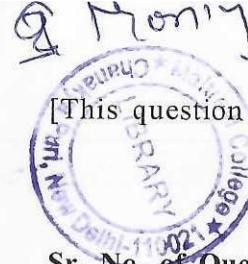


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4. (a) How does the counter-current exchange mechanism help in the formation of dilute urine? (8)
- (b) How do kidneys contribute to the acid-base balance of the body? (7)
5. (a) How is oxygen transported by the blood? Write a note on Bohr effect. (10)
- (b) What are the physiological adaptations to high altitude? (5)
6. Write short notes on **any three** of the following : (5×3=15)
- (i) Regulation of respiration
 - (ii) Conduction system of the heart
 - (iii) Salivary glands in Human
 - (iv) Juxtaglomerular apparatus

(1000)



[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 1615

G

Unique Paper Code : 2232012303

Name of the Paper : Human Physiology: Life Sustaining Systems / Discipline Specific Core-9

Name of the Course : B.Sc. (Hons) Zoology Exam-2023

Semester : II (NEP-UGCF)

Duration : 2 Hours

Maximum Marks : 60

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt **ANY FOUR** questions in all and Question no. 1 is compulsory.
3. Draw neat and well labelled diagrams wherever necessary.

P.T.O.

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1. (a) Define the following : (4)

- (i) Haldane effect
- (ii) Starling's law of heart
- (iii) Macula Densa
- (iv) Portal triad

(b) Expand the following abbreviations : (2)

- (i) MALT
- (ii) ENS
- (iii) Tm
- (iv) RDS

(c) Give the location and function of the following : (3)

- (i) Intercalated discs
- (ii) Mesangial cells
- (iii) Type II cells

(d) Fill in the blanks : (4)

- (i) ADH causes the insertion of _____ in the membrane of principal cells.

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(ii) Endothelium derived relaxation factor is the other name for _____, a vasodilator produced by endothelial cells.

(iii) Action potential in cardiac muscle cells spreads by way of _____.

(iv) The percentage of total blood volume occupied by RBCs is called the _____.

(e) Give reasons/significance for the following: (2)

- (i) Cardiac muscle cells don't get fatigued
- (ii) Liver receives blood through a portal vein

2. (a) How are fats digested and absorbed in the alimentary canal? (9)

(b) Name the different enzymes from the pancreas along with their functions in detail. (6)

3. (a) Explain various mechanisms that control the regulation of blood pressure. (9)

(b) Depict the process of blood coagulation in the form of a self-explanatory flow chart. (6)

P.T.O.