Tripura University

(A Central University)

Suryamaninagar

West Tripura

Syllabus for

Four Years Undergraduate Programme Subject:

Human Physiology

(As per NEP-2020)

3rd Semester (Minor)

Revised as on October, 2025

2nd YEAR
Semester-III
Paper- 3A (Theory)
HP- 301M

Full marks-60 (Internal assessment-24; End Sem. Exam. -36)

Unit-1: Cardiovascular System-I

1. Anatomy of the heart. Properties of cardiac muscle.
2. Origin and propagation of cardiac impulse-Junctional tissues.
3. Cardiac cycle -Pressure and volume changes. Heart sounds. Murmurs. Arterial pulse.
4. Heart block and Arrhythmia.

Unit 2: Cardiovascular System-II

1. Heart rate- Bradycardia, Tachycardia, Factors controlling heart rate.
2. Cardiac output - factors affecting, Starling's law of heart. Measurement by application of Fick's principle.
3. Innervations of the heart and blood vessels,
4. Cardiac and vasomotor reflexes.

Unit-3: Cardiovascular System-III

1. Blood pressure- Normal value, Physiological variation. Hypertension-types.
2. Blood vessels-types, structure. Hemodynamics: velocity of blood flow, nature of blood flow.
3. Coronary Circulation-course and peculiarities.
4. Coronary artery disease (CAD)-

Atherosclerosis.

Unit – IV Cardiovascular System -IV

1. Effects of exercise on cardiovascular system.
2. Immediate and delayed effects of hemorrhage on cardiovascular system.
3. Electrocardiography- Principles of Electrocardiography,
5. Normal electrocardiogram, different waves, intervals and segments; different electrocardiographic lead systems.

Paper-3B (Practical)

HP-301M

Full marks-40 (Internal assessment-16; End Sem. Exam. -24)

CONTENTS:

1. Identification of different pulse and diurnal variation.
2. Determination of pulse rate in different posture.
3. Determination of arterial blood pressure by sphygmomanometer.
4. Measurement of PFI by Harvard step test (modified) and graphical presentation of the recovery heart rate.
5. Measurement of hand grip strength by hand grip dynamometer.