

B.Sc.(with Credits)-Regular-Semester 2012 Sem VI  
**B.Sc.4501 - Biochemistry Paper-I (Metabolism-II)**

P. Pages : 2

Time : Three Hours



**GUG/S/18/5618**

Max. Marks : 50

- Notes : 1. All questions are compulsory and carry equal marks.  
2. Draw diagrams wherever necessary.

1. Give detailed account of  $\beta$ -oxidation of fatty acids. **10**

**OR**

Give detailed account on fatty acid synthase complex. **10**

2. Give detailed account urea formation by urea cycle. **10**

**OR**

Give detailed account on biosynthesis of purine nucleotides. **10**

3. a) Explain HMP shunt. **2½×**  
**4=10**

b) Explain ketosis.

c) Write a note on glucose-alanine cycle.

d) Explain the role of CAMP in nucleotide metabolism.

**OR**

e) Give brief idea about  $\alpha$ -oxidation. **2½×**  
**4=10**

f) Write a note on ketoacidosis.

g) Explain the role of glutamine to transport ammonia.

h) Write a note on Gout.

4. a) Explain yield of ATP during fatty acid oxidation. **2½×**  
**4=10**

b) Write a note on biosynthesis of sphingolipids.

c) Write a note on transamination reaction.

d) Write a note on regulation of bio-synthesis of pyrimidine nucleotides.

**OR**

- e) Write a note on hydrolysis of triglycerols. 2½×  
f) Write a note on ketogenesis. 4=10  
g) Explain oxidative deamination with suitable example.  
h) Explain the importance of ribonucleotide reductase.

**5. Solve any ten.** **1×10**  
**=10**

- a) Name the pathway required to supply NADPH for fatty acid biosynthesis.  
b) What is mean by ω-oxidation?  
c) Name the compound repressible to transport fatty acids into mitochondria.  
d) Name the enzyme involved in regulation of fatty acid biosynthesis.  
e) Write chemical structure of choline.  
f) Name any one unsaturated fatty acid.  
g) How many ATP's are utilized by urea cycle.  
h) Name any one disorder associated with urea cycle.  
i) Give any two examples of ketogenic amino acids.  
j) Give full form of PRPP.  
k) Give the structure of CAMP.  
l) What is the source of carbon & nitrogen atom in pyrimidine ring.

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