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(i) Neuromuscular junction

(ii) Structure of the uterus

(5,5,6)

(200)

[This question paper contains 8 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 3009

I

Unique Paper Code : 3184002003

Name of the Paper : GE - 3: Understanding the
Human Body Systems

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

Semester : III (NEP-UGCF-2023)

Duration : 3 Hours

Maximum Marks : 90

Instructions for Candidates

1. Write your Roll. No. on the top immediately on receipt of this question paper.
2. Attempt **five** questions in all.
3. **Question No. 1** is compulsory.
4. Subparts of the questions should be attempted together.

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5. Draw illustrations or diagrams wherever necessary.

1. (a) Differentiate between (2x4=8)

(i) Endocrine and exocrine glands

(ii) Lung volume and capacity

(iii) Juxtamedullary and cortical nephrons

(iv) Motor and sensory nerves

(b) Define (any 5) (2x5=10)

(i) Homeostasis

(ii) Polycythemia

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(iv) A plane that cuts the body into unequal left and right sides

(v) Sound produced when the AV valves close

(vi) Stoppage of menstruation (5,5,6)

6. (a) Discuss the classification of hormones. Why is it that thyroid hormone is also called a steroid hormone?

(b) Discuss the events that take place at a chemical synapse. How is acetyl choline removed from the synaptic cleft?

(c) Draw a well labelled diagram of

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(v) Podocytes

(vi) Eustachian tube (5,5,6)

5. (a) Discuss the composition of blood. How and why is blood a connective tissue?

(b) What are the functions of the circulatory system?
Why are arteries called resistance vessels?

(c) Give one word for the following

(i) Presence of glucose in the urine

(ii) Folding of the apical membrane of the epithelial cells of the intestines

(iii) Target organ of vitamin D₃

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(iii) Refractory period

(iv) Motor unit

(v) Tachycardia

(vi) Residual volume

(vii) Menarche

(viii) Peristalsis

(c) State True/False and justify (2x4=8)

(i) There are more negative feedback systems than positive feedback systems

(ii) Continuous conduction is faster than saltatory conduction

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(iii) Spermatogenesis occurs at normal body temperature

(iv) A person lying face downwards would be in supine position

2. Write short notes on: (4x4=16)

(i) Acromegaly

(ii) Cardiac Cycle

(iii) Counter current multiplication

(iv) Lateral inhibition

3. (a) Explain the role of calcium ions in muscle contraction and relaxation.

(b) Elucidate the process of spermatogenesis.

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(c) How does exchange of gases take place in the human body? (5,5,6)

4. (a) Explain the process of nerve impulse conduction in a neuron.

(b) Why is the pancreas a mixed gland? Elucidate the functions of the exocrine pancreas in the process of digestion.

(c) Give the location and function of

(i) AV Valve

(ii) Na-K ATPase

(iii) Sertoli cells

(iv) Motor end plate

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