

Student's name:

Time: 3 hours

Biochemistry II Summer 2020 Exam

Short note questions (answer all questions) 100 Marks

Add structures and examples to your answers

Q1) Complete these reactions:

- a- Pyruvate to DHAP
- b- Ornithine to arginine
- c- Glycerol to PS
- d- Serine to sphingomyelin
- e- Tyrosine to adrenaline

Q2) Mention the cycle's rate limiting steps; and how they regulated:

- a- Pentose P shuttle
- b- Glycolysis
- c- Beta oxidation
- d- Urea cycle
- e- Cholesterol synthesis

Q3) Compare between:

- a- Insulin and adrenaline stimulated phosphatases
- b- Complex I and II
- c- Pyruvate dehydrogenase and Pyruvate kinase deficiency
- d- Malate and lactate dehydrogenase
- e- ΔG equations

Q4) Describe the mechanisms of:

- a- Adenylyl cyclase
- b- Nucleoside di P kinase
- c- Citrate synthase
- d- Thiopherase
- e- Glucose isomerase

Q5) Briefly explain why:

- a- ATP energy
- b- Hypo and hyperthermia due to mitochondrial cycles inhibition
- c- Type II diabetes mellitus
- d- Glycogen storage diseases
- e- Coupling reactions

Q6) Write about:

- a- Bilirubin
- b- PKU
- c- Glutamate as N collector
- d- Porphyria
- e- GLUT

Q7) How to synthesize:

- a- Creatine
- b- Glucose
- c- Acetone
- d- Oxaloacetate
- e- Serine

Good Luck

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