


PR-4006
First Year M. B. B. S. Examination

June / July - 2014

Biochemistry : Paper - II

Time : 1 Hour and 50 Minutes]

[Total Marks : 40

Instructions :

(1)

નોંધ : કૃપા કરીને નીચેના વિગતો ઠીક-ઠીક રીતે ભરવા. Fillup strictly the details of signs on your answer book.		Seat No. :
Name of the Examination :		
F. Y. M.B.B.S.		
Name of the Subject :		
BIOCHEMISTRY-2		
Subject Code No. :	4 0 0 6	Section No. (1, 2, ...) : 182
		Student's Signature

- Write each section in separate answer books
- Draw figures wherever possible

SECTION-I

- Short notes : (2 out of 3) 8
 - Mechanism of translation process (protein synthesis)
 - Coenzyme functions and various applications of folate antagonists in clinical practice
 - Formation of various biologically important products from tyrosine. Why administered dopamine is not effective in the treatment of Parkinsonism?
- Describe in brief : (4 out of 6) 12
 - Phase II reactions for the elimination of various metabolites
 - Deficiency manifestations of Vitamin A
 - Explain the importance of any four tumor markers
 - Haem synthesis and explain at which step of the metabolic pathway the synthesis of haem is regulated
 - Causes of primary and secondary Gout
 - Mechanism of competitive inhibition and give importance of four competitive inhibitors in clinical practice

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[Contd...

SECTION-II

3. Case with 5 questions

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Mrs. Patel who was Rh negative (Mr. Patel was Rh positive) had given birth to a baby boy. This was her second pregnancy. This baby boy had developed haemolytic jaundice of new born with a high serum bilirubin levels of 21 mg/dl. Most of the bilirubin was in "indirect" form. The child was given exchange transfusion followed by phototherapy. The condition was improved.

- 1) Where bilirubin formed in our body and what do you understand by direct & indirect bilirubin?
- 2) Why most of the bilirubin in the serum of this baby was in indirect form?
- 3) How bilirubin is transported in the plasma. Why caution needs to be exercised while administering aspirin like drugs to the children
- 4) Looking into the case history explain the basis for the development of haemolytic jaundice of new born in this patient.
- 5) Why exchange transfusion and phototherapy was given to this child.

4. Answer in few lines : (5 out of 7)

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- 1) In strict sense genetic code is not universal
- 2) Drugs based on (in the mode of action) the principle of suicide inhibition of enzymes has wide application in clinical medicine
- 3) Plasmids play essential role in DNA recombinant technology and presence plasmids in bacteria pose a great challenge in modern medical practice
- 4) The nature of defect in haemoglobin in diseases like sickle cell anaemia is different from thalassemia
- 5) Most of human cancers show the emergence of oncofetal antigens. Explain with examples
- 6) Vitamin D deficiency is seen in liver and renal disorders
- 7) About 40 g of carbohydrate diet will induce sleep, while protein rich food will cause alertness. Explain.