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ZOOLOGY B.O.S MEETING - 2021

Board of studies meeting was held on Thursday 18th of November 2021 in the room X 205 of the Department of Zoology, St Aloysius College, Mangalore.

Agenda

1. Review the NEP Zoology syllabus effect from academic year 2020

The NEP Zoology syllabus for I B.Sc. degree course was discussed and suggestions provided by the Board members were incorporated. The changes have been approved by the members of board of studies.

Following members were present at the meeting

	Members Present	Nature of representatoion	Signature
1	Dr Siby Philip	Subject Expert	PRESSENT ONLINE
2	Dr. Sham Prasad Varija Raghu	Subject Expert	
3	Dr. Nagarathna K A	Vice Chancellor's Nominee	
4	Conrad Charles I P	Industrial representative	
5	Dr Sudeep Ghate	Meritorious aluminous	

Internal members

1	Dr. Hemachandra	Chair person	
2	Mr. Hariprasad Shetty	Zoology Staff	
3	Ms. Karen T. D'Souza	Zoology Staff	ABSENT
4	Mr Kiran Vati K	Zoology Staff	
5	Dr Rachana B Rai	Zoology Staff	
6	Mr Glavin T. Rodrigues	Zoology Staff	

BOS CHANGES 2021-22

	ORIGINAL SYLLABUS	CHANGES MADE
<p>Semester I- Zoology Core Course I Content:</p> <p>Course Title/Code: Cytology, Genetics and Infectious Diseases</p>	<p>Chapter 1. Structure and Function of Cell Organelles I in Animal cell</p> <ul style="list-style-type: none"> • Plasma membrane: chemical structure—lipids and proteins ▪ Endomembrane system: protein targeting and sorting, transport, endocytosis and exocytosis <p>Chapter 3. Nucleus and Chromatin Structure</p> <ul style="list-style-type: none"> • Structure and function of nucleus in eukaryotes • Chemical structure and base composition of DNA and RNA • DNA supercoiling, chromatin organization, structure of chromosomes • Types of DNA and RNA 	<p>Chapter 1. Structure and Function of Cell Organelles I in Animal cell</p> <p><u>Added -</u></p> <ul style="list-style-type: none"> • Cell and its components: Basic types of cells- prokaryotic and eukaryotic, nature and comparison, Cell theory. • Plasma membrane: chemical structure (fluid mosaic model) and function. <p>Chapter 3. Nucleus and Chromatin Structure</p> <p><u>Deleted:</u> Chemical structure and base composition of DNA and RNA</p> <p><u>Added and reorganized-</u></p> <ul style="list-style-type: none"> ▪ Chromatin - euchromatin and heterochromatin, nucleosomes, unit fibre, solenoid fibre, and higher order of organization, condensation and coiling. Chromosome - the structure of a typical metaphase chromosome; giant chromosomes- polytene chromosomes, lamp brush chromosomes; endomitosis. ▪ Structure of DNA & RNA – Forms of DNA, Types of RNA. Watson and Crick model of DNA-

<p>Zoology Core Lab Course Content</p> <p>Course Title: Cell Biology & Cytogenetics Lab</p>	<p>2. To study different cell types such as buccal epithelial cells, neurons, striated muscle cells using 3. Methylene blue/any suitable stain (virtual/ slaughtered tissue).</p> <p>3. To study the different stages of Mitosis in root tip of <i>Allium cepa</i>.</p> <p>4. To study the different stages of Meiosis in grasshopper testis (virtual).</p> <p>5. To check the permeability of cells using salt solution of different concentrations.</p> <p>6. Study of parasites in humans (e.g. Protozoans, Helminthes in compliance with examples being studied in theory) permanent microslides.</p> <p>7. To learn the procedures of preparation of temporary and permanent stained slides, with available mounting material.</p> <p>8. Study of mutant phenotypes of <i>Drosophila</i> sp. (from Cultures or Photographs).</p> <p>9. Preparation of polytene chromosomes (<i>Chironomus</i> larva or <i>Drosophila</i> larva).</p> <p>10. Preparation of human karyotype and study the chromosomal structural and numerical aberrations from the pictures provided. (Virtual/optional).</p> <p>11. To prepare family pedigrees.</p> <p>12. https://www.vlab.co.in</p> <p>13. https://zoologysan.blogspot.com</p> <p>14. www.vlab.iitb.ac.in/vlab</p> <p>15. www.onlinelabs.in</p> <p>16. www.powershow.com</p> <p>17. https://vlab.amrita.edu https://sites.dartmouth.edu/</p>	<p>1. Understanding of simple and compound microscopes.</p> <p>2. To study different cell types such as buccal epithelial cells, neurons, striated muscle cells using 3. Methylene blue/any suitable stain (virtual/ slaughtered tissue).</p> <p>3. Micrometry: Measurement of cell dimension using micrometry.</p> <p>4. To study the different stages of Mitosis in root tip of <i>Allium cepa</i>.</p> <p>5. To study the different stages of Meiosis in grasshopper testis (virtual).</p> <p>6. To check the permeability of cells using salt solution of different concentrations.</p> <p>7. Study of parasites in humans (e.g. Protozoans, Helminthes in compliance with examples being studied in theory) permanent microslides.</p> <p>8. To learn the procedures of preparation of temporary and permanent stained slides, with available mounting material.</p> <p>9. Study of mutant phenotypes of <i>Drosophila</i> sp. (from Cultures or Photographs).</p> <p>10. Preparation of polytene chromosomes (<i>Chironomus</i> larva or <i>Drosophila</i> larva).</p> <p>11. Preparation of temporary stained mount to show the presence of Barr body in human female blood cells/ cheek cells.</p>
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		<p>12. Preparation of human karyotype and study the chromosomal structural and numerical aberrations from the pictures provided. (Virtual/optional).</p> <p>13. To prepare family pedigrees.</p> <p>14. https://www.vlab.co.in</p> <p>15. https://zoologysan.blogspot.com</p> <p>16. www.vlab.iitb.ac.in/vlab</p> <p>17. www.onlinelabs.in</p> <p>18. www.powershow.com</p> <p>https://vlab.amrita.eduhttps://sites.dartmouth.edu/</p>
<p>Zoology Core Course Content For II Semester BSc</p> <p>Course Title: Biochemistry and Physiology</p>	<p>Chapter 5. Digestion and Respiration in humans</p> <ul style="list-style-type: none"> • Structural organization and functions of gastrointestinal tract and associated glands. • Mechanical and chemical digestion of food; Absorptions of carbohydrates, lipids, proteins, water, minerals and vitamins; Physiology of trachea and Lung. • Mechanism of respiration, Pulmonary ventilation; Respiratory volumes and capacities; Transport of oxygen and carbon dioxide in blood, Respiratory pigments, Dissociation curves and the factors influencing it; • Control of respiration. <p>Chapter 6. Circulation and Excretion in humans</p> <ul style="list-style-type: none"> • Components of blood and their functions; 	<p>Chapter 5. Digestion and Respiration in humans</p> <p><i>Added</i></p> <ul style="list-style-type: none"> • Metabolic disorders - obesity, Kwashiorkor, Marasmus. • Respiratory disorders- asthma, pneumonia, occupation related lung diseases <p><i>Added</i></p>

	<p>hemopoiesis</p> <ul style="list-style-type: none"> • Blood clotting: Blood clotting system, Blood groups: Rh-factor, ABO and MN • Structure of mammalian heart • Cardiac cycle; Cardiac output and its regulation, Electrocardiogram, Blood pressure and its regulation • Structure of kidney and its functional unit; Mechanism of urine formation <p>Chapter 7. Nervous System and Endocrinology in humans</p> <ul style="list-style-type: none"> • Structure of neuron, resting membrane potential (RMP) • Origin of action potential and its propagation across the myelinated and unmyelinated nerve fibers. Types of synapse • Endocrine glands - pineal, pituitary, thyroid, parathyroid, pancreas and adrenal; hormones secreted by them. • Classification of hormones; Mechanism of Hormone action. 	<p>Chapter 6. Circulation and Excretion in humans</p> <ul style="list-style-type: none"> • Circulatory disorders -Anaemia, atherosclerosis, myocardial infarction. • Excretory disorders- Renal calculi, uremia, gout, nephritis, renal failure-acute and chronic. <p><i>Added</i></p> <p>Chapter 7. Nervous System and Endocrinology in humans</p> <ul style="list-style-type: none"> • Neuro disorders- Parkinson's and Alzheimer's diseases. • Hypo and hypersecretion of hormones and its effects
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 10/11/2022

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