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(20216) 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

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

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.

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

(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

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