

Code No: A109211102

R09

Set No. 2

II B.Tech I Semester Examinations, MAY 2011
ANATOMY AND PHYSIOLOGY
Bio-Medical Engineering

Time: 3 hours

Max Marks: 75

Answer any FIVE Questions
All Questions carry equal marks

1. Define Deglutition. Explain different stages of deglutition. [15]
2. Write short notes on:
 - (a) Renal plasma clearance
 - (b) Estimation of Renal Blood Flow
 - (c) Cystometrogram
 - (d) Micturition reflex. [15]
3. Write short notes on
 - (a) Pulse
 - (b) Blood Pressure. [7+8]
4. Discuss in detail the synthesis, storage and physiological functions of the hormones of posterior pituitary. Describe their mechanism of action. [15]
5. Explain the formation and circulation of lymph and explain the importance of thoracic duct and lymphatic duct in transporting the lymph to circulatory system. [15]
6. Describe the accessory structures of eye and structural divisions of eyeball? [15]
7. Discuss about the lung volumes and capacities. What is pulmonary ventilation? [15]
8. What is sliding filament mechanism occurring in muscle fiber? What is muscle bone? [15]

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Set No. 4

II B.Tech I Semester Examinations, MAY 2011

ANATOMY AND PHYSIOLOGY

Bio-Medical Engineering

Time: 3 hours

Max Marks: 75

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

1. Write short notes:

- (a) Hypothalamic pituitary- thyroid axis.
- (b) Autoregulation of thyroid hormone synthesis.
- (c) Transport and metabolism of thyroid hormones.
- (d) Thyrotoxicosis and Cretinism. [15]

2. With a neat sketch, explain the blood flow through heart? What is Arrhythmia? [15]

3. Explain in detail the role of kidney in the long term regulation of blood pressure. [15]

4. What are the common functions of respiratory and cardiovascular systems? Write a short note on expiration. [15]

5. Mention some of the principle. superficial skeletal muscles? [15]

6. Explain 'reflex action' with an illustrating diagram? [15]

7. Describe the mechanism of carbohydrate digestion and absorption in various parts of gut. Add a note on Lactose Intolerance. [15]

8. Write short notes:

- (a) Antigen Presenting Cell (APC)
- (b) Role of lymph node in immunological memory.
- (c) Role of lymph node in the localization and prevention of infections.
- (d) Role of lymph in cardiovascular homeostasis. [15]

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Set No. 1

II B.Tech I Semester Examinations, MAY 2011
ANATOMY AND PHYSIOLOGY
Bio-Medical Engineering

Time: 3 hours

Max Marks: 75

Answer any FIVE Questions
All Questions carry equal marks

1. Enumerate the enzymes secreted by exocrine pancreas. Discuss their role in lipid digestion and absorption. [15]
2. Illustrate the physiology of lung with a neat sketch. [15]
3. Explain how the lymph formed in our body will reaches to systemic circulation and explain how the lymphatic system is connected with circulatory system. [15]
4. What are the thyroid function tests? Explain physiological basis of their specificity and sensitivity. [15]
5. Write short notes:
 - (a) Renal function tests
 - (b) Diuretics
 - (c) Loop diuretics
 - (d) Osmolarity of body fluids. [15]
6. Describe the skeleton of the thorax with a neat diagram. [15]
7. (a) Discuss the coronary circulation? Explain semilunar valves?
(b) What are the autorhythmic fibres? Discuss about the conduction system of heart with a neat sketch. [15]
8. Enumerate the visual pathway. [15]

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Set No. 3

II B.Tech I Semester Examinations, MAY 2011
ANATOMY AND PHYSIOLOGY
Bio-Medical Engineering

Time: 3 hours

Max Marks: 75

Answer any FIVE Questions
All Questions carry equal marks

1. What is lymph? Describe the lymphatic circulation. Explain lymphedema. [15]
2. Distinguish between quiet and forced inspiration and exoiration. Illustrate Pharynx. [15]
3. What are salivary glands? Write about the composition and functions of saliva. [15]
4. Define GFR? How is GFR regulated? Describe the methods of estimation. [15]
5. Classify different bones of upper limb with a neat sketch? Discuss about humerus and scapula. [15]
6. Write short notes:
 - (a) Diabetes insipidus.
 - (b) Aquaporins
 - (c) Milk ejection reflex
 - (d) Role of vasopressin in blood pressure homeostasis. [15]
7. Discuss about the cable properties of the nerve? Explain velocity of conduction of nerve impulse? [15]
8. Describe the structure and function of the valves of the heart? [15]
