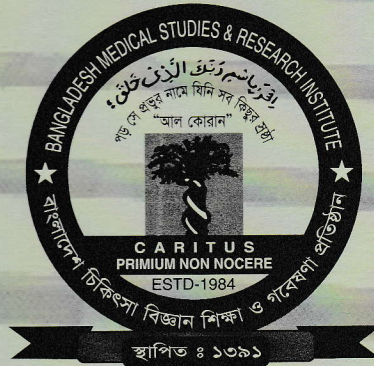


CONTINUOUS ASSESSMENT CARD
FOR UNDER GRADUATE MEDICAL EDUCATION

DEPARTMENT OF PHYSIOLOGY



Uttara Adhunik Medical College
Dhaka, Bangladesh

Photograph

Name of the Student :

Roll No :

U. M. :

Session :

Placement :

From :

To :

Card 1: (Cellular Physiology & Blood)

Sl. No.	Name of item	Full Marks	Marks Obtained	Remarks (Signature & Date)
1	Definition, goal & importance of physiology. Homeostasis : definition, major functional systems, control systems of the body.	10		
2	The Cell : functions of cell membrane & cell organelles.	10		
3	The cell membrane transport : active & passive transport, exocytosis & endocytosis. Intercellular communications.	10		
4	Membrane potential : definition and basic physics of membrane potential. Resting membrane potential Nerve Action potential & propagation of action potential.	10		
5	Neuromuscular junction, muscle contraction & transmission of impulse from nerve ending to the muscle fibre.	10		
6	Composition & functions of blood, Plasma proteins : Origin, normal values, properties & functions.	10		
7	RBC : normal count, morphology, functions, erythropoiesis, fate of RBC. Hemoglobin : synthesis, types, functions. Red blood cell indices. Anaemia : definition & classification. Polycythemia : definition & type. Jaundice : definition & classification.	10		
8	WBC : classification with normal count, morphology, development, properties & functions. leucocytosis, leucopenia.	10		
9	Platelets : normal count, morphology, functions & development. Hemostasis : definition & events. Coagulation : definition, blood clotting factors. Mechanism of coagulation & fibrinolysis. Anticoagulant : name, mode of action. Bleeding disorder : thrombocytopenic purpura & hemophilia. Tests for bleeding disorder : bleeding time, coagulation time and prothrombin time.	10		
10	Blood grouping : ABO & Rh system, hazards of blood transfusion & Rh incompatibility.	10		

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Card 2: (Cardiovascular Physiology)

Sl. No.	Name of item	Full Marks	Marks Obtained	Remarks (Signature & Date)
1	Properties of cardiac muscle. Junctional tissues of the heart. Generation of cardiac impulse & its conduction in the heart.	10		
2	Cardiac cycle : definition, events, pressure & volume changes during different phases of cardiac cycle. Heart sounds : type, characteristics and their significances. ECG : definition, principles and interpretations.	10		
3	Functional classification of blood vessels, interrelationship among pressure, flow & resistance. Local & humoral control of blood flow in the tissues. Exchange of fluid through the capillary membrane.	10		
4	SV, EDV, ESV : definition & factors affecting them. Cardiac output : definition, measurement, regulation and factors affecting cardiac output. Venous return : definition & factors affecting. Heart rate : factors affecting & regulation. Pulse : definition, characteristics.	10		
5	Peripheral resistance : definition & factors affecting. Blood pressure : definition, types, measurement & regulation of arterial blood pressure.	10		
6	Circulatory adjustment during muscular exercise Cardiac arrhythmias : tachycardia, bradycardia. Heart block : definition and types. Shock : definition, classification. Physiological basis of compensatory mechanism of circulatory shock.	10		

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Card 3: (Respiratory Physiology)

Sl. No.	Name of item	Full Marks	Marks Obtained	Remarks (Signature & Date)
1	Respiration : definition, mechanism. Pulmonary & Alveolar ventilation. Pulmonary volumes and capacities (spirometry). Dead space : physiological & anatomical. Lung function tests : name & significance.	10		
2	Composition of atmospheric, alveolar, inspired and expired air. Respiratory unit and respiratory membrane. Diffusion of Gases through the respiratory membrane. Peculiarities of pulmonary circulation. Ventilation-perfusion ratio.	10		
3	Transport of Oxygen & Carbon dioxide in blood. Oxy-hemoglobin dissociation curve. Bohr effect, Haldane effect & Chloride shift.	10		
4	Respiratory centers : Name, location & functions. Nervous & chemical regulation of respiration. Regulation of respiration during exercise.	10		
5	Hypoxia : Definition, types. Cyanosis : Definition & types. Definition of dyspnea, hypercapnea & periodic breathing.	10		

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Card 4 : (Gastrointestinal Physiology & Renal physiology)

Sl. No.	Name of item	Full Marks	Marks Obtained	Remarks (Signature & Date)
1	Physiological anatomy of gastrointestinal (GI) tract. Enteric nervous system. Local hormones of GIT : name, functions & regulation of secretion Neural and hormonal control of GI function.	10		
2	Movements of the GIT. GI reflexes.	10		
3	Kidney : functions of kidneys. Renal circulation : peculiarities with functional importance.	10		
4	Urine formation Glomerular filtration, determinants of GFR, Autoregulation of renal blood flow and GFR.	10		
5	Reabsorption and secretion by the renal tubules Definition of T_m , Renal threshold, tubular load & plasma load and diuresis.	10		
6	Mechanism of formation of concentrated & dilute urine.	10		
7	Micturition reflex Abnormalities of micturition.	10		

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Card 5 : (Endocrine Physiology)

Sl. No.	Name of item	Full Marks	Marks Obtained	Remarks (Signature & Date)
1	Endocrine glands : name Hormones : definition, classification, mechanism of action, regulation of secretion.	10		
2	Hypothalamic hormones. Pituitary hormones (anterior & posterior) : name, functions and their control by the hypothalamus and disorders (Dwarfism, gigantism, acromegaly & hypopituitarism and diabetes insipidus).	10		
3	Thyroid hormones : biosynthesis, transport, functions, regulation of secretion, disorders (Hypothyroidism hyperthyroidism, Cretinism, Myxoedema and goitre).	10		
4	Parathyroid hormone : functions, mechanism of action & regulation of secretion.	10		
5	Adrenocortical hormones : name, functions , mechanism of action, regulation of secretion & disorders (Addison's disease, Cushing's Syndrome, Conn's disease).	10		
6	Hormones of Islets of Langerhan's of pancreas : functions, mechanism of action, regulation of secretion & disorders.	10		

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Card 6: (Physiology of Reproduction)

Sl. No.	Name of item	Full Marks	Marks Obtained	Remarks (Signature & Date)
1	Introduction to reproductive physiology, sex determination & sex differentiation, Puberty Functional anatomy of male reproductive system. Secondary sex characteristics of male. Gonad : functional structure and functions of testes. Testosterone : functions. Spermatogenesis : steps & hormonal control.	10		
2	Functional anatomy of female reproductive system. Secondary sex characteristics of female. Gonad : functional structure and functions of ovaries, Functional structure of uterus. Menstrual cycle : definition, hormonal control, Ovarian and endometrial cycle with their hormonal regulation. Ovulation : definition, mechanism & hormonal control. Indicators of ovulation. Definition of menstruation, menarche & menopause. Ovarian hormones. Oestrogen and progesterone : functions.	10		
3	Physiology of pregnancy & Lactation : Pregnancy : physiological changes during pregnancy. Placental hormones : name & functions. Mammogenesis : hormonal influence for mammogenesis & lactation. Physiology of contraception.	10		

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Card 7: (Neurophysiology & special senses)

Sl. No.	Name of item	Full Marks	Marks Obtained	Remarks (Signature & Date)
1	<p>Functional organization and functions of major levels of central nervous system (CNS).</p> <p>Neuron : definition, parts, types</p> <p>Nerve fiber : classification, properties, effects of injury to the nerve fiber.</p> <p>Synapse : physiological anatomy, type, properties & synaptic transmission</p> <p>Neurotransmitters : definition, types & functions</p>	10		
2	<p>Sensory systems of the body :</p> <p>Sensory receptor : definition, classification, properties, receptor/generator potential.</p> <p>Cerebral cortex : Name and functions of the Brodmann's areas.</p> <p>General/somatic senses : definition and classification.</p> <p>Ascending tracts/ sensory pathways- name. (Tract of Gall & Burdach, spinothalamic tract, spinocerebellar tract) : origin, course, termination, functions, and effect of lesions.</p>	10		
3	<p>Reflex : definition, classification, properties.</p> <p>Reflex arc : definition, component stretch reflex, knee jerk, planter response and Withdrawal reflex- with reciprocal innervations & crossed extensor-pathway/ Muscle spindle,</p> <p>Golgi tendon organ : definition, physiological anatomy and functions.</p> <p>Muscle tone : definition, function and maintenance.</p>	10		
4	<p>Descending tracts/ motor pathways- name.</p> <p>Pyramidal tract : origin, course, termination, function, effect of lesion.</p> <p>Extrapyramidal tract : name, functions.</p> <p>Upper motor neuron and lower motor neuron : definition, effect of lesion.</p> <p>Spinal cord : effect of hemisection.</p>	10		
5	<p>Cerebellum : functional division, neuronal circuit, functions, error control mechanism of motor activity & cerebellar disorder.</p>	10		
6	<p>Basal ganglia : functional components, functions & effects of lesions.</p> <p>Thalamus, Reticular formation, Limbic system : functional components and functions.</p> <p>CSF: circulation & functions.</p> <p>Blood brain barrier : function.</p>	10		

Card 7: (Neurophysiology & special senses)

Sl. No.	Name of item	Full Marks	Marks Obtained	Remarks (Signature & Date)
7	Hypothalamus : name of the nucleus, functions Body Temperature Normal body temperature, site of measurement, sources of heat gain, channels of heat loss, regulation of body temperature in hot and cold environment.	10		
8	Autonomic Nervous system : physiological anatomy of sympathetic and parasympathetic system, functions. Alarm or stress response.	10		
9	Vision : physiological anatomy of eye, image formation in the eyes, visual receptors, visual pathway, common refractive errors, accommodation reaction, light reflex, dark and light adaptation. Field of vision, color vision, visual acuity.	10		
10	Hearing : auditory apparatus, receptor, Mechanism of hearing, mechanism of sound transmission and auditory pathway.	10		
11	Smell : receptor and pathway, Taste : receptors, modalities of taste sensation and pathway.	10		

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Card 8 : Physiology Practical

(I hear and I forget, I see and I remember, I do and I understand)

Sl. No.	Name of item	Full Marks	Marks Obtained	Remarks (Signature & Date)
1	Laboratory equipment, laboratory animals, blood sample, collection (venous & capillary) of blood.	10		
2	Preparation & staining of blood film & differential count of WBC with interpretation and analysis of result.	10		
3	Determination of total count of WBC with interpretation and analysis of result.	10		
4	Determination of total count of RBC with interpretation and analysis of result.	10		
5	Estimation of haemoglobin with interpretation and analysis of result.	10		
6	Determination of packed cell volume (PCV), Calculation of MCV, MCH & MCHC with interpretation and analysis of result.	10		
7	Estimation of ESR by Westergren method with interpretation and analysis of result.	10		
8	Determination of bleeding time, clotting time with interpretation and analysis of result.	10		
9	Study of morphology and osmotic behavior of RBC with interpretation and analysis of result.	10		
10	Determination of ABO & Rh blood groups with interpretation and analysis of result.	10		
11	Auscultation of 1st & 2nd heart sounds.	10		
12	Clinical examination of radial pulse.	10		
13	Measurement of normal blood pressure & effects of exercise on blood pressure	10		
14	Recording & analysis of 12 leads normal ECG	10		
15	Auscultation of breath sounds	10		

Card 8 : Physiology Practical

(I hear and I forget, I see and I remember, I do and I understand)

Sl. No.	Name of item	Full Marks	Marks Obtained	Remarks (Signature & Date)
16	Spirometric measurement of lung function test. Determination of FVC, FEV ₁ , FEV ₁ /FVC %, PEF, MVV with analysis of result.	10		
17	Study on the tracing of respiratory movements & effects of breath holding, hyperventilation, speech, deglutition (physiological apnoea).	10		
18	Auscultation of intestinal sound.	10		
19	Elicitation of knee jerk, planter response.	10		
20	Recording of oral & axillary temperature & effects of exercise on it.	10		
21	Mapping of visual field by perimeter.	10		
22	Observation of light reflexes and analysis of result.	10		
23	Determination of color vision.	10		
24	Determination of visual acuity by Snellen's chart.	10		
25	Determination of hearing tests: Rinne and Weber test with interpretation and analysis of result.	10		
26	Determination of specific gravity of urine.	10		
27	Demonstration of uses of computer and other IT materials (One observer station should remain in 1st professional MBBS examination in the physiology discipline).	10		

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