



- KEEPING MOBILE PHONE/ANY ELECTRONIC GADGETS, EVEN IN 'OFF' POSITION IS TREATED AS EXAM MALPRACTICE
- DON'T WRITE ANYTHING ON THE QUESTION PAPER

Answer ALL Questions

(10 X 10 = 100 Marks)

1. Following a high energy trauma, a patient is rushed into the Emergency ward with a femoral shaft fracture. Discuss the structure of the femur and how the bone would remodel following intra medullary nailing surgery to fix the midsection (diaphysis) of the bone.
 2. Atrial fibrillation is a specific condition that significantly affects the cardiac cycle. In this arrhythmia, the normal, coordinated contraction of the atria is replaced by rapid, disorganized electrical impulses. Describe the anatomy of the heart and the cardiac cycle and briefly discuss how the atrial fibrillation would affect the cardiac cycle.
 3. Explain the mechanism of gas exchange in the alveoli and discuss how pathological changes to the alveoli sac can impair oxygen and carbon dioxide transport.
 4. After experiencing a stroke, a patient exhibits deficits in motor function and language on his left side of the body. Provide a detailed outline of the brain's structure (including a schematic sketch) and discuss how damage to specific areas can result in the observed clinical symptoms.
 - 5.(a) Compare the function of the ascending and descending pathways of the CNS.
- OR**
- 5.(b) Explain the synaptic transmission mechanism starting from action potential to post – synaptic inactivation.
 6. Discuss the anatomy of the eye and explain how common refractive errors that would require spectacles would result from changes in this anatomy.

7. A 40-year-old woman complains of recurrent vertigo accompanied by hearing loss. Clinical evaluation suggests a disruption in the auditory pathway. Analyze the components of the auditory pathway and discuss its clinical relevance to balance disorders.
8. Describe the structure and function of a nephron.
- 9.(a) Explain the role of digestive enzymes in gastrointestinal absorption.

OR

- 9.(b) Explain how the kidney function is affected by dehydration and over hydration.
10. Critically evaluate the role of hormones in regulating reproductive functions.

⇔⇔⇔ Y/D/TY ⇔⇔⇔