

PHYSIOLOGY – Paper II**Time: 3 Hours****Total Marks: 50**

- Answer all questions
- Draw Diagrams wherever necessary

Long essay**(10)**

1. A 50 years old patient of hypertension suddenly developed weakness of right upper and lower extremities and difficulty in speaking following a brief episode of loss of consciousness. On examination motor tone of his right extremities was found to be increased. Answer the following questions based on your knowledge in physiology :
 - What would an examination of power and deep tendon reflexes of the patient reveal
 - What would examination of the plantar reflex of the patient most likely reveal
 - Explain the physiological basis of the findings of deep tendon reflexes in this patient
 - What is the most likely clinical diagnosis of his condition (2+2+5+1=10)

Short essays**(2x5 =10)**

2. Metabolic effects of insulin
3. Denervation hypersensitivity

Answer briefly**(5x3=15)**

4. Accommodation reflex
5. Pituitary dwarfism
6. Parkinsonism
7. Features of cerebellar lesions
8. Ovarian cycle

Draw and label**(2x2½=5)**

9. Length-tension relationship in skeletal muscle
10. Wald's visual cycle

Explain the physiological basis of the following**(5x2=10)**

11. Patients with sensory ataxia lose balance on closing their eyes
12. Intra-uterine contraceptive devices prevent pregnancy
13. Diaphragmatic pain is felt at the tip of the shoulder
14. Patients of acromegaly may develop diabetes
15. Cardiac muscle cannot be tetanised