



RAN-1807000101030001-S

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F.Y.B.H.M.S. Examination

January - 2020

Physiology & Biochemistry Paper-I

Time: 3 Hours]

[Total Marks: 100

सूचना : / Instructions

(1)

नीचे दृष्टविले निशानीवाणी विगतो उत्तरवही पर अवश्य लખवी.

Fill up strictly the details of signs on your answer book

Name of the Examination:

F.Y.B.H.M.S. Examination

Name of the Subject :

Physiology & Biochemistry Paper-I

Subject Code No.: 1807000101030001-S

Seat No.:

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Student's Signature

- (2) All questions are compulsory.
- (3) Figure to the right indicates full marks.
- (4) Write both sections separately.

SECTION - I

Q. 1. Define erythropoiesis. Site of erythropoiesis. Describe factors affecting it in detail. **15**

OR

Q. 1. Describe physiology of blood groups (ABO & Rh). Explain in detail about hemolytic diseases of newborn (HDN). **15**

Q. 2. Define blood pressure. Types of blood pressure. Describe hormonal regulation of blood pressure in detail. **15**

OR

Q. 2. 1. Define Heart Rate. What are normal values? Write down factors affecting Heart Rate. **08**

2. Define cardiac output. Explain factors affecting cardiac output. **07**

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[1]

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P0727

- Q. 3. Write short notes on : (Any Three)** 15
- Difference between RNA & DNA
 - Surface tension
 - Functions of Blood
 - Intrinsic Mechanism of Blood Coagulation.
 - Diastolic events of cardiac cycle

- Q. 4. Answer in one word or sentence.** 05
- Functions of endoplasmic reticulum
 - Which vitamin necessary for blood clotting? Why?
 - Define stroke volume. It's normal value.
 - The cytoplasm is capable of performing different kinds of work directed by _____.
 - How much is cardiac cycle time?

SECTION - II

- Q. 1. Define Anoxia / Hypoxia. Describe various types of Anoxia / Hypoxia.** 15

OR

- Q. 1. Explain in detail the transport of oxygen in blood.** 15

- Q. 2. Define Urine. Name the normal & abnormal constituents of it, with applied physiology of all abnormal constituents of Urine.** 15

OR

- Q. 2.** 1. Tubular reabsorption of Na⁺, Glucose & water through PCT. 08
2. Define nephron. Types of nephron. Describe histology of nephron. 07

- Q. 3. Write short notes on : (Any three)** 15
- Pulmonary function test.
 - Artificial respiration.
 - Counter current exchanger.
 - Functions of Skin.
 - Neuromuscular junction.

- Q. 4. Answer in one word or sentence.** 05
- Enumerate name of epidermis layer of skin.
 - Define Cyanosis.
 - Define Asphyxia.
 - Define micturition reflex.
 - How much is the normal intra pleural pressure.



RAN-3954

First Year B.H.M.S. Examination

January - 2019

Human Physiology and Biochemistry Paper-I

[Total Marks: 100

सूचना : / Instructions

नीचे दृशविव निशानीवाणी विगतो उत्तरवही पर अवश्य लभवी.
Fill up strictly the details of signs on your answer book

Name of the Examination:

First Year B.H.M.S. Examination

Name of the Subject :

Human Physiology and Biochemistry Paper-I

Subject Code No.: 3 9 5 4 Section No. (1, 2,.....): II

Seat No.:

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Student's Signature

- Instructions: 1. All questions are compulsory.
2. Figures to the right indicates full marks.

SECTION - I

Q.1 Define Haemoglobin.

15

What are the normal values in male, female, infants and foetus?
Write down its properties, functions with a note on its degradation.

OR

Classify Leucocytes. Describe the various developmental stages of WBC

Q.2 Define Blood Pressure.

What are the various factors on which blood pressure depends.
Write a note on short term mechanism of Blood pressure regulation.

15

OR

1. Define Cardiac Output, Stroke Volume, Minute Volume, Stroke Volume index, Cardiac Reserve. Write a note on factors determining cardiac output.
2. Describe the interior structure of heart. Write in brief about each type of valve.

08

Q.3

Q.3 Write Short notes on (Any Three)

15

- (1) Functions of Lymph
- (2) Functions of Plasma Protein
- (3) Diffusion
- (4) Lysosome
- (5) Waves of ECG

Q.4

Q.4 Write the following.

5

- (1) Antibodies belong to which class of plasma protein.
- (2) What is the end product of Haemoglobin break down?
- (3) What is Marey's Law?
- (4) What is the Synonym of Left Atrio-Ventricular Valve?
- (5) Define Tissue

SECTION - II

Q.1 Explain Lung volumes and capacities in detail.

15

OR

Describe micturation reflex in detail. Add a note on urinary bladder.

Q.2 Write in detail, regulation of respiration.

15

OR

(1) Reabsorption in proximal convoluted tubules.

08

(2) Carbon dioxide transport

07

Q.3 Write Short notes (any 3)

15

1. JG apparatus

2. Property of nerve

3. Regulation of body temperature

4. Asphyxia

5. Functions of excretory system

Q.4 Write Answers.

05

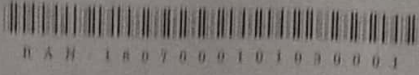
1. Write normal value of GFR

2. Write function of skin

3. What is nephron?

4. What is hypoxia?

5. What is tachycardia?



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First year B. H. M. S. Examination

November / December - 2019

Human Physiology & Biochemistry: Paper-I

[Total Marks: 100

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(1)

नीचे दशांशों में निम्नलिखित विवरणों के उत्तरपत्र पर अवश्य लिखें।
 Fill up strictly the details of signs on your answer book

Name of the Examination:
 First year B. H. M. S.

Name of the Subject :
 Human Physiology & Biochemistry: Paper-I

Subject Code No.: 1807000101030001

Seat No.:

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Student's Signature

- All questions are compulsory.
- Figure to the right indicate full marks.
- Write both section separately.

SECTION-I

1 Name the different cells of blood. Describe structure & functions of Platelets. 15

OR

1 Describe in detail Morphology, development & functions of Agranulocytes. Write a note on its Applied Physiology. 15

2 Describe Cardiac Cycle in detail 15

OR

- (1) Properties of Cardiac Muscle 8
- (2) Chemical Regulation of Blood Pressure. 7

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[P.T.O.]

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3 Short Notes (Any three)

15

- (1) Endoplasmic Reticulum
- (2) Osmosis
- (3) Functions of Haemoglobin
- (4) Valves of Heart
- (5) Function of Spleen

4 Answer in one word or sentence.

5

- (1) What are different types of Plasma Protein
- (2) Define Bleeding Time & Clotting Time
- (3) Define Systolic and Diastolic Blood Pressure
- (4) What is the Synonym of Left Atrio-Ventricular Valve?
- (5) Define Tissue

SECTION-II

1 Describe Nervous Regulations of Respiration in detail.

15

OR

1 Describe transport of Carbon Dioxide in Blood from tissue to lungs in detail.

2 What is GFR ? What is its normal value ? Which are the different Factors affecting it ?

OR

2 (1) What is counter Current Mechanism ?
Described it's in detail.

8

(2) Peculiarities of Renal Blood Circulation.

7

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[2]

[Contd.]

3 Write Short Note (Any three)

15

- (1) Role of Hypothalamus in regulation of body temperature
- (2) Dead space
- (3) Functions of kidney.
- (4) Abnormal Constituents of Urine
- (5) Surfactant

4 Answer in word or sentence.

5

- (1) What is vital capacity ?
- (2) Which are the structures of Juxtaglomerular Apparatus?
- (3) Define sarcomere
- (4) Give three functions of skin
- (5) Site & function of heat gain center