I.T.S DENTAL COLLEGE, HOSPITAL & RESEARCH CENTRE

47, Knowledge Park-III, Greater Noida

B.D.S 1st year – 2011 Batch

First Internal Assessment

Subject: Physiology/Biochemistry

1. Attempt all questions.
2. Draw neat, well labelled diagrams wherever necessary.
3. Answer all the questions in one sheet only.

19.01.12
Time: 3.0 hrs.

PART-A

M.M: (40)

Q. 1 Discuss the regulation of Respiration. [6]

Q. 2 **Write briefly on:** 4X2=[8]

a) Excitation contraction coupling in a skeletal muscle

b) Mechanism of Blood coagulation

Q. 2 **Draw well labelled diagrams showing-** 2.5X4=[10]

O2 – Hb dissociation curve

Lung volumes & capacities

c) Compound action potential

d) FEV, in obstructive and restrictive lung disorder

Q. 3 **Compare and contrast the following:-** 2X3=[6]

a) Adult and fetal haemoglobin

b) Hypoxic Hypoxia and anaemic hypoxia

c) Red and White skeletal muscle

Q. 5 **Write short notes on-** 2X5=[10]

a) Wallisian Degeneration

b) Respiratory distress syndromes

c) Haldane's effect

d) Nerve growth factor

e) Strength duration curve

PART-B

M.M: [30]

Q. 1 Define Carbohydrate & differentiate between monosaccharides, oligo saccharides & polysaccharides. What are the structural different between amylase & amylobectin? [6]

Q. 2 What are lipids? Explain the biological importance & classify them. Explain compound lipids.

Q. 3 **Write short notes on any 04 -** 3X4=[12]

a) Triglycerides

b) Collagen

c) Essential Amino acids

d) Significance of HMP shunt

e) Urea cycle

Q. 4 **Differentiate any 02 -** 3X2=[6]

a) Competitive & non-competitive inhibition

b) Coenzymes & isoenzymes

c) Gangliosides & cerebrosides

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BDS 1st Year (2011 Supplementary Batch)

Subject: Physiology/Biochemistry

Final Internal Assessment Examination

- Attempt all questions
- Draw neat and well labelled diagram wherever required
- Use separate sheet for Part A and Part B

Time: 3 hrs
M.M. – [35]

PART - A

Q. 1	Define Cardiac output. Discuss the regulation of Cardiac output.	[8]
Q. 2	Write briefly on-	4X2=[8]
a)	Oxygen transport in Blood	
b)	Counter Current Mechanism	
Q. 3	Write short notes on-	2.5X4=[10]
a)	Deglutition	
b)	Hypothyroidism	
c)	Light Reflex	
d)	Parkinson's Disease	
Q. 4	Compare and contrast the following-	3X3=[9]
a)	Diabetes Mellitus & Diabetes Insipidus	
b)	Conditioned Reflex and unconditioned Reflex	
c)	Proliferative & Luteal phase of Menstrual cycle	

PART - B

Q. 1	Enumerate the Factors that influence the absorption of calcium. Give in detail how Blood Calcium levels are regulated?	[6]
Q. 2	a) Describe the sources, biochemical functions, RDA & deficiency manifestations of Vit. D	[5]
	b) Differentiate between Rickets & Osteomalacia	[2]
Q. 3	Explain HMP shunt & mention its significance.	[7]
Q. 4	Define BMR. Enumerate the factors affecting it.	[5]
Q. 5	Write short notes on any 5 -	2X5=[10]
a)	Clinical significance of isoenzymes	
b)	Essential fatty acids	
c)	Sickle cell Anemia	
d)	Replication fork	
e)	Hyperthyroidism	
f)	NH3 toxicity	

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47, Knowledge Park-III, Greater Noida

BDS 1st year (Reg. Batch)

Final Internal Assessment Examination

Subject: Physiology/Biochemistry

- Attempt all questions
- Use separate sheet for Part A & Part B
- Draw neat and well labelled diagram wherever required

10.09.2012
Time: 3 hrs
M.M. – [60]

PART - A

Q. 1 Discuss the regulation of arterial blood pressure. [6]

Q. 2 Write briefly on: 4X2=[8]
a) Juxta glomerular apparatus and its functions
b) Sensory / Ascending Pathways and Sensory Homunculus

Q. 3 Compare and contrast the following: 2.5X4=[10]
a) Hypofunction and hyperfunction of growth hormone in young and adult
b) Bohr's effect and Haldane's effect
c) Red and white muscle
d) Nerve deafness and conduction deafness

Q. 4 Write short notes on: 2X3=[6]
a) Enzymes of pancreatic juice and their functions
b) Action Potential and its ionic bases
c) Spermatogenesis and factors affecting it

PART – B

Q. 1 Draw TCA Cycle. What are the normal values of blood glucose? How is blood sugar level regulated in our body? [7]

Q. 2 What are Proteins? What are the functions of Protein in our body & what is the structural organization of Protein in the body? [7]

Q. 3 Describe Sources, functions, requirement & deficiency manifestation of Vit. A. [6]

Q. 4 Describe the following: 2.5X2=[5]
a) β- Oxidation of fatty acids
b) Glycogen storage disease

Q. 5 Write short notes on any two: 2.5X2=[5]
a) Diagnostic significance of isoenzymes
b) Metabolic Role of Calcium
c) Hypothyroidism & Hyperthyroidism
d) Replication

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B.D.S 1st – Regular Batch

Second Internal Assessment

Subject: Physiology / Biochemistry

1. Attempt all questions.
2. Draw neat, well labelled diagrams wherever necessary.
3. Use separate sheet for Part-A & part-B.

Date:24.05.12
Time: 3.0 hrs.
M.M: (70)

PART-A

Q. 1	What is normal serum calcium level? Discuss its hormonal regulation.	[6]
Q. 2	Discuss the regulation of cardiac output.	[6]
Q. 3	Write briefly on:-	[4x2=8]
a)	Ovarian changes during normal menstrual cycle.	
b)	Composition and functions of pancreatic juice.	
Q. 4	Compare and contrast:-	[3x4=12]
a)	Hypothyroidism in young and adult.	
b)	Segmentation and peristalsis.	
c)	FEV, in obstructive and restrictive diseases.	
d)	Baroreceptors and chemoreceptors.	
Q. 5	Write short notes on:-	[2x4=8]
a)	Spermatogenesis.	
b)	ECG in Lead II	
c)	Lactation	
d)	Shock	

PART-B

Q. 1	Enumerate the factors that influence the absorption of calcium. Give in details how blood calcium level are regulated?	[6]
Q. 2 a)	Describe sources, biochemical functions. RDA & deficiency manifestations of vitamin A.	[6]
b)	Differentiate between Rods & Cones.	
Q. 3	Define BMR. Explain the factors that affect BMR.	[6]
Q. 4	Differentiate between any three:-	[2x3=6]
a)	Rickets & Osteomalacia	
b)	Kwashiorkor & Marasmus	
c)	Competitive & Non-competitive inhibition	
d)	Cerebrosides & Gangliosides	
Q. 5	Write short notes on any three:-	[2x3=6]
a)	RQA	
b)	Fatty Liver	
c)	Dietary fibres	
d)	Oxygen dissociation curve	