

II B.Tech I Semester Regular Examinations, November 2006
ANATOMY AND PHYSIOLOGY
(Bio-Medical Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. Describe how frequency of stimulation affects the muscle tension with muscle physiology in detail? Define muscle fatigue? [16]
2. What are the functional differences of a typical sensory and motor neuron? Define autonomic nervous system. [16]
3. Explain different phases of action potential of cardiac muscle fibre of heart? [16]
4. Describe the responses of the respiratory system to exercise. [16]
5. Explain the working of endocrine regulatory system? [16]
6. Describe the location and function of the gall bladder? How is employing of the gall bladder regulated? [16]
7. List and describe the primary in secondary lymphatic organs of the body. [16]
8. Write a short notes on
 - (a) Renal failure [8]
 - (b) Nephron [8]

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1. Discuss about the facial bones. Describe the structure of mandible and hyoid bone? [16]
2. Describe the basic functions of nervous system that are necessary to maintain homeostasis? [16]
3. What are the different types of valves present in the heart? Explain. Define regurgitation? [16]
4. Give the structure of trachea and its associated structures. Explain the functions of trachea? [16]
5. What are the Endocrine glands? Explain in detail? [16]
6. Write short notes on:
 - (a) Pancreas [8]
 - (b) The gall-bladder [8]
7. Write about the lymphatic system in detail. [16]
8. Describe the renal physiology? [16]

Code No: R050211102

Set No. 3

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1. Describe the structure and functions of the fibrous joint? [16]
2. Explain how each of the following events related to the physiology of vision
 - (a) Refraction of light [5]
 - (b) Accommodation of the lens [5]
 - (c) Construction of pupil [6]
3. Write a detailed note on the blood vessels? [16]
4. What organs make up the respiratory systems? Distinguish between the upper and lower respiratory system, and discuss. [16]
5. Write about anterior and posterior pituitary glands? Sketch them? [16]
6. Describe the composition of the saliva and the role of each of its components. [16]
7. Define immunity. Discuss the types of immune responses. [16]
8. Compare the principle events of the ovarian and uterine cycle. [16]

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1. What are the events present in contraction and relaxation of a skeletal muscle fiber? [16]
2. Where is hypothalamus located? Explain some of its major functions? [16]
3. Write a detailed note on the blood vessels? [16]
4. What organs make up the respiratory systems? Distinguish between the upper and lower respiratory system, and discuss. [16]
5. Describe the developmental anatomy of the endocrine system. [16]
6. How does the gastrointestinal tract differ from accessory structures of digestion? [16]
7. Mention the clinical symptoms of the following disorders:
 - (a) Hodgkin's disease [5]
 - (b) Chronic fatigue syndrome [5]
 - (c) AIDS [6]
8. Write about the evaluation of kidney function? Discuss about ureters? [16]
