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(20216)

(Printed Pages 4)

Roll No.....

B.D.S. I Prof.

5136(N)

**B.D.S. Supply & Main Examination,
Feb. 2016**

**Human Physiology & Biochemistry
(BDS-02)**

Time : Three Hours]

[Maximum Marks : 35+35

Note : (1) Attempt **all** questions.

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

PART-A

(PHYSIOLOGY)

1. Define blood pressure, its type and normal values. Describe the short term regulatory mechanisms for control of blood pressure.

1+2+4=7

P.T.O.

2. Discuss the composition and functions of gastric juice. 7
3. Describe in brief about- 2.5×2=5
 - (a) Growth hormone
 - (b) Functions of kidney
4. Differentiate between following- 2.5×4=10
 - (a) Innate and acquired immunity
 - (b) Active and passive transport
 - (c) Cortical and juxtamedullary nephrons
 - (d) Fast and slow pain
5. Write short notes on any **three** - 2×3=6
 - (a) Hypoxic hypoxia
 - (b) Hypermetropia
 - (c) Blood platelets
 - (d) Oxy hemoglobin dissociation curve

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PART-B

(Biochemistry)

1. What are lipoproteins? Classify lipoproteins and describe their role in health and disease. 1+3+3=7
2. What is β -oxidation? Enumerate steps involved in ' β ' oxidation of fatty acid and calculate the energetics of oxidation of one molecule of Palmitic acid. 1+3+2=6
3. What is IUB classification of enzymes? Add a short answer on diagnostic and therapeutic applications of enzymes. 1+3+3=7
4. What is transcription? Give an account of steps involved in transcription. 1+5=6

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P.T.O.

5. Write short notes on the following: $3 \times 3 = 9$

(a) Composition and functions of Saliva

(b) Digestion and absorption of lipids.

(c) Ketone bodies synthesis, utilization and excretion.

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(21116)

Roll No.

B.D.S. I Prof.

5136(N)

B.D.S. Supply & Main Examination,

Nov. 2016

Human Physiology & Biochemistry

(BDS-02)

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

Note : (1) Attempt **all** questions.

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

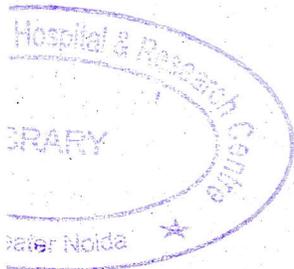
Part-A

(Physiology)

1. Define Cardiac output. Describe its methods of measurement.

07

P.T.O.



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2. Enumerate the hormones which regulate the serum calcium level. Describe the role of parathyroid hormone in detail. 07
3. Differentiate between : 2.5×4=10
- (a) First heart sound and second heart sound
 - (b) Upper motor neuron lesion and lower motor neuron lesion
 - (c) Myopia and hypermetropia
 - (d) Red muscle fiber and white muscle fiber.
4. Write in brief : 2.5×2=5
- (a) Spermatogenesis
 - (b) Clotting factors of Blood
5. Write short notes on any **three** : 2×3=6
- (a) Middle ear
 - (b) Chemical regulation of Respiration

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(c) Counter current mechanism of urine formation

(d) Visceral Pain

Part-B

(Biochemistry)

1. Describe the sources, biochemical functions, normal requirements and deficiency manifestations of Vit. D. 5
2. What are Ketone bodies? Explain the reactions leading to the formation of them. How are they utilised in the body. 4
3. Discuss the biochemical alterations seen in blood & Urine in different types of Jaundice. 4
4. Describe the process of DNA replication. Name two inhibitors of replication. 4

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P.T.O.

5. Write short notes on :

3×6=18

- (a) Glucose Tolerance Test (GTT)
- (b) Fatty liver
- (c) Mutarotation
- (d) Enzyme Profile in Myocardial Infraction
- (e) Oncogenes
- (f) Detoxification

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