DEPARTMENT OF ZOOLOGY OF BERHAMPORE GIRLS COLLEGE

**Module wise Syllabus distribution of 4th SEM B.Sc. Zoology CCG (Program) Courses (January to June, 2020)**

**Details about Teachers**

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| **Sl No** | **Name of the Teacher** | **Designation** | **Contact No** | **E mail id** |
| **1** | **Bhaskar Mahanayak (BM)** | **Assistant Professor and Head of the Dept.** | **6295260820** | **bmahanayak@gmail.com** |
| **2** | **Rabiul Hoque (RH)** | **Assistant Professor** | **9609268155** | **rhrabiulhaque486@gmail.com** |
| **3** | **Sarmistha Chattopadhyay (SC)** | **Guest Lecturer** | **9735602335** |  |
| **4** | **Tania Mondal (TM)** | **Guest Lecturer** | **8900548572** | **mondaltania20@gmail.com** |
| **5** | **Sanchari Chatterjee (SCC)** | **Guest Lecturer** | **9609549056** | **sanchar.sylvan@gmail.com** |
| **6** | **Debashree Konar Chowdhury (DKC)** | **Guest Lecturer** | **7031569916** | **debashreekonar@gmail.com** |
| **7** | **Somrita Rudra (SR)** | **Guest Lecturer** | **8016549943** | **somritarudra8@gmail.com** |
| **8** | **Deepsikha Mukherjee (DM)** | **Guest Lecturer** | **6294263865** | **deepsikhamukherjee103@gmail.com** |
| **9** | **Soumima Chattoraj (SMC)** | **Guest Lecturer** | **7044108774** | **soumimachattoraj007@gmail.com** |

**Details about Non-teaching staff**

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| **Sl No** | **Name of the Staff** | **Designation** | **Contact No** | **Email Id** |
| **1** | **Mithu Hazra** | **Lab Attendant** | **9609252150** |  |
| **2** | **Rajesh Nabik** | **Lab Attendant (Casual)** | **7872114179** |  |

**Module wise Syllabus distribution of B.Sc 4th SEM ZOOLOGY CCG (Program) Course (January to June, 2020)**

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| Course Code: ZOOL-CCG-T-04 Course Title: Physiology and Biochemistry |
| **Theory (Total 60 Lectures)** |
| Unit | Name of teacher | Topics | Sub-Topics  | No of Classes |
| 1 | RH | **Digestion and Absorption of Food** | Structure and function of digestive glands; Digestion and absorption of carbohydrates, fats and proteins. | 6 |
| 2 | TM | **Functioning of Excitable Tissue (Nerve and Muscle)** | Structure of neuron, Propagation of nerve impulse (myelinated and non-myelinated nerve fibre); Structure of skeletal muscle, Mechanism of muscle contraction (Sliding filament theory. | 6 |
| 3 | SC | **Respiratory Physiology** | Transport of oxygen and carbon dioxide in blood, Factors affecting transport of gases. | 6 |
| 4 | RH | **Renal Physiology** | Functional anatomy of kidney, Mechanism and regulation of urine formation | 6 |
| 5 | SR | **Cardiovascular Physiology** | Structure of heart, Coordination of heartbeat, Cardiac cycle, ECG | 5 |
| 6 | SC | **Endocrine and Reproductive Physiology** | Structure and function of endocrine glands (pituitary, thyroid, parathyroid, pancreas, adrenal, ovaries, and testes), Brief account of Menstrual cycle. | 5 |
| 7 | TM | **Carbohydrates** | Glycolysis, Citric acid cycle | 4 |
| 8 | SR | **Lipids** | Fatty acid biosynthesis | 4 |
| 9 | RH | **Proteins** | Amino acids: Structure, ClassificationProteins: Levels of organization; Protein metabolism: Urea cycle | 6 |
| 10 | SC | **Nucleic Acids** | Structure: Purines and pyrimidines, Nucleosides, Nucleotides, Nucleic acids | 4 |
| 11 | TM(Topic 1)SR (Topic 2) | **Enzymes** | 1.Classification; Cofactors; Specificity; Isozymes; Mechanism of enzyme action; 2. Enzyme kinetics; Factors affecting rate of enzyme-catalyzed reactions. | 44 |
| **Practical (Total 30 Lectures)** |
| 1 | SC |  | Preparation of temporary mounts: Blood film | 7 |
| 2 | SC |  | Estimation of haemoglobin using Sahli’shaemoglobinometer | 7 |
| 3 | DM |  | Examination of permanent histological sections of mammalian duodenum, lung, kidney, thyroid, pancreas, adrenal, testis, ovary. | 8 |
| 4 | DM |  | Qualitative tests of functional groups in carbohydrates/proteins/lipids. | 8 |

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| Course Code: ZOOL-CCG-SEC-02  | Course Title: Apiculture |
| **Theory (Total 30 Lectures)** |
| Unit | Name of teacher | Unit Title | Topics  | No of Classes |
| 1 | SC | **Biology of Bees** | Biology and social organization of honey bees | 4 |
| 2 | SR | **Rearing of Bees** | Artificial Bee rearing (Apiary), Beehives – Newton and Langstroth; Bee Pasturage; Selection of Bee Species for Apiculture; Bee Keeping Equipment; Methods of Extraction of Honey (Indigenous and Modern). | 8 |
| 3 | SC | **Diseases and Enemies** | Bee Diseases and Enemies; Control and Preventive measures | 6 |
| 4 | SR | **Bee Economy** | Products of Apiculture Industry and its Uses (Honey, Bees Wax, Propolis), Pollen etc | 6 |
| **Field Visit** |
| 5 | SC | **Entrepreneurship in Apiculture** | Report on a visit to an apiculture farm | 6 |