

- (vii) Stoppage of bleeding
- (viii) Specialized junction between a neuron and neuron/muscle
- (ix) Surgical cutting or sealing of part of each vas deferens as a means of sterilization
- (x) Serous membrane of the abdominal cavity
5. (a) Discuss the sliding filament theory of muscle contraction. What is the role of ATP in the process? 5
- (b) Give the location and function of 10
- (i) Myenteric plexus
- (ii) Broca's area
- (iii) Pyloric sphincter
- (iv) Podocytes
- (v) Type II alveolar cells
6. (a) Describe the mechanism of salt and water reabsorption in the proximal tubule. How ADH helps the body conserve water? 6
- (b) Draw a well labelled diagram of 9
- (i) Oxy-Haemoglobin dissociation curve
- (ii) Conduction system of heart
- (iii) Coronal section of Kidney

[This question paper contains 4 printed pages]

Your Roll No. :

Sl. No. of Q. Paper : **6463 I**

Unique Paper Code : 3184002003

Name of the Paper : Understanding the Human Body Systems (GE)

Name of the Course : **Common Program Group (B.Sc. (H) Bio-medical Sciences)**

Semester : II (NEP-UGCF)

Time : 3 Hours **Maximum Marks : 90**

Instructions for Candidates :

- (a) Write your Roll No. on the top immediately on receipt of this question paper.
- (b) Question **No. 1** is compulsory.
- (c) Attempt **five** questions in **all**.
- (d) Subparts of the questions should be attempted together.
- (e) Draw illustrations or diagrams wherever necessary.

1. (a) Define (any 4) :

2×4=8

- (i) Residual volume
- (ii) Menopause
- (iii) Aphasia
- (iv) Obligatory water loss
- (v) Peristalsis

(b) Differentiate between

3×4=12

- (i) Spatial and temporal summation
- (ii) Coronal and sagittal plane
- (iii) Endocrine and paracrine
- (iv) Neutrophil and lymphocyte

(c) State **true** or **false** and justify (any 4)

2.5×4=10

- (i) Skin colour depends on the number of melanocytes.
- (ii) Conduction is faster in myelinated neurons than unmyelinated neurons.
- (iii) Insulin and glucagon hormone actions are antagonistic in nature.
- (iv) Strength of ventricular contraction is directly proportional to end diastolic volume.
- (v) Platelets do not stick to the endothelium in a normal blood flow.

2. Write short notes on :

- (a) Functions of Liver 5
- (b) Cells of the epidermis 5
- (c) Extrinsic clotting pathway 5

3. (a) Describe the structure of cerebrum and explain its functions. 5

- (b) Discuss the general features of connective tissue with examples. 5

(c) Discuss the process of spermatogenesis. 5

4. (a) Distinguish between the anterior and posterior pituitary, and identify the hormones secreted by each part. 5

- (b) Give one word for 10

- (i) Maintenance of body's internal environment
- (ii) Cells that secrete HCl in gastric lumen
- (iii) Cardiac rate less than 60 beats per minute
- (iv) Supporting cells which form myelin sheath around axons of the CNS
- (v) Volume of gas inspired or expired in an unforced respiratory cycle
- (vi) Valve present between left atrium and left ventricle