



RASHIDA IQBAL FINANCIAL AID **ORGANIZATION**

2ND YEAR PHYSIOLOGY TERM GUIDELINES

CNS motor system; sir inam notes are more than enough plus guyton for some topics(chap 55-60 and 62)

Imp questions

- Differentiate UMNL from LMNL
- Babinski's sign (vv.imp)
- Hypotonia, hypertonia, hemiplegia, hemiparesis
- Myotatic reflex and inverse myotatic reflex
- Imp of lengthening reaction
- Cerebral cortical areas and its functions
- One should know the diff broadmann areas; sir inam often used to ask this
- Functional and anatomical classification of motor tracts and the functions carried by them
- Name extrapyramidal tracts
- Decerebrate rigidity
- Decorticate rigidity
- Poliomyelitis, syringomyelia, tabes dorsalis causes
- Brown sequard syndrome
- Functions of cerebellum and basal ganglion and a few examples (anatomy doesn't need to be prepared)
- Type of tremors, rebound phenomenon, dysdiadochokinesia
- Parkinsonism and cerebellar defects on a whole are very imp (type of tremors and gait in each case)
- CSF must be read once
- Functions of association areas
- Broca's aphasia and wernicke's aphasia, global aphasia
- Mechanism of consolidation

- Types of amnesia
- Epilepsy and brain waves are imp
- Sleep, its neurotransmitters and REM and NON REM Sleep

* Note: CNS Motor system is very imp and more than half of the proff viva is from motor system so prepare it well

Renal

- Causes of acute and chronic renal failure? (Jaypee)
- Diuretics are often asked in mcqs. (Jaypee)

Hearing physiology;

1. Guyton chap no. 53(either do it from here or sir inam's notes)
2. Guyton chap no 56 from page 714 till end(vestibular apparatus)

Imp questions:

- Impedance matching
- Attenuation reflex
- Mechanism of sound transmission
- Endocochlear potential; stria vascularis
- Causes of conductive deafness
- place principle and volley principle
- Auditory nervous pathways

Endocrinology

->From guyton

Chap 1 from notes, Radioimmunoassay and ELISA

Chap 3 from guyton

- iodine trapping
- mechanism of action of thyroxin and triiodothyronine
- functions of thyroid hormone
- affects of TSH
- Graves disease and myxedema(v imp)
- exophthalmus
- diagnostic tests for hyperthyroidism
- causes of hypothyroidism
- differences between dwarfism and cretinism

Regards

Maria sattar (batch 43)

c) Male genital tract

A bomb blast occurs in the vicinity of a house. A lady present in the house feels that hearing gets slightly impaired temporarily. Later on, clinical examination reveals that auditory system is functionally intact.

- Name the reflex which protects auditory apparatus from loud sounds.
- Mention the physiological significance of this reflex.
- Enlist causes of conductive deafness in the middle ear.

b) How does neospinothalamic tract differ from the paleospinothalamic tract?

A 50-year-old man presents to the physician with difficulty in initiating movement and maintaining balance. Examination reveals rigidity of limbs and resting tremors.

- Name the disease with which man is suffering from along with the site of lesion.
- How speech and gait will be altered in this patient?

Outline the role of:

- Thyroxine on cardiovascular system

- Enlist various sensations carried by dorsal column.
 - How does neospinothalamic tract differ from the paleospinothalamic tract?

A 50-year-old man presents to the physician with difficulty in initiating movement and maintaining balance. Examination reveals rigidity of limbs and resting tremors.

- Name the disease with which man is suffering from along with the site of lesion.
- How speech and gait will be altered in this patient?

5 Outline the role of:

- Thyroxine on cardiovascular system
- Calcitonin in bone physiology

6 A 45-year-old woman with Rheumatoid Arthritis with

Department of Physiology
Second Year MBBS Class Test (SEOs)

Time allowed : 60 Min

Date 21-04-2011

Mark

Attempt all questions.

Q.1 Briefly discuss the role of:

- a) Phase locking mechanism in sound frequency analysis
- b) Crista ampullaris in equilibrium

Q.2 A 60 years old man had to undergo gastrectomy for the treatment of carcinoma of stomach. What are the possible problems he is likely to suffer after removal of stomach?

- a) What are the various steps involved in the synthesis of thyroxine?
- b) How will you differentiate cretinism from dwarfism?

Q.3 How cortisol affects?

Attempt **all** questions. All questions carry equal marks.

Name the hormones secreted from the THYROID. Explain the mechanism of action of STEROID HORMONES.

How will you differentiate a DWARF from a CRETIN?

Explain the FLEXOR or WITHDRAWAL REFLEX with the diagram.

Enumerate functions of the SPINOCEREBELLUM. Give features of the CEREBELLAR DISEASE.

What is the motor and sensory loss at and below Hemisection of the SPINAL CORD?

Explain the Phases of the ENDOMETRIAL CYCLE.

Draw the RHODOPSIN VISUAL CYCLE. What is the effect of VITAMIN A DEFICIENCY?

- i) Name the micturition abnormality he is likely to have.
- ii) What are the features of this abnormality?
- b) What is Micturition Reflex?

3. A 55 year old man develops tremor in his hands which increase when he tries to do any voluntary action. He also has difficulty in maintaining balance. On examination, there is decreased muscle tone.

- a) Which part of the Brain is affected?
- b) Enlist FOUR other clinical abnormalities due to lesion of this part of the Brain.
- c) Enumerate the functions of this part of the Brain.

4. a) Name the Motor and Sensory speech areas in the Cerebral Cortex. Give their functions.

- b) What are the effects produced by the lesion of the speech areas.

5. a) A 5 year old obese boy is brought to the physician. He has stunted