Roll No. .....

(2043)

BDS Ist Prof.

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B. D. S. Examination, April 2003

Paper II

General Human Physiology & Biochemistry

(BDS-02)

Time : Three Hours] *[Maximum Marks : 25+25*

Note : Attempt *all* questions of Section A and *five* questions from Section B. Illustrate your answers with suitable diagrams.

Section A

(General Human Physiology)

1. (a) Discuss the factors affecting erythropoiesis.
   (b) Name the coagulation factors of blood. 5

2. (a) Name the enzymes of pancreatic juice. Discuss their functions.

(b) Write a note on enterohepatic circulation of bile. 5

3. (a) Name the types of hypoxia. Discuss about hypoxic hypoxia.

(b) Discuss the role of baroreceptors on control of blood pressure. 5

4. Write notes on any two of the following : 5

(a) Myxoedema

(b) Diabetes insipidus

(c) Tetany.

5. (a) Discuss the vegetative functions of hypothalamus.

(b) Write a note on Safe period. 5

Section B

(Biochemistry)

1. (a) Fats are preferred source of energy fuel compared to carbohydrates and proteins. Explain.

(b) What is the role of cholesterol in the formation of atherosclerotic plaques ? 5

2. Write short notes on the following :

(i) Fat soluable vitamins

(ii) Structural organisations in proteins

(iii) HMP shunt pathway. 5

3. (a) What is the net effect of qusulin on blood glucose level ?

(b) Define oxidative phosphorylation. Name the components of electron transport chain. 5

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BDS Ist Prof.

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B. D. S. Examination, Sept. 2003

GENERAL HUMAN PHYSIOLOGY AND BIOCHEMISTRY

Second Paper

(BDS-02)

Time : Three Hours] [*Maximum Marks : 25+25*

Note. Attempt *all* questions of Section A and *five* questions from Section B. Illustrate your answers with suitable diagrams.

Section A

(General Human Physiology)

1. Describe the physiology of muscle contraction. 5

2. Describe the intrinsic mechanism of blood coagulation. 5

P.T.O.

4. Write a note on Vitamin - D 2

(b) Discuss the role of surfactant. 2

5. Define Plasma clearance. How you will determine GFR ? 4

6. Differentiate between –

(a) Peristalsis and antiperistalsis. 4

(b) Active transport and facilitated diffusion.

Section - B
(Biochemistry)

(a) Compare the biochemical significance of oxygen dissociation cure between myoglobin and Haemoglobin. 2

(b) What do you understand by allosteric effect? Name the allosteric effecters of Haemoglobin binding to oxygen. 2

(a) What are the important conclusions about Michaelis-Menten kinetics of enzyme catalysed reactions? 2

(b) How enzyme inhibitors act as drugs? Illustrate your answer with two examples. 2

3. Describe the salient features of chemio osmotic synthesis for the generation of ATP. 4

4. (a) Describe briefly TCA cycle; its location inside the cell and its purpose. 3

(b) Compare the quantum of energy production from glucose in glycolysis and TCA cycle. 2

5. (a) Name a condition and a disease in which there is accumulation of ketone bodies and ketosis. Explain the causes. What therapy has to be given immediately? 3

6. (a) Describe the beneficial role of fibre in the diet. 2

(b) Explain how are Vitamin C, Selenium and Vitamin E as group of nutrients for the prevention of chronic diseases. 2