THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0423] **APRIL 2023** **Sub. Code: 1508**

B.Sc. CARDIAC TECHNOLOGY
FIRST YEAR (Regulations 2014-2015, 2018-2019 & 2021-2022 onwards)
PAPER I – APPLIED ANATOMY, PHYSIOLOGY AND BIO-CHEMISTRY RELATED TO CARDIAC TECHNOLOGY
Q. P. Code: 801508

Time: Three hours **Maximum : 100 Marks**

Answer ALL Questions

I. Elaborate on: **(3 x 10 = 30)**

1. Describe in detail about the blood supply of the heart. Add a note on its Applied Anatomy.
2. Define Cardiac Output. Describe in detail about the factors regulating the cardiac output.
3. What are the biochemical functions of Calcium in our body? Elaborate on how plasma calcium level is maintained.

II. Write notes on: **(8 x 5 = 40)**

1. Bronchopulmonary segments.
2. Coverings of the Heart.
3. Structure and functions of Nephron.
4. Pleura.
5. Role of kidneys in acid base regulation.
6. Biochemical functions of Vitamin A.
7. Immunoglobulins.
8. Describe the intrinsic pathway of Clotting.

III. Short answers on: **(10 x 3 = 30)**

1. Draw the diagram of Scapula and name its parts.
2. Atrioventricular node.
3. Colloidal Osmotic Pressure.
4. Cartilages of the larynx.
5. Essential Hypertension.
6. Valsalva manoeuvre.
7. Name the physiological buffers in our body. Also mention the predominant buffer system in plasma.
8. Landsteiner's law.
9. Competitive inhibition with an example.
10. Write the normal reference values of
    i) Thyroid Stimulating Hormone ii) Blood pH iii) Fasting blood glucose.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 1123] **NOVEMBER 2023** **Sub. Code: 1508**

B.Sc. CARDIAC TECHNOLOGY

FIRST YEAR (Regulations 2014-2015, 2018-2019, 2020-2021 & 2021-2022 onwards)

PAPER I – APPLIED ANATOMY, PHYSIOLOGY AND BIO-CHEMISTRY RELATED TO CARDIAC TECHNOLOGY

Q. P. Code: 801508

Time: Three hours **Maximum : 100 Marks**

Answer ALL Questions

I. Elaborate on: **(3 x 10 = 30)**

1. Explain the two main mechanisms that Control Blood Pressure.
2. Describe the circulation of the blood through the Lungs. Name the main vessels involved.
3. Write a detailed note on Lipoprotein in Atherosclerosis.

II. Write notes on: **(8 x 5 = 40)**

1. Blood supply of Heart.
2. Systolic and diastolic Blood Pressure.
3. Structure of Nephrons.
4. Cartilages.
5. Oxygen transport in the blood.
6. Muscle of Respiration.
7. Classification of Aminoacids.
8. Describe regulation, characteristics and general functions of WBCs.

III. Short answers on: **(10 x 3 = 30)**

1. Structure associated with the Pharynx.
2. Thyroid cartilage.
3. Types of Blood vessels.
4. Erythrocytes.
5. Diffusion.
6. Plasma protein.
7. Functions of Glucocorticoids.
8. Lobes of right and left lung.
9. Functions of Fatty acids.
10. Functions of Veins.

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