

SSR DEGREE COLLEGE, NIZAMABAD (5029)
DEPARTMENT OF MEDICAL LAB TECHNOLOGY (MLT)

SEMESTER – I, Descriptive Questions

Paper- Human Physiology

UNIT – I: Physiology of Digestive System

Short Questions (4 Marks)

1. What are the main digestive activities that occur in the mouth?
2. What are the functions of saliva?
3. Write short notes on peristalsis.
4. What is the composition of gastric juice?
5. What are the functions of gastric juice?
6. Explain the digestion of proteins in the stomach.
7. Mention the functions of pancreatic juice.
8. Write short notes on bile and its functions.
9. What is intestinal juice?
10. Define absorption of food.
11. What are villi and microvilli?
12. Mention the end products of digestion.

Essay Questions (10 Marks)

1. Describe the process of digestion in the mouth, pharynx, and esophagus.
2. Explain the composition and functions of gastric juice and describe digestion in the stomach.
3. Discuss the role of pancreatic juice, bile, and intestinal juice in digestion.
4. Explain the process of absorption of digested food in the small intestine.
5. Write an essay on the physiology of the digestive system.

UNIT – II: Physiology of Excretory System

Short Questions (4 Marks)

1. What are the main functions of the kidneys?
2. Define urine formation.
3. Explain glomerular filtration in brief.
4. What are the normal constituents of urine?
5. Write short notes on tubular reabsorption.

6. What are the abnormal constituents of urine?
7. Define micturition.
8. What is cystourethrogram?
9. What are diuretics? Give examples.
10. Write short notes on renal function tests (RFTs).
11. What is the role of ADH in urine formation?
12. How does aldosterone affect kidney function?

Essay Questions (10 Marks)

1. Describe the physiology of urine formation in detail.
2. Discuss the composition and properties of normal urine.
3. Explain the role of hormones (ADH, Aldosterone, and PTH) in regulating kidney functions.
4. Write an essay on micturition and its nervous control.
5. Discuss the clinical importance of renal function tests.

UNIT – III: Physiology of Respiratory System

Short Questions (4 Marks)

1. Define respiration and its types.
2. What is the difference between external and internal respiration?
3. What are the steps involved in the process of breathing?
4. Define tidal volume, vital capacity, and residual volume.
5. What is pulmonary ventilation?
6. Name the muscles involved in inspiration and expiration.
7. What is the respiratory center?
8. Write short notes on control of respiration.
9. What is the role of hemoglobin in oxygen transport?
10. Write short notes on the exchange of gases in the lungs.

Essay Questions (10 Marks)

1. Explain the mechanism of breathing.
2. Describe the process of external and internal respiration.
3. Discuss the transport of oxygen and carbon dioxide in the blood.
4. Explain the regulation of respiration by nervous and chemical control.
5. Write an essay on the physiology of respiration.

UNIT – IV: Physiology of Cardiovascular System

Short Questions (4 Marks)

1. What are the components of the circulatory system?
2. Define cardiac cycle.
3. What is systole and diastole?
4. What is cardiac output?
5. What is the normal heart rate in adults?
6. Write short notes on SA node and AV node.
7. What are the functions of blood?
8. Define blood pressure and mention its normal values.
9. Write short notes on ECG and its significance.
10. What is the difference between pulmonary and systemic circulation?
11. Define portal circulation.
12. What are the sounds of the heart?
13. Write short notes on regulation of blood pressure.
14. Define hypertension and hypotension.

Essay Questions (10 Marks)

1. Describe the structure and working of the human heart with a labeled diagram.
2. Explain the events of the cardiac cycle in detail.
3. Discuss the conduction of cardiac impulse and explain the ECG.
4. Describe pulmonary, systemic, and portal circulation.
5. Explain the physiological regulation of blood pressure and factors affecting it.
6. Write an essay on the structure and functions of the cardiovascular system.