



COURSE HANDOUT (PART-II)

In addition to part-I (General Handout for all courses appended to the timetable) this portion gives further specific details regarding the course.

Course No. : BIO F110
Course Title : BIOLOGY LABORATORY
Instructor-in-charge : SHILPI GARG

Team of Instructors : Uma S. Dubey, Ashish Runthala, Gurpreet Kaur, PA Boopathi, Parik Kakani, Rajnish Singh, Vandana, Zaiba Hasan Khan, Leena Fageria, Poonam Singh, Ranita De, Subhra Das, Zarna Pala, Monika M., Monika S., Vikram Pareek, Tripti Misra, Isha Pandey, Neelam Mahala, Pinky, Heena Saini, Tania Pal Choudhary

Course Description:

Analysis and estimation of biomolecules, preparation of temporary slides for microscopic analysis, study of cell structure and division, investigation of catalytic activity of enzyme, physiology of plant and animal systems, diversity of living systems.

Scope and Objective of the course:

The major objective of this course is to offer a hands-on experience on fundamental aspects of practical biology. The student would observe and understand various biological phenomena and also be equipped with some simple techniques which form the basis of research in biology.

Text Book/Manual: Laboratory Manual for Biology, BITS Pilani 2014.

Reference Book: Simon, E.J. et al: Campbell Essential Biology with Physiology (5th Edition, BITS Pilani custom edition). Noida: Pearson India Education Services Pvt. Ltd., 2015

Experiment Plan:

Experiment – 1:	Measurement of glucose concentration in the given sample by Folin-Wu's method.
Experiment – 2:	Measurement of total protein content in the given sample by Lowry's method.
Experiment – 3:	To extract total genomic DNA from banana pulp.
Experiment – 4:	Separation of chlorophyll pigments by paper chromatography
Experiment – 5:	Measurement of mitotic index and duration of mitosis in the given plant tissue. Observation of various stages of mitosis through readymade slides.





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Experiment – 6:	Measurement of haemoglobin content in the human blood and determination of blood group and Rh status.
Experiment – 7:	To study the effect of the enzyme lactase on milk
Experiment – 8:	To study the phenomenon of plasmolysis in onion peel.
Experiment – 9:	Preparation of temporary mount of leaf epidermis to study the structure of stomata and measurement of transpiration rate using Ganong's potometer.
Experiment –10:	Identify and write characteristic features of the given sample slides.

Evaluation Scheme:

S. No.	Evaluation component	Duration	Date, time and Venue	Weightage (%)	Nature of component
1.	Day to day Evaluation (Attendance + Performance)	-	Daily Lab	20%	OB
2.	Quiz/ Viva	30 min	TBA	30%	CB
3.	Record	-	TBA	10%	OB
4.	Comprehensive Exam	2 hrs	<TEST_C>	40%	CB

Note: The order of experiments listed above may change depending on the availability of chemicals, enzymes, and other requirements for a specific experiment.

Notices: Notices will be displayed on Biological Sciences Departmental Notice Board and on Nalanda.

Make up Policy: Make up will be granted only with prior permission in genuine cases such as hospitalization upon production of the relevant documents as proof.

Instructor-in-Charge
BIO F110



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