

[LI 164]

APRIL 2016

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. Describe the innervation of the bladder with a neatly labelled diagram.
2. Describe the Coronary circulation with suitable illustration. What are the ECG changes one would expect if the right coronary artery is occluded?
3. Draw the dermatomes in the body – anterior and posterior views, and label them.
4. Where and how does the trachea bifurcate? Name the bronchopulmonary segments and what segments would be involved in aspiration when the patient is supine and erect, and why?

II. PHYSIOLOGY: (4 x 5 = 20)

1. What are the substances which are absorbed and secreted at the renal tubular level? Explain with a diagram.
2. Cholesterol metabolism.
3. Lung function tests.
4. What is Frank Starling's law? In what way does this law explain cardiac failure?

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

1. What are the essential fatty acids? Enumerate the different types, their uses, requirements per day, and what would their deficiencies result in?
2. How is Vitamin D produced? What are its different forms? Name the uses of Vitamin D.
3. What are antioxidants and what is their role in the human body?

IV. PHARMACOLOGY: (3 x 5 = 15)

1. What are the atypical antipsychotics? What are their side effects and their safety profile in the elderly?
2. Write a note on bioavailability of drugs.
3. What are the oral hypoglycaemic drugs that are safe to use in renal failure? Enumerate them and write notes on their mechanism of action, metabolism and excretion.

V. MICROBIOLOGY: (3 x 5 = 15)

1. Clostridium difficile infection in the elderly – presentation, treatment and prognosis.
2. Infection control practices in hospitals.
3. ELISA test – principle, uses and interpretation.

VI. PATHOLOGY: (3 x 5 = 15)

1. What are the causes of hypochromic microcytic anemia? How would you investigate this entity in a 65 year old patient who has come to you with lethargy?
2. Describe the pathological changes – gross and micro – one would expect to see on the autopsy of a patient with Alzheimer's dementia.
3. What is the pathophysiology of frailty?
