

**First Professional MBBS Degree Examinations August 2018**

**Physiology – Paper II**

**Time: 3 Hours**

**Total Marks: 50**

- *Answer all questions*
- *Draw Diagrams wherever necessary*

**Long essay**

**(10)**

1. A 50 years old diabetic was brought to the hospital complaining of severe breathlessness. His breath had a fruity odor and the respiratory rate was 30 per minute. His blood sugar was 375mg% and plasma pH was 7.2. Answer the following questions based on your knowledge in physiology:

- What is the most likely clinical diagnosis of his condition
- What is the most important medication that should be administered immediately
- Name two abnormal substances that might be present in his urine
- Explain the physiological actions of the hormone involved and its regulation

**(2+1+2+5)**

**Short essays**

**(2x5 =10)**

2. Dark adaptation in the human eye
3. Mention the stages of spermatogenesis and the factors that affect it

**Answer briefly**

**(5x3=15)**

4. Attenuation reflex in the middle ear
5. Brown-Sequard syndrome
6. Latch-bridge mechanism
7. Cretinism
8. Functions of cerebellum

**Draw and label**

**(2x2½=5)**

9. Sarcomere in skeletal muscle
10. Muscle spindle

**Explain the physiological basis of the following**

**(5x2=10)**

11. The pain of an injury is felt more after the game by a player
12. Corticosteroids are administered to a lady in preterm labour
13. Patients of Parkinsonism are administered L-dopa
14. Patients of acromegaly may have visual field defects
15. Upper motor neuron lesions produce hypertonia

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