

(2½ Hours)

[Total Marks : 60]

Please check whether you have got the right question paper.

N.B. : (1) Answer **all five** questions.(2) **All** questions carry **equal** marks.(3) Draw **neat** labelled diagrams wherever **necessary**.

- Q.1. (a) Describe the mechanism of urea production in body. How is it excreted out of the body ? **6**
- (b) Briefly discuss the process of proteolysis. **6**
- OR**
- Q.1. What are the different precursors for the biosynthesis of amino acids ? Discuss the biosynthesis of threonine and its regulation. **12**
- Q.2. Describe briefly :—
- (a) Compare the end products of purine and pyrimidine degradation. **6**
- (b) Inherited disorders of Purine salvage pathway. **6**
- OR**
- Q.2. Discuss the biosynthesis and degradation of pyrimidine nucleotides. **12**
- Q.3. Describe briefly :—
- (a) Electron transport chain in nitrogenase **6**
- (b) Nitrate reduction in cytosol. **6**
- OR**
- Q.3. Discuss the structure of NIF genes and its regulation by oxygen and ammonia. **12**
- Q.4. Describe briefly :—
- (a) Production of ATP in photosynthesis **6**
- (b) Functions of alkaloids **6**
- OR**
- Q.4. Describe briefly :—
- (a) Biosynthesis of nicotine **6**
- (b) Carbon fixation by C₄ pathway. **6**
- Q.5. Write short notes on any **three** :— **12**
- (a) Decarboxylation of amino acids
- (b) Ammonia excretion
- (c) Precursors of purine biosynthesis
- (d) Bacterial hydrogenases
- (e) Tannins
- (f) Phytochrome.
