

II B.Tech I Semester Regular Examinations, November 2005

ANATOMY AND PHYSIOLOGY

(Bio-Medical Engineering)

Time: 3 hours

Max Marks: 80

**Answer any FIVE Questions
All Questions carry equal marks**

1. Describe the structural and functional classification of joints? [16]
2. What is the myogram? Discuss in detail about muscle contraction? [16]
3. Explain the structure and functions of neuron? [16]
4. Describe the retinal processing of visual input and the neural pathway of light impulses to the brain. [16]
5. With a neat sketch, explain the blood flow through heart? What is Arrhythmia? [16]
6. Explain the physiology of a lung with a neat diagram. [16]
7. Explain the structure of spleen? Write the anatomy of the lymphatic system? [16]
8. Describe the physical characteristics, normal constituents and abnormal constituents of urine? [16]

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1. Explain about the pelvic girdle? [16]
2. Describe the pituitary gland. Write with functions of the anterior pituitary? [16]
3. Describe the external anatomy of spinal cord? What is Pia-matter? [16]
4. Describe the retinal processing of visual input and the neural pathway of light impulses to the brain. [16]
5. Describe the structure and function of the valves of the heart? [16]
6. Describe the development of respiratory system. [16]
7. Describe the location of the Oesophagus? What is its role in digestion? [16]
8. List the functions of the kidney? Trace the path of blood flow through the kidneys? [16]

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1. Which bones make up the axial and appendicular divisions of the skeleton? [16]
2. How do the adrenal cortex and adrenal medulla compare with regard to location and histology? [16]
3. Distinguish between the central and peripheral nervous systems and describe the functions of each sub-divisions? [16]
4. Discuss about physiology of vision? What are photoreceptors and photopigments? [16]
5. Write a detailed note on the blood vessels? [16]
6. Write short notes on the following: [8+8=16]
 - (a) Menstrual Cycle.
 - (b) Physiological changes in woman during pregnancy.
7. Describe the location of the stomach? Briefly explain the anatomical features of the stomach? [16]
8. Write a short notes on: [8+8=16]
 - (a) Glomerular capsule
 - (b) Dialysis.

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1. Describe the main structural and functional characteristics of muscle tissue? Write about Process? [16]
2. Name few endocrine glands? Explain any one in detail with neat sketch? [16]
3. Describe the external anatomy of spinal cord? What is Pia-matter? [16]
4. Describe the retinal processing of visual input and the neural pathway of light impulses to the brain. [16]
5. Write about: [8+8=16]
 - (a) Composition and functions of blood
 - (b) Blood groups and their importance.
6. Describe the development of respiratory system. [16]
7. Describe the location of the liver with its principle functions? Draw a labelled diagram of liver lobule? [16]
8. Describe the renal physiology? [16]
