

E-Pathshala

B.Sc. First year		
1.	Use, care and maintenance of Microscope	https://indiabioscience.org/media/articles/DBT-Life-Science-Protocol-Manual.pdf
2.	Bacterial culture, Gram staining	https://vlab.amrita.edu/?sub=3&brch=73&sim=208&cnt=1
3.	Permeability test using erythrocytes	
4.	Preparation of Polytene chromosome in chironomous or drosophilia larva	http://vlabs.iitb.ac.in/vlabs-dev/labs/mit_bootcamp/zoology/labs/exp1/theory.php
5.	Preparation of various satges of mitosis in onion root tip	https://vlab.amrita.edu/?sub=3&brch=188&sim=1102&cnt=1
6.	Preparation of various satges of meiosis in insect: testies	https://byjus.com/biology/meiosis-in-onion-bud-cell-or-grasshopper-testis-through-permanentslide/ https://indiabioscience.org/media/articles/DBT-Life-Science-Protocol-Manual.pdf
7.	Study of developmental stages (life cycle)of Cockroach, housefly, moth, mosquito, butterfly, frog(any 4)	https://www.ecomist.co.nz/life-cycle-cockroaches/ https://animals.howstuffworks.com/insects/housefly4.htm https://learning-center.homesciencetools.com/article/life-cycle-frog/
8.	Developmental Stages of Frog ; Cleavage, Blastula, Grastrula, Neurula, Tadpoles through available resources	https://indiabioscience.org/media/articles/DBT-Life-Science-Protocol-Manual.pdf
9.	Permanent slides of chick embryos at 24, 36, 48, 72 hrs of incubation	https://indiabioscience.org/media/articles/DBT-Life-Science-Protocol-Manual.pdf
10.	Study of different type of Placenta with suitable Histological slides or visual diagram	https://indiabioscience.org/media/articles/DBT-Life-Science-Protocol-Manual.pdf
B.Sc. Second year semester IIIrd		
1.	Study of fossils, including living fossils	file:///C:/Users/a/Desktop/lab%20manuals/350%2024%20-%20Lab-II.pdf
2.	Study of Evidences of evolution. i) Analogous and Homologous organs. ii) Connecting links (Peripatus, Archaeopteryx, Limulus) iii) Embryological evidences	https://www.kullabs.com/classes/subjects/units/lessons/notes/note-detail/1552
3.	Mimicry, coloration in animals	file:///C:/Users/a/Desktop/lab%20manuals/350%2024%20-%20Lab-II.pdf
4.	Histological slides Amphioxus : T.S, Oral hood, Pharynx, Tail Frog :- T.S. lung, Stomoch, Kidney, T.S. Intestine,	https://www.japson.com/products/biology-products/slides-and-specimen/zoology-prepared-slides.html

	Rat :- T.S. Liver, Pancrease, Ovary, Testies, Pituitary, Thyroid, Adrenal	
B.Sc. Second year semester IVth		
1.	Demonstration of Barr bodies	https://www.slideshare.net/landoelvis1/kenyatta-university-barr-bodies
2.	Photo slides for Turners syndrome, klinefelters syndrome, Down syndrome	file:///C:/Users/a/Desktop/lab%20manuals/350%2024%20-%20Lab-II.pdf
3.	Use of pH meter for estimation of pH in soil samples, b. Use of pH meter for estimation of pH in water samples	https://vlab.amrita.edu/?sub=2&brch=193&sim=1549&cnt=1 http://vlab.amrita.edu/?sub=3&brch=272&sim=1414&cnt=2
4.	Estimation of Dissolved oxygen, salinity, pH, free CO ₂ , carbonates and bicarbonates, calcium in water samples	https://shodhganga.inflibnet.ac.in/bitstream/10603/4003/10/10_chapter%204.pdf
5.	Mounting of plankton	https://www.microscopemaster.com/plankton-microscopy.html
6.	Qualitative analysis of fresh water plankton	https://www.enviroscienceinc.com/services/laboratory-analysis/algae-identification-and-lab-services/#zooplankton
B.Sc. Third year semester Vth		
1.	Detection of blood groups in human being.	https://vlab.amrita.edu/?sub=3&brch=69&sim=192&cnt=1
2.	Differential counts of blood	http://vlab.amrita.edu/?sub=3&brch=188&sim=336&cnt=2
3.	Estimation of hemoglobin percentage with the help of haemometer	https://www.youtube.com/watch?v=mWAEIvu1mV8
4.	Preparation of haemin crystals	https://www.youtube.com/watch?v=kwRgNNI6xrM
5.	Life Cycles of Lac insect Honey bee Silk Moth.	http://www.yourarticlelibrary.com/zoology/lac-insect-for-lac-culture-in-india-life-cycle-of-lac-insect-with-pictures/23833 http://www.dem.ri.gov/programs/agriculture/documents/pwg_presentation_pollinator_djoslin.pdf http://www.biologydiscussion.com/animals-2/lifecycle-of-silkworm-with-diagram/2655
6.	Histological Slides of major organs of Respiratory systems, circulatory system, Nervous system, types of Muscles, Endocrine glands, testis and ovary.	https://www.amboss.com/us/knowledge/Virtual_histology_slide_box
B.Sc. Third year semester VIth		
1.	Preparation of Alcoholic grades, dehydration and clearing of tissues	https://www.slideshare.net/SowmyaSrinivas5/tissue-processing-65750933
2.	Use and care of Oven	https://eta-safety.lbl.gov/safety-alert/oven-safety-lab-areas https://www.mynewlab.com/blog/what-are-ovens-used-for-in-a-laboratory/?cn-reloaded=1
3.	Embedding and block making, trimming of block.	https://www.youtube.com/watch?v=MWHxq_Xly-A

4.	Use and Care of different types of Microtome.	https://conductscience.com/mastering-the-microtome/ https://paramedicsworld.com/histopathology-cytopathology-notes/microtomes/medical-paramedical-studynotes
5.	Honing and stropping Knives	https://www.slideshare.net/ektatapia/microtomy-40403616
6.	Section cutting and spreading,	https://www.slideshare.net/vikashkr756/short-talk-fina https://indiabioscience.org/media/articles/D-BT-Life-Science-Protocol-Manual.pdf
7.	Staining of the sections, (Double Staining), mounting.	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4804027/
8.	Camera Lucida. Use and Drawings	http://www.macollege.in/app/webroot/uploads/department_materials/doc_474.pdf
9.	Introduction to models of PCR, Southern blotting through available resources	https://vlab.amrita.edu/?sub=3&brch=186&sim=321&cnt=1 https://www.news-medical.net/life-sciences/Southern-Blot-Lab-Technique-Used-to-Detect-Specific-Biomolecules.aspx
10.	Vital Staining of mitochondria by using Janus, Green B stain.	https://wikieducator.org/ANDC_DU/Biology_Protocols/vital_staining
11.	Extraction of DNA by using salt, detergent and enzymes from natural sources from any animal tissue / plant material	https://indiabioscience.org/media/articles/D-BT-Life-Science-Protocol-Manual.pdf
12.	Study of Operon models through available resources.	https://www.khanacademy.org/science/biology/gene-regulation/gene-regulation-in-bacteria/a/the-lac-operon
13.	Application of DNA finger printing through available resources	https://www.webmd.com/a-to-z-guides/dna-fingerprinting-overview#1