

# BIOCHEMISTRY

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## Paper - 1

JUNE/JULY 2006

(2 ½ hours)

Total marks : 35

### SECTION – B

2. Write short answers ( any 5 of 6 ) :

(5x2=10)

- a) What is Chargaff's rule?
- b) Methemoglobin.
- c) Structure and functions of IgG.
- d) Two examples of transmethylation reactions.
- e) Why is the calorific value of fats much higher than that of carbohydrates and proteins.
- f) Inhibitors of the respiratory chain.

3. Answer in short ( any 2 of 3 ) :

(2x4=8)

- a) Diagnostic applications of enzymes and isoenzymes.
- b) Nitrogen balance.
- c) A boy has developed a tendency of biting of nails, fingers and lips, often causing selfmutilation. He also suffers from spasticity and mental retardation.
  - i) Name the disease.
  - ii) Name the deficient enzyme causing the disease.
  - iii) Name the concerned metabolic pathway.
  - iv) Explain why only males are affected with the disease.

### SECTION – C

4. Describe translation phase of protein biosynthesis and its inhibition.(1x9=9)

OR

Describe sources, biochemical functions, deficiency manifestations and daily requirement of pyridoxine.

**5. Answer (any 2 of 3) :**

**(2x4=8)**

- a) Tertiary and quaternary structure of proteins.
- b) Kwashiorkor.
- c) Lac Operon Concept.

