

5/12/18 (M)

[This question paper contains 4 printed pages]

Your Roll No. :

Sl. No. of Q. Paper : 209 I

Unique Paper Code : 42234301

Name of the Course : **B.Sc.(Prog.)**

Name of the Paper : Physiology and
Biochemistry

Semester : III

Time : 3 Hours

Maximum Marks : 75

Instructions for Candidates :

- Write your Roll No. on the top immediately on receipt of this question paper.
- Attempt **five** questions in **all**, two each from **Section-A** and **Section-B**.
- Question **NO.1** is compulsory.
- Attempt both sections in same answer sheet.

P.T.O.

1. (a) Define the following terms : $1 \times 5 = 5$

- (i) Dead space
- (ii) Goitre
- (iii) Peristalsis
- (iv) K_m
- (v) Aminotransferase

(b) Distinguish between the following :

$2 \times 4 = 8$

- (i) I bands and A bands
- (ii) Tricuspid valve and Bicuspid valve
- (iii) Transketolase and Transaldolase
- (iv) Anabolic pathway and Amphibolic pathway

(c) Expand the following terms :

$1 \times 4 = 4$

- (i) GFR
- (ii) PNS
- (iii) LDH
- (iv) NADPH

(d) Match the following :

$1 \times 5 = 5$

- | | |
|---------------------------|----------------------|
| (i) Aldosterone | (a) Axon |
| (ii) Pyruvate carboxylase | (b) Intestinal juice |

(iii) Crypts of Lieberkuhn

(c) Adrenal cortex

(iv) Pentose Phosphate Pathway

(d) Gluconeogenesis

(v) Nodes of Ranvier

(e) Synthesis of Ribose

(e) Give one function of the following :

$1 \times 5 = 5$

- (i) Fibrinogen
- (ii) Sertoli cells
- (iii) Semilunar valves
- (iv) Flavoproteins
- (v) Coenzyme A

Section - A

2. (a) Explain "Sliding filament theory" in muscle contraction with appropriate diagram. 4

(b) Describe the processes involved in urine formation by the kidneys. 8

3. (a) Elaborate on the transport of O_2 and CO_2 in blood. 8

- (b) Discuss the process of fat digestion and absorption in the Small intestine. 4

4. Write short notes on any **three** of the following :
4+4+4

- (a) Thyroid gland
- (b) Conduction of cardiac impulse
- (c) Hormonal control of menstrual cycle
- (d) Action potential

Section - B

5. Discuss the steps involved in Glycolysis.

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6. (a) Describe the biosynthesis of Palmitic acid. 8

- (b) Briefly explain the process of Oxidative deamination. 4

7. Write short notes on **any three** of the following :
4+4+4

- (a) Glycogenolysis
- (b) Competitive inhibition
- (c) Cori cycle
- (d) Lock and Key model