



ST. LAWRENCE HIGH SCHOOL
27, BALLYGUNGE CIRCULAR ROAD, KOLKATA- 700019
Session Plan/ Syllabus Coverage for the Academic Year 2025-2026



Subject: BIOLOGY

No. Of Working Days:103

Term: First term

Name of the Subject Co-ordinator: Ms. Shaista Ahmed

No. Of Periods Available: 28

Class: 12

Section: A

Name of the Book: NOOTAN ISC BIOLOGY- By Prof V.Singh,D.K. Jain and Ajay Kr Bhattacharya 22nd Edition 25-26) [Bk NIB =Abbreviation]

MONTH	NO. OF PERIODS	LESSONS	TOPICS COVERED	CLASS WORK	TEACHING AIDS
APRIL	13	<u>CHAPTER-1</u> SEXUAL REPRODUCTION IN FLOWERING PLANTS [Bk NIB Pgs 3-50] <u>CHAPTER-2</u> HUMAN REPRODUCTION [Bk NIB Pgs 51-98]	Structure and details of parts of flower, Pre fertilization – Structures and events, Double fertilization, Post fertilization–Events and structures; Apomixis Parthenocarp, Polyembryony, Formation of fruit and seed, seed dispersal Male and female reproductive structures and Gametogenesis, Menstrual cycle Fertilization and Implantation, Pregnancy and Embryonic development, Parturition and Lactation.	Explanation of the topics was done. Notes on megasporogenesis, microsporogenesis, types of endosperms and flowchart of male and female gametophyte development was given. [Bk NIB Pgs 3-50] Explanation of the concepts were done and Flowcharts for Spermatogenesis and Oogenesis was done. Diagrams of human testis and ovaries were given . Notes were given on hormonal control of Parturition and Lactation. [Bk NIB Pgs 51-98]	Labelled drawings of Male and female gametophyte. Demonstration of development of male gametophyte using pollen grains of periwinkle. Chart on Menstrual cycle vs Oestrous cycle, Drawings of T.S of testis and ovaries. Permanent slides of TS of testis and ovaries
MAY	09	<u>CHAPTER- 3</u> REPRODUCTIVE HEALTH [Bk NIB Pgs 99-124] <u>CHAPTER 06-</u> ORIGIN OF LIFE [Bk NIB pgs 261-276]	Reproductive health –Problems and Strategies, Population explosion, medical termination of Pregnancy, Infertility, Amniocentesis, Genetic Counselling and Sexually Transmitted Diseases. Universe and Origin of Solar system, Origin of life, Evolution. <u>TOPIC FOR BIOLOGY PROJECT GIVEN</u>	Explanation of the topics was done. Definitions of Infertility and MTP were given and causes were discussed. Notes given on Birth Control Measures. [Bk NIB Pgs 57-66] Explanation of Origin of Solar system and life. [Bk NIB pgs 261-276] <u>GUIDELINES AND DETAILS OF THE PROJECT WERE GIVEN TO THE STUDENTS TO BE DONE AS HOLIDAY HOMEWORK</u>	Drawings of Amniocentesis and symptoms of sexually transmitted diseases. Flowchart of Origin of life and Evolution
JUNE	06 <u>Unit test for First term</u>	<u>CHAPTER 07-</u> EVIDENCES AND THEORIES OF BIOLOGICAL EVOLUTION [Bk NIB pgs 277-331] <u>CHAPTER 08-</u> HUMAN EVOLUTION [Bk NIB pgs 333-344]	Evidences of Evolution Theories and Mechanism of Evolution, Theories of Natural selection, Causes of Variations, Artificial versus Natural selection, Convergent and Divergent Evolution Place of man in Animal Kingdom, Evolution of Man. <u>SYLLABUS OF UNIT TEST 1: CH 1 SEXUAL REPRODUCTION FLOWERING PLANTS AND CH 2 HUMAN REPRODUCTION</u>	Explanation and discussion on: Evidences of Evolution, Adaptive radiation, Mechanism of Evolution- Hardy Weinberg Principle, Founders effect and Bottleneck effect. [Bk NIB pgs 277-331] Explanation of Evolution of man and his ancestors [Bk NIB pgs 333-344]	Chart of Geological time scale and drawings showing Founders effect, Hardy Weinberg's Principle. Chart of Evolution of man.

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Signature of the Teacher: 1. *Shaista Ahmed*

PRINCIPAL:

Submitted on: 13.5.25

Academic Co-ordinator: *Soumak Chatterjee*

VICE PRINCIPAL:

Rajy



ST. LAWRENCE HIGH SCHOOL

27, BALLYGUNGE CIRCULAR ROAD, KOLKATA- 700019

Term: First term and Rehearsal Exam

No. Of Periods Available: 40



Name of the Subject Co-ordinator: Ms. Shaista Ahmed

Class: 12

Section: A

Subject: BIOLOGY

No. Of Working Days: 103

Name of the Book: NOOTAN ISC BIOLOGY- By Prof V.Singh,D.K. Jain and Ajay Kr Bhattacharya 22nd Edition 25-26) [Bk NIB =Abbreviation]

MONTH	NO. OF PERIODS	LESSONS	TOPICS COVERED	CLASS WORK	TEACHING AIDS
JULY	18	<p><u>CHAPTER -4</u> PRINCIPLES OF INHERITANCE AND VARIATION [Bk NIB Pgs 127-195]</p> <p><u>CHAPTER 05:</u> MOLECULAR BASIS OF INHERITANCE [Bk NIB Pgs 197-259]</p>	<p>Mendelian and Non- Mendelian Inheritance, Pedigree Analysis, Chromosomal theory of Inheritance, Sex linked inheritance and traits, Sex determination, Linkage, Mutation and Genetic Disorders in Humans.</p> <p>Genes, Nucleic acids, Replication of DNA, Central Dogma, Structure of Eukaryotic chromosome, Human genome project, DNA Fingerprinting, Rice genome project.</p>	<p>Explanation of the topics and Notes were given on Incomplete Dominance, Co -Dominance, Multiple Allelism, Pleiotropy, Polygenic inheritance, Linkage. [Bk NIB Pgs 127-195]</p> <p>Explanation of the topic and Notes given on DNA as the genetic material, Structure of Eukaryotic chromosome, DNA Replication, Protein synthesis, Gene expression, Human Genome Project, DNA fingerprinting, Transcription, Translation, Genetic Code and Lac Operon. [Bk NIB Pgs 197-259]</p>	<p>Pictures of different genetic disorders are shown and Chart for Pedigree analysis was shown.</p> <p>Labelled diagrams of process of replication, protein synthesis and Operon concept.</p> <p>Demonstration of Isolation of DNA of Banana</p>
AUGUST	16	<p><u>CHAPTER 9-</u> HUMAN HEALTH AND DISEASES [Bk NIB Pgs 347-416]</p> <p><u>CHAPTER 10-</u> MICROBES IN HUMAN WELFARE [Bk NIB Pgs 417-423]</p>	<p>Common Diseases in Humans, AIDS and Cancer Immunity and it's types, Immune system in the body</p> <p>Microbes in Household products, Industrial products in Biogas production and in Sewage treatment,</p>	<p>Explanation and notes to be given on topics- Common diseases in Humans and Causes and Symptoms of AIDS and Cancer [Bk NIB Pgs 347-416]</p> <p>Explanation and Discussion On the topics- Microbes in Household products, Industrial products, energy generation, Biogas production and in Sewage treatment [Bk NIB Pgs 417-423]</p>	<p>Chart showing different types of Cancer.</p> <p>Tabular chart on types of breeding</p> <p>Labelled diagrams of Biogas production and Sewage treatment.</p>
SEPTEMBER	06 <u>First term Exams:</u> <u>09.09.25-</u> <u>26.09.25</u>	<p><u>CHAPTER 10-</u> MICROBES IN HUMAN WELFARE [Bk NIB Pgs 423-438]</p> <p>SYLLABUS FOR FIRST TERM CHAPTERS- 1,2,3,4,5,6,7,8,9 and 10</p>	<p>Biocontrol agents and Microbes in Bio fertilizers.</p> <p>REVISION OF FIRST TERM CHAPTERS- 1,2,3,4,5,6,7,8,9 and 10</p>	<p>Notes given on Bio fertilizers and Bio control agents. [Bk NIB Pgs 423-438]</p> <p>MCQs, SAQs and LAQs discussed</p>	<p>Flowchart of Biocontrol agents</p> <p>Worksheet and assignments</p>

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Signature of Teacher: 1. *addhared*

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24/4/25
13.5.25

PRINCIPAL:

Submitted on: *13.5.25*
21.04.2025

Academic Co-ordinator: *Soumak Chatterji*

VICE PRINCIPAL:

Rajy



ST. LAWRENCE HIGH SCHOOL
27, BALLYGUNGE CIRCULAR ROAD, KOLKATA- 700019



Subject: BIOLOGY

No. Of Working Days:40

Term: Rehearsal Exam

No. Of Periods Available: 18

Name of the Subject Co-ordinator: Ms. Shaista Ahmed

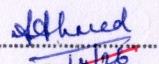
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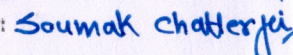
MONTH	NO. OF PERIODS	LESSON	TOPICS COVERED	CLASS WORK	TEACHING AIDS
OCTOBER	11	<u>CHAPTER 11:</u> BIOTECHNOLOGY: PRINCIPLES AND PROCESSES [Bk NIB 441-470]	Principles of Biotechnology, tools of Recombinant DNA technology, Process of Recombinant DNA technology	Explanation of the topics was done. Notes on different types of vectors were given. Flow charts were given on the process of DNA technology and genetic transformation in plants and animals. [Bk NIB pgs 441-470]	Labelled diagrams of Bioreactors and gel electrophoresis.
		<u>CHAPTER 12: BIOTECHNOLOGY AND IT'S APPLICATION</u> [Bk NIB 471- 491]	Objectives of Biotechnological Research, Applications of Biotechnology in Health and Medicine, Stem cell technology, Gene therapy, Molecular Diagnosis, ELISA, Transgenic animals, Biopiracy, bio patent, Bioethical issues and Biosafety.	Explanation of the topics and Notes were given on production of Bt cotton and insulin using <i>E.coli</i> , Gene therapy, Transgenic animals, Bio piracy. [Bk NIB Pgs 471-491]	Labelled diagram of insulin production by <i>E. coli</i>
NOVEMBER	12	<u>CHAPTER 13: ORGANISMS AND POPULATION</u> [Bk NIB Pgs 495-528]	Levels of Ecological organisation, Population interactions, Attributes of Population.	Explanation of the topic levels of Ecological organisation and Population interactions. Notes were given on attributes of Population. [Bk NIB Pgs 495-528]	Pictorial representations of Population Interactions
		<u>CHAPTER 14: ECOSYSTEM</u> [Bk NIB Pgs 529-560]	Components of Ecosystem, Biotic factors, Structure of Pond Ecosystem, Flow of Energy, Productivity, Ecological services.	Explanation of Components of an Ecosystem, Notes on Energy flow and energy pyramids were given [Bk NIB Pgs 529-560]	Tabular Chart of Pond Ecosystem, Charts on food web and food chain
		<u>CHAPTER 15: BIODIVERSITY AND ITS CONSERVATION</u> [Bk NIB Pgs 561-592]	Types of Biodiversity, Patterns of Biodiversity, Importance, Loss and Cause of Biodiversity, Concept of Threatened species, Genetic conservation, Ramsar sites and Historic conventions on Biodiversity	Explanation of the topics was done. Notes were given on loss of Biodiversity and Comparison of in situ and Ex situ Conservation. Ramsar sites [Bk NIB Pgs 56-592]	Charts on types of conservation strategies
DECEMBER	02 Rehearsal Exam from 08.12.26	<u>SYLLABUS COMPLETED -</u>	<u>REVISION OF THE SYLLABUS</u> <u>CHAPTERS :1,2,3,4,5,6,7,8,9,10,11,12,13,14 and 15</u>	MCQs, SAQs and LAQs discussed	Worksheet and assignments

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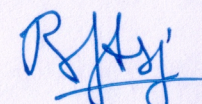
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