

6. Write short notes on any **three** of the following :
3×5=15

- (i) Endocrine function of Pancreas
- (ii) Histological Structure of Testis
- (iii) Carbon Dioxide transport in Blood
- (iv) Ultrafiltration

[This question paper contains 4 printed pages]

Your Roll No. :

Sl. No. of Q. Paper : 3072 **I**

Unique Paper Code : 2232522401

Name of the Paper : LS-DSC-12: Fundamentals
of Human Physiology

Name of the Course : **B.Sc. (Prog.) Life Sciences**
(NEP-UGCF)

Semester : IV

Time : 2 Hours **Maximum Marks : 60**

Instructions for Candidates :

- (a) Write your Roll No. on the top immediately on receipt of this question paper.
- (b) Attempt **four** questions in all.
- (c) Question No. **1** is compulsory.
- (d) Draw well labelled diagrams wherever required.

1. (a) Define the following terms : (any **three) :3**

- (i) Emulsification
- (ii) Refractory Period
- (iii) Pacemaker
- (iv) Negative Feedback Mechanism

- (b) Differentiate between the following: (any **three**) : 6
- (i) Isotropic and Anisotropic Band
 - (ii) Bohr effect and Haldane effect
 - (iii) Multipolar and Bipolar neurons
 - (iv) Spermatogenesis and Spermeiogenesis
- (c) Expand the following: (any **two**) : 1
- (i) EPSP
 - (ii) ADH
 - (iii) MV
- (d) Fill in the blanks: (any **two**) : 2
- (i) and are components of muscle TRIAD.
 - (ii) Hypersecretion of GH during childhood causes
 - (iii)hormones are derived from cholesterol.
- (e) Give the location and function of the following: (any **three**) 3
- (i) Parietal cells
 - (ii) Podocytes
 - (iii) Chromaffin cells
 - (iv) Calsequestrin

2. (a) Give an account on microscopic organization of sarcomere. 6
- (b) Discuss the events involved in excitation-contraction coupling cycle of skeletal muscle. 9
3. (a) Describe the endocrine role of ovary in the female reproductive system. 9
- (b) Explain the factors that contribute to resting membrane potential in the nervous tissue. 6
4. (a) Elucidate the major changes during different phases of Cardiac cycle. 9
- (b) Outline the process of pulmonary ventilation with the help of diagrams. 6
- 5 (a) Describe the digestion of proteins in various regions of gastrointestinal tract. 8
- (b) Explain the process of Counter-current mechanism in formation of urine. 7