

Roll No. 6092631

201112)

B.D.S. I Prof.

5136(N)

B. D. S. Examination, Nov. 2012

Human Physiology & Biochemistry

(BDS-02)

Time: Three Hours]

[Maximum Marks : 35+35

Note: (i) Attempt all questions.

(ii) Illustrate your answers with suitable diagram wherever necessary. Use separate copy for Part-A and Part-B.

Part-A : Human Physiology [Marks : 35

1. Explain with the help of flow chart the extrinsic and intrinsic pathway of coagulation. 6

2. Write briefly about the following: 5×2=10

(a) Short-term regulation of blood pressure

(b) Digestion and absorption of fats.

Write short notes on the following:

2½×4=10

- (a) Intracellular apparatus
- (b) Excitation-contraction coupling
- (c) Permanent methods of contraception
- (d) Surfactant.

4. Draw labelled diagram of the following:

3×3=9

- (a) Oxyhaemoglobin dissociation curve
- (b) Photoreceptors or Retina
- (c) Mature sperm.

Part-B : Biochemistry [Marks : 35]

1. What is the role of cyclic AMP in glycogenolysis? 5

2. Explain the primary, secondary and tertiary structure of protein. What are the forces which stabilized them? 4

3. Describe the sources, daily requirement, absorption and deficiency manifestation of calcium. 4

4. What is oxidative deamination? 4

5136(N)

5. Write short notes on the following:

3×4=12

- (a) Vitamin E
- (b) Why we do require phosphorous and magnesium?
- (c) Give the structure of haemoglobin and what is the prosthetic group of haemoglobin?
- (d) What are the functions of Vitamin-K?
- (e) What is the cause of diabetes mellitus?
- (f) What are the functions of Vitamin-C?

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Roll No. 6911083.

B.D.S.-I Prof.

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B. D. S. Examination, August 2012

HUMAN PHYSIOLOGY & BIOCHEMISTRY

(BDS-02N)

Time : Three Hours] [Maximum Marks : 35+35

Note : (i) Attempt all questions.

- (ii) Illustrate your answers with suitable diagram wherever necessary. Use separate copy for Part-A and Part-B.

Part-A

(Human Physiology)

1. Enumerate the hormones secreted by adrenal cortex. Describe the functions of glucocorticoids. 10
2. Write briefly about : 5×2=10
 - (a) Refractive errors
 - (b) Erythropoiesis and the factors affecting it.

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(2)

3. Write short notes on the following. $2\frac{1}{2} \times 4 = 10$

- (a) Motor unit
- (b) Functions of saliva
- (c) Glomerular filtration rate and factors affecting it
- (d) VITAL capacity.

4. Draw labelled diagram of the following : $2\frac{1}{2} \times 2 = 5$

- (a) Neuromuscular junctions
- (b) Agranulocytes.

Part-B

(Bio-chemistry)

1. Describe how the calcium levels are regulated in blood? What is the role of calcium in tooth formation? 4

2. What are the enzyme inhibitors? Classify them and explain their function. 4

3. What is Gene? What is Genetic code? How protein synthesis takes place in human body? 5

5136(N)

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4. Draw TCA cycle. What are the normal values of blood glucose? How is blood sugar level regulated in our body? 4

5. Write short notes on the following : $3 \times 6 = 18$

- (a) Phenylketonuria
- (b) Essential fatty acids
- (c) Inhibitors and uncouplers of oxidation phosphorylation
- (d) Hyperthyroidism
- (e) Collagen
- (f) DNA.

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