

INSTRUCTION DIVISION
Course Handout (Semester I, 2021-2022)
Course No. : BIO F110
Course Title: Biological Laboratory

Instructor in Charge: Anasuya Ganguly

**Instructors (faculty): Prof. Judith Maria Braganca, Prof. Dibakar Chakrabarty
Prof. Rajesh Mehrotra, and Dr. Tushar Tirtha Saha**

Course Description:

The spectacular progress over the past two decades in our understanding of biological processes at the molecular level has been made possible by the coming together of physical, chemical, biochemical and genetic approaches and by the availability of a wide range of analytical techniques. This course involves experiments designed to strengthen many theoretical concepts learnt in the General Biology course.

Course Plan:

Expt No.	Title*
1	Measurement of total protein content in the given sample.
2	Measurement of glucose concentration in the given sample
3	Measurement of mitotic index and duration of mitosis in the given plant tissue.
4	a. Measurement of Haemoglobin content in human blood b. Determination of ABO-Rh Blood Typing.
5	Quantitation of DNA.
6	Determination of the Km of phosphatase enzyme.
7	Separation of chlorophyll pigments by paper chromatography
8	Study the phenomenon of plasmolysis in onion peel
9	a. Determination of the level of total cholesterol present in serum. b. Determination of Body Mass Index.
10	Measurement of Blood Pressure.
11	Observation of permanent slides and comments.
12	Computational annotation of nucleic acids and proteins.
13	Tissue location of the endogenous enzyme polyphenol oxidase in the given samples

*For details read "BIOLOGICAL LABORATORY (BIO F110) MANUAL" uploaded on google drive, link will be shared in quanta

Evaluation components: Total marks: 300

Components	Duration	Marks	Remarks
Lab experiments, videos of experiments will be shown during online class, the experiment will be explained in details, any doubts will be cleared in class	1-2hrs	13X10=130	Total 10 marks per experiment: Experiment: 8 marks- viva voce Attendance: 2 marks The 8 marks will be given after taking viva voce of student for each experiment. Viva will be done during class hours. Viva of the previous experiment will be taken during the following class- before that days experiment is explained. All doubts should be cleared with the instructors before viva, which will be taken in the next class. For some experiments we might give an assignment (instead of viva-voce or quiz), which should be submitted on time.
08/12/21, Wednesday 2:00 PM - 3:30 PM Online mid semester examination (mcq, short answer types) (syllabus- experiments done till med sem)	30mins	70	In google forms or through moodle/quanta/mettl. The student should keep video on during the full length of the test
22/01/22 (FN) Comprehensive online Examination (all experiments)	(FN) 1 hr	100	In google forms or through moodle/quanta/mettl. The student should keep video on during the full length of the test

Anasuya Ganguly
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