[LM 164] MAY 2018 **Sub. Code: 2059**

M.D. DEGREE EXAMINATION
BRANCH XVI – GERIATRICS
PAPER I – APPLIED BASIC SCIENCES IN GERIATRIC MEDICINE
Q.P. Code :202059

Time: Three Hours **Maximum : 100 Marks**

Write Notes on :

I. ANATOMY: **(4 x 5 = 20)**

1. Mr. Alagappan has a foot drop. What is the nerve involved, and what is it a branch of and what muscles does it supply? What could be a cause for the foot drop? How would you evaluate and treat him?
2. Describe the normal histology of the liver, with an appropriate diagram.
3. Trace the optic pathway with a diagram. What are the deficits one would expect if the nerve is affected anywhere along its course?
4. What is the corticospinal tract? What is its function and describe its course in detail with the help of a diagram? What are the deficits one would expect if this tract was injured at its various levels?

II. PHYSIOLOGY: **(4 x 5 = 20)**

1. What are the phases of a normal swallow? How will you assess swallow in a patient suspected to have a swallowing difficulty?
2. Describe the neuro muscular junction with an appropriate diagram. What are the neurotransmitters seen at the junction? What would you expect to find at the junction in a patient with Myesthenia gravis?
3. Describe the renin angiotensin system and its relevance in blood pressure control.
4. Enzymes involved in digestion.

III. BIO-CHEMISTRY: **(3 x 5 = 15)**

1. Cystatin C – what is its clinical significance, and what is its sensitivity and specificity?
2. What are the liver function tests? What functions of the liver do they assess individually?
3. How will you ideally evaluate a patient with hypercalcemia? What is the treatment you would initiate?

IV. PHARMACOLOGY: **(3 x 5 = 15)**

1. Write a note on Acetylcholine Esterase (ACE) inhibitors – its mechanism of action, indications and its usefulness.
2. How does one evaluate newer drug therapies?
3. What are the safety profiles of anti convulsants in the elderly? Enumerate all the classes of drugs one would use in an elderly patient with seizure disorder? What would your drug of choice be?

V. MICROBIOLOGY: **(3 x 5 = 15)**

1. Hepatitis B – Investigation treatment and prevention.
2. Innate immunity – components, activation and how does it protect us?
3. How would you test for HIV1 in a blood sample – enumerate the methods and their sensitivity and specificity, and interpretation? What is the gold standard?

VI. PATHOLOGY: **(3 x 5 = 15)**

1. Enumerate the various tumour markers and the tumours they are associated with.
2. Describe the pathological changes seen in the red and white blood cells of a patient suffering from Myelodysplastic Syndrome.
3. Describe (with appropriate diagrams) how a normal liver progresses onto be labelled as a cirrhotic liver on a biopsy?

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