**Date:** 21/5/2018

**Time:** 2 hours

**Pages:** 2 pages

**Full mark:** 25marks

**Biochemistry (C), for the 2nd year students**

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**Please, answer all the following questions with formulae if possible.**

1. ***Write about: (8 marks)***
2. Mention the metabolic inborn errors of amino acids which caused by congenital deficiency of enzymes and explain one of them. **(3 marks)**
3. List the specialized products from tyrosine and explain the formation of one of them **(1.5 marks)**
4. The mechanism of action of L-glutamate dehydrogenase and metabolic functions (significance) of glutamate **(1.5marks)**
5. Compare the enzymes carbamoyl phosphate synthetase I and II.  **(2marks)**

1. ***Discuss : (2x6=12marks)***
2. Fate of ammonia in liver
3. Abnormal constituents of urine (Three only)
4. Synthesis of Indole and skatol.
5. Regulation of calcium metabolism.
6. Detoxication by conjugation with glycine and glucouronic acids
7. Blood Buffer Systems

***Please, turn over***

1. ***Choose the correct answer (please ,in a table) (5marks)***
2. ***NH3 is detoxified in brain chiefly as***

(A) Urea (B) Uric acid

 (C) Creatinine (D) Glutamine

1. ***Source of N1 in pyrimidines is***

(A) glutamic acid (B) aspartic acid

(C) Glycine (D) alanine

1. ***Bence Jones proteins may be excreted in urine of patients suffering from***

 (A) Tuberculosis (B) Diabetes mellitus

(C) Multiple myeloma (D) Hyperthyroidism

1. ***Conversion of tyrosine to dihydroxyphenylalanine is catalysed by tyrosine hydroxylase which requires***

(A) NAD (B) FAD

(C) ATP (D) Tetrahydrobiopterin

1. ***A coenzyme required for the synthesis of glycine from serine is***

 (A) ATP (B) Pyridoxal phosphate

(C) Tetrahydrofolate (D) NAD

1. ***Transmethylation of guanido acetic acid gives***

(A)Creatine phosphate (B) Creatinine

##  (C) Choline (D) n-methyl nicotinamide

1. ***Oxaloacetate is converted to aspartic acid by***

 (A) Reductase (B) Oxidase

(C) Transminase (D) Catalase

1. ***Uricase enzyme is present in mammals except***

(A) Man and chimpanzy (B) dogs

(C) Camel (D) cats

1. ***The normal urine color is due to***

(A) indican (B) urochromes

(C) porphyrins. (D) Bilirubin

1. ***Small amount of urinary oxalates is contributed by the amino acid:***

(A) Glycine (B) Tyrosine

 (C) Alanine (D) Serine

***Good luck ,* Prof.Dr.Kh.Kahilo**