bioreactor principle

**Day 5,date 2<sup>nd</sup> jan, 2021**

**Topic-** bioreactor types



**Week 13**

**Day 1, Date 4<sup>th</sup> jan, 2021**

**Topic-** fermenter working

**Day 2, Date 5<sup>th</sup> jan 2021**

**Topic-** fermenter types

**DAY 3 , Date 6th jan, 2021**

**Topic-** principle of fermentation

**Day 4, date 7<sup>th</sup> jan, 2021**

**Topic-** glutamic production method

**Day 5, date 8<sup>th</sup> jan, 2021**

**Topic-** aminoacid production

**Day 6, date 9<sup>th</sup> jan, 2021**

**Topic-** glutamic production

**Week 14**

**Day 1, Date 11<sup>th</sup> jan, 2021**

**Topic-** overproduction methods

**Day 2, Date 12<sup>th</sup> jan 2021**

**Topic-** lysine production

**DAY 3 , Date 13th jan, 2021**

**Topic-** feed back inhibition

**Day 4, date 14<sup>th</sup> jan, 2021**

**Topic-** constitutive mutants

**Day 5, date 15<sup>th</sup> jan, 2021**

**Topic-** auxotrope mutants

**Day 6, date 16<sup>th</sup> jan, 2021**

**Topic-** screening principle

**Week 15**

**Day 1, Date 18<sup>th</sup> jan, 2021**

**Topic-** screening types

**Day 2, Date 19<sup>th</sup> jan 2021**

**Topic-** antibiotic screening

**DAY 3 , Date 20th jan, 2021**

**Topic-** methods of production

**Day 4, date 21<sup>th</sup> jan, 2021**

**Topic-** butanol

**Day 5,date 22<sup>th</sup> jan, 2021**

**Topic-** glycerol acetone

**Day 6,date 23<sup>th</sup> jan, 2021**

**Topic-** production of acids

**Week 16**

**Day 1,Date 25<sup>th</sup> jan,2021**

**Topic-** media formulation

**Day 2,Date 27<sup>th</sup> jan 2021**

**Topic-** types of fermentor

**DAY 3 ,Date 28th jan,2021**

**Topic-** bubble column

**Day 4,date 29<sup>th</sup> jan,2021**

**Topic-** trickle bed reacto

**Day 5,date 30<sup>th</sup> jan, 2021**

**Topic-** airlift fermentor

**Week 17**

**Day 1,Date 1st feb,,2021**

**Topic-** Two stage system

**Day 2,Date 2<sup>nd</sup> feb2021**

**Topic-** MSF

**DAY 3 ,Date 3<sup>rd</sup> feb,2021**

**Topic-** SSF

**Day 4,date4th feb,2021**

**Topic-** secondary metabolites types

**Day 5,date 5<sup>th</sup> feb, 2021**

**Topic-** secondary metabolites.

**Day 6,date 6<sup>th</sup> feb, 2021**

**Topic-** product formation

**Week 18**

**Day 1,Date 8<sup>th</sup> feb,,2021**

**Topic-** improvement methods

**Day 2,Date 9<sup>th</sup> feb2021**

**Topic-** Fermenter/bioreactor design

**DAY 3 ,Date 10<sup>th</sup> feb,2021**

Topic- fed batch system

**Day 4,date 11<sup>th</sup> feb,2021**

Topic- Fermentation system;

**Day 5,date 12<sup>th</sup> feb, 2021**

Topic- continuous system

**Day 6,date 13<sup>th</sup> feb, 2021**

Topic- fed batch system

**Week 19**

**Day 1,Date 15<sup>th</sup> feb,,2021**

Topic- design and operation

**Day 2,Date 17<sup>th</sup> feb2021**

Topic- Fermenter/bioreactor

**DAY 3 ,Date 18<sup>th</sup> feb,2021**

Topic- stirred tank reacto

**Day 4,date4th feb,2021**

Topic- mass transfer

**Day 5,date 19<sup>th</sup> feb, 2021**

Topic- aeration in a reactor

**Week 20**

**Day 1,Date 22<sup>nd</sup> feb,,2021**

Topic- media formulation

**Day 2,Date 23<sup>nd</sup> feb2021**

Topic- stirred tank reactor,

**DAY 3 ,Date 24<sup>rd</sup> feb,2021**

Topic- packed bed reactor

**Day 4,date 25<sup>th</sup> feb,2021**

Topic- xanthan gums,introduction

**Day 5,date 27<sup>th</sup> feb, 2021**

Topic- xanthan gums,types

**SONIKA**  
**BIOTECHNOLOGY DEPARTEMENT**  
**B.SC IST SEMESTER( ODD SEMESTER)**

**Week1**

Day 1, Date: 23 NOV2020  
TOPIC: Definition & scope of Biotechnolog

Day 2, Date: 24 NOV2020  
TOPIC: introduction of genetic engineering

Day 3, Date: 25NOV 2020  
TOPIC: plant and animal tissue culture

**Week 02**

Day 1, 1st DEC 2020  
TOPIC: fermentation technology

Day 2, Date: 2<sup>nd</sup> DEC2020  
TOPIC: Embryo transfer

**Week 03**

Day 1, Date: 7<sup>th</sup> DEC2020  
TOPIC:Immobilized enzyme

Day 2, Date: 8<sup>th</sup> DEC-2020  
TOPIC:im types

Day 3, Date: 9<sup>th</sup> DEC 2020  
TOPIC: introduction to gene

**Week 04**

Day 6, Date:14<sup>th</sup> DEC 2020  
TOPIC: genomes

Day 6, Date: 15<sup>th</sup> DEC 2020  
TOPIC: Proteins and proteome,

Day 6, Date: 16<sup>th</sup> DEC 2020  
TOPIC: Proteins and proteome,

**Week 05**

Day 1, Date: 21th DEC 2020  
TOPIC: Recombinant DNA technology

Day 2, Date: 22<sup>nd</sup> DEC 2020  
TOPIC: embryo transfer technolog

Day 3, Date: 23th DEC -2020  
TOPIC: fermentation technology

**Week 06**

Day 1, Date: 28<sup>th</sup> DEC 2020  
TOPIC: DNA fingerprinting

Day 2, Date: 29<sup>th</sup> DEC -2020  
TOPIC: veterinary sciences

Day 3, Date: 30<sup>th</sup> DEC -2020  
TOPIC: veterinary sciences

<b>Week 07</b>
Day 1, Date: 4 <sup>th</sup> JAN -2021 TOPIC: Food industry and chemical industry
Day 2, Date: 5 <sup>th</sup> JAN -2021 TOPIC: Biotechnology in agriculture
Day 3, Date: 6 <sup>th</sup> JAN -2021 TOPIC: Ethics in Biotechnology
<b>Week 08</b>
Day 1, Date: 11 <sup>th</sup> JAN 2021 TOPIC: Ethics in Biotechnology
Day 2, Date: 12 <sup>th</sup> JAN 2021 TOPIC: Biotechnology research in India.
DAY3 13th JAN 2021 , <b>HOLIDAY</b>
<b>Week 09</b>
Day 1, Date: 18 <sup>th</sup> JAN 2021 TOPIC:IPR
Day 1, Date: 19 <sup>th</sup> JAN 2021 TOPIC:IPR TYPES
Day 3, Date: 20 <sup>th</sup> JAN 2021 <b>HOLIDAY</b>
<b>Week 10</b>
Day 1, Date: 25 <sup>th</sup> JAN 2021 TOPIC: Trade mark
Day 2, Date: 26 <sup>th</sup> JAN 2021 <b>HOLIDAY</b>
Day 3, Date: 27 <sup>th</sup> JAN-2021 TOPIC: Trade seceret
<b>Week 11</b>
Day 1, Date: 1st FEB 2021 TOPIC: Risk assessment in biotechnology
Day 2, Date: 2 <sup>nd</sup> FEB 2021 TOPIC: Risk assessment in biotechnology
Day 3, Date: 3 <sup>rd</sup> FEB-2021 TOPIC:RDT
<b>Week 12</b>
Day 1, Date: 8 <sup>th</sup> FEB -2021 TOPIC:RDT TYPES
Day 2, Date: 9 <sup>th</sup> FEB 2021 TOPIC:RDT PRINCIPLE
Day 6, Date: 10 <sup>th</sup> FEB 2021 TOPIC:RDT ENZYMES
<b>Week 13<sup>TH</sup></b>
Day 1, Date: -15 <sup>th</sup> FEB 2021 <b>TOPIC</b> proteome, CLASS

Day 2, Date: 16 <sup>th</sup> FEB 2021 TOPIC:proteome,types
Day 3, Date: 17 <sup>th</sup> FEB 2021 TOPIC: proteome,
<b>Week 14<sup>th</sup></b>
Day 1, Date: 22 <sup>nd</sup> FEB 2021 TOPIC: Monoclonal antibodies
Day 2, Date: 23 <sup>rd</sup> FEB 2021 TOPIC: Animal and veterinary sciences,
Day 3, Date: 24 <sup>th</sup> FEB-2021 TOPIC: Application of biotechnology
<b>Week 15<sup>th</sup></b>
Day 1, Date: 1st MARCH 2021 TOPIC: Bioremediation and waste treatment biotechnology.
Day 2, Date: 2 <sup>nd</sup> MARCH -2021 TOPIC: Biotechnology in context of developing world
Day 3, Date: 3 <sup>rd</sup> MARCH 2021 TOPIC:Application of biotechnology

**Name of the Teacher – Ms. Kajal Sahni**

**Subject- Biochemistry I**

**Paper- II**

**Class- B.Sc. I**

<b>Week 04 TOPIC- Biomolecules</b>
Day 5, Date: 27-11-2021 TOPIC: Introduction, important features
Day 6, Date: 28-11-2021 TOPIC: Covalent and non-covalent interactions
<b>Week 01 TOPIC- Carbohydrates:</b>
Day 4, Date: 03-12-2021 TOPIC: Introduction and Biological Significance
Day 5, Date: 04-12-2021 TOPIC: Definition and classification: Monosaccharides; families of monosaccharides
Day 6, Date: 05-12-2021 TOPIC: simple aldoses and ketoses, Configuration and Conformation, Stereoisomerism/ Asymmetric centres
<b>Week 02</b>
Day 4, Date: 10-12-2021 TOPIC: Fischer and Haworth projection formula, pyranose and furanose ring forms,
Day 5, Date: 11-12-2021 TOPIC: reducing and non-reducing sugars
Day 6, Date: 12-12-2021 TOPIC: sugar derivatives
<b>Week 03</b>

Day 4, Date: 17-12-2021 TOPIC: Glycosidic bond Disaccharides and Oligosaccharides
Day 5, Date: 18-12-2021 TOPIC: Glycosidic bond Disaccharides and Oligosaccharides
Day 6, Date: 19-12-2021 TOPIC: Glycosidic bond Disaccharides and Oligosaccharides
<b>Week 04</b>
Day 4, Date: 24-12-2021 TOPIC: Polysaccharides
Day 6, Date: 26-12-2021 TOPIC: Polysaccharides
<b>Week 05</b>
Day 4, Date: 31-12-2021 TOPIC: Polysaccharides
<b>Week 01</b>
Day 4, Date: 07-01-2021 TOPIC: Polysaccharides
Day 5, Date: 08-01-2021 TOPIC: Classification and structure of amino acids
Day 6, Date: 09-01-2021 TOPIC: essential amino acids, rare and non-protein amino acids, optical and chemical properties of amino acids
<b>Week 02 Amino acids and Proteins</b>
Day 4, Date: 14-01-2021 TOPIC: cidbase behaviour/zwitterions; pKa value
Day 5, Date: 15-01-2021 TOPIC: Titration curve
Day 6, Date: 16-01-2021 TOPIC: Peptide bond
<b>Week 03</b>
Day 5, Date: 22-01-2021 TOPIC: Classification based on structure and function
Day 6, Date: 23-01-2021 TOPIC: Doubt Class
<b>Week 04</b>
Day 4, Date: 28-01-2021 TOPIC: Classification based on structure and function
Day 5, Date: 29-01-2021 TOPIC: Classification based on structure and function
Day 6, Date: 30-01-2021 TOPIC: Forces stabilizing different structural levels
<b>Week 01</b>
Day 4, Date: 04-02-2021 TOPIC: Amino acid analysis/N-terminal amino acid analysis
Day 5, Date: 05-02-2021 TOPIC: Amino acid analysis/N-terminal amino acid analysis

Day 6, Date: 06-02-2021 TOPIC: Amino acid analysis/N-terminal amino acid analysis
<b>Week 02 TOPIC- Lipids</b>
Day 4, Date: 11-02-2021 TOPIC: Introduction and Classification
Day 5, Date: 12-02-2021 TOPIC: Introduction and Classification
Day 6, Date: 13-02-2021 (TEST) TOPIC: Polysaccharides
<b>Week 03</b>
Day 4, Date: 18-02-2021 TOPIC: Fatty acids – structure and nomenclature,
Day 5, Date: 19-02-2021 TOPIC: soap value, acid value, iodine number
Day 6, Date: 20-02-2021 TOPIC: rancidity. Essential fatty acids
<b>Week 04</b>
Day 4, Date: 25-02-2021 TOPIC: A general account of structure and function of triacylglycerols and phospholipids
Day 5, Date: 26-02-2021 TOPIC: A general account of structure and function of glycolipids and glycolipids
<b>Week 01</b>
Day 4, Date: 04-03-2021 TOPIC: A general account of structure and function of steroids and bile acids
Day 5, Date: 05-03-2021 TOPIC: A general account of structure and function of bile salts and terpenes
Day 6, Date: 06-03-2021 TOPIC: Nucleotides and Nucleic acids
<b>Week 02</b>
Day 5, Date: 12-03-2021 TOPIC: Structure and nomenclature of nucleosides and nucleotides, polynucleotides,
Day 6, Date: 13-03-2021 TOPIC: DNA
<b>Week 03</b>
Day 4, Date: 18-03-2021 TOPIC: RNA
Day 5, Date: 19-03-2021 TOPIC: Properties of DNA
Day 6, Date: 20-03-2021 TOPIC: Biologically important nucleotides and their functions



**Name of the Teacher – Ms. Kajal Sahni**

**Subject- Immunology**

**Paper- VI**

**Class- B.Sc. II**

<b>Week 03</b>
Day 1, Date: 12-10-2021 TOPIC: Immunology: Introduction, History and Scope. Terminology of immune system
Day 2, Date: 13-10-2021 TOPIC: Immunity: Definition, types of Immunity
Day 3, Date: 14-10-2021 TOPIC: Features of Immune Response
<b>Week 04</b>
Day 1, Date: 19-10-2021 TOPIC: Cells of the Immune System
Day 2, Date: 20-10-2021 TOPIC: Cells of the Immune System
Day 3, Date: 21-10-2021 TOPIC: Cells of the Immune System
<b>Week 05</b>
Day 1, Date: 26-10-2021 TOPIC: Cells of the Immune System
Day 2, Date: 27-10-2021 TOPIC: Cells of the Immune System
Day 3, Date: 28-10-2021 TOPIC: Doubt Class
<b>Week 01</b>
Day 1, Date: 02-11-2021 TOPIC: Organs of the Immune System
Day 2, Date: 03-11-2021 TOPIC: Organs of the Immune System
<b>Week 02</b>
Day 1, Date: 09-11-2021 TOPIC: Organs of the Immune System
Day 2, Date: 10-11-2021 TOPIC: Antigens
Day 3, Date: 11-11-2021 (TEST) TOPIC: Cells of the Immune System
<b>Week 03</b>
Day 1, Date: 16-11-2021 TOPIC: Antigens
Day 2, Date: 17-11-2021 TOPIC: Antigens
Day 3, Date: 18-11-2021 TOPIC: Antigens

<b>Week 04</b>
Day 1, Date: 23-11-2021 TOPIC: Antigens
Day 2, Date: 24-11-2021 TOPIC: Doubt Class
<b>Week 05</b>
Day 1, Date: 30-11-2021 TOPIC: Antibodies
<b>Week 01</b>
Day 2, Date: 01-12-2021 TOPIC: Antibodies
Day 3, Date: 02-12-2021 TOPIC: Antibodies
<b>Week 02</b>
Day 1, Date: 07-12-2021 TOPIC: Antibodies
Day 2, Date: 08-12-2021 TOPIC: Antibodies
Day 3, Date: 09-12-2021 (TEST) TOPIC: Organs of the Immune System
<b>Week 03</b>
Day 1, Date: 14-12-2021 TOPIC: Antigen – Antibody Interactions
Day 2, Date: 15-12-2021 TOPIC: Antigen – Antibody Interactions
Day 3, Date: 16-12-2021 TOPIC: Antigen – Antibody Interactions
<b>Week 04</b>
Day 1, Date: -21-12-2021 TOPIC: Antigen – Antibody Interactions
Day 2, Date: 22-12-2021 TOPIC: Antigen – Antibody Interactions
Day 3, Date: 23-12-2021 TOPIC: Doubt Class
<b>Week 05</b>
Day 1, Date: 28-12-2021 TOPIC: Antigen – Antibody Interactions
Day 2, Date: 29-12-2021 TOPIC: Immune Response: Introduction, Humoral Immunity
Day 3, Date: 30-12-2021 TOPIC: Primary and Secondary immune response
<b>Week 01</b>
Day 1, Date: 04-01-2021 TOPIC: B cells in antibody formation
Day 2, Date: 05-01-2021 TOPIC: B cells in antibody formation

Day 3, Date: 06-01-2021 TOPIC: B cells in antibody formation
<b>Week 02</b>
Day 1, Date: 11-01-2021 TOPIC: B cells in antibody formation
Day 2, Date: 12-01-2021 TOPIC: B cells in antibody formation
Day 3, Date: 13-01-2021 TOPIC: Doubt Class
<b>Week 03</b>
Day 1, Date: 18-01-2021 TOPIC: Role of MHC molecules
Day 2, Date: 19-01-2021 TOPIC: Antigen presenting cells
<b>Week 04</b>
Day 1, Date: 25-01-2021 TOPIC: Factors influencing antibody formation
Day 3, Date: 27-01-2021 TOPIC: Cell mediated immunity
<b>Week 01</b>
Day 1, Date: 01-02-2021 TOPIC: Cell mediated immunity
Day 2, Date: 02-02-2021 TOPIC: Cell mediated immunity
Day 3, Date: 03-02-2021 TOPIC: Cell mediated immunity
<b>Week 02 TOPIC</b>
Day 1, Date: 08-02-2021 TOPIC: role of MHC and MHC restriction
Day 2, Date: 09-02-2021 TOPIC: cytokines and lymphokines
Day 3, Date: 10-02-2021 (TEST) TOPIC: Antibodies
<b>Week 03 TOPIC</b>
Day 1, Date: 15-02-2021 TOPIC: functions of cell mediated immunity
Day 3, Date: 17-02-2021 TOPIC: Complement system
<b>Week 04 TOPIC</b>
Day 1, Date: 22-02-2021 TOPIC: Complement system
Day 2, Date: 23-02-2021 TOPIC: Complement system
Day 3, Date: 24-02-2021 TOPIC: Major Histocompatibility Complex
<b>Week 01 TOPIC</b>

Day 1, Date: 01-03-2021 TOPIC: Major Histocompatibility Complex
Day 2, Date: 02-03-2021 TOPIC: Major Histocompatibility Complex
Day 3, Date: 03-03-2021 TOPIC: Hypersensitivity and allergic reactions.
<b>Week 02 TOPIC</b>
Day 1, Date: 08-03-2021 TOPIC: Autoimmunity, immunological tolerance
Day 2, Date: 09-03-2021 TOPIC: Vaccines: concept, types of vaccines
Day 3, Date: 10-03-2021 (TEST) TOPIC: Major Histocompatibility Complex
<b>Week 03</b>
Day 1, Date: 15-03-2021 TOPIC: Vaccines: concept, types of vaccines
Day 2, Date: 16-03-2021 TOPIC: Vaccines: concept, types of vaccines
Day 3, Date: 17-03-2021 TOPIC: Doubt Class

**Name of the Teacher – Ms. Ritu**  
**Subject- Molecular Biology**  
**Paper- VII**  
**Class- B.Sc. I**

<b>Week 02</b>
Day 4, Date: 08-10-2020 TOPIC: Molecular Biology: Introduction to molecular aspects of life
Day 5, Date: 09-10-2020 TOPIC: Molecular Biology: Introduction to molecular aspects of life
Day 6, Date: 10-10-2020 TOPIC: DNA as the genetic material – experiments proving DNA as genetic material.
<b>Week 03</b>
Day 4, Date: 15-10-2020 TOPIC: DNA as the genetic material – experiments proving DNA as genetic material.
Day 5, Date: 16-10-2020 TOPIC: DNA as the genetic material – experiments proving RNA as genetic material.
<b>Week 04</b>
Day 4, Date: 22-10-2020 TOPIC: <b>TEST</b>
Day 5, Date: 23-10-2020 TOPIC: Nucleic acids: Structure, function and properties of DNA

Day 6, Date: 24-10-2020 TOPIC: function and properties of DNA and RNA.
<b>Week 05</b>
Day 3, Date: 28-10-2020 TOPIC: Watson and Crick model of DNA
Day4 , Date: 29-10-2020 TOPIC: DNA forms (A, B and Z), their characteristic
Day 5, Date: 30-10-2020 TOPIC: <b>TEST</b>
<b>Week 01</b>
Day 4, Date: 05-11-2020 TOPIC: Different types of RNA, their structure and function.
Day 5, Date: 06-11-2020 TOPIC: Organization of Genomes – bacterial, viral, human, organelles
Day 6, Date: 07-11-2020 TOPIC: Organization of Genomes – bacterial, viral, human, organelles
<b>Week 02</b>
Day 4, Date: 12-11-2020 TOPIC: <b>TEST</b>
Day 5, Date: 13-11-2020 TOPIC: Eukaryotic genomes: Chromosomal organization and structure
<b>Week 03</b>
Day 4, Date: 19-11-2020 TOPIC: Euchromatin, heterochromatin, centromere, telomere.
Day 5, Date: 20-11-2020 TOPIC: Chromatin structure (nucleosome)
Day 6, Date: 21-11-2020 TOPIC: histone and non-histone proteins
<b>Week 04</b>
Day 5, Date: 27-11-2020 TOPIC: IS elements
Day 6, Date: 28-11-2020 TOPIC: ransposable elements of Maize and P elements of Drosophila.
<b>Week 01</b>
Day 4, Date: 03-12-2020 TOPIC: Extra chromosomal DNA in prokaryotes – plasmids.
Day 5, Date: 04-12-2020 TOPIC: <b>TEST</b>
Day 6, Date: 05-12-2020

TOPIC: DNA Replication: Central dogma of molecular biology
<b>Week 02</b>
Day 4, Date: 10-12-2020 TOPIC: Semi-conservative mode of DNA replication, experimental proof
Day 5, Date: 11-12-2020 TOPIC: Unidirectional and bidirectional mode of DNA replication
Day 6, Date: 12-12-2020 TOPIC: theta model and rolling circle model.
<b>Week 03</b>
Day 4, Date: 17-12-2020 TOPIC: DNA replication in prokaryotes and eukaryotes
Day 5, Date: 18-12-2020 TOPIC: different stages, proteins and enzymes involved.
Day 6, Date: 19-12-2020 TOPIC: <b>TEST</b>
<b>Week 04</b>
Day 4, Date: 24-12-2020 TOPIC: DNA damage and repair: causes of DNA damage, mutations
Day 6, Date: 26-12-2020 TOPIC: Repair mechanisms- photo reactivation, excision repair
<b>Week 05</b>
Day 4, Date: 31-12-2020 TOPIC: mismatch repair, SOS repair
<b>Week 01</b>
Day 4, Date: 07-01-2021 TOPIC: <b>TEST</b>
Day 5, Date: 08-01-2021 TOPIC: Genetic Code: concept, elucidation or cracking of genetic code, features of genetic code
Day 6, Date: 09-01-2021 TOPIC: Wobble hypothesis
<b>Week 02</b>
Day 4, Date: 14-01-2021 TOPIC: Structure of gene- introns/exons, regulatory sequences
Day 5, Date: 15-01-2021 TOPIC: structure of prokaryotic gene.
Day 6, Date: 16-01-2021 TOPIC: <b>TEST</b>
<b>Week 03</b>
Day 5, Date: 22-01-2021 TOPIC: Transcription in prokaryotes and eukaryotes, diff. stages, mechanism, promoters

Day 6, Date: 23-01-2021 TOPIC: transcription factors, RNA polymerases
<b>Week 04</b>
Day 4, Date: 28-01-2021 TOPIC: Post transcriptional modifications- 5' cap formation, 3'-end processing/polyadenylation
Day 5, Date: 29-01-2021 TOPIC: gene splicing and generation of mature mRNA, Inhibitors of transcription
Day 6, Date: 30-01-2021 TOPIC: Site Specific and Homologous recombination.
Day 4, Date: 04-02-2021 TOPIC: Recombination in prokaryotes – Transformation, transduction and conjugation
Day 5, Date: 05-02-2021 TOPIC: Translation/Protein synthesis: Mechanism of initiation
Day 6, Date: 06-02-2021 TOPIC: elongation and termination of protein synthesis in prokaryotes and eukaryotes
<b>Week 02</b>
Day 4, Date: 11-02-2021 TOPIC: Inhibitors of translation, Post-translational modifications.
Day 6, Date: 13-02-2021 TOPIC: Regulation of Gene Expression in prokaryotes and eukaryotes, induction and repression
<b>Week 03</b>
Day 5, Date: 19-02-2021 TOPIC: positive and negative regulation. Operon model- lac, ara
<b>Week 04</b>
Day 4, Date: 25-02-2021 TOPIC: trp, catabolite repression, transcription attenuation.
Day 5, Date: 26-02-2021 TOPIC: <b>TEST</b>

**Name of the Teacher – Ms. Ritu**

**Subject- Plant Biotechnology**

**Paper- XII**

**Class- B.Sc. IIII**

<b>Week 03 TOPIC:- Plant Tissue Culture</b>
Day 1, Date: 12-10-2021 TOPIC: Introduction/Concept of plant tissue culture
Day 2, Date: 13-10-2021

TOPIC: History of plant tissue culture
Day 3, Date: 14-10-2021 TOPIC: Scope of plant tissue culture
<b>Week 04</b>
Day 1, Date: 19-10-2021 TOPIC: Applications along with major achievements
Day 2, Date: 20-10-2021 TOPIC: Layout of Plant Tissue Culture Laboratory
Day 3, Date: 21-10-2021 TOPIC: organization of Plant Tissue Culture Laboratory
<b>Week 05</b>
Day 1, Date: 26-10-2021 TOPIC: different work areas of Plant Tissue Culture Laboratory
Day 2, Date: 27-10-2021 TOPIC: infrastructure/equipments of Plant Tissue Culture Laboratory
Day 3, Date: 28-10-2021 TOPIC: instruments and other requirements of Plant Tissue Culture Laboratory
<b>Week 01 TOPIC:- Aseptic Techniques</b>
Day 1, Date: 02-11-2021 TOPIC: General sanitation/cleanliness of PTC laboratory
Day 2, Date: 03-11-2021 TOPIC: precautions regarding maintenance of aseptic conditions
<b>Week 02</b>
Day 1, Date: 09-11-2021 TOPIC: Washing, drying and sterilization of glassware
Day 2, Date: 10-11-2021 TOPIC: sterilization of media
Day 3, Date: 11-11-2021 TOPIC: surface sterilization
<b>Week 03</b>
Day 1, Date: 16-11-2021 TOPIC: aseptic work station
Day 2, Date: 17-11-2021 TOPIC: DOUBT CLASS
Day 3, Date: 18-11-2021 TOPIC: TEST
<b>Week 04 TOPIC:- Culture Media</b>
Day 1, Date: 23-11-2021 TOPIC: Nutritional requirements for plant tissue culture
Day 2, Date: 24-11-2021 TOPIC: role of different media components
<b>Week 05</b>
Day 1, Date: 30-11-2021 TOPIC: plant growth regulators
<b>Week 01</b>
Day 2, Date: 01-12-2021



TOPIC: different culture media viz. MS, B <sub>5</sub> Nitsch and White's medium
Day 3, Date: 02-12-2021 TOPIC: Preparation of culture media
<b>Week 02 TOPIC:-</b> In-vitro methods in plant tissue culture
Day 1, Date: 07-12-2021 TOPIC: Explants, their cellular characteristics
Day 2, Date: 08-12-2021 TOPIC: dedifferentiation and redifferentiation
Day 3, Date: 09-12-2021 TOPIC: cellular totipotency, organogenesis and somatic embryogenesis
<b>Week 03</b>
Day 1, Date: 14-12-2021 TOPIC: Micropropagation/clonal propagation of elite species
Day 2, Date: 15-12-2021 TOPIC: Synthetic seeds
Day 3, Date: 16-12-2021 TOPIC: Introduction, principle of Callus and suspension culture techniques
<b>Week 04</b>
Day 1, Date: -21-12-2021 TOPIC: methodology of Callus and suspension culture techniques
Day 2, Date: 22-12-2021 TOPIC: applications and limitations of Callus and suspension culture techniques
Day 3, Date: 23-12-2021 TOPIC: Somaclonal variation
<b>Week 05 TOPIC:-</b> Organ culture
Day 1, Date: 28-12-2021 TOPIC: Anther & Pollen culture- concept, technique, applications and limitations
Day 2, Date: 29-12-2021 TOPIC: ovary and ovule culture- concept, technique, applications and limitations
Day 3, Date: 30-12-2021 TOPIC: embryo and endosperm culture- concept, technique, applications and limitations
<b>Week 01</b>
Day 1, Date: 04-01-2021 TOPIC: Embryo rescue
Day 2, Date: 05-01-2021 TOPIC: Protoplast isolation, viability test, protoplast culture
Day 3, Date: 06-01-2021 TOPIC: Somatic hybridization – protoplast fusion techniques (chemical and electro-fusion)
<b>Week 02</b>
Day 1, Date: 11-01-2021 TOPIC: selection of hybrids, production of symmetric and asymmetric hybrids and cybrids
Day 2, Date: 12-01-2021 TOPIC: Practical applications of somatic hybridization and cybridization
Day 3, Date: 13-01-2021 TOPIC: TEST
<b>Week 03 UNIT-II</b>

Day 1, Date: 18-01-2021 TOPIC: Production of secondary metabolites in vitro: introduction
Day 2, Date: 19-01-2021 TOPIC: Production of secondary metabolites in vitro: technique and utilities
<b>Week 04</b>
Day 1, Date: 25-01-2021 TOPIC: Biotransformation
Day 3, Date: 27-01-2021 TOPIC: Plant germ plasm conservation and cryopreservation
<b>Week 01 TOPIC:- Genetic Engineering in plants</b>
Day 1, Date: 01-02-2021 TOPIC: Introduction
Day 2, Date: 02-02-2021 TOPIC: Plant transformation by <i>Agrobacterium tumefaciens</i> and <i>A. rhizogenes</i>
Day 3, Date: 03-02-2021 TOPIC: Ti plasmid. Strategies for gene transfer to plant cells
<b>Week 02</b>
Day 1, Date: 08-02-2021 TOPIC: Binary and cointegrate vectors
Day 2, Date: 09-02-2021 TOPIC: Gene targeting in plants, Use of plant viruses as vectors
Day 3, Date: 10-02-2021 TOPIC: TEST
<b>Week 03</b>
Day 1, Date: 15-02-2021 TOPIC: Direct DNA transfer/Physical methods of gene transfer in plants - micro projectile bombardment, electroporation
Day 3, Date: 17-02-2021 TOPIC: Direct DNA transfer/Physical methods of gene transfer in plants - liposome mediated, Calcium phosphate mediated
<b>Week 04 TOPIC:- Transgenic Plants</b>
Day 1, Date: 22-02-2021 TOPIC: Introduction and applications
Day 2, Date: 23-02-2021 TOPIC: Developing insect resistance
Day 3, Date: 24-02-2021 TOPIC: bacterial and fungal disease resistance
<b>Week 01</b>
Day 1, Date: 01-03-2021 TOPIC: virus resistance
Day 2, Date: 02-03-2021 TOPIC: abiotic stress tolerance in plants
Day 3, Date: 03-03-2021 TOPIC: TEST
<b>Week 02 TOPIC:- Improving food quality</b>
Day 1, Date: 08-03-2021

TOPIC: nutritional enhancement of plants-carbohydrates
Day 2, Date: 09-03-2021 (TEST)
TOPIC: nutritional enhancement of plants- seed storage proteins
Day 3, Date: 10-03-2021
TOPIC: nutritional enhancement of plants- vitamins
<b>Week 03</b>
Day 1, Date: 15-03-2021
TOPIC: Plants as Bioreactors: antibodies, polymers
Day 2, Date: 16-03-2021
TOPIC: industrial enzymes and Edible vaccines
Day 3, Date: 17-03-2021
TOPIC: TEST

**Name of the Teacher – Ms. Kajal Sahni**  
**Subject- Biomolecules**  
**Paper- BT-101**  
**Class- M.Sc. I**

<b>Week 01 TOPIC-WATER</b>
Day 1, Date: 04-01-2021
TOPIC: Introduction of Biomolecules and Water
Day 2, Date: 05-01-2021
TOPIC: Water Structure, hydrogen bonding, as a biological solvent
Day 3, Date: 06-01-2021
TOPIC: ionization and fitness of the aqueous environment for living organisms, pH, Henderson-Hasselbalch equation
Day 4, Date: 07-01-2021
TOPIC: Henderson-Hasselbalch equation Buffers, Physiological buffers
Day 5, Date: 08-01-2021
TOPIC: Buffers, Physiological buffers CARBOHYDRATES- Structure, occurrence and biological importance of important monosaccharides,
Day 6, Date: 09-01-2021
TOPIC: oligosaccharides and polysaccharides
<b>Week 02 TOPIC- CARBOHYDRATES</b>
Day 1, Date: 11-01-2021
TOPIC: Ring structures and anomeric forms, mutarotation, sugar derivatives
Day 2, Date: 12-01-2021
TOPIC: reactions of monosaccharides
Day 3, Date: 13-01-2021
TOPIC: Glycosaminoglycans
Day 4, Date: 14-01-2021

TOPIC: Glycosaminoglycans
Day 5, Date: 15-01-2021 TOPIC: Heteropolysaccharides of bacterial and algal cell walls
Day 6, Date: 16-01-2021 TOPIC: Proteoglycans
<b>Week 03 TOPIC- CARBOHYDRATES</b>
Day 1, Date: 18-01-2021 TOPIC: Glycoproteins, Lectins
Day 2, Date: 19-01-2021 TOPIC: Amino acids and Proteins : Common structural features, classification by R group
Day 4, Date: 21-01-2021 TOPIC: Zwitter ion structures, acid-base properties
Day 5, Date: 22-01-2021 TOPIC: titration curves of amino acids
Day 6, Date: 23-01-2021 TOPIC: Essential amino acids, Separation of amino acids
<b>Week 04 TOPIC- Amino acids and Proteins</b>
Day 1, Date: 25-01-2021 TOPIC: Peptides including biological, active peptides
Day 3, Date: 27-01-2021 TOPIC: Classification and different structural levels (Primary, secondary, tertiary & quaternary) of proteins
Day 4, Date: 28-01-2021 TOPIC: Determination of amino acid sequences of proteins
Day 5, Date: 29-01-2021 TOPIC: Ramachandran plot
Day 6, Date: 30-01-2021 TOPIC: Characteristic amino acid composition of proteins; Determination of amino acid sequences of proteins; Effect of amino acid sequence on the function of a protein and stability of $\alpha$ -helix
<b>Week 01 TOPIC- Amino acids and Proteins</b>
Day 1, Date: 01-02-2021 TOPIC: Effect of amino acid sequence on the function of a protein and stability of $\alpha$ -helix Protein folding and role of chaperons in protein folding
Day 2, Date: 02-02-2021 TOPIC: Protein folding and role of chaperons in protein folding Chemical synthesis of polypeptides
Day 3, Date: 03-02-2021 TOPIC: Chemical synthesis of polypeptides Introduction of Lipids
Day 4, Date: 04-02-2021 TOPIC: Introduction of Lipids Classification of Lipids
Day 5, Date: 05-02-2021 TOPIC: Classification of Lipids Structures, nomenclature and properties of fatty acids
Day 6, Date: 06-02-2021 (TEST) TOPIC: Glycosaminoglycans
<b>Week 02 TOPIC- Lipids</b>

Day 1, Date: 08-02-2021 TOPIC: Structures, nomenclature and properties of fatty acids
Day 2, Date: 09-02-2021 TOPIC: Essential fatty acids, Acylglycerols
Day 3, Date: 10-02-2021 TOPIC: Characterization of fats-Saponification value, iodine number
Day 4, Date: 11-02-2021 TOPIC: Rancidity, acid value, Reichert-Meissel number
Day 5, Date: 12-02-2021 TOPIC: Structures and properties of different types of phospholipids and sphingolipids
Day 6, Date: 13-02-2021 TOPIC: Classification of Lipids Structures, nomenclature and properties of fatty acids
<b>Week 03 TOPIC- Lipids</b>
Day 1, Date: 15-02-2021 TOPIC: Sphingomyelins
Day 3, Date: 17-02-2021 TOPIC: Cerebrosides
Day 4, Date: 18-02-2021 TOPIC: Gangliosides
Day 5, Date: 19-02-2021 TOPIC: Structure and functions of prostaglandins
Day 6, Date: 20-02-2021 TOPIC: Structure and functions of Prostacyclins
<b>Week 04 TOPIC- Lipids</b>
Day 1, Date: 22-02-2021 TOPIC: Structure and functions of Thromboxanes
Day 2, Date: 23-02-2021 TOPIC: Structure and functions of Leukotrienes
Day 3, Date: 24-02-2021 TOPIC: Terpenes of biological significance
Day 4, Date: 25-02-2021 TOPIC: Sterols and bile acids
Day 5, Date: 26-02-2021 TOPIC: Nucleic Acids- Introduction
<b>Week 01 TOPIC- Nucleic Acids</b>
Day 1, Date: 01-03-2021 TOPIC: Structure and properties of purines and pyrimidine bases
Day 2, Date: 02-03-2021 (TEST) TOPIC: Ramachandran plot
Day 3, Date: 03-03-2021 TOPIC: Nucleosides and Nucleotides
Day 4, Date: 04-03-2021 TOPIC: Biologically important nucleotides
Day 5, Date: 05-03-2021 TOPIC: Nucleic acids as the genetic material – experimental evidences
Day 6, Date: 06-03-2021

TOPIC: Nucleic acids as the genetic material – experimental evidences
<b>Week 02 TOPIC- Nucleic Acids</b>
Day 1, Date: 08-03-2021 TOPIC: Chargaff's rules, The covalent backbone of nucleic acids
Day 2, Date: 09-03-2021 (TEST) TOPIC: Sphingomyelins, Cerebrosides, Gangliosides
Day 3, Date: 10-03-2021 TOPIC: Double helical model of DNA structure
Day 5, Date: 12-03-2021 TOPIC: Structural polymorphism of DNA (A,B and Z-DNA)
Day 6, Date: 13-03-2021 TOPIC: Doubt Class
<b>Week 03 TOPIC- Nucleic Acids</b>
Day 1, Date: 15-03-2021 TOPIC: Structural polymorphism of RNA
Day 2, Date: 16-03-2021 TOPIC: Denaturation & annealing of DNA;
Day 3, Date: 17-03-2021 (TEST) TOPIC: Structure and functions of prostaglandins and Thromboxanes
Day 4, Date: 18-03-2021 TOPIC: Biological functions of nucleotides
Day 5, Date: 19-03-2021 TOPIC: Chemical synthesis of oligonucleotides
Day 6, Date: 20-03-2021 TOPIC: Doubt Class

**Name of the Teacher – Ms. Sonika**

**Subject- Microbiology**

**Paper- BT-102**

**Class- M.Sc. I**

<b>Week 01</b>
Day 1, Date: 04-01-2021 TOPIC: Various branches and applications of Microbiology, History
Day 2, Date: 05-01-2021 TOPIC: contributions of various scientists to this science with particular reference to the contribution of the following scientists- A.V.Leeuwenhoek, Louis Pasteur, Edward Jenner
Day 3, Date: 06-01-2021 TOPIC: contributions of various scientists to this science with particular reference to the contribution of the following scientists- Robert Koch, Alexander Fleming and Joseph Lister
Day 4, Date: 07-01-2021

TOPIC: Morphology and arrangement of bacterial cells, Bacterial- flagella
Day 5, Date: 08-01-2021 TOPIC: Fimbriae, capsule, spores and cysts,
Day 6, Date: 09-01-2021 TOPIC: cell walls of Gram +ve and Gram –ve bacteria
<b>Week 02</b>
Day 1, Date: 11-01-2021 TOPIC: Nutritional requirements and nutritional categories of microorganisms
Day 2, Date: 12-01-2021 TOPIC: Physical factors for growth
Day 3, Date: 13-01-2021 TOPIC: Enrichment culture techniques for isolation of microorganisms
Day 4, Date: 14-01-2021 TOPIC: pure culture techniques and preservation techniques
Day 5, Date: 15-01-2021 TOPIC: Study of growth curve, measurement of growth
Day 6, Date: 16-01-2021 TOPIC: Study of growth curve, measurement of growth
<b>Week 03</b>
Day 1, Date: 18-01-2021 TOPIC: <b>TEST</b>
Day 2, Date: 19-01-2021 TOPIC: Distinguishing features of bacteria, viruses, fungi, protozoa, algae
Day 4, Date: 21-01-2021 TOPIC: Criteria used for characterization including molecular approaches
Day 5, Date: 22-01-2021 TOPIC: Classification, Nomenclature and Identification of microorganisms
Day 6, Date: 23-01-2021 TOPIC: Taxonomy and nomenclature based upon Bergey's manual
<b>Week 04</b>
Day 1, Date: 25-01-2021 TOPIC: <b>TEST</b>
Day 3, Date: 27-01-2021 TOPIC: Gram (+) and Gram (-) bacteria of medical and industrial importance (Pseudomonas, Azotobacter
Day 4, Date: 28-01-2021 TOPIC: Gram (+) and Gram (-) bacteria of medical and industrial importance Rhizobium Agrobacterium);
Day 5, Date: 29-01-2021 TOPIC: characteristics of Mycobacterium and Mycoplasmas

Day 6, Date: 30-01-2021 TOPIC: food born diseases.
<b>Week 01</b>
Day 1, Date: 01-02-2021 TOPIC: food born diseases
Day 2, Date: 02-02-2021 TOPIC: photosynthetic prokaryotes (purple bacteria)
Day 3, Date: 03-02-2021 TOPIC: photosynthetic prokaryotes (green bacteria, cyanobacteria)
Day 4, Date: 04-02-2021 TOPIC: actinomycetes
Day 5, Date: 05-02-2021 TOPIC: brief account of different types of viruses with special reference to lambda phage, herpes
Day 6, Date: 06-02-2021 TOPIC: brief account of different types of viruses with special reference to adenoviruses and retroviruses
<b>Week 02</b>
Day 1, Date: 08-02-2021 TOPIC: virioids and prions
Day 2, Date: 09-02-2021 TOPIC: fungi and algae of industrial importance
Day 3, Date: 10-02-2021 TOPIC: fungi and algae of industrial importance
Day 4, Date: 11-02-2021 TOPIC: <b>TEST</b>
Day 5, Date: 12-02-2021 TOPIC: Sterilization methods- dry heat, moist heat
Day 6, Date: 13-02-2021 TOPIC: Sterilization methods- radiations, filtration
<b>Week 03</b>
Day 1, Date: 15-02-2021 TOPIC: Sterilization methods- gaseous sterilization
Day 3, Date: 17-02-2021 TOPIC: Validation of sterilization processes
Day 4, Date: 18-02-2021 TOPIC: Factors affecting antimicrobial action
Day 5, Date: 19-02-2021 TOPIC: Mode of action of antimicrobial agents
Day 6, Date: 20-02-2021 TOPIC: Antibiotics and their mode of action



<b>Week 04</b>
Day 1, Date: 22-02-2021 TOPIC: Antibiotics and their mode of action
Day 2, Date: 23-02-2021 TOPIC: Antibiotics and their mode of action
Day 3, Date: 24-02-2021 TOPIC: Microbiological assay of antibiotics (ampicillin)
Day 4, Date: 25-02-2021 TOPIC: Microbiological assay of antibiotics (tetracycline)
Day 5, Date: 26-02-2021 TOPIC: Microbiological assay of antibiotics (tetracycline)
<b>Week 01</b>
Day 1, Date: 01-03-2021 TOPIC: <b>TEST</b>
Day 2, Date: 02-03-2021 TOPIC: Types of toxins and their mode of action.
Day 3, Date: 03-03-2021 TOPIC: Types of toxins and their mode of action.
Day 4, Date: 04-03-2021 TOPIC: <b>TEST</b>
Day 5, Date: 05-03-2021 TOPIC: Microbial ecology
Day 6, Date: 06-03-2021 TOPIC: Biogeochemical cycles
<b>Week 02</b>
Day 1, Date: 08-03-2021 TOPIC: Biogeochemical cycles
Day 2, Date: 09-03-2021 TOPIC: Biogeochemical cycles
Day 3, Date: 10-03-2021 TOPIC: Physical environment
Day 5, Date: 12-03-2021 TOPIC: Microenvironment & Niche
Day 6, Date: 13-03-2021 TOPIC: Microorganisms and ecosystems
<b>Week 03</b>
Day 1, Date: 15-03-2021 TOPIC: Microorganisms and ecosystems
Day 2, Date: 16-03-2021 TOPIC: Soil microbiology: Types of microorganisms in soil

Day 3, Date: 17-03-2021 (TEST) TOPIC: Soil microbiology: functions of microorganisms in soil.
Day 4, Date: 18-03-2021 TOPIC: Microorganism associations with vascular plants (Mycorrhizae)
Day 5, Date: 19-03-2021 TOPIC: Microorganism associations with vascular plants (rhizobia)
Day 6, Date: 20-03-2021 TOPIC: Microorganism growth in foods
<b>Week 04</b>
Day 1, Date: 22-03-2021 TOPIC: food spoilage & control
Day 2, Date: 23-03-2021 TOPIC: <b>TEST</b>
Day 2, Date: 24-03-2021 TOPIC: <b>REVISION AND DISCUSSION</b>

**Name of the Teacher – Ms. Sonika**

**Subject- Molecular Cell Biology**

**Paper- BT-103**

**Class- M.Sc. I**

<b>Week 01</b>
Day 1, Date: 04-01-2021 TOPIC: Overview of cells and cell research: Origin and evolution of cells, Cells as experimental models, tools of cell biology.
Day 2, Date: 05-01-2021 TOPIC: Fundamentals of Molecular Biology
Day 3, Date: 06-01-2021 TOPIC: Heredity, Genes, and DNA
Day 4, Date: 07-01-2021 TOPIC: Recombinant DNA, Detection of Nucleic Acids and
Day 5, Date: 08-01-2021 TOPIC: Gene Function in Eukaryotes
Day 6, Date: 09-01-2021 TOPIC: Nucleus: Nuclear envelope and traffic between the nucleus and cytoplasm
<b>Week 02</b>
Day 1, Date: 11-01-2021

TOPIC: organization of the nucleus, nucleolus, nucleus during mitosis
Day 2, Date: 12-01-2021 TOPIC: organization of the nucleus, nucleolus, nucleus during mitosis
Day 3, Date: 13-01-2021 TOPIC: Protein Sorting and Transport
Day 4, Date: 14-01-2021 TOPIC: Endoplasmic reticulum
Day 5, Date: 15-01-2021 TOPIC: Endoplasmic reticulum
Day 6, Date: 16-01-2021 TOPIC: Lysosomes, mechanism of vesicular transport
<b>Week 03</b>
Day 1, Date: 18-01-2021 TOPIC: <b>TEST</b>
Day 2, Date: 19-01-2021 TOPIC: DNA Replication:
Day 4, Date: 21-01-2021 TOPIC: DNA polymerase
Day 5, Date: 22-01-2021 TOPIC: , replication at the ends of chromosomes.
Day 6, Date: 23-01-2021 TOPIC: , replication at the ends of chromosomes.
<b>Week 04</b>
Day 1, Date: 25-01-2021 TOPIC: <b>TEST</b>
Day 3, Date: 27-01-2021 TOPIC: DNA Repair
Day 4, Date: 28-01-2021 TOPIC:; Direct reversal of DNA damage
<b>Week 05</b>
Day 1, Date: 01-02-2021 TOPIC: recombinational repair.
Day 2, Date: 02-02-2021 TOPIC: ) recombinational repair.TYPES
Day 3, Date: 03-02-2021 TOPIC: RNA Synthesis
Day 4, Date: 04-02-2021 TOPIC: Processing
Day 5, Date: 05-02-2021

TOPIC: Prokaryotic transcription
Day 6, Date: 06-02-2021 TOPIC: RNA polymerases
<b>Week 06</b>
Day 1, Date: 08-02-2021 TOPIC:T ranscription factor
Day 2, Date: 09-02-2021 TOPIC: RNA processing and turnover,
Day 3, Date: 10-02-2021 TOPIC: Golgi apparatus
Day 4, Date: 11-02-2021 TOPIC: <b>TEST</b>
Day 5, Date: 12-02-2021 TOPIC: mechanism of vesicular transport
Day 6, Date: 13-02-2021 TOPIC: Endoplasmic reticulum
<b>Week 07</b>
Day 1, Date: 15-02-2021 TOPIC:
Day 3, Date: 17-02-2021 TOPIC:
Day 4, Date: 18-02-2021 TOPIC: Protein Synthesis,
Day 5, Date: 19-02-2021 TOPIC: Protein Synthesis,
Day 6, Date: 20-02-2021 TOPIC: Regulation:
<b>Week 08</b>
Day 1, Date: 22-02-2021 TOPIC: Cell Signaling:
Day 2, Date: 23-02-2021 TOPIC: : Signaling molecules and their receptors
Day 3, Date: 24-02-2021 TOPIC: functions of cell surface
Day 4, Date: 25-02-2021 TOPIC: functions of cell surface
Day 5, Date: 26-02-2021 TOPIC: receptors,
<b>Week 9</b>

Day 1, Date: 01-03-2021 TOPIC: <b>TEST</b>
Day 2, Date: 02-03-2021 TOPIC: pathways of intracellular signal transduction
Day 3, Date: 03-03-2021 TOPIC: signaling in development and differentiation.
Day 4, Date: 04-03-2021 TOPIC: pathways of intracellular signal transduction- <b>TEST</b>
Day 5, Date: 05-03-2021 TOPIC: Cell death and cell renewal:
Day 6, Date: 06-03-2021 TOPIC: Cell death and cell renewal:
<b>Week 10</b>
Day 1, Date: 08-03-2021 TOPIC: programmed cell death, s
Day 2, Date: 09-03-2021 TOPIC: Embryonic stem cells
Day 3, Date: 10-03-2021 TOPIC: therapeutic cloning
Day 5, Date: 12-03-2021 TOPIC: therapeutic cloning
Day 6, Date: 13-03-2021 TOPIC: Cancer
<b>Week 11</b>
Day 1, Date: 15-03-2021 TOPIC: Development and causes of cancer
Day 2, Date: 16-03-2021 TOPIC: tumor viruses
Day 3, Date: 17-03-2021 (TEST) TOPIC: oncogenes
Day 4, Date: 18-03-2021 TOPIC: suppressor genes
Day 5, Date: 19-03-2021 TOPIC: application of molecular biology to cancer prevention and treatment
Day 6, Date: 20-03-2021 TOPIC: application of molecular biology to cancer prevention and treatment
<b>Week 12</b>
Day 1, Date: 22-03-2021 TOPIC: pathways of intracellular signal transduction

Day 2, Date: 23-03-2021 TOPIC: <b>TEST</b>
Day 2, Date: 24-03-2021 TOPIC: <b>REVISION AND DISCUSSION</b>

**Name of the Teacher – Ms. Ritu**  
**Subject- Biotechniques**  
**Paper- BT-104**  
**Class- M.Sc. I**

<b>Week 02 TOPIC- CELL SEPARATION, DISRUPTION, EXTRACTION, AND CONCENTRATION TECHNIQUES</b>
Day 4, Date: 08-10-2020 TOPIC: Microfiltration
Day 5, Date: 09-10-2020 TOPIC: Centrifugation
Day 6, Date: 10-10-2020 TOPIC: Ultrasonication
<b>Week 03 TOPIC- CELL SEPARATION, DISRUPTION, EXTRACTION, AND CONCENTRATION TECHNIQUES</b>
Day 1, Date: 12-10-2020 TOPIC: DOUBT CLASS
Day 2, Date: 13-10-2020 TOPIC: TEST
Day 3, Date: 14-10-2020 TOPIC: High pressure homogenization
Day 4, Date: 15-10-2020 TOPIC: Bead milling
Day 5, Date: 16-10-2020 TOPIC: TEST
<b>Week 04 TOPIC- CELL SEPARATION, DISRUPTION, EXTRACTION, AND CONCENTRATION TECHNIQUES</b>
Day 1, Date: 19-10-2020 TOPIC: Ultrafiltration
Day 2, Date: 20-10-2020 TOPIC: Applications of ultrafiltration
Day 3, Date: 21-10-2020 TOPIC: Diafiltration
Day 4, Date: 22-10-2020 TOPIC: Applications of diafiltration
Day 5, Date: 23-10-2020 TOPIC: DOUBT CLASS
Day 6, Date: 24-10-2020

TOPIC: TEST
<b>Week 05</b>
Day 6, Date: 26-10-2020 TOPIC: Reverse osmosis
Day 6, Date: 27-10-2020 TOPIC: Lyophilisation
Day 6, Date: 28-10-2020 TOPIC: TEST
Day 6, Date: 29-10-2020 TOPIC: Principle of sedimentation contd.
Day 6, Date: 30-10-2020 TOPIC: Principle of sedimentation
<b>Week 01 TOPIC-CENTRIFUGATION METHODS</b>
Day 1, Date: 02-11-2020 TOPIC: Centrifugation techniques contd.
Day 2, Date: 03-11-2020 TOPIC: Centrifugation techniques
Day 4, Date: 05-11-2020 TOPIC: Applications of centrifugation
Day 5, Date: 06-11-2020 TOPIC: DOUBT CLASS
Day 6, Date: 07-11-2020 TOPIC: TEST
<b>Week 02</b>
Day 1, Date: 09-11-2020 TOPIC: Differential centrifugation
Day 2, Date: 10-11-2020 TOPIC: Density gradient centrifugation
Day 3, Date: 11-11-2020 TOPIC: Ultracentrifugation
Day 4, Date: 12-11-2020 TOPIC: DOUBT CLASS
Day 5, Date: 13-01-2020 TOPIC: TEST
<b>Week 03 TOPIC- MICROSCOPY</b>
Day 1, Date: 16-11-2020 TOPIC: Light microscopy-Magnification
Day 2, Date: 17-11-2020 TOPIC: Light microscopy-Resolving power
Day 3, Date: 18-11-2020 TOPIC: Light microscopy- Numerical aperture
Day 4, Date: 19-11-2020 TOPIC: Light microscopy- Limit of resolution
Day 5, Date: 20-11-2020 TOPIC: DOUBT CLASS
Day 6, Date: 21-11-2020

TOPIC: TEST
<b>Week 04 TOPIC- MICROSCOPY</b>
Day 1, Date: 23-11-2020 TOPIC: Principle of Bright field microscopy
Day 2, Date: 24-11-2020 TOPIC: Applications of Bright field microscopy
Day 5, Date: 27-11-2020 TOPIC: Principle of phase contrast microscopy
Day 6, Date: 28-11-2020 TOPIC: Applications of phase contrast microscopy
<b>Week 05 TOPIC- MICROSCOPY</b>
Day 1, Date: 30-11-2020 TOPIC: DOUBT CLASS
<b>Week 01 TOPIC- MICROSCOPY</b>
Day 2, Date: 01-12-2020 TOPIC: TEST
Day 3, Date: 02-12-2020 TOPIC: Principle of Fluorescence microscopy contd.
Day 4, Date: 03-12-2020 TOPIC: Principle of Fluorescence microscopy Applications of Fluorescence microscopy
Day 5, Date: 04-12-2020 TOPIC: Applications of Fluorescence microscopy
Day 6, Date: 05-12-2020 TOPIC: Electron microscopy and its types
<b>Week 02 TOPIC- MICROSCOPY</b>
Day 1, Date: 07-12-2020 TOPIC: Principle of Scanning electron microscopy
Day 2, Date: 08-12-2020 TOPIC: Applications of Scanning electron microscopy
Day 3, Date: 09-12-2020 TOPIC: Principle of Transmission electron microscopy
Day 4, Date: 10-12-2020 TOPIC: Applications of Transmission electron microscopy
Day 5, Date: 11-12-2020 TOPIC: DOUBT CLASS
Day 6, Date: 12-12-2020 TOPIC: TEST
<b>Week 03 TOPIC-SPECTROSCOPY</b>
Day 1, Date: 14-12-2020 TOPIC: Principle of X-ray diffraction contd.
Day 2, Date: 15-12-2020 TOPIC: Principle of X-ray diffraction
Day 3, Date: 16-12-2020 TOPIC: Principle of fluorescence spectroscopy contd.
Day 4, Date: 17-12-2020 TOPIC: Principle of fluorescence spectroscopy
Day 5, Date: 18-12-2020



TOPIC: DOUBT CLASS
Day 6, Date: 19-12-2020 TOPIC: TEST
<b>Week 04 TOPIC-SPECTROSCOPY</b>
Day 1, Date: -21-12-2020 TOPIC: Principle of UV and Visible spectroscopy contd.
Day 2, Date: 22-12-2020 TOPIC: Principle of UV and Visible spectroscopy
Day 3, Date: 23-12-2020 TOPIC: Principle of ORD/CD spectroscopy contd.
Day 4, Date: 24-12-2020 TOPIC: Principle of ORD/CD spectroscopy
Day 6, Date: 26-12-2020 TOPIC: DOUBT CLASS
<b>Week 05 TOPIC-SPECTROSCOPY</b>
Day 1, Date: 28-12-2020 TOPIC: TEST
Day 2, Date: 29-12-2020 TOPIC: Principle of NMR spectroscopy contd
Day 3, Date: 30-12-2020 TOPIC: Principle of NMR spectroscopy
Day 4, Date: 31-12-2020 TOPIC: Principle of ESR spectroscopy
<b>Week 01 TOPIC-SPECTROSCOPY</b>
Day 1, Date: 04-01-2021 TOPIC: Principle of Atomic absorption spectroscopy contd.
Day 2, Date: 05-01-2021 TOPIC: Principle of Atomic absorption spectroscopy
Day 3, Date: 06-01-2021 TOPIC: Principle of Atomic emission spectroscopy contd.
Day 4, Date: 07-01-2021 TOPIC: Principle of Atomic emission spectroscopy
Day 5, Date: 08-01-2021 TOPIC: DOUBT CLASS
Day 6, Date: 09-01-2021 TOPIC: TEST
<b>Week 02 TOPIC-CHROMATOGRAPHY</b>
Day 1, Date: 11-01-2021 TOPIC: Principle of paper chromatography
Day 2, Date: 12-01-2021 TOPIC: Applications of paper chromatography
Day 3, Date: 13-01-2021 TOPIC: Principle of thin layer chromatography
Day 4, Date: 14-01-2021 TOPIC: Applications of thin layer chromatography
Day 5, Date: 15-01-2021

TOPIC: DOUBT CLASS
Day 6, Date: 16-01-2021 TOPIC: TEST
<b>Week 03 TOPIC- CHROMATOGRAPHY</b>
Day 1, Date: 18-01-2021 TOPIC: Principle of gel-filtration chromatography
Day 2, Date: 19-01-2021 TOPIC: Applications of gel-filtration chromatography
Day 4, Date: 21-01-2021 TOPIC: Principle of Ion-exchange chromatography
Day 5, Date: 22-01-2021 TOPIC: Applicatins of Ion-exchange chromatography
Day 6, Date: 23-01-2021 TOPIC: DOUBT CLASS
<b>Week 04 TOPIC- CHROMATOGRAPHY</b>
Day 1, Date: 25-01-2021 TOPIC: TEST
Day 3, Date: 27-01-2021 TOPIC: Principle of Affinity chromatography
Day 4, Date: 28-01-2021 TOPIC: Applications of Affinity chromatography
Day 5, Date: 29-01-2021 TOPIC: Principle of Gas liquid chromatography
Day 6, Date: 30-01-2021 TOPIC: Applicitions of Gas liquid chromatography
<b>Week 01 TOPIC- CHROMATOGRAPHY</b>
Day 1, Date: 01-02-2021 TOPIC: Principle of High pressure liquid chromatography(HPLC)
Day 2, Date: 02-02-2021 TOPIC: Applications of High pressure liquid chromatography(HPLC)
Day 3, Date: 03-02-2021 TOPIC: Principle and applications of reversed phase chromatography
Day 4, Date: 04-02-2021 TOPIC: Principle and applications of Hydrophobic interaction chromatography
Day 5, Date: 05-02-2021 TOPIC: DOUBT CLASS
Day 6, Date: 06-02-2021 (TEST) TOPIC: TEST
<b>Week 02 TOPIC- ELECTROPHORESIS</b>
Day 1, Date: 08-02-2021 TOPIC: Concept of electrophoresis
Day 2, Date: 09-02-2021 TOPIC: Factors affecting electrophoresis
Day 3, Date: 10-02-2021 TOPIC: Agarose gel electrophoresis
Day 4, Date: 11-02-2021

TOPIC: Pulse field gel electrophoresis
Day 5, Date: 12-02-2021 TOPIC: DOUBT CLASS
Day 6, Date: 13-02-2021 TOPIC: TEST
<b>Week 03 TOPIC- ELECTROPHORESIS</b>
Day 1, Date: 15-02-2021 TOPIC: PAGE
Day 3, Date: 17-02-2021 TOPIC: SDS-PAGE
Day 4, Date: 18-02-2021 TOPIC: Isoelectrofocusing
Day 5, Date: 19-02-2021 TOPIC: 2 Dimensional electrophoresis
Day 6, Date: 20-02-2021 TOPIC: DOUBT CLASS
<b>Week 04 TOPIC- RADIOISOTOPE TECHNIQUES</b>
Day 1, Date: 22-02-2021 TOPIC: TEST
Day 2, Date: 23-02-2021 TOPIC: Radioactivity
Day 3, Date: 24-02-2021 TOPIC: Units of Radioactivity
Day 4, Date: 25-02-2021 TOPIC: Radioactivity decay
Day 5, Date: 26-02-2021 TOPIC: Rate of Radioactivity decay
<b>Week 01 TOPIC- MEASUREMENT OF RADIOACTIVITY</b>
Day 1, Date: 01-03-2021 TOPIC: DOUBT CLASS
Day 2, Date: 02-03-2021 TOPIC: TEST
Day 3, Date: 03-03-2021 TOPIC: Geiger counter contd.
Day 4, Date: 04-03-2021 TOPIC: Geiger counter
Day 5, Date: 05-03-2021 TOPIC: Liquid Scintillation Counter contd.
Day 6, Date: 06-03-2021 TOPIC: Liquid Scintillation Counter
<b>Week 02</b>
Day 1, Date: 08-03-2021 TOPIC: Autoradiography
Day 2, Date: 09-03-2021 TOPIC: Effects of radiations on biological system contd.
Day 3, Date: 10-03-2021 TOPIC: Effects of radiations on biological system

Day 5, Date: 12-03-2021 TOPIC: Cerenkov radiations
Day 6, Date: 13-03-2021 TOPIC: Principle of Tracer technique
<b>Week 03 TOPIC- RADIOISOTOPE TECHNIQUES</b>
Day 1, Date: 15-03-2021 TOPIC: Applications of Tracer technique
Day 2, Date: 16-03-2021 TOPIC: DOUBT CLASS
Day 3, Date: 17-03-2021 TOPIC: TEST of Unit-IV (Complete)
Day 4, Date: 18-03-2021 TOPIC: TEST of Unit-I (Complete)
Day 5, Date: 19-03-2021 TOPIC: TEST of Unit-II (Complete)
Day 6, Date: 20-03-2021 TOPIC: TEST of Unit-III (Complete)

**Name of the Teacher – Ms. Ritu**  
**Subject- Molecular Genetics**  
**Paper- BT- 114**  
**Class- M.Sc. II**

<b>Week 02</b>
Day 4, Date: 08-10-2020 TOPIC: Packaging of DNA into chromosomes
Day 5, Date: 09-10-2020 TOPIC: Packaging of DNA into chromosomes
Day 6, Date: 10-10-2020 TOPIC: Chromosome banding
<b>Week 03</b>
Day 1, Date: 12-10-2020 TOPIC: Chromosome banding
Day 2, Date: 13-10-2020 TOPIC: Gene organization
Day 3, Date: 14-10-2020 TOPIC: Multigene families, Pseudo genes
Day 4, Date: 15-10-2020 TOPIC: Repetitive DNA
Day 5, Date: 16-10-2020 TOPIC: <b>TEST</b>
<b>Week 04</b>

Day 1, Date: 19-10-2020 TOPIC: Chromatin domains
Day 2, Date: 20-10-2020 TOPIC: Chromatin domains
Day 3, Date: 21-10-2020, TOPIC: An overview of mutation and polymorphism
Day 4, Date: 22-10-2020 TOPIC: VNTR polymorphism, Hot spots
Day 5, Date: 23-10-2020 TOPIC: DNA damage- spontaneous, Induced (Alkylation, oxidation, radiation)
Day 6, Date: 24-10-2020 TOPIC: DNA damage- spontaneous, Induced (Alkylation, oxidation, radiation)
<b>Week 05</b>
Day 6, Date: 26-10-2020 TOPIC: DNA damage- spontaneous, Induced (Alkylation, oxidation, radiation)
Day 6, Date: 27-10-2020 TOPIC: <b>TEST</b>
Day 6, Date: 28-10-2020 TOPIC: Genotoxicity/ mutagenicity TEST systems (Ames TEST, Comet assay),
Day 6, Date: 29-10-2020 TOPIC: Genotoxicity/ mutagenicity TEST systems (Sister chromatid exchanges, Micronucleus)
Day 6, Date: 30-10-2020 TOPIC: <b>TEST</b>
<b>Week 01</b>
Day 1, Date: 02-11-2020 TOPIC: Gene trap vector
Day 2, Date: 03-11-2020 TOPIC: Gene conversion
Day 4, Date: 05-11-2020 TOPIC: <b>TEST</b>
Day 5, Date: 06-11-2020, TOPIC: Positive and negative control of transcription
Day 6, Date: 07-11-2020 TOPIC: Repression and activation
<b>Week 02</b>
Day 1, Date: 09-11-2020 TOPIC: Repression and activation
Day 2, Date: 10-11-2020 TOPIC: Organization and regulation of Lac operon in <i>E. coli</i> .
Day 3, Date: 11-11-2020 TOPIC: Organization and regulation of Trp operon in <i>E. coli</i> .

Day 4, Date: 12-11-2020 TOPIC: Organization and regulation of Ara operon in <i>E. coli</i> .
Day 5, Date: 13-11-2020 TOPIC: <b>TEST</b>
<b>Week 03</b>
Day 1, Date: 16-11-2020 TOPIC: <b>TEST</b>
Day 2, Date: 17-11-2020 TOPIC: Balance between lysogeny and lytic cycle
Day 3, Date: 18-11-2020, TOPIC: Eukaryotic activators
Day 4, Date: 19-11-2020 TOPIC: DNA binding domains
Day 5, Date: 20-11-2020 TOPIC: Transcriptional repressors
Day 6, Date: 21-11-2020 TOPIC: Signal transduction and control of transcriptional regulators
<b>Week 04</b>
Day 1, Date: 23-11-2020 TOPIC: Gene silencing, Epigenetic gene regulation
Day 2, Date: 24-11-2020 TOPIC: <b>TEST</b>
Day 5, Date: 27-11-2020, TOPIC: Riboswitches
Day 6, Date: 28-11-2020 TOPIC: Interfering RNA (RNAi) and gene expression
<b>Week 05</b>
Day 1, Date: 30-11-2020 TOPIC: Interfering RNA (RNAi) and gene expression
<b>Week 01</b>
Day 2, Date: 01-12-2020 TOPIC: Micro RNA and its fuctions
Day 3, Date: 02-12-2020 TOPIC: Micro RNA and its fuctions
Day 4, Date: 03-12-2020 TOPIC: <b>TEST</b>
Day 5, Date: 04-12-2020 TOPIC: Micro RNA and its fuctions
Day 6, Date: 05-12-2020

<b>TOPIC: TEST</b>
<b>Week 02</b>
Day 1, Date: 07-12-2020 TOPIC: Concept, Recombinases and their function
Day 2, Date: 08-12-2020 TOPIC: cre-lox recombination
Day 3, Date: 09-12-2020 TOPIC: Biological role of site specific recombination
Day 4, Date: 10-12-2020 TOPIC: Classes of transposable elements-DNA transposons
Day 5, Date: 11-12-2020 TOPIC: Classes of transposable elements- Virus like transposons
Day 6, Date: 12-12-2020 TOPIC: Classes of transposable elements- Non viral retro transposons
<b>Week 03</b>
Day 1, Date: 14-12-2020 TOPIC: Mechanism of DNA mediated transposition
Day 2, Date: 15-12-2020 TOPIC: Mechanism of RNA mediated transposition
Day 3, Date: 16-12-2020 TOPIC: <b>TEST</b>
Day 4, Date: 17-12-2020 TOPIC: Shot gun approach , Clone contig approach,
Day 5, Date: 18-12-2020 TOPIC: DNA markers for genetic mapping, RFLP, SSP
Day 6, Date: 19-12-2020 TOPIC: DNA markers for genetic mapping, SNPs,
<b>Week 04</b>
Day 1, Date: -21-12-2020 TOPIC: <b>TEST</b>
Day 2, Date: 22-12-2020 TOPIC: Physical mapping-Restriction mapping
Day 3, Date: 23-12-2020 TOPIC: Florescent <i>in situ</i> hybridization (FISH)
Day 4, Date: 24-12-2020 TOPIC: Sequence tagged sites (STS) mapping
Day 6, Date: 26-12-2020 TOPIC: <b>TEST</b>
<b>Week 05</b>
Day 1, Date: 28-12-2020

TOPIC: High throughput sequencing
Day 2, Date: 29-12-2020 TOPIC: Clone by clone approach
Day 3, Date: 30-12-2020 TOPIC: Clone by clone approach
Day 4, Date: 31-12-2020 TOPIC: <b>TEST</b>
<b>Week 01</b>
Day 1, Date: 04-01-2021 TOPIC: Concept of Comparative genomics
Day 2, Date: 05-01-2021 TOPIC: Comparative genomics of eukaryotes
Day 3, Date: 06-01-2021 TOPIC: Comparative genomics of eukaryotes
Day 4, Date: 07-01-2021 TOPIC: Comparative genomics role in evolution
Day 5, Date: 08-01-2021, TOPIC: Comparative genomics role in evolution
Day 6, Date: 09-01-2021 TOPIC: <b>TEST</b>
<b>Week 02</b>
Day 1, Date: 11-01-2021 TOPIC: SAGE
Day 2, Date: 12-01-2021 TOPIC: SAGE
Day 3, Date: 13-01-2021 TOPIC: <b>TEST</b>
Day 4, Date: 14-01-2021 TOPIC: Special features of metaphase chromosomes
Day 5, Date: 15-01-2021 TOPIC: Special features of metaphase chromosomes
Day 6, Date: 16-01-2021 TOPIC: <b>TEST</b>
<b>Week 03</b>
Day 1, Date: 18-01-2021 TOPIC: Chromatin modifications
Day 2, Date: 19-01-2021 TOPIC: Chromatin modifications
Day 4, Date: 21-01-2021 TOPIC: Signature Tagged Mutagenesis (STM)



Day 5, Date: 22-01-2021 TOPIC: Signature Tagged Mutagenesis (STM)
Day 6, Date: 23-01-2021 TOPIC: <b>TEST</b>
<b>Week 04</b>
Day 1, Date: 25-01-2021 TOPIC: Organization of genome in lambda phage
Day 3, Date: 27-01-2021 TOPIC: , Regulation of lytic cascade
Day 4, Date: 28-01-2021 TOPIC: Antitermination
Day 5, Date: 29-01-2021 TOPIC: Repressor proteins, Establishment of lysogeny
Day 6, Date: 30-01-2021 TOPIC: <b>TEST</b>
<b>Week 01</b>
Day 1, Date: 01-02-2021 TOPIC: Transcriptome
Day 2, Date: 02-02-2021 TOPIC: Rapid Amplification of cDNA ends (RACE)
Day 3, Date: 03-02-2021 TOPIC: <b>TEST</b>
Day 4, Date: 04-02-2021 TOPIC: DNA microarrays
Day 5, Date: 05-02-2021 TOPIC: DNA microarrays
Day 6, Date: 06-02-2021 (TEST) TOPIC: <b>TEST</b>
<b>Week 02 TOPIC- Lipids</b>
Day 1, Date: 08-02-2021 TOPIC: whole genome shot gun sequencing
Day 2, Date: 09-02-2021 TOPIC: whole genome shot gun sequencing
Day 3, Date: 10-02-2021 TOPIC: <b>TEST</b>
Day 4, Date: 11-02-2021 TOPIC: Genome size and complexity
Day 5, Date: 12-02-2021 TOPIC: Genome size and complexity
Day 6, Date: 13-02-2021

<b>TOPIC: TEST</b>
<b>Week 03</b>
Day 1, Date: 15-02-2021 TOPIC: Short interfering RNA ( si RNA) and its fuctions
Day 3, Date: 17-02-2021 TOPIC: Short interfering RNA ( si RNA) and its fuctions
Day 4, Date: 18-02-2021 TOPIC: <b>TEST</b>
Day 5, Date: 19-02-2021 TOPIC: <b>TEST</b>
Day 6, Date: 20-02-2021 TOPIC: <b>TEST</b>
<b>Week 04</b>
Day 1, Date: 22-02-2021 TOPIC: <b>REVISION AND DISCUSSION</b>
Day 2, Date: 23-02-2021 TOPIC: <b>REVISION AND DISCUSSION</b>
Day 3, Date: 24-02-2021 TOPIC: <b>REVISION AND DISCUSSION</b>
Day 4, Date: 25-02-2021 TOPIC: <b>REVISION AND DISCUSSION</b>
Day 5, Date: 26-02-2021 TOPIC: <b>REVISION AND DISCUSSION</b>

**Name of the Teacher – Ms. Kajal Sahni**  
**Subject- Plant Biotechnology**  
**Paper- BT-115**  
**Class- M.Sc. II**

<b>Week 02 TOPIC- PLANT GENETIC TRANSFORMATION</b>
Day 4, Date: 08-10-2020 TOPIC: Organization of plant genome- Nuclear genome
Day 5, Date: 09-10-2020 TOPIC: Chloroplast genome
Day 6, Date: 10-10-2020 TOPIC: Mitochondrial genome
<b>Week 03</b>
Day 1, Date: 12-10-2020 TOPIC: TEST
Day 2, Date: 13-10-2020 TOPIC: Transposon tagging

Day 3, Date: 14-10-2020 TOPIC: T-DNA tagging
Day 4, Date: 15-10-2020 TOPIC: DOUBT CLASS
Day 5, Date: 16-10-2020 TOPIC: TEST
<b>Week 04 TOPIC- CHLOROPLAST TRANSFORMATION</b>
Day 1, Date: 19-10-2020 TOPIC: Vector designing contd.
Day 2, Date: 20-10-2020 TOPIC: Vector designing
Day 3, Date: 21-10-2020 TOPIC: Methods
Day 4, Date: 22-10-2020 TOPIC :Advantages
Day 5, Date: 23-10-2020 TOPIC:DOUBT CLASS
Day 6, Date: 24-10-2020 TOPIC:TEST
<b>Week 05 TOPIC- AGROBACTERIUM MEDIATED TRANSFORMATION</b>
Day 2, Date: 26-10-2020 TOPIC: Ti plasmid
Day 3, Date: 27-10-2020 TOPIC: Ri plasmid
Day 4, Date: 28-10-2020 TOPIC: Role of virulence genes contd.
Day 5, Date: 29-10-2020 TOPIC: Role of virulence genes
Day 6, Date: 30-10-2020 TOPIC: TEST
<b>Week 01 TOPIC- VECTOR BASED ON Ti AND Ri PLASMIDS</b>
Day 1, Date: 02-11-2020 TOPIC: Cointegrate vectors
Day 2, Date: 03-11-2020 TOPIC: Binary vectors
Day 4, Date: 05-11-2020 TOPIC: Techniques of Agrobacterium mediated transformation of plants
Day 5, Date: 06-11-2020 TOPIC: Factors affecting Agrobacterium mediated transformation of plants
Day 6, Date: 07-11-202 TOPIC: DOUBT CLASS
<b>Week 02 TOPIC- DIRECT GENE TRANSFER METHODS</b>
Day 1, Date: 09-11-2020 TOPIC: TEST
Day 2, Date: 10-11-2020 TOPIC: Particle bombardment method
Day 3, Date: 11-11-2020

TOPIC: PEG-mediated method
Day 4, Date: 12-11-2020 TOPIC: Electroporation method
Day 5, Date: 13-01-2020 TOPIC: Microinjection method
<b>Week 03</b>
Day 1, Date: 16-11-2020 TOPIC: Alternative methods contd.
Day 2, Date: 17-11-2020 TOPIC: Alternative methods
Day 3, Date: 18-11-2020 TOPIC: DOUBT CLASS
Day 4, Date: 19-11-2020 TOPIC: TEST
Day 5, Date: 20-11-2020 TOPIC: Screenable markers
Day 6, Date: 21-11-2020 TOPIC: Selectable markers
<b>Week 04</b>
Day 1, Date: 23-11-2020 TOPIC: Molecular characterization of plants contd.
Day 2, Date: 24-11-2020 TOPIC: Molecular characterization of plants
Day 5, Date: 27-11-2020 TOPIC: DOUBT CLASS
Day 6, Date: 28-11-2020 TOPIC: TEST
<b>Week 05</b>
Day 1, Date: 30-11-2020 TOPIC: Marker free methodologies
<b>Week 01</b>
Day 2, Date: 01-12-2020 TOPIC: Methods for multiple gene transfer in plants contd.
Day 3, Date: 02-12-2020 TOPIC: Methods for multiple gene transfer in plants
Day 4, Date: 03-12-2020 TOPIC: Gene silencing in plants
Day 5, Date: 04-12-2020 TOPIC: DOUBT CLASS
Day 6, Date: 05-12-2020 TOPIC: TEST
<b>Week 02 TOPIC-STRATEGIES FOR INTRODUCING BIOTIC AND ABIOTIC STRESS RESISTANCE/TOLERANCE</b>
Day 1, Date: 07-12-2020 TOPIC: Viral resistance
Day 2, Date: 08-12-2020

TOPIC: Fungal resistance
Day 3, Date: 09-12-2020 TOPIC: Insect resistance
Day 4, Date: 10-12-2020 TOPIC: Herbicide resistance
Day 5, Date: 11-12-2020 TOPIC: DOUBT CLASS
Day 6, Date: 12-12-2020 TOPIC: TEST
<b>Week 03 TOPIC- VARIOUS ABIOTIC STRESSES</b>
Day 1, Date: 14-12-2020 TOPIC: Drought stress
Day 2, Date: 15-12-2020 TOPIC: Salinity stress
Day 3, Date: 16-12-2020 TOPIC: Temperature stress
Day 4, Date: 17-12-2020 TOPIC: Flooding stress
Day 5, Date: 18-12-2020 TOPIC: DOUBT CLASS
Day 6, Date: 19-12-2020 TOPIC: TEST
<b>Week 04 TOPIC-GENETIC ENGINEERING OF PLANTS FOR MOLECULAR FARMING/PHARMING</b>
Day 1, Date: 21-12-2020 TOPIC: Production of medically related proteins in plants contd.
Day 2, Date: 22-12-2020 TOPIC: Production of medically related proteins in plants
Day 3, Date: 23-12-2020 TOPIC: Nutritional enhancement of plants- Carbohydrates
Day 4, Date: 24-12-2020 TOPIC: Nutritional enhancement of plants- Seed storage proteins
Day 6, Date: 26-12-2020 TOPIC: Nutritional enhancement of plants-Vitamins
<b>Week 05 TOPIC-GENETIC ENGINEERING OF PLANTS FOR MOLECULAR FARMING/PHARMING</b>
Day 1, Date: 28-12-2020 TOPIC: Manipulation of flower colors
Day 2, Date: 29-12-2020 TOPIC: Other value addition compounds (like industrial enzymes)
Day 3, Date: 30-12-2020 TOPIC: DOUBT CLASS
Day 4, Date: 31-12-2020 TOPIC: TEST
<b>Week 01 TOPIC-PLANT CELL AS BIOFACTORIES FOR THE PRODUCTION OF SECONDARY METABOLITES</b>
Day 1, Date: 04-01-2021 TOPIC: Production of secondary metabolites through plant tissue cultures contd.
Day 2, Date: 05-01-2021 TOPIC: Production of secondary metabolites through plant tissue cultures

Day 3, Date: 06-01-2021 TOPIC: Development of high yielding cell line cultures
Day 4, Date: 07-01-2021 TOPIC: Selection of high yielding cell line cultures
Day 5, Date: 08-01-2021 TOPIC: DOUBT CLASS
Day 6, Date: 09-01-2021 TOPIC: TEST
<b>Week 02 TOPIC- OTIMIZATION OF FACTORS AFFECTING YIELD OF PLANT CELLS</b>
Day 1, Date: 11-01-2021 TOPIC: Physical culture conditions
Day 2, Date: 12-01-2021 TOPIC: Media
Day 3, Date: 13-01-2021 TOPIC: Other biochemical factors
Day 4, Date: 14-01-2021 TOPIC: DOUBT CLASS
Day 5, Date: 15-01-2021 TOPIC: TEST
Day 6, Date: 16-01-2021 TOPIC: Bioreactors contd.
<b>Week 03</b>
Day 1, Date: 18-01-2021 TOPIC: Bioreactors contd.
Day 2, Date: 19-01-2021 TOPIC: Bioreactors
Day 4, Date: 21-01-2021 TOPIC: Immobilized plant cell culture
Day 5, Date: 22-01-2021 TOPIC: DOUBT CLASS
Day 6, Date: 23-01-2021 TOPIC: TEST
<b>Week 04</b>
Day 1, Date: 25-01-2021 TOPIC: Biotransformation
Day 3, Date: 27-01-2021 TOPIC: Permeabilization of cells
Day 4, Date: 28-01-2021 TOPIC: Removal of secreted products
Day 5, Date: 29-01-2021 TOPIC: DOUBT CLASS
Day 6, Date: 30-01-2021 TOPIC: TEST
<b>Week 01 TOPIC-INTELLECTUAL PROPERTY RIGHTS, BIOSAFETY AND ETHICAL ISSUES</b>
Day 1, Date: 01-02-2021 TOPIC: Intellectual property rights (IPR) contd.
Day 2, Date: 02-02-2021

TOPIC: Intellectual property rights (IPR)
Day 3, Date: 03-02-2021 TOPIC: Patents contd.
Day 4, Date: 04-02-2021 TOPIC: Patents
Day 5, Date: 05-02-2021 TOPIC: DOUBT CLASS
Day 6, Date: 06-02-2021 (TEST) TOPIC: TEST
<b>Week 02 TOPIC-INTELLECTUAL PROPERTY RIGHTS, BIOSAFETY AND ETHICAL ISSUES</b>
Day 1, Date: 08-02-2021 TOPIC: Trade secrets
Day 2, Date: 09-02-2021 TOPIC: Copyright
Day 3, Date: 10-02-2021 TOPIC: Trademarks
Day 4, Date: 11-02-2021 TOPIC: TEST
Day 5, Date: 12-02-2021 TOPIC: Plant genetic resources contd.
Day 6, Date: 13-02-2021 TOPIC: Plant genetic resources
<b>Week 03 TOPIC-INTELLECTUAL PROPERTY RIGHTS, BIOSAFETY AND ETHICAL ISSUES</b>
Day 1, Date: 15-02-2021 TOPIC: GATT
Day 3, Date: 17-02-2021 TOPIC: TRIPPS
Day 4, Date: 18-02-2021 TOPIC: DOUBT CLASS
Day 5, Date: 19-02-2021 TOPIC: TEST
Day 6, Date: 20-02-2021 TOPIC: Patenting of biological material contd.
<b>Week 04 TOPIC-INTELLECTUAL PROPERTY RIGHTS, BIOSAFETY AND ETHICAL ISSUES</b>
Day 1, Date: 22-02-2021 TOPIC: Patenting of biological material
Day 2, Date: 23-02-2021 TOPIC: Patenting of transgenic organisms and genes contd.
Day 3, Date: 24-02-2021 TOPIC: Patenting of transgenic organisms and genes
Day 4, Date: 25-02-2021 TOPIC: DOUBT CLASS
Day 5, Date: 26-02-2021 TOPIC: TEST
<b>Week 01</b>
Day 1, Date: 01-03-2021 TOPIC: Plant breeders rights (PBRs) contd.

Day 2, Date: 02-03-2021 TOPIC: Plant breeders rights (PBRs)
Day 3, Date: 03-03-2021 TOPIC: Farmer's rights contd.
Day 4, Date: 04-03-2021 TOPIC: Farmer's rights
Day 5, Date: 05-03-2021 TOPIC: DOUBT CLASS
Day 6, Date: 06-03-2021 TOPIC: TEST
<b>Week 02 TOPIC-CONCERNS ABOUT GM CROPS</b>
Day 1, Date: 08-03-2021 TOPIC: Environmental concerns
Day 2, Date: 09-03-2021 (TEST) TOPIC: Biosafety concerns
Day 3, Date: 10-03-2021 TOPIC: Ethical concerns
Day 5, Date: 12-03-2021 TOPIC: DOUBT CLASS OF UNIT-IV(COMPLETE)
Day 6, Date: 13-03-2021 TOPIC: TEST OF UNIT -IV
<b>Week 03</b>
Day 1, Date: 15-03-2021 TOPIC: DOUBT CLASS OF UNIT-I (COMPLETE)
Day 2, Date: 16-03-2021 TOPIC: TEST OF UNIT -I
Day 3, Date: 17-03-2021 TOPIC: DOUBT CLASS OF UNIT-II (COMPLETE)
Day 4, Date: 18-03-2021 TOPIC: TEST OF UNIT -II
Day 5, Date: 19-03-2021 TOPIC: DOUBT CLASS OF UNIT-III (COMPLETE)
Day 6, Date: 20-03-2021 TOPIC: TEST OF UNIT -III

**Name of the Teacher – Ms. Kajal Sahni**  
**Subject- Immunolgy**  
**Paper- BT-117**  
**Class- M.Sc. II**

**Week 02 TOPIC:- Introduction and overview**



Day 4, Date: 08-10-2020 TOPIC: Introduction of immunology contd.
Day 5, Date: 09-10-2020 TOPIC: Introduction of immunology
Day 6, Date: 10-10-2020 TOPIC: Overview of immunology
<b>Week 03 TOPIC:- Introduction and overview</b>
Day 1, Date: 12-10-2020 TOPIC: Cells of immune system contd.
Day 2, Date: 13-10-2020 TOPIC: Cells of immune system contd.
Day 3, Date: 14-10-2020 TOPIC: Cells of immune system contd.
Day 4, Date: 15-10-2020 TOPIC: Cells of immune system contd.
Day 5, Date: 16-10-2020 TOPIC: Cells of immune system
<b>Week 04</b>
Day 1, Date: 19-10-2020 TOPIC: DOUBT CLASS
Day 2, Date: 20-10-2020 TOPIC: TEST
Day 3, Date: 21-10-2020 TOPIC: innate immunity
Day 4, Date: 22-10-2020 TOPIC: cellular immunity
Day 5, Date: 23-10-2020 TOPIC: physical barriers contd.
Day 6, Date: 24-10-2020 TOPIC: physical barriers
<b>Week 05</b>
Day 6, Date: 26-10-2020 TOPIC: chemical barriers contd.
Day 6, Date: 27-10-2020 TOPIC: chemical barriers
Day 6, Date: 28-10-2020 TOPIC: cellular defenses contd.
Day 6, Date: 29-10-2020 TOPIC: cellular defenses
Day 6, Date: 30-10-2020 TOPIC: DOUBT CLASS
<b>Week 01</b>
Day 1, Date: 02-11-2020 TOPIC: TEST
Day 2, Date: 03-11-2020 TOPIC: inflammation

Day 4, Date: 05-11-2020 TOPIC: receptors involved in innate immune system contd.
Day 5, Date: 06-11-2020 TOPIC: receptors involved in innate immune system
Day 6, Date: 07-11-2020 TOPIC: cells involved in adaptive immune response contd.
<b>Week 02</b>
Day 1, Date: 09-11-2020 TOPIC: cells involved in adaptive immune response
Day 2, Date: 10-11-2020 TOPIC: organs involved in adaptive immune response contd.
Day 3, Date: 11-11-2020 TOPIC: organs involved in adaptive immune response
Day 4, Date: 12-11-2020 TOPIC: DOUBT CLASS
Day 5, Date: 13-01-2020 TOPIC: TEST
<b>Week 03</b>
Day 1, Date: 16-11-2020 TOPIC: fate of antigen after penetration contd.
Day 2, Date: 17-11-2020 TOPIC: fate of antigen after penetration
Day 3, Date: 18-11-2020 TOPIC: interrelationship between innate and acquired immunity contd.
Day 4, Date: 19-11-2020 TOPIC: interrelationship between innate and acquired immunity
Day 5, Date: 20-11-2020 TOPIC: DOUBT CLASS
Day 6, Date: 21-11-2020 TOPIC: TEST
<b>Week 04 TOPIC:- Antigens, antibodies and their interactions</b>
Day 1, Date: 23-11-2020 TOPIC: Requirements of immunogenicity contd.
Day 2, Date: 24-11-2020 TOPIC: Requirements of immunogenicity
Day 5, Date: 27-11-2020 TOPIC: primary response contd.
Day 6, Date: 28-11-2020 TOPIC: primary response
<b>Week 05</b>
Day 1, Date: 30-11-2020 TOPIC: secondary response contd.
<b>Week 01</b>
Day 2, Date: 01-12-2020 TOPIC: secondary response

Day 3, Date: 02-12-2020 TOPIC: DOUBT CLASS
Day 4, Date: 03-12-2020 TOPIC: TEST
Day 5, Date: 04-12-2020 TOPIC: major classes of antigens contd.
Day 6, Date: 05-12-2020 TOPIC: major classes of antigens
<b>Week 02</b>
Day 1, Date: 07-12-2020 TOPIC: basic structure of antibodies contd.
Day 2, Date: 08-12-2020 TOPIC: basic structure of antibodies
Day 3, Date: 09-12-2020 TOPIC: antibody classes contd.
Day 4, Date: 10-12-2020 TOPIC: antibody classes contd.
Day 5, Date: 11-12-2020 TOPIC: antibody classes contd.
Day 6, Date: 12-12-2020 TOPIC: antibody classes contd.
<b>Week 03</b>
Day 1, Date: 14-12-2020 TOPIC: antibody classes
Day 2, Date: 15-12-2020 TOPIC: DOUBT CLASS
Day 3, Date: 16-12-2020 TOPIC: TEST
Day 4, Date: 17-12-2020 TOPIC: biological activity contd.
Day 5, Date: 18-12-2020 TOPIC: biological activity
Day 6, Date: 19-12-2020 TOPIC: antigenic determinants on immunoglobulins contd.
<b>Week 04</b>
Day 1, Date: -21-12-2020 TOPIC: antigenic determinants on immunoglobulins
Day 2, Date: 22-12-2020 TOPIC: immunoglobulin super family contd.
Day 3, Date: 23-12-2020 TOPIC: immunoglobulin super family
Day 4, Date: 24-12-2020 TOPIC: DOUBT CLASS
Day 6, Date: 26-12-2020 TOPIC: TEST
<b>Week 05</b>

Day 1, Date: 28-12-2020 TOPIC: organization of immunoglobulin genes contd.
Day 2, Date: 29-12-2020 TOPIC: organization of immunoglobulin genes
Day 3, Date: 30-12-2020 TOPIC: expression of immunoglobulin genes contd.
Day 4, Date: 31-12-2020 TOPIC: expression of immunoglobulin genes
<b>Week 01 TOPIC- antigen-antibody interactions</b>
Day 1, Date: 04-01-2021 TOPIC: DOUBT CLASS
Day 2, Date: 05-01-2021 TOPIC: TEST
Day 3, Date: 06-01-2021 TOPIC: immunoprecipitation
Day 4, Date: 07-01-2021 TOPIC: agglutination
Day 5, Date: 08-01-2021 TOPIC: ELISA contd.
Day 6, Date: 09-01-2021 TOPIC: ELISA
<b>Week 02 TOPIC-</b>
Day 1, Date: 11-01-2021 TOPIC: immunofluorescence contd.
Day 2, Date: 12-01-2021 TOPIC: immunofluorescence
Day 3, Date: 13-01-2021 TOPIC: flow cytometry contd.
Day 4, Date: 14-01-2021 TOPIC: flow cytometry
Day 5, Date: 15-01-2021 TOPIC: DOUBT CLASS
Day 6, Date: 16-01-2021 TOPIC: TEST
<b>Week 03 TOPIC- Generation of B- cell and T- cell responses</b>
Day 1, Date: 18-01-2021 TOPIC: <i>Biology of B lymphocytes</i> : introduction contd.
Day 2, Date: 19-01-2021 TOPIC: <i>Biology of B lymphocytes</i> : introduction
Day 4, Date: 21-01-2021 TOPIC: ontogeny of B lymphocytes
Day 5, Date: 22-01-2021 TOPIC: DOUBT CLASS
Day 6, Date: 23-01-2021 TOPIC: TEST

<b>Week 04 TOPIC-</b>
Day 1, Date: 25-01-2021 TOPIC: B cell membrane proteins contd.
Day 3, Date: 27-01-2021 TOPIC: B cell membrane proteins
Day 4, Date: 28-01-2021 TOPIC: signal transduction molecules associated with membrane immunoglobulins contd.
Day 5, Date: 29-01-2021 TOPIC: signal transduction molecules associated with membrane immunoglobulins contd.
Day 6, Date: 30-01-2021 TOPIC: signal transduction molecules associated with membrane immunoglobulins
<b>Week 01 TOPIC- <i>biology of T-cells</i></b>
Day 1, Date: 01-02-2021 TOPIC: DOUBT CLASS
Day 2, Date: 02-02-2021 TOPIC: TEST
Day 3, Date: 03-02-2021 TOPIC: antigen specific T cell receptors contd.
Day 4, Date: 04-02-2021 TOPIC: antigen specific T cell receptors
Day 5, Date: 05-02-2021 TOPIC: T cell differentiation contd.
Day 6, Date: 06-02-2021 TOPIC: T cell differentiation
<b>Week 02 TOPIC-</b>
Day 1, Date: 08-02-2021 TOPIC: DOUBT CLASS
Day 2, Date: 09-02-2021 TOPIC: TEST
Day 3, Date: 10-02-2021 TOPIC: thymic selection contd.
Day 4, Date: 11-02-2021 TOPIC: thymic selection
Day 5, Date: 12-02-2021 TOPIC: role of major histocompatibility complex in immune response contd.
Day 6, Date: 13-02-2021 TOPIC: role of major histocompatibility complex in immune response
<b>Week 03 TOPIC-</b>
Day 1, Date: 15-02-2021 TOPIC: DOUBT CLASS
Day 3, Date: 17-02-2021 TOPIC: TEST
Day 4, Date: 18-02-2021 TOPIC: activation of T cells
Day 5, Date: 19-02-2021 TOPIC: function of T cells

Day 6, Date: 20-02-2021 TOPIC: activation of B cells
<b>Week 04 TOPIC-</b>
Day 1, Date: 22-02-2021 TOPIC: function of B cells
Day 2, Date: 23-02-2021 TOPIC: cytokines
Day 3, Date: 24-02-2021 TOPIC: complement system
Day 4, Date: 25-02-2021 TOPIC: DOUBT CLASS
Day 5, Date: 26-02-2021 TOPIC: TEST
<b>Week 01 TOPIC- Immune system in health and disease</b>
Day 1, Date: 01-03-2021 TOPIC: <i>Hybridoma technology</i> : commercial production of antibodies using monoclonal Antibodies contd.
Day 2, Date: 02-03-2021 TOPIC: <i>Hybridoma technology</i> : commercial production of antibodies using monoclonal antibodies
Day 3, Date: 03-03-2021 TOPIC: live attenuated vaccines
Day 4, Date: 04-03-2021 TOPIC: killed vaccines
Day 5, Date: 05-03-2021 TOPIC: subunit vaccines
Day 6, Date: 06-03-2021 TOPIC: conjugate vaccines
<b>Week 02 TOPIC- Nucleic Acids</b>
Day 1, Date: 08-03-2021 TOPIC: DNA vaccines
Day 2, Date: 09-03-2021 TOPIC: DOUBT CLASS
Day 3, Date: 10-03-2021 TOPIC: TEST
Day 5, Date: 12-03-2021 TOPIC: Production of recombinant antibodies
Day 6, Date: 13-03-2021 TOPIC: Production of edible vaccines
<b>Week 03 TOPIC-</b>
Day 1, Date: 15-03-2021 TOPIC: development of diagnostics and immunoprophylactics using biotech and nanotech tools contd.
Day 2, Date: 16-03-2021 TOPIC: development of diagnostics and immunoprophylactics using biotech and nanotech tools
Day 3, Date: 17-03-2021

TOPIC: DOUBT CLASS of UNIT-I
Day 4, Date: 18-03-2021 TOPIC: DOUBT CLASS of UNIT-II
Day 5, Date: 19-03-2021 TOPIC: DOUBT CLASS of UNIT-III
Day 6, Date: 20-03-2021 TOPIC: DOUBT CLASS of UNIT-IV