



# **RASHIDA IQBAL FINANCIAL AID** **ORGANIZATION**

## **GUIDELINES OF PHYSIOLOGY – 2<sup>ND</sup> YR**

**BY AHMAD HASSAN BHAI**

IMPORTANT QUESTIONS AND TOPICS FOR MBBS 1ST  
PROFESSIONAL PART-II (PHYSIOLOGY)

### **RENAL PHYSIOLOGY :-**

PREPARE THIS FROM MINI AND THE TOPICS LISTED BELOW FROM  
MAJOR:

- Pg 300: fluid in potential spaces of the body.
- Pg 308: transport of urine from kidney into bladder
- Pg 309-310: micturition reflex + yellow box
- Pg 347: obligatory urine volume
- Pg 383: phosphate buffer system + protein buffer system
- Pg 392: clinical causes of acid-base disorders
- Pg 405: table 31-6
- Pg 408: specific tubular disorders

## SOME IMP QUESTIONS :

- INDICATOR DILUTION METHODS WITH EXAMPLES .
- CAUSES OF INTRA AND EXTRACELLULAR EDEMA .
- FUNCTIONS OF KIDNEY .
- GFR (DEFINITION AND FACTORS EFFECTING IT) .
- MICTURITION REFLEX .
- GLOMEROTUBULAR AND TUBULO GLOMERULAR FEEDBACK .
- ALL THE DIURETICS WITH EXAMPLES .
- GENRAL CONCEPT OF URINE FORMATION .
- MEASURING GFR .
- WHY INULIN USED .
- HOW CORTICO-PAPILLARY OSMOTIC GRADIENT IS PRODUCED AND MAINTAINED .
- DIFFERENCES B/W COUNTER CURRENT MULTIPLIER AND COUNTER CURRENT EXCHANGER .
- DIFFERENCES B/W DIABETES INSPIDUS AND MELLITUS
- TYPES OF DIABETES INSPIDUS .
- EFFECT OF ACIDOSIS AND ALKALOSIS ON Ca AND K EXCRETION
- CAUSES OF METABOLIC ACIDOSIS, ALKALOSIS AND RESP ACIDOSIS AND ALKALOSIS ( THERE IS A TABLE IN SATYA OF BIOCHEM ).
- RENAL BUFFERING OF ACIDOSIS AND ALKALOSIS .
- TABLE 30-1 MINI
- FILTRATION FRACTION .
- CAUSES OF RENAL FAILURE .
- END STAGE RENAL DISEASE .
- EFFECTS OF RENAL DISEASE .
- DIFFERENCE B/W UREMIA AND AZOTEMIA .
- ATONIC BLADDER

## GASTRO INTESTINAL TRACT :-

MAJOR GUYTON ( NO NEED TO DO THE CHAP REGARDING ABSORPTION)

- DIFFERENCES B/W SLOW WAVES AND SPIKE POTENTIALS .
- WHY SLOW WAVES DONT CAUSE CONTRACTION .
- MIGRATORY MOTOR COMPLEX .
- MECHANISM OF PERISTALSIS .
- LAW OF GUT .
- CHEWING .
- 2ND STAGE OF SWALLOWING .
- STOMACH EMPTYING \*\* .
- SEGMENTATION CONTRACTIONS .
- HAUSTRATIONS .
- DEFECATION REFLEX .
- DIFFERENT PHASES OF GASTRIC ACID SECRETION .
- TABLE 64-1 GUYTON .
- FUNCTIONS OF MUCUS .
- FUNCTIONS OF SALIVA .
- REGULATION OF ALL SECRETIONS .
- ENTEROGASTIC AND REVERSE ENTEROGASTRIC REFLEX .
- PANCREATITIS (COMPLETE MECHANISM) .
- MECHANISM OF SECRETION OF GASTIC JUICE ( GASTRIN-HISTAMINE MEDIATED) .
- DIFFERENCES B/W LIVER AND GALL BLADDER BILE .
- DIARRHOEA (TYPES) .
- ACHLASIA .
- GASTRITIS AND RESULTING PERNICIOUS ANEMIA .
- PEPTIC ULCERS CAUSES AND TREATMENT .
- TYPES OF SPRUE .
- HISCHPRUNG DISEASE .
- VOMITING ( NEURAL PATHWAY) .
- MOTION SICKNESS .
- CAUSES OF FLATUS

## ENDOCRINOLOGY:-

IT IS REALLY IMPORTANT ... NO GUESS WORK HERE .... YOU HAVE TO PREPARE EVERYTHING .... ALL THE ABNORMALITIES ... ANY OF THESE CAN COME IN A SCENARIO BASED QUESTIONS BUT THE MOST REPEATED HAVE BEEN WRITTEN HERE .

- THYROTOXICOSIS .
- DIABETES MELLITUS .
- CUSHING'S DISEASE AND SYNDROME .
- CRETINISM .
- ALBINISM .
- GIGANTISM AND ACRMEGALY .
- TETANY .
- CONN'S SYNDROME

SOME DISEASES CAN BE ASKED IN THE FOLLOWING FORM :

- DIFFERENTIATE B/W HYPO N HYPER THYROIDISM .
- DIABETES TYPE 1 AND 2 .
- TYPES OF DWARFISM .
- CRETINISM AND HYPOTHYROIDISM .
- DIABETES INSPIDUS AND MELLITUS

SOME OTHER IMP QUESTIONS INCLUDE :- .

- HYPOTHALAMO HYPOPHYSEAL AXIS .
- EFFECT OF CORTISOL ON HEMATOCRIT .
- SOMATOMEDINS .
- THYROID HORMONE FORMATION AND RELEASE .
- INSULIN RELEASE .
- ANTI THYROID SUBSTANCES .
- GOITER TYPES .
- ADH ACTION MECHANISM .
- CALCIUM REGULATION ( PTH, CALCITONIN AND VIT D ) ( DIAGRAM IN JAYPEE WOULD BE ENOUGH FOR THIS CHAP )

## EYE :-

PREPARE FROM DR INAM'S NOTES .

- OPTICAL AND VISUAL AXIS .
- PHYSIOLOGICAL SCOTOMA (BLIND SPOT ) .
- PATHOLOGICAL SCOTOMA .
- PATHWAY OF LACRIMATION .
- FUNCTIONS OF TEARS AND THEIR COMPOSITION .
- AQUEOUS HUMOR ..
- GLAUCOMA AND ITS TYPES .
- TREATMENT OF GLAUCOMA .
- CATARACTS .
- ARGYL ROBERTSON PUPIL \*\* .
- ACCOMODATION REFLEX ( ALL THE 3 COMPONENTS SHOULD BE LISTED ALONG WITH AFFERENTS AND EFFERENTS) .
- PRESBYOPIA .
- MYOPIA AND ITS CORRECTION .
- VISUAL ACQUITY .
- LAYERS OF RETINA .
- FOVEA CENTRALIS .
- VISUAL CYCLE .
- NIGHT BLINDNESS \*\* .
- DIFFERENCES B/W RODS N CONES .
- PHOTORECEPTION .
- DARK CURRENT .
- LATERAL INHIBITION .
- LIGHT AND DARK ADAPTATION .
- LESIONS IN VISUAL PATHWAYS .
- EXTRAOCULAR MOVEMENTS

## EAR :-

PREFERABLY FROM DR INAM'S NOTES.. IF NOT, DO STUDY JAYPEE !

- AIR AND BONE CONDUCTION RELATION .
- DEAFNESS TYPES .
- REASONS FOR CONDUCTIVE AND PERCEPTIVE DEAFNESS AND TREATMENT .
- ACUTE SUPPURATIVE OTITIS MEDIA (ASOM) AND CHRONIC SUPPURATIVE OTITIS MEDIA (CSOM) .
- IMPEDANCE MATCHING .
- OTOSCLEROSIS .
- ATTENUATION REFLEX .
- ENDOCOCHLEAR POTENTIAL .
- STIMULATION OF AUDITORY HAIR CELLS .
- VOLLEY'S PRINCIPLE .
- TONOTOPIC ARRANGEMENT OF HAIR CELLS .
- PRESBYCUSIS .
- NOTE ON SEMICIRCULAR CANALS .
- STIMULATION OF CRISTA AMPULLARIS .
- STIMULATION OF OTOLITH ORGANS
- .MENIERE'S DISEASE,
- VERTIGO ,
- MOTION SICKNESS AND NYSTAGMUS .
- VESTIBULAR FUNCTION TESTS (FOR VIVA)

## MOTOR PHYSIOLOGY:-

- NOTE ON AUTONOMIC RECEPTORS .
- SYMPATHETIC NERVOUS SYSTEM EFFECTS .
- PARASYMPATHETIC NS EFFECTS .
- AUTONOMIC REGULATION OF SWEAT GLANDS .
- DIFFERENCES B/W AUTONOMIC AND SOMATIC NERVOUS SYSTEM .
- BABINSKI SIGN (WHEN PRESENT BOTH PHYSIOLOGICAL AND PATHOLOGICAL CONDITIONS) .

- CLONUS .
- PROPERTIES OF REFLEX ACTION .
- STRUCTURE OF MUSCLE SPINDLE .
- MYOTATIC REFLEX ----> PATHWAY , TYPES (STATIC N DYNAMIC) ,IMPORTANCE .
- LENGTHENING REACTION (INVERSE MYOTATIC REFLEX) ----> PATHWAY , IMPORTANCE
- WHAT ARE GOLGI BOTTLE NEURONS .
- MOTOR APRAXIA .
- NAMES AND FUNCTIONS OF DESCENDING PATHWAYS .
- RETICULAR FORMATION ( MEDIAL AND LATERAL ) IN FULL DETAIL !!
- TYPES OF PARALYSIS .
- DECEREBRATE RIGIDITY .
- DECORTICATE RIGIDITY .
- BROWN-SEQUARD SYNDROME \*\*\*\*\* .
- POLIOMYELITIS,
- TABES DORSALIS AND SYRINGOMYELIA .
- RHOMBERG'S SIGN .
- FUNCTIONS OF CEREBELLUM (OVER ALL AND OF THE 3 PARTS SEPERATELY ) .
- DIFFERENCES B/W MOSSY AND CLIMBING FIBRES .
- CEREBELLAR LESION CLINICAL MANIFESTATIONS .
- PARKINSONISM (MANIFESTATIONS AND TREATMENT) (CAUSES) .
- DIFFERENCES B/W PARKINSONISM AND CEREBELLAR DISEASE .
- DIFFERENCE B/W FESTINANT, DRUNKEN (STAGGERING) AND SPASTIC GAIT .
- TYPES OF CHOREA .
- TYPES OF SLEEP AND DIFFERENCES B/W REM AND NON REM SLEEP
- SLEEP DISORDERS .
- EPILEPSY TYPES .
- DIFFERENCES B/W UPPER MOTOR NEURON LESION (UMNL) AND LOWER MOTOR NEURON LESION (LMNL)

## SENSORY PHYSIOLOGY :-

MINI GUYTON WOULD BE ENOUGH .

- TYPES OF SYNAPSES .
- EPSP AND IPSP .
- PHYSIOLOGICAL ANATOMY OF SYNAPSE .
- SYNAPTIC DELAY
- PROPERTIES OF SYNAPSE .
- RECEPTORS CLASSIFICATION (COMPLETE) .
- ADAPTATION OF RECEPTORS\*\* .
- DORSAL COLUMN MEDIAL LEMNISCAL SYSTEM (DCML-SYSTEM) COMPLETE .
- ANTEROLATERAL SYSTEM .
- DIFFERENCES B/W DCML SYSTEM AND ANTEROLATERAL SYSTEM .
- APHASIA TYPES .
- ASTEREOGONOSIS .
- PHANTOM LIMB .
- SYNTHETIC SENSATIONS .
- AMORPHOSYNTHESIS .
- CORTICAL PLASTICITY .
- BROWN SEQUARD SYNDROME ( HEMISECTION OF SPINAL CORD) .
- DIFFERENCES B/W SLOW N FAST PAIN .ANALGESIA SYSTEM

## REPRODUCTION :- .

- CRYPTORCHIDISM .
- BLOOD TESTIS BARRIER ( IN DETAIL ) (PREFERABLY FOM GANONG) .
- FACTORS EFFECTING SPERMATOGENESIS .
- FUNCTIONS OF SERTOLI CELLS .
- ACROSOMAL REACTION .
- SECONDARY SEXUAL CHARACTERISTICS IN MALE UNDER THE EFFECT OF TESTOSTERONE .
- OVARIAN CYCLE ( 3 PHASES IN DETAIL ) .
- UTERINE CYCLE ( ALL STAGES IN DETAIL ) .



- DIFFERENCES IN ACTIONS OF ESTROGEN AND PROGESTERONE ON ;  
1)UTERUS 2)MAMMARY GLANDS 3)FALLOPIAN TUBES .
- OVULATION ( FLOW CHART IN GUYTON) .
- FERTILIZATION .
- PLACENTA FUNCTIONS .
- HCG AND PREGNANCY TEST .
- 3 STAGES OF LABOR .
- LACTATION .
- MILK LET DOWN .
- ADVANTAGES OF BREAST FEEDING TO BABY AND THE MOTHER ...  
AND METABOLIC STRESS ON THE MOTHER
- SIGNS AND SYMPTOMS OF MENOPAUSE
- TREATMENT OF MENOPAUSE
- WHAT IS MENARCHE

JAZZAKALLAH UL KHAIR FOR ALL YOUR SUPPORT AND TRUST. DONATE GENEROUSLY ... HELP THE ONES WHO NEED IT THE MOST. WE WILL BE HAPPY TO SERVE YOU ALL IN FUTURE.

DO REMEMBER EVERYONE IN YOUR PRAYERS

**RIFAQ**  
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