

Avinashilingam Institute for Home Science and Higher Education for Women
Coimbatore-641043.

Master's Degree Examination – November 2017

I Semester

Class : IPG
Major : BIOCHEMISTRY

Time: 3 hours
Max. Marks: 60

17MBCC03 Intermediary Metabolism and Regulation

Part A

Choose the correct answer

10 x 1/2 = 5

- Which of the following statements about the control of muscle glycogen is correct?
 - muscle glycogen phosphorylase is allosterically activated by cAMP
 - muscle glycogen phosphorylase is allosterically activated by ATP
 - muscle glycogen phosphorylase normally exist in the *a* form
 - muscle glycogen phosphorylase is activated by phosphorylation by an active phosphorylase kinase
- All the enzymes of citric acid cycle are regulated except
 - citrate synthase
 - isocitrate dehydrogenase
 - α -ketoglutarate dehydrogenase
 - succinate dehydrogenase
- Which of the following statements about HDL is correct?
 - HDL are only synthesized in the liver
 - HDL transport triacylglycerols to peripheral tissues
 - HDL pick up cholesterol and convert it to cholesterol ester
 - HDL cannot be endocytosed by the liver
- The key enzyme in the regulation of fatty acid synthesis is
 - acetyl CoA carboxylase
 - protein phosphatase
 - thiokinase
 - protein kinase
- Which of the following statements about the urea cycle is correct?
 - argininosuccinate is lysed to urea and ornithine in the urea cycle
 - carbamoyl phosphate supplies both of the nitrogen atoms of urea in the urea cycle
 - formation of urea from the urea cycle yields energy
 - arginine is hydrolysed to urea and ornithine in the urea cycle
- GABA is derived from glutamate by which of the following reactions
 - transamination
 - decarboxylation
 - deamination
 - hydroxylation
- Dopamine is synthesized from which of the following amino acids
 - tyrosine
 - tryptophan
 - histidine
 - methionine
- Which of the following amino acids is not converted to acetyl CoA by metabolism?
 - tyrosine
 - leucine
 - valine
 - lysine
- Which of the following statements about the *de novo* synthesis of purine nucleotides is correct?
 - AMP is the first purine nucleotide assembled from the *de novo* pathway
 - The enzyme PRPP amidotransferase catalyses the committed step of the *de novo* synthesis pathway
 - IMP is a competitive inhibitor of PRPP synthetase
 - AMP is a competitive inhibitor of PRPP amidotransferase
- A rare inherited disorder caused by a deficiency of the enzyme hypoxanthine-guanine phosphoribosyltransferase
 - Lesch-Nyhan syndrome
 - Von Gierke's disease
 - Reye's syndrome
 - orotic aciduria

