

20/04/2013

B.Tech ^I CS-4781

(2½ Hours)

[Total Marks : 60]

- N.B. :** (1) **All** questions are **compulsory**.
 (2) **All** questions carry **equal** marks.
 (3) Draw **neat**, labelled diagram and structures wherever **necessary**.

1. (a) Discuss the Uronic acid pathway and mention its significance. 8
OR
 (a) With reference to the glycogen storage diseases comment on the following :- 8
 (i) Von Gierke's disease
 (ii) Cori's disease.
- (b) Give functional significance of FAS complex (fatty acid synthase complex). 4
OR
 (b) Explain significance of HMP pathway. 4
2. Attempt any **two** of the following :- 12
 (a) Describe the biosynthesis of phenylalanine.
 (b) Give the reactions involved in the breakdown of the aminoacids leading to the formation of α -ketoglutarate.
 (c) Comment on Alkaptonuria and Albinism.
 (d) Discuss the biosynthesis of valine.
3. (a) Give an account of biosynthesis of Inosine monophosphate. 8
OR
 (a) Discuss the biosynthesis of pyrimidine nucleotides. 8
 (b) Briefly explain Gout. 4
OR
 (b) Comment on Lesch-Nyhan syndrome. 4
4. Describe the reactions of the glyoxalate pathway in plants and give its significance. 12
OR
 (a) Write a note on RUBP carboxylase. 6
 (b) Explain CAM pathway. 6
5. Write short notes on (any **three**) :- 12
 (a) Debranching enzyme
 (b) Ketogenic amino acids
 (c) Orotic aciduria
 (d) SCID
 (e) Significance of C4 cycle
 (f) Nitrogen fixation.