

**RISHI BANKIM CHANDRA COLLEGE FOR WOMEN**  
**ঋষি বঙ্কিমচন্দ্র মহিলা কলেজ**

East Kanthal Para, P.O.-Naihati, Dist-North 24 Parganas  
 (North), Pin - 743165, State - West Bengal

Ph no.- 033-25801905 / 9163481261

[Email.ID-rbccwomen@gmail.com](mailto:rbccwomen@gmail.com)

**ACADEMIC CALENDER**  
**SUBJECT- PHYSIOLOGY GENERAL (GE/DSC)**  
**SESSION- 2019-2020**

**CBCS SEMESTER I (F.M.-75)**

<i>SEMESTER</i>	<i>PAPERCODE</i>	<i>SYLLABUS MODULE / UNIT</i>	<i>NO. OF HOURS</i>	<i>TEAC -HER</i>	<i>DISTRIBUTION</i>	<i>STUDENT'S SEMINAR</i>
I	PHYGCOR01T	Chemistry of Biomolecules	14	AB	July'19 - August'19	
		Nutrition, Vitamins, Minerals	10	SB		
		Gastrointestinal Hormones	5	RM		
I	PHYGCOR01T	Enzymes	6	AB	September'19 - October'19	
		Digestion and Absorption	10	RM		
I	PHYGCOR01T	Carbohydrate, Protein and Fat Metabolism	10	SB	November'19 - December'19	
		Regulation of Gastrointestinal Functions	5	RM		
		Theory Assessment	1	RM, SB, AB		
I	PHYGCOR01P	Biological Chemistry	30	AB, RM	July'19 - September'19	
I	PHYGCOR01P	Biochemical Estimation	30	AB, RM	October'19 - December'19	Student's seminar
		Practical Assessment	2	AB, RM, SB	December'19	

**CBCS SEMESTER II (F.M.-75)**

<i>SEMESTER</i>	<i>PAPERCODE</i>	<i>SYLLABUS MODULE / UNIT</i>	<i>NO. OF HOURS</i>	<i>TEAC -HER</i>	<i>DISTRIBUTION</i>	<i>STUDENT'S SEMINAR</i>
II	PHYGCOR02T	<p>Circulation: Origin of the Heartbeat &amp; the Electrical Activity of the heart The Heart as a Pump Circulation Through Special Regions</p> <p>Dynamics of Blood &amp; Lymph Flow. Cardiovascular regulatory mechanisms</p>	15	AB	January'20 - February'20	
II	PHYGCOR02T	<p>Respiration: Pulmonary Function Gas Transport between the Lungs &amp; the Tissues</p> <p>Regulation of Respiration</p> <p>Respiratory Adjustments in Health &amp; Disease</p>	10	RM	February'20 - March'20	
II	PHYGCOR02T	<p>Excretion: Renal Function</p> <p>Micturition</p> <p>Theory Assessment</p>	10	RM	April'20-May'20	
II	PHYGCOR02P	<p>Measurement of arterial blood pressure at rest and after exercise.</p> <p>Modified Harvard Step Test and Determination of Physical Fitness</p>	5	AB	March'20-April'20	
II	PHYGCOR02P	<p>Recording of Recovery Heart Rate after Standard exercise.</p>	5	SB	March'20-April'20	
II	PHYGCOR02P	<p>Recording of Recovery Heart Rate after Standard exercise.</p>	1	RM, AB, SB	June'20	
II	PHYGCOR02P	<p>Sphygmomanometric Measurement of arterial blood pressure at rest and after exercise.</p> <p>Modified Harvard Step Test and Determination of Physical Fitness</p>	15	RM	January'20 - February'20	
II	PHYGCOR02P	<p>Recording of Recovery Heart Rate after Standard exercise.</p>	15	AB	March'20 - April'20	

II	PHYGCOR02P	Pneumographic recording of effects of talking, drinking, laughing, coughing, exercise, hyperventilation and breath - holding.	15	AB	March'20 - April'20	
II	PHYGCOR02P	Renal biochemistry: Identification of normal and abnormal constituents of urine.  Hematological Experiments: Differential count of WBC, Total count of RBC and WBC.	15	SB	March'20 - May'20	Student's seminar
		Practical Assessment	2	RM, SB, AB	June'20	

### CBCS SEMESTER III (F.M.-75)

<i>SEMESTER</i>	<i>PAPERCODE</i>	<i>SYLLABUS MODULE / UNIT</i>	<i>NO. OF HOURS</i>	<i>TEAC -HER</i>	<i>DISTRIBUTION</i>	<i>STUDENT'S SEMINAR</i>
III	PHYGCOR03T	Nerve & Muscle	20	RM, AB	July '19 - August'19	
III	PHYGCOR03T	Special Senses	15	RM, AB	September'19 - October'19	
III	PHYGCOR03T	Nervous System  Theory Assessment	25  1	SB  RM, SB, AB	November'19 - December'19	
III	PHYGCOR03P	Measurement of Grip Strength	15	RM	July'19 - August'19	
III	PHYGCOR03P	Determination of Visual Acuity	15	AB, RM	September'19 - October'19	
III	PHYGCOR03P	Determination of Colour Vision	15	SB	November'19 - December'19	
III	PHYGCOR03P	Demonstration on	5	AB	December'19	Student's

		Kymograph Practical Assessment	2	RM, SB, AB		seminar
III	PHYSSEC01M	Skill Enhancement Course (SEC): Hematological Techniques: Preparation of blood smear and identification of blood cells. Preparation of haemin crystal.  Bleeding time, clotting time. Measurement of haemoglobin in blood. Blood group determination.  Internal Assessment	15  15  2	RM  AB  AB, RM, SB	August'19 - November'19	

### CBCS SEMESTER IV (F.M.-75)

<i>SEMESTER</i>	<i>PAPERCODE</i>	<i>SYLLABUS MODULE / UNIT</i>	<i>NO. OF HOURS</i>	<i>TEAC -HER</i>	<i>DISTRIBUTION</i>	<i>STUDENT'S SEMINAR</i>
IV	PHYGCOR04T	Endocrinology: The Thyroid Gland  Endocrine Functions of the Pancreas & the Regulation of carbohydrate Metabolism  The Adrenal Medulla & Adrenal Cortex	15	AB	January'20 - February'20	
IV	PHYGCOR04T	Hormonal Control of Calcium Metabolism & the Physiology of Bone	15	SB	February'20 - March'20	

		The Pituitary Gland  Endocrine Functions of the Kidneys, Heart, & Pineal Gland				
IV	PHYGCOR04T	Reproduction  Theory Assessment	30  1	RM  RM, SB, AB	January'20 - March'20  April'20	
IV	PHYGCOR04P	Study and Identification of Stained Sections of Different Mammalian Tissues and Organs.  Practical Assessment	60  2	AB, RM, SB  RM, AB, SB	January'20 - April'20	Student's seminar

**PART-III**  
**PAPER- IVA (THEORETICAL); F.M.-50**

SESSION	TOPIC	REMARKS
Term 1, Half 1 (August'19- September'19)	<p><b>1. Haematology :</b></p> <p>Blood groups - ABO and Rh. Blood transfusion - precaution and hazards. Immunological basis of identification of ABO and Rh blood groups. Functions and estimation of haemoglobin. Abnormal haemoglobins - thalassaemia and sickle-cell anaemia. Definition, determination and significance of TC, DC, ESR, Arneth count, PCV, MCV, MHC, MCHC, bleeding time, clotting time and prothrombin time. Anaemia - types (definition and causes). Leucocytosis, leucopenia and leukaemia. Purpura.</p> <p><b>2. Biochemistry and Molecular Biology:</b></p> <p>Brief idea of HMP shunt and its significance (detailed enzymatic reactions are not required). Purine and pyrimidine bases, nucleosides, nucleotides and polynucleotides. Structure of DNA and RNA. Elementary idea of gene, genome, transcription, genetic code, translation and genetic engineering. Application of PCR and western blot and diagnosis. Pathophysiological significance of the following blood constituents: glucose, urea, creatinine, uric acid, cholesterol, bilirubin, SGPT</p>	

	and SGOT, alkaline and acid phosphatases and ketone bodies.  <b>3. Microbiology and Immunology:</b> Virus - DNA virus and RNA virus. Bacteriophage. Bacteria-structure and morphological classification. Gram positive and Gram negative and acid-fast bacteria. Pathogenic and non-pathogenic bacteria - definition with a few examples. Sterilization and Pasteurization. A brief idea of antibiotics. Elementary knowledge of innate and acquired immunity. Humoral and cell mediated immunity Vaccination - principles and importance of immunization. Basic principle of immunological detection of pregnancy.	
Term 1, Half 2 (October'19- December'19)	<b>4. Community Health and Management:</b> Principle of balanced diet formulation of individuals - infants, growing children, students, pregnant women, lactating women and aged persons. Antioxidants and Aging. Some common pollutants and their effects – carbon monoxide, lead and arsenic. Effects of noise on human body and preventive measures. Role of physiologist in community health. Etiology, Pathophysiology and Management of: Anaemia, Iodine deficiency, Hypothyroidism and Hyperthyroidism, Obesity, Polycystic ovary, Recurrent spontaneous abortion, Diabetes, Hypertension, Atherosclerosis, Gout, Arthritis, Ventricular Hypertrophy, Marasmus, Kwashiorkor, Vit A, Iron and iodine deficiency, Alzheimer's disease, Dementia, Depression & Anxiety disorder, Stroke, Migraine, Asthma, Chronic Obstructive Pulmonary Disease (COPD), Tuberculosis, Diarrhoea, Dysentery, Giardiasis, Ulcer, Typhoid fever, Malaria, Influenza, Common cough and cold. Myopia, Hypermetropia, Cataract, Macular degeneration, Glaucoma, Osteoporosis & Hormone replacement therapy, Eczema. Pharmacodynamics and Pharmacokinetics (definition only), Dose and mechanism of action of different drugs in the management of above mentioned diseases.	
Term 2, Half 1 (January'20- March'20)	<b>5. Biostatistics :</b> Basic concepts – variable, population, parameter, sample, statistic. Classification of data – qualitative and quantitative, continuous and discontinuous. Presentation of data– frequency distribution, bar diagram, pie diagram, frequency polygon and histogram. Mean, median, mode, standard deviation and standard error.	3rd Year Test Exam 2nd Year Test Exam
Term 2, Half 2 (April'20 - June'20)	Revision Classes	Student's seminar

<b>PART-III</b>		
<b>PAPER- IVB (PRACTICAL); F.M.-50</b>		
SESSION	TOPIC	REMARKS
Term 1, Half 1 (August'19 - September'19)	<b>A. Haematology:</b> a) DC of WBC, estimation of haemoglobin, blood group determination, bleeding time and coagulation time, TC of RBC and WBC. Demonstration: Haematocrit, MCV, ESR.  <b>B. Biochemistry:</b> a) Identification of normal constituents of urine - chloride. sulphate,	4 weeks Puja Vacation

	phosphate, creatinine and urea. Identification of abnormal constituents of urine - glucose, protein, acetone blood and bile salts. Demonstration: Blood sugar estimation (Folin – Wu method)	
Term 1, Half 2 (October'19- December'19)	<p><b>C. Human Experiments:</b></p> <p>a) Determination of Physical Fitness Index (PFI) of an individual by modified Harvard step test and recording of recovery heart-rate after standard exercise.</p> <p>b) Pneumographic recording of respiratory movements along with the effect of drinking of water, talking, forced hyperventilation and breath holding.</p>	Annual Sports & 1 week Winter Recess
Term 2, Half 1 (January'20- March'20)	<p><b>c) Measurement of some common anthropometric parameters:</b> stature, weight, eye height, shoulder height, elbow height. sitting height, elbow rest height (sitting), knee height (sitting), arm reach from wall, mid-arm circumference, waist circumference, hip circumference, neck circumference, head circumference, chest circumference.</p> <p>d) Calculation of Body Surface Area (using a nomogram) and Body Mass Index from anthropometric measurements.</p> <p><b>Demonstration:</b></p> <p>a) Tests for colour blindness, test for visual acuity using Snellen's Chart.Exploration of conductive and perceptive deafness by tuning for method.</p> <p>b) Ergographic recording of muscular fatigue by' Moss's ergograph. Clinical classification of reflexes: superficial reflex - planter reflex, Deep reflex – knee jerk, Visceral reflex - pupillary light reflex.</p> <p><b>D. Field Study Report:</b></p> <p>Diet survey of a family as per ICMR specification. OR Population study of physiological parameters such as height, weight, heart-rate, blood pressure, respiratory rate, PFI, TC of RBC, estimation of haemoglobin, DC of WBC as far as practicable.</p>	3rd Year Test Exam 2nd Year Test Exam
Term 2, Half 2 (April'20 - June'20)	Revision Classes	Student's seminar

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**ACADEMIC CALENDER**  
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**F.M.-75**

<i>SEMESTER</i>	<i>PAPERCODE</i>	<i>SYLLABUS MODULE / UNIT</i>	<i>NO. OF HOURS</i>	<i>TEAC -HER</i>	<i>DISTRIBUTION</i>	<i>STUDENT'S SEMINAR</i>
I	PHYGCOR01T	Chemistry of Biomolecules  Nutrition, Vitamins, Minerals  Gastrointestinal Hormones	14  10  5	AB  SB  RM	December'20 - January'21	
I	PHYGCOR01T	Enzymes  Digestion and Absorption	6  10	AB  RM	January'21- February'21	
I	PHYGCOR01T	Carbohydrate, Protein and Fat Metabolism  Regulation of Gastrointestinal Functions  Theory Assessment	10  5  1	SB  RM  RM, SB, AB	January'21- March'21  March'21	
I	PHYGCOR01P	Biological Chemistry	30	AB, RM	December'20 - January'21	
I	PHYGCOR01P	Biochemical Estimation  Practical Assessment	30  2	AB, RM  AB, RM, SB	February'21 - March'21  March'21	Student's Seminar



III	PHYGCOR03T	Nerve & Muscle	20	RM, AB	July '20 - August'20	
III	PHYGCOR03T	Special Senses	15	RM, AB	September'20 - October'20	
III	PHYGCOR03T	Nervous System	25	SB	November'20 - January'21	
		Theory Assessment	1	RM, SB, AB	January'21	
III	PHYGCOR03P	Measurement of Grip Strength	15	RM	July'20 - August'20	
III	PHYGCOR03P	Determination of Visual Acuity	15	AB, RM	August'20 - September'20	
III	PHYGCOR03P	Determination of Colour Vision	15	SB	September'20 - October'20	
III	PHYGCOR03P	Demonstration on Kymograph	5	AB	November'20 - December'20	
III	PHYGCOR03P	Neurological experiments	10	SB	January'21	
		Practical Assessment	2	RM,A B, SB		
III	PHYSSEC01M	Skill Enhancement Course (SEC): Hematological Techniques: Preparation of blood smear and identification of blood cells. Preparation of haemin crystal.	15	SB	August'20- October'20	Student's Seminar
		Bleeding time, clotting time. Measurement of haemoglobin in blood. Blood group determination.	15	AB		
		Internal Assessment	2	AB, RM, SB	December'20	
V	PHYGDSE02T	Importance of Regular Exercise in health and wellbeing	5	RM	July'20 - August'20	

		Basic concept of Bioenergetics Energy sources during exercise	5	RM		
		Cardiorespiratory responses during different grades of exercise	5	SB		
V	PHYGDSE02T	Concept of EPOC	5	RM	September'20 - October'20	
		Aerobic Work Capacity	5	RM		
		Physiological Fatigue and recovery	5	AB		
V	PHYGDSE02T	Principles of Physical Training	15	AB	November'20 - December'20	
		Training to improve aerobic and anaerobic power				
		Effect of overtraining and Detraining				
V	PHYGDSE02T	Nutritional Supplements and Ergogenic Aids	15	SB	January'21- February'21	
		Sports Injury and its Management				
		Basic idea of Sports rehabilitation and Sports Medicine				
		Theory Assessment	1	RM, SB, AB	February'21	
V	PHYGDSE02P	Measurement of blood pressure before and after Exercise.	15	AB	July'20 -August'20	Student's Seminar
		Recording of Recovery Pulse Rate after Standard Exercise				
V	PHYGDSE02P	Determination of VO <sub>2</sub> max by queen college	15	RM	September'20 - October'20	

		step test.				
V	PHYGDSE02P	Measurement of Body Fat Percentage	15	RM	November'20 - December'20	
V	PHYGDSE02P	Determination of Endurance Time by Handgrip dynamometer  Practical Assessment	15  2	SB  RM, SB, AB	January'21	
I, III, V	PHYGCOR01T PHYGCOR01P PHYGCOR03T PHYGCOR03P PHYGDSE02T PHYGDSE02P	WBSU EXAM			March'21 - April'21	
II	PHYGCOR02T	Circulation: Origin of the Heartbeat & the Electrical Activity of the heart. The Heart as a Pump Circulation Through Special Regions  Dynamics of Blood & Lymph Flow. Cardiovascular regulatory mechanisms	15     10	AB     SB	May'21- June'21	
II	PHYGCOR02T	Respiration: Pulmonary Function Gas Transport between the Lungs & the Tissues  Regulation of Respiration, Respiratory Adjustments in Health & Disease	10   10	RM   AB	May'21- June'21  June'21	
II	PHYGCOR02T	Excretion: Renal Function  Micturition  Theory Assessment	10  5  1	RM  AB  RM, AB, SB	May'21- June'21	

II	PHYGCOR02P	Sphygmomanometric measurement of arterial blood pressure at rest and after exercise.  Modified Harvard Step Test and Determination of Physical Fitness	15	RM	May'21	
II	PHYGCOR02P	Recording of Recovery Heart Rate after Standard Exercise.	15	AB	June'21	
II	PHYGCOR02P	Pneumographic recording of effects of talking, drinking, laughing, coughing, exercise, hyperventilation and breath - holding.	15	AB	June'21	
II	PHYGCOR02P	Renal biochemistry: Identification of normal and abnormal constituents of urine.  Hematological Experiments: Differential count of WBC, Total count of RBC and WBC.  Practical Assessment	15      2	SB      RM, SB, AB	May'21-June'21	
IV	PHYGCOR04T	Endocrinology: The Thyroid Gland  Endocrine Functions of the Pancreas & the Regulation of Carbohydrate Metabolism  The Adrenal Medulla & Adrenal Cortex	15	AB	May'21-June'21	
IV	PHYGCOR04T	Hormonal Control of Calcium Metabolism & the Physiology of Bone  The Pituitary Gland  Endocrine Functions of	15	SB	May'21-June'21	

		the Kidneys, Heart, & Pineal Gland  Theory Assessment	1	RM, SB, AB		
IV	PHYGCOR04T	Reproduction	30	RM	May'21-June'21	Student's Seminar
IV	PHYGCOR04P	Study and Identification of Stained Sections of Different Mammalian Tissues and Organs.  Practical Assessment	60  2	AB, RM, SB  RM, AB, SB	March'21-May'21  May'21	
VI	PHYGDSE03T	Nutritional classification, digestive Absorption, Metabolism of Carbohydrates, Proteins, Lipids. Sound Pollution as a Community health issue.  Principles of Human Nutrition-Relationship between Nutrition, Health & Disease.  Recommended dietary Allowances, Malnutrition & chronic Energy, LBW, PEM, Xerophthalmia, IDD, Iron & Iodine Deficiency, Micronutrient Disorders. Food Toxicity, Effect of Processing on Nutritive value of foods. Balanced Diet, Diet Survey  Concept of ACU. Composition & Nutritional Value of Common Indian Foodstuff- Rice, wheat,	10  10  10  10	RM  AB  SB  AB	May'21-June'21	

		pulses, egg, meat, fish, milk, Dietary Fibres, Calorie Requirement Principles of Formulation of Balanced diets for growing child, adult man & woman, pregnant and lactating woman				
VI	PHYGDSE03T	<p>Definition, Concept of Noise. Source of Extraordinary Sound. Effects of Sound Pollution on Human Health, Noise Index (Noise Standard).</p> <p>Socioecology of Nutrition. Habitual diets in India &amp; their adequacy. Basic idea about community health and public health issues. Diet Management of Obese, Diabetic, Hypertensive Person and Athlete. Basic Idea on PCM, Marasmus, Kwashiorkor and their prevention.</p> <p>Theory Assessment</p>	10  10  1	RM  AB  RM,A B, SB	May'21-June'21	
VI	PHYGDSE03	<p>Diet Survey</p> <p>Practical Assessment</p>	60  2	SB, RM,  SB, RM AB	March'21-May'21  June'21	Student's Seminar

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I	PHYGCOR01T	Chemistry of Biomolecules	14	AB	September'21- October'21	
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		Digestion and Absorption	10	RM		
I	PHYGCOR01T	Carbohydrate, Protein and Fat Metabolism	10	SB	November'21- December'21	
		Regulation of Gastrointestinal Functions	5	RM		
		Theory Assessment	1	RM, SB, AB		
I	PHYGCOR01P	Biological Chemistry	30	AB, RM	September'21	

I	PHYGCOR01P	Biochemical Estimation	30	AB, RM	October'21- December'21	
		Practical Assessment	2	AB, RM, SB	January'21	
III	PHYGCOR03T	Nerve & Muscle	20	RM, AB	October'21	
III	PHYGCOR03T	Special Senses	15	RM, AB	November'21	
III	PHYGCOR03T	Nervous System	25	SB	December'21	
		Theory Assessment	1	RM, SB, AB		
III	PHYGCOR03P	Measurement of Grip Strength	15	RM	October '21	
III	PHYGCOR03P	Determination of Visual Acuity	15	AB, RM	November'21	
III	PHYGCOR03P	Determination of Colour Vision	15	SB	December'21	
III	PHYGCOR03P	Demonstration on Kymograph	5	AB	November'21	
III	PHYGCOR03P	Neurological experiments	10	SB	November'21	
		Practical Assessment	2	RM, AB, SB	December'21	
III	PHYSSEC01M	Skill Enhancement Course (SEC): Hematological Techniques: Preparation of blood smear and identification of blood cells. Preparation of haemin crystal.	15	RM	October'21- January'22	
		Bleeding time, clotting time. Measurement of haemoglobin in blood. Blood group determination.	15	AB		
		Internal Assessment	2		January'22	
V	PHYGDSE02T	Importance of Regular Exercise in health and	5	RM	September'21	



		Wellbeing				
		Basic concept of Bioenergetics Energy sources during exercise	5	RM		
		Cardiorespiratory responses during different grades of exercise	5	SB		
V	PHYGDSE02T	Concept of EPOC	5	RM	September'21- October'21	Student's Seminar
		Aerobic Work Capacity	5	RM		
		Physiological Fatigue and recovery	5	AB		
V	PHYGDSE02T	Principles of Physical Training	15	AB	October'21 - November'21	
		Training to improve aerobic and anaerobic power				
		Effect of Overtraining and Detraining				
V	PHYGDSE02T	Nutritional Supplements and Ergogenic Aids	15	SB	October'21 - December'21	
		Sports Injury and its Management				
		Basic idea of Sports rehabilitation and				
		Sports Medicine				
		Theory Assessment	1	RM, SB, AB		
V	PHYGDSE02P	Measurement of blood pressure before and after exercise.	15	AB	September'21	
		Recording of recovery pulse rate after standard exercise				
V	PHYGDSE02P	Determination of VO <sub>2</sub>	15	RM	October'21	

		max by queen college step test.				
V	PHYGDSE02P	Measurement of Body Fat Percentage	15	RM	November'21	
V	PHYGDSE02P	Determination of Endurance Time by Handgrip Dynamometer	15	SB	December'21	
		Practical Assessment	2	RM, SB, AB		
I, III, V	PHYGCOR01T PHYGCOR01P PHYGCOR03T PHYGCOR03P PHYGDSE02T PHYGDSE02P	WBSU EXAM			January'22 - February'22	
II	PHYGCOR02T	Circulation: Origin of the Heartbeat & the Electrical Activity of the heart. The Heart as a Pump. Circulation Through Special Regions	15	AB	March'22-April '22	Science Exhibition
		Dynamics of Blood & Lymph Flow. Cardiovascular regulatory mechanisms	10	SB		
II	PHYGCOR02T	Respiration: Pulmonary Function Gas Transport between the Lungs & the Tissues	10	RM	April'22-May'22	
		Regulation of Respiration	5	AB		
		Respiratory Adjustments in Health & Disease	5	SB		
II	PHYGCOR02T	Excretion: Renal Function	10	RM	May'22-June'22	
		Micturition	5	AB		
		Theory Assessment	1	RM, AB, SB		

II	PHYGCOR02P	Sphygmomanometric measurement of arterial blood pressure at rest and after exercise.  Modified Harvard Step Test and Determination of Physical Fitness	15	RM	March'22-April '22	Student's Seminar
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II	PHYGCOR02P	Renal biochemistry: Identification of normal and abnormal constituents of urine.  Hematological Experiments: Differential count of WBC, Total count of RBC and WBC.  Practical Assessment	15      2	SB     RM, SB, AB	May'22-June'22      June'22	
IV	PHYGCOR04T	Endocrinology: The Thyroid Gland  Endocrine Functions of the Pancreas & the Regulation of Carbohydrate Metabolism  The Adrenal Medulla & Adrenal Cortex	15	AB	April'22-May'22	
IV	PHYGCOR04T	Hormonal Control of Calcium Metabolism & the Physiology of Bone  The Pituitary Gland  Endocrine Functions of the Kidneys, Heart, &	15	SB	April'22-May'22	

		Pineal Gland.				
IV	PHYGCOR04T	Reproduction  Theory Assessment	30  1	RM  RM, SB, AB	April'22-May'22  June'22	
IV	PHYGCOR04P	Study and Identification of Stained Sections of Different Mammalian Tissues and Organs.  Practical Assessment	60  2	AB, RM, SB  RM, AB, SB	March'22-April'22  June'22	
VI	PHYGDSE03T	Nutritional Classification, Digestive Absorption, Metabolism of Carbohydrates, Proteins, Lipids. Sound Pollution as a Community health issue.  Principles of Human Nutrition-Relationship between Nutrition, Health & Disease.  Recommended dietary Allowances, Malnutrition & Chronic Energy, LBW, PEM, Xerophthalmia, IDD, Iron & Iodine Deficiency, Micronutrient Disorders. Food Toxicity, Effect of Processing on Nutritive value of foods. Balanced Diet, Diet Survey  Concept of ACU. Composition & Nutritional Value of Common Indian Foodstuff- Rice, wheat, pulses, egg, meat, fish,	10  10  10  10	RM  AB  SB  AB	March'22  March'22  March'22  May'22	

		milk, Dietary Fibres, Calorie Requirement Principles of Formulation of Balanced diets for growing child, adult man & woman, pregnant and lactating woman				
VI	PHYGDSE03T	<p>Definition, Concept of Noise. Source of Extraordinary Sound. Effects of Sound Pollution on Human Health, Noise Index (Noise Standard).</p> <p>Socioecology of Nutrition. Habitual diets in India &amp; their adequacy. Basic idea about community health and public health issues. Diet Management of Obese, Diabetic, Hypertensive Person and Athlete. Basic Idea on PCM, Marasmus, Kwashiorkor and their prevention.</p> <p>Theory Assessment</p>	<p>10</p> <p>10</p> <p>1</p>	<p>RM</p> <p>AB</p> <p>RM, AB, SB</p>	<p>April'22 - May'22</p> <p>April'22 - May'22</p> <p>May'22</p>	Student's Seminar
VI	PHYGDSE03	<p>Diet Survey</p> <p>Practical Assessment</p>	<p>60</p> <p>2</p>	<p>SB, RM</p> <p>SB, RM</p>	March'22-May'22	
II, IV, VI	<p>PHYGCOR02T</p> <p>PHYGCOR02P</p> <p>PHYGCOR04T</p> <p>PHYGCOR04P</p> <p>PHYGDSE03T</p> <p>PHYGDSE03P</p>	WBSU EXAM			June'22	

**RISHI BANKIM CHANDRA COLLEGE FOR WOMEN**  
**ঋষি বঙ্কিমচন্দ্র মহিলা কলেজ**

East Kanthal Para, P.O.-Naihati, Dist-North 24 Parganas  
 (North), Pin - 743165, State - West Bengal

Ph no.- 033-25801905 / 9163481261

[Email.ID-rbccwomen@gmail.com](mailto:rbccwomen@gmail.com)

<b>ACADEMIC CALENDER</b>						
<b>SUBJECT- PHYSIOLOGY GENERAL (GE/DSC)</b>						
<b>SESSION- 2022-2023</b>						
<b>F.M.-75</b>						
<b>SEMESTER</b>	<b>PAPERCODE</b>	<b>SYLLABUS MODULE / UNIT</b>	<b>NO. OF HOURS</b>	<b>TEAC -HER</b>	<b>DISTRIBUTION</b>	<b>STUDENT'S SEMINAR/ EXHIBITION</b>
I	PHYGCOR01T	Chemistry of Biomolecules	14	AB	September'22	
		Nutrition, Vitamins, Minerals	10	SB	September'22	
		Gastrointestinal Hormones	5	RM	September'22	
I	PHYGCOR01T	Enzymes	6	AB	September'22 - November'22	
		Digestion and Absorption	10	RM		
I	PHYGCOR01T	Carbohydrate, Protein and Fat Metabolism	10	SB	November'22- December'22	Student's Seminar
		Regulation of Gastrointestinal Functions	5	RM	December'22	
		Theory Assessment	1	RM, SB, AB	December'22	
I	PHYGCOR01P	Biological Chemistry	30	AB, RM	November'22- December'22	
I	PHYGCOR01P	Biochemical Estimation	30	AB, RM	November'22 - January'23	
		Practical Assessment	2	AB, RM,	January'23	

				SB		
III	PHYGCOR03T	Nerve & Muscle	20	RM, AB	August'22 - September'22	
III	PHYGCOR03T	Special Senses	15	RM, AB	September'22 - October'22	
III	PHYGCOR03T	Nervous System	25	SB	August'22	
		Theory Assessment	1	RM, SB, AB	October'22	
III	PHYGCOR03P	Measurement of Grip Strength	15	RM	September'22 - October'22	Student' s Seminar
III	PHYGCOR03P	Determination of Visual Acuity	15	AB, RM	November'22	
III	PHYGCOR03P	Determination of Colour Vision	15	SB	November'22	
III	PHYGCOR03P	Demonstration on Kymograph	5	AB	November'22	
III	PHYGCOR03P	Neurological experiments	10	SB	November'22 - December'22	
		Practical Assessment	2	RM, AB, SB	January'23	
III	PHYSSEC01M	Skill Enhancement Course (SEC): Hematological Techniques: Preparation of blood smear & identification of blood cells. Preparation of haemin crystal.	15	RM	September'22 - October'22	
		Bleeding time, clotting time. Measurement of Hemoglobin in blood. Blood group determination.	15	AB		
		Internal assessment	2	RM, AB, SB	October'22	
V	PHYGDSE02T	Importance of Regular Exercise in health and Wellbeing	5	RM	August'22	

		Basic concept of Bioenergetics Energy sources during exercise	5	RM	September'22	
		Cardiorespiratory responses during different grades of exercise	5	SB	September'22	
V	PHYGDSE02T	Concept of EPOC	5	RM	October'22	
		Aerobic Work Capacity	5	RM	November'22	
		Physiological Fatigue and recovery	5	AB	August'22	
V	PHYGDSE02T	Principles of Physical Training	15	AB	September'22	
		Training to improve aerobic and anaerobic power				
		Effect of Overtraining and Detraining				
V	PHYGDSE02T	Nutritional Supplements and Ergogenic Aids	15	SB	September'22 - October'22	
		Sports Injury and its Management				
		Basic idea of Sports rehabilitation and				
		Sports Medicine				
		Theory Assessment	1	RM, SB, AB	November'22	
V	PHYGDSE02P	Measurement of blood pressure before and after exercise.	15	AB	November'22 - December'22	
		Recording of recovery Pulse Rate after Standard Exercise				
V	PHYGDSE02P	Determination of VO <sub>2</sub> max by queen college step test.	15	RM	November'22 - December'22	
V	PHYGDSE02P	Measurement of Body Fat Percentage	15	RM	December'22	
V	PHYGDSE02P	Determination of Endurance Time by Handgrip	15	SB	November'22-December'22	



		Dynamometer  Practical Assessment	2	RM, SB, AB	February'22	Science Exhibiti on
I, III, V	PHYGCOR01T PHYGCOR01P PHYGCOR03T PHYGCOR03P PHYGDSE02T PHYGDSE02P	WBSU EXAM			January'23 - March'23	
II	PHYGCOR02T	Circulation: Origin of the Heartbeat & the Electrical Activity of the heart. The Heart as a Pump. Circulation Through Special Regions.  Dynamics of Blood & Lymph Flow.  Cardiovascular regulatory mechanisms	15      10	AB      SB	March'23- April'23	
II	PHYGCOR02T	Respiration: Pulmonary Function Gas Transport between the Lungs & the Tissues  Regulation of Respiration  Respiratory Adjustments in Health & Disease	10    5  5	RM    AB  SB	March'23 - April'23  April'23 - May'23	
II	PHYGCOR02T	Excretion: Renal Function  Micturition  Theory Assessment	10  5  1	RM  AB  RM, AB, SB	April'23 - May'23   June'23	
II	PHYGCOR02P	Sphygmomanometric measurement of arterial blood pressure at rest and after exercise.  Modified Harvard Step Test and Determination of Physical Fitness	15	RM	March'23 - April'23	Student' s Seminar

II	PHYGCOR02P	Recording of Recovery Heart Rate after standard exercise.	15	AB	March'23 - April'23	
II	PHYGCOR02P	Pneumographic recording of effects of talking, drinking, laughing, coughing, exercise, hyperventilation and breath - holding.	15	AB	April'23 - May'23	
II	PHYGCOR02P	Renal biochemistry: Identification of normal and abnormal constituents of urine.  Hematological Experiments: Differential count of WBC, Total count of RBC and WBC.  Practical Assessment	15       2	SB       RM, SB, AB	March'23 - April'23       August'23	
IV	PHYGCOR04T	Endocrinology: The Thyroid Gland  Endocrine Functions of the Pancreas & the Regulation of Carbohydrate metabolism  The Adrenal Medulla & Adrenal Cortex	15	AB	March'23 - April'23	
IV	PHYGCOR04T	Hormonal Control of Calcium Metabolism & the Physiology of Bone  The Pituitary Gland  Endocrine Functions of the Kidneys, Heart, & Pineal Gland  Theory Assessment	15       1	SB       RM, SB, AB	March'23 - April'23       May'23	
IV	PHYGCOR04T	Reproduction	30	RM	March'23 - April'23	Student's Seminar
IV	PHYGCOR04P	Study and Identification of Stained Sections of	60	AB, RM,	March'23 - May'23	

		Different Mammalian Tissues and Organs.  Practical Assessment	2	SB  RM, AB, SB	August'23	
VI	PHYGDSE03T	Nutritional classification, digestive absorption, metabolism of carbohydrates, proteins, lipids. Sound Pollution as a Community health issue.  Principles of Human Nutrition-Relationship between Nutrition, Health & Disease.  Recommended dietary Allowances, malnutrition & Chronic Energy, LBW, PEM, Xerophthalmia, IDD, Iron & Iodine deficiency, micronutrient disorders. Food Toxicity, Effect of Processing on Nutritive value of foods. Balanced Diet, Diet Survey Concept of ACU.  Composition & Nutritional Value of Common Indian Foodstuff- Rice, wheat, pulses, egg, meat, fish, milk, Dietary Fibres, Calorie Requirement Principles of formulation of balanced diets for growing child, adult man & woman, pregnant and lactating woman	10  10  10	RM  AB  SB  AB	March'23 - April'23  March'23- April'23  March'23- April'23  April'23 - May'23	
VI	PHYGDSE03T	Definition, Concept of Noise. Source of Extraordinary Sound. Effects of Sound Pollution on Human Health, Noise Index (Noise Standard).  Socioecology of nutrition. Habitual diets in India & their adequacy. Basic idea about community health and public health issues. Diet Management of Obese,	10  10	RM  AB	April'23 - May'23  April'23 - May'23	Student's Seminar

		Diabetic, Hypertensive Person and Athlete. Basic Idea on PCM, Marasmus, Kwashiorkor and their prevention.				
		Theory Assessment	1	RM, AB, SB	May'23	
VI	PHYGDSE03	Diet Survey	60	SB, RM	March'23 - May'23	
		Practical Assessment	2	SB, RM	July'23	
II, IV, VI	PHYGCOR02T PHYGCOR02P PHYGCOR04T PHYGCOR04P PHYGDSE03T PHYGDSE03P	WBSU EXAM			August'23-September'23	

Semester	General	Internal Assessment	University Examination
I	GENERAL	February'23	March'23
III	GENERAL	December'22	January'23
V	GENERAL	December'22	February'23
II	GENERAL	June'23	September'23
IV	GENERAL	May'23	September'23
VI	GENERAL	May'23	August'23

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East Kanthal Para, P.O.-Naihati, Dist-North 24 Parganas  
 (North), Pin - 743165, State - West Bengal

Ph no.- 033-25801905 / 9163481261

[Email.ID-rbccwomen@gmail.com](mailto:rbccwomen@gmail.com)

**ACADEMIC CALENDER**  
**SUBJECT- PHYSIOLOGY GENERAL (GE/DSC)**  
**SESSION- 2023-2024**  
**F.M.-75**

<i>SEMESTER</i>	<i>PAPERCODE</i>	<i>SYLLABUS MODULE / UNIT</i>	<i>NO. OF HOURS</i>	<i>TEAC -HER</i>	<i>DISTRIBUTION</i>	<i>STUDENT'S SEMINAR/ EXHIBITION</i>
I (NEP)	MIT	Anatomy of Heart. Electrical Activity of the heart: Electrocardiogram, Cardiac Arrhythmias, Hypertrophy and Cardiomyopathy. Cardiac Cycle, Heart sounds, Cardiac Output.	12	AB	August'23-September'23	
		Blood- formation, composition, circulation, and functions. Blood vessels: artery, vein, capillaries. Hemoglobin	10	SB	August'23-September'23	
		Anatomy of Respiratory tract and Lungs. Pulmonary Function: Mechanics of breathing, Gas Exchange in the lungs & tissues, Pulmonary Circulation, Other Functions of the Respiratory System	5	RM	August'23-September'23	
I (NEP)	MIT	Cardiovascular regulatory Mechanisms: Local, Hormonal, Neural. Arterial blood pressure, Korotkoff sounds. Coronary Circulation.	8	AB	October'23 - November'23	
		Hypercapnia (respiratory acidosis) and hypocapnia (respiratory alkalosis). Neural & Chemical	10	RM	October'23 - November'23	

		Regulation of Respiration. Forms of Hypoxia.				
I (NEP)	M1T	Blood disorders- anemia, thalassemia, leukemia, hemophilia. Blood groups (ABO & Rh systems), Blood transfusion, and Blood storage. Lymph - formation, composition, circulation, and functions  Chronic obstructive pulmonary disease (COPD). Artificial Respiration.	10  5  1	SB  RM  RM, SB, AB	December'23  December'23  December'23	Student's Seminar
I (NEP)	M1P	Study and Identification of Stained Sections of Different Mammalian Tissues and Organs, Preparation of blood smear and identification of blood cells. Determination of blood groups	30	AB, RM	November'23- December'23	
I (NEP)	M1P	Sphygmomanometer measurement of arterial blood pressure at rest. Measurement of oxygen saturation by pulse oximeter before and after exercise. Measurement of peak expiratory flow rate.  Demonstration: Differential count of WBC. Total count of RBC and WBC. Bleeding time and clotting time. Pneumographic recording of effects of talking, drinking, laughing, coughing, exercise, hyperventilation and breath holding. Study of Kymograph and its accessories. ECG. Cardiopulmonary Resuscitation (CPR).  Practical Assessment	25  05  2	AB, RM  SB  AB, RM,	January'24- Febuary'24  January'24- Febuary'24  Febuary'24	Celebration of Cervical Cancer Awareness Month' 2024

				SB		
III	PHYGCOR03T	Nerve & Muscle	20	RM, AB	August'23 - September'23	
III	PHYGCOR03T	Special Senses	15	RM, AB	September'23 - October'23	
III	PHYGCOR03T	Nervous System	25	SB	August'23	
		Theory Assessment	1	RM, SB, AB	October'23	
III	PHYGCOR03P	Measurement of Grip Strength	15	RM	September'23 - October'23	Student's Seminar
III	PHYGCOR03P	Determination of Visual Acuity	15	AB, RM	November'23	
III	PHYGCOR03P	Determination of Colour Vision	15	SB	November'23	
III	PHYGCOR03P	Demonstration on Kymograph	5	AB	November'23	
III	PHYGCOR03P	Neurological experiments	10	SB	November'23 - December'23	
		Practical Assessment	2	RM, AB, SB	January'24	
III	PHYSSEC01M	Skill Enhancement Course (SEC): Hematological Techniques: Preparation of blood smear & identification of blood cells. Preparation of hemin crystal.	15	RM	September'23 - October'23	
		Bleeding time, clotting time. Measurement of Hemoglobin in blood. Blood group determination.	15	AB		
		Internal assessment	2	RM, AB, SB	October'23	
V	PHYGDSE02T	Importance of Regular Exercise in health and Wellbeing	5	RM	August'23	

		Basic concept of Bioenergetics Energy sources during exercise	5	RM	September'23	
		Cardiorespiratory responses during different grades of exercise	5	SB	September'23	
V	PHYGDSE02T	Concept of EPOC	5	RM	October'23	
		Aerobic Work Capacity	5	RM	November'23	
		Physiological Fatigue and recovery	5	AB	August'23	
V	PHYGDSE02T	Principles of Physical Training	15	AB	September'23	
		Training to improve aerobic and anaerobic power				
		Effect of Overtraining and Detraining				
V	PHYGDSE02T	Nutritional Supplements and Ergogenic Aids	15	SB	September'23 - October'23	
		Sports Injury and its Management				
		Basic idea of Sports rehabilitation and				
		Sports Medicine				
		Theory Assessment	1	RM, SB, AB	November'23	
V	PHYGDSE02P	Measurement of blood pressure before and after exercise.	15	AB	November'23 - December'23	
		Recording of recovery Pulse Rate after Standard Exercise				
V	PHYGDSE02P	Determination of VO <sub>2</sub> max by queen college step test.	15	RM	November'23 - December'23	
V	PHYGDSE02P	Measurement of Body Fat Percentage	15	RM	December'23	Celebration of Constipation Awareness Month'23



V	PHYGDSE02P	Determination of Endurance Time by Handgrip Dynamometer	15	SB	November'23-December'23	Science Exhibition
		Practical Assessment	2	RM, SB, AB	February'24	
I, III, V	M1T M1P PHYGCOR03T PHYGCOR03P PHYGDSE02T PHYGDSE02P	WBSU EXAM			January'24 - Apr'24	
II (NEP)	M2T	Carbohydrates, Proteins and lipids, DNAs and RNAs, Mechanism of enzyme action, Michaelis-Menten equation, Hyperbolic kinetics	10	AB	May'24	
		Anatomy of Gastrointestinal tract. Digestion & absorption, Mechanism and Regulation of Gastric HCl secretion and Nutritional Physiology	15	SB	May'24	
II (NEP)	M2T	Anatomy and function of Renal System. Micturition. Renal Circulation, Non-excretory function of kidney.	10	RM	May'24-June'24	
		Respiratory Adjustments in Health & Disease	5	AB	June'24	
		Gastrointestinal hormones, Exocrine Functions. Gastrointestinal Diseases	5	SB	June'24	
II (NEP)	M2T	Chronic kidney disease. Other excretory organs: Skin, Liver, Large intestine, and Lungs. Micturition	10	RM	July'24	
					July'24	
		Enzyme Inhibition. Factors regulating enzyme activities. Isoenzymes,	5	AB	July'24	

		Allosteric enzymes, Ribozymes, Abzymes, Rate limiting enzymes  Theory Assessment	1	RM, AB, SB	July'24	
II (NEP)	M2P	Qualitative tests for the identification of physiologically important substances	15	RM	May'24-June'24	Student's Seminar
II (NEP)	M2P	Study and Identification of Stained Sections of Different Mammalian Tissues and Organs	10	AB	May'24-June'24	
II (NEP)	M2P	Quantitative estimation of amino nitrogen [Sorensen's formol titration method (percentage as well as total quantity)]  Quantitative estimation of glucose and sucrose and lactose by Benedict's method.	10  05	AB  RM	July'24  July'24	
II (NEP)	M2P	Demonstration: Identification of normal and abnormal constituents of urine.  Urine albumin-creatinine ratio (ACR)  Practical Assessment	15  05  2	SB  SB  RM, SB, AB	June'24-July-24   August'25  August'24	World Lung Cancer Awareness Day'24 Celebration (1 <sup>st</sup> August'24)
IV	PHYGCOR04T	Endocrinology: The Thyroid Gland  Endocrine Functions of the Pancreas & the Regulation of Carbohydrate metabolism  The Adrenal Medulla & Adrenal Cortex	15	AB	March'24 - April'24	

IV	PHYGCOR04T	Hormonal Control of Calcium Metabolism & the Physiology of Bone	15	SB	March'24 - April'24	
		The Pituitary Gland  Endocrine Functions of the Kidneys, Heart, & Pineal Gland  Theory Assessment	1	RM, SB, AB	May'24	
IV	PHYGCOR04T	Reproduction	30	RM	March'24 - April'24	Student's Seminar
IV	PHYGCOR04P	Study and Identification of Stained Sections of Different Mammalian Tissues and Organs.	60	AB, RM, SB	March'24 - May'24	
		Practical Assessment	2	RM, AB, SB	August'24	
VI	PHYGDSE03T	Nutritional classification, digestive absorption, metabolism of carbohydrates, proteins, lipids. Sound Pollution as a Community health issue.	10	RM	March'24 - April'24	
		Principles of Human Nutrition-Relationship between Nutrition, Health & Disease.	10	AB	March'24- April'24	
		Recommended dietary Allowances, malnutrition & Chronic Energy, LBW, PEM, Xerophthalmia, IDD, Iron & Iodine deficiency, micronutrient disorders. Food Toxicity, Effect of Processing on Nutritive value of foods. Balanced Diet, Diet Survey Concept of ACU.	10	SB	March'24- April'24	
		Composition & Nutritional Value of Common Indian Foodstuff- Rice, wheat, pulses, egg, meat, fish, milk, Dietary Fibers,	10	AB	April'24 - May'24	

		Calorie Requirement Principles of formulation of balanced diets for growing child, adult man & woman, pregnant and lactating woman				
VI	PHYGDSE03T	Definition, Concept of Noise. Source of Extraordinary Sound. Effects of Sound Pollution on Human Health, Noise Index (Noise Standard).  Socioecology of nutrition. Habitual diets in India & their adequacy. Basic idea about community health and public health issues. Diet Management of Obese, Diabetic, Hypertensive Person and Athlete. Basic Idea on PCM, Marasmus, Kwashiorkor and their prevention.	10  10	RM  AB	April'24 - May'24  April'24 - May'24	Student's Seminar
		Theory Assessment	1	RM, AB, SB	May'24	
VI	PHYGDSE03	Diet Survey	60	SB, RM	March'24 - May'24	
		Practical Assessment	2	SB, RM	July'23	
II, IV, VI	M2T M2P PHYGCOR04T PHYGCOR04P PHYGDSE03T PHYGDSE03P	WBSU EXAM			July'24-September'24	