



MUGBERIA GANGADHAR MAHAVIDYALAYA

P.O.—BHUPATINAGAR, Dist.—PURBA MEDINIPUR, PIN.—721425, WEST BENGAL, INDIA

NAAC Re-Accredited B+Level Govt. aided College

CPE (Under UGC XII Plan) & NCTE Approved Institutions

DBT Star College Scheme Award Recipient

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REPORT ON SYLLABUS DISTRIBUTION

DEPT. OF PHYSIOLOGY

SESSION - 2022-2023

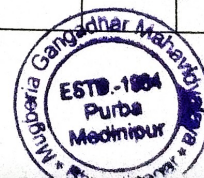


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Principal
Mugberia Gangadhar Mahavidyalaya

Mugberia Gangadhar Mahavidyalaya
Distribution of the syllabus
Under Choice Based Credit System (CBCS)
physiology
Sem-I,

Course	Unit	Name of teacher	Credit & Marks	Class allotted per week	Total class
CC- IT : Cellular Physiology, Biophysical Principles, Biochemistry, Digestive system & Metabolism)	<p>Course Contents:</p> <ul style="list-style-type: none"> • Cellular Physiology and Biophysical Principles <p>Membrane physiology: structure and functions of cell and subcellular membranes, cytoskeletal system, cell junctions and cell adhesion molecules, Physicochemical principles and Physiological importance of : Diffusion, Osmosis, Dialysis, Ultrafiltration, Surface tension, Adsorption, Absorption, pH and buffers, Colloids. Enzymes - classification, coenzymes, factors affecting enzyme action, regulation of enzymes- feedback, covalent and allosteric. Isozymes and non-protein enzymes</p> <ul style="list-style-type: none"> • Biochemistry and Metabolism : <p><i>Carbohydrates</i> : classification , structure and properties <i>Proteins</i> : Classification , order of structure (elementary idea), Amino acids: classification and properties <i>Lipids</i> : classification. Fatty acids – Classification, and properties, lipoprotein – Classification and structure <i>Nucleic acid</i> – structure of DNA and RNA</p>	BISW ADYU TI BERA	06=(4T +2P) (CA=15 +ESE=6 0) TOTAL- 75	03	03×15 =45
CC- IT : Cellular Physiology, Biophysical Principles, Biochemistry,	<p><i>Vitamins</i> – classification and functions. <i>Minerals</i> – functions of Sodium, Potassium, Calcium, Phosphorus, Iron, Zinc, Iodine and Fluoride.</p> <p>Metabolism – Glycolysis, TCA cycle,</p>	SUJA YA MAHA PATR A		02	02×15 =30



Digestive system & Metabolism	<p>Glycogenesis, Glycogenolysis. Gluconeogenesis, Beta oxidation of saturated fatty acid, Ketone bodies – formation and significance. Deamination, Transamination. Amino acid pool, Urea cycle, vitamins in metabolism</p> <p>Digestive System: Alimentary canal and digestive glands – Structure in relation to functions. Composition, functions and regulation of secretion of digestive juices including bile. Digestion and absorption of carbohydrate, protein and lipid. Movements of the stomach and small intestine</p>				
DSC1P(C1P) : C1P : Practical: Fresh tissue experiments	<p>C1P : Practical: Fresh tissue experiments & Identification of permanent slides credits 02</p> <p>1. Fresh tissue experiments:</p> <p>a) Examination & staining of fresh tissue: squamous, ciliated & columnar epithelium, skeletal muscle fibre (Rat/ Goat) by Methylene blue stain.</p> <p>b) Transitional epithelium, mesentery (Rat/ Goat) (counter stain by Methylene blue)</p> <p>c) Staining of adipose tissue by Sudan III or IV</p>	BISW ADYU TI BERA	02		
C1P : Practical: Identification of permanent slides	<p>Identification of permanent slides:</p> <p>1. Bone, cartilage, lung, trachea, spleen, lymph gland, liver, salivary glands, pancreas, esophagus, stomach, small intestine, large intestine, ovary, adrenal, testis, thyroid, spinal cord, cerebellum, cerebral cortex, kidney, skin, tongue.</p>	SUJA YA MAHA PATR A	02	01	

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PHYSIOLOGY
Sem-III



Course	Unit	Name of teacher	Credit & Marks	Class allotted per week	Total class
DSC-1C (CC-3): Nerve –Muscle Physiology, Nervous system, Skin and Body Temperature Regulation	Unit 1: Nerve-muscle Physiology Different types of muscle and their structures. Sarcotubular system. Red and white muscles. Properties of muscle: all or none law, rheobase, chronaxie, indefatigability, beneficial effect, summation, refractory period, tetanus and fatigue. Smooth Muscle: Morphology, Single-unit and multi-unit smooth muscle. Muscle spindle. Cardiac Muscle: Morphology, Electrical Properties, Mechanical Properties Pacemaker Tissue.	S M	06=(4T+2P) (CA=15+ESE=60) TOTAL-75	02	1 5×2 =30
	Unit 2: Nervous System: A brief outline of organization and basic functions of the nervous system - central and peripheral nervous system. Structural organization of the different parts of the brain and spinal cord. Hemi section and complete section of spinal cord. Brown-Sequard syndromes. Receptors : Definition, structure, classification, mode of action. Blocker and Stimulator. Reflexes:	B B		02	15×2=30



	<p>Introduction, Monosynaptic Reflexe, Stretch Reflex, Polysynaptic reflex. Withdrawal Reflex. General Properties of Reflexes. Reflex action - definition, classification, properties , reflex arc.</p> <p>Unit 3: Skin and Body temperature regulation: Histological structure of skin. Colour of the skin. Organization of sweat gland. Composition and function of the sweat. Regulation of sweat secretion. Insensible and sensible perspiration. Composition and function of sebum. Triple response.</p>				
DSC1CP(C3P) : (Practical)	<p>3. Measurement of grip strength.</p> <p>4. Recording of body temperature.</p>	S M		01	15× 1=1 5
	<p>1. Isolation and Staining of nerve fibers with node(s) of Ranvier (AgNO3). Staining of skeletal and cardiac muscles by Methylene Blue stain.</p>	B B		02	15× 2=3 0



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Distribution of the syllabus, 2022-23
Under Choice Based Credit System (CBCS)

PHYSIOLOGY

Sem-V SEC

Course	Unit	Name of teacher	Credit & Marks	Classes allotted per week	Total class
SEC3T: Maternal and Child Nutrition	Unit - I • Nutritional needs during pregnancy, common disorders of pregnancy (Anaemia, HIV infection, Pregnancy induced hypertension), relationship between maternal diet and birth outcome. • Maternal health and nutritional status, maternal mortality and issues relating to maternal health.	B B	02 (10+40) =50	02	15×1 =15
	Unit - II • Nutritional needs of nursing mothers and infants, determinants of birth weight and consequences of low birth weight, Breastfeeding biology, Breastfeeding support and counselling)				
	Unit - III • Infant and young child feeding and care -	S M		01	15×1 =15



	<p>Current feeding practices and nutritional concerns, guidelines for infant and young child feeding, Breast feeding, weaning and complementary feeding.</p> <ul style="list-style-type: none"> • Assessment and management of moderate and severe malnutrition among children, Micronutrient malnutrition among preschool children • Child health and morbidity, neonatal, infant and child mortality, IMR, U5MR and MMR; link between mortality and malnutrition; <p>Unit - IV Overview of maternal and child nutrition policies and programmes.</p>				
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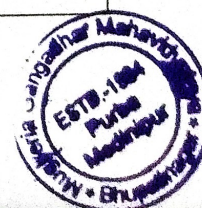
		B B	02	15×2= 30
	<p>Unit 2: B. Cardiovascular system</p> <p>Structure of heart and blood vessels, Junctional tissues of the heart, Cardiac cycle and heart sounds, Cardiac output – factor affecting, Heart rate – regulation, bradycardia, tachycardia, Blood pressure - regulation, hypertension and hypotension, Athrosclerosis, ECG – principle, normal and abnormalities, Artificial pacemaker, Angina pectoris, Cardiac hypertrophy, rheumatoid arthritis, Angiography.</p>			
GE-1P1: Practical	<p>A. TC of WBC, DC of WBC (with Leishman stain), Haemoglobin estimation by haematometer, Haemin crystal. BT, CT & Blood</p>	S M	01	15×1= 15



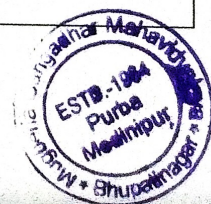
	group.				
	B. Measurement of HR, PFI, Step Test. BP: systolic, diastolic, mean arterial blood pressure, pulse pressure by Riva-Royce mercury manometer	B B		01	15×1=15

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PHYSIOLOGY
Sem-III
PAPER- GE-3

Course	Unit	Name of teacher	Credit & Marks	Class allotted per week	Total class
GE3T: Community and Public Health	Unit 1: Basic idea about community health and public health issues, Malnutrition in a community, overnutrition, issues of obesity; possible	B B	06=(4T+2P) (CA=15 + ESE=60) TOTAL-75	03	15×3=45



	<p>remedial measures. Composition and nutritional value of common Indian foodstuffs, rice, wheat, pulses, egg, meat, fish and milk. Dietary fibers. Calorie requirement. Concept of ACU. Principles of formulation of balanced diets for growing child, adult man and woman, pregnant and lactating woman. Diet management of obese, diabetic, hypertensive person and athlete. Basic idea on PCM, marasmus, kwashiorkor and their prevention. Iron and iodine deficiency.</p>	B B			
	<p>Sound pollution as a community health issue; definition, concept of noise, source of extraordinary sound, effects of sound</p>	S M		02	15×2=30



	pollution on human health, noise index (noise standards).				
GE-1P1: Practical	Qualitative assessment of noise,	S M		01	15×1=15 5
	survey on the status of dietary intake in the surrounding area through visits, etc	B B		01	15×1=15 5



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10.02.24

Principal
Mugberia Gangadhar Mahavidyalaya