

First Year Pharm D Degree Supplementary Examinations – January 2017

**Human Anatomy and Physiology**

**Time: 3 Hours**

**Total Marks: 70**

- Answer all Questions.
- Draw Diagrams wherever necessary.

**Essay**

**(3x10=30)**

1. Describe the events of excitation and contraction coupling in the skeletal muscle with a neat labeled diagram
2. Discuss the ovarian and uterine phases of female reproductive cycle. Emphasize the role of female sex hormones.
3. Define cardiac output and list the factors affecting it. Explain the various mechanisms of regulation of cardiac output

**Short notes:**

**(8x5=40)**

4. Functional components of reflex arc
5. Methods of transportation across cell membranes
6. Role of T and B lymphocytes in immunity
7. Mechanism of urine formation
8. Neural and chemical ways of regulating respiration
9. Structural and functional differences between autonomic and somatic nervous system.
10. Physiology of vision
11. Cerebrospinal fluid- its circulation and functions

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