

2017-2011

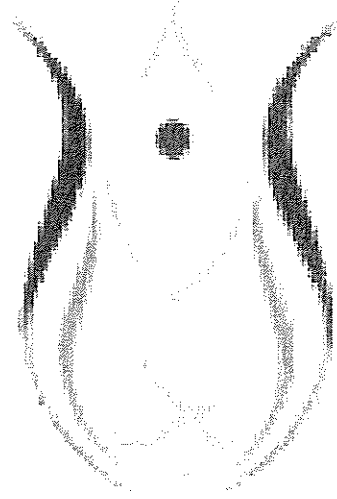
جان الدفاعات - كلية الطب

سنة ثانية - فصل أول

أسئلة سنوات سابقة

Mid-Term

Past Papers



Medical Committee
The University of Jordan

Mid-term Exam past papers for all the 5 subjects of first semester - second year. These were chosen among thousands of questions and introduced to you by جان الدفاعات ...

Microbiology
Pharmacology
Pathology

Biochemistry

Community Med

ب. ف. م.

4
5
6

- BIOCHEM @2012

- ✓ what is the product of glycolysis in the RBC's>>>LACTATE
- ✓ all of the following happen in the in the glycolysis except>>>conversion from NADH to
- ✓ NAD+ takes place
- ✓ one of the following found in blood but not in serum>>>>fibrinogen
- ✓ what binds to bilirubin>>>>albumin
- ✓ what results bcs of the action of superoxide dismutase: H₂O₂ + o₂
- ✓ thatwasnt a choice, there was h₂o₂ and there was o₂⁻. Are you saying both of those
- ✓ Choices were correct?
- ✓ what is the most common cause of gout in the following situations :
inhibiting salvage pathway of purines
- ✓ one of the ways to treat gout(hyperuricemia)>>>inhibiting xanthine oxidase
- ✓ What makes the ring of the pyrimidines:aspartate + glutamine
- ✓ one of the following about carnitine deficiency is wrong>>>> it interferes with the entrance of small chain fatty acids..
- ✓ synthesis of 12 carbon fatty(the carbon products are present) acid requires :1 acetyl Coa , 0 ATP , 10 NADPH
- ✓ activator of lipases>>>apo c 2
- ✓ one of the following about carnitine deficiency is wrong>>>> it interferes with the entrance of small chain fatty acids..
- ✓ synthesis of 12 carbon fatty(the carbon products are present) acid requires :1 acetyl Coa , 0 ATP , 10 NADPH
- ✓ activator of lipases>>>apo c 2

قام الدكتور نايف في بداية (محاضرة) بالإجابة على بعض أسئلة (الامتحان mid) بسرعة، حاولتُ قدر استطاعتي (الاستماع إلى هذه الأسئلة ونقلتها منها ما استطعت سماعه. أتمنى أن تعود علينا جميعاً بالفائدة:

- ① During well fed state, which of the following enzymes exist in the activated form?
 - Glycogen Synthase.
- ② Which of the following statements about regulation of pyruvate dehydrogenase is correct?
 - pyruvate dehydrogenase is inhibited by high acetyl CoA concentration.
- ③ Galactosemia may be treated most practically by:
 - elimination of all dairy products in the diet.
- ④ Place the following steps of the cascade of Glycogen metabolism in the proper sequence:
 - hormone binding to target cell.
 - formation of cAMP.
 - Phosphorylation by protein kinase.
 - phosphorylation of Glycogen synthase A & phosphorylase kinase.
 - phosphorylation of phosphorylase B
- ⑤ In Lactose biosynthesis, the substrates of Lactose Synthase are:
 - Glucose & UDP Galactose.
- ⑥ Fructose intolerance is due to:
 - Liver aldolase B deficiency

⑦ Function of Citric acid cycle is characterized by all of the following statements except:

- it _____ for the net synthesis of oxaloacetate.

⑧ Protein kinase is activated by a process involving:
A, B & C

(A) relate of α subunit to G-protein

(B) production of cAMP.

(C) Dissociation of the subunit complex to regulatory catalytic subunit.

⑨ which of the following is the products of the reaction of superoxide dismutase?

- Hydrogen peroxide.

كانت هذه هي المرة الأولى التي أجب فيها كتابة
المحاضرات ، و لأن الواقع بدأ مختلفاً جداً عما كنت
أتصور أود أن أشكر كل من مرّ و سيمر بهذه
التجربة خاصة من قام بكتابة محاضرات virology ..
أعتذر مسبقاً عن أي خطأ ورد في هذه المحاضرة
و أشكر للجنة جهودها و أتمنى إعادة النظر بشأن
انضمام المزيد من الطالبات للجنة ليسهل التواصل
معها ..

أختكم
مسرة سكرها

Biochemistry

Quiz

16/12/2010

د. تاليف

د. فيصل الخطيب

Q1) about transketolase and transaldolase which of the following are (is) correct :-

- a- both require thiamine pyrophosphate as a co-factor.
- b- both ~~are~~ catalyze irreversible steps.
- c- both work on a ketose.
- d- both are used to generate hexose from pentose but not pentose from hexose.
- e- all are correct.

Q2) all of the following are true about PPP except :-

- a- it's the only source of NADPH for RBCs.
- b- it's regulated by glucose-6-phosphate dehydrogenase.
- c- it occurs in organs having fatty acid or steroid hormone synthases.
- d- NADPH is produced by the reversible steps.
- e-

Q3) which of the following is used to produce hydrogen peroxide.

- a- GSH peroxidase.
- b- catalase.
- c- SOD
- d- oxidase.
- e- Fenton reaction.

Q4) which of the following doesn't produce ROS :-

- a- oxidative burst during phagocytosis.
- b- coenzyme Q in R.C.
- c- oxidase.
- d- flavinoids.

Q5) how many NADPH and acetyl CoA needed to produce 12 C fatty acid.
→ 10 NADPH, 6 acetyl CoA.

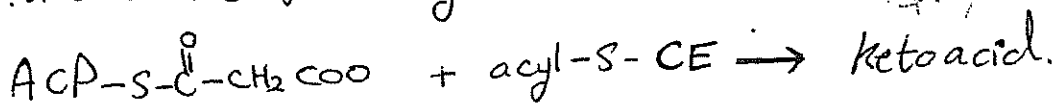
Q6) the major source of cholesterol from food is:
a- liver. d- ~~meat~~ animal fat.
b- egg. e- butter.
c- red meat.

Q7) regarding arachidonic acid, which is not true:
a- ---
b- it contains 4 double
c- its synthesis require isomerase, reductase and β ---
d- its ω -3
e- its an essential fatty acid if linoleic acid is deficient.

Q8) inhibition of acetyl CoA carboxylase, result in:
a- ---
b- increase fatty acid oxidation.
c- inhibit carnitine shuttle.
d- inhibit transfer of acetyl CoA to mitochondria.
e- increase cholesterol synthesis.

Q9) which of the following is an activator signal of fatty acid synthesis.
→ citrate.

Q10) about the following reaction ----



- a- malonyl CoA is one of the reactants.
b- CO_2 is a product.
c- ---
d- --
e- ---

Q11) about glycerol phosphate synthesis in adipose tissue.

a- it's carried by glycerol-P-dehydrogenase.

b- it's " " glycerol kinase.

c- it needs ATP to drive the reaction to the forward direction.

d- it's generated by phosphorylation of glycerol.

e- (b+c+d) are correct.

Q12) generation of lysophosphatidic acid from phospholipid.
is done by.

a- removal of fatty acid at carbon #2.

b- by lysophosphatase action.

c- --

d- --

e- ----

Q13) about keton bodies is wrong.

a- the liver can use keton body as a source of energy.

b- not all of keton bodies contain keton group.

c- it happens when insulin levels are high.

d- it cause acidemia when accumulate in plasma.

e- ----

Q14) about sphingosine which is not true;

a- it is generated by the action of ceramidase.

b- it's found in cardiolipin.

c- it's found in glycolipids and sulfatid.

d- it's generated from palmitoyl CoA and serine.

e- ----

15) which of the following when hydrolysed results in generation of two second messengers.

⇒ phosphatidylinositol 4,5-bisphosphate

16) phosphatidyl choline is generated from phosphatidylethanolamine by which of the following processes-

⇒ methylation.

17) when we transfer phosphoryl choline from PC (phosphatidyl choline) to ceramide; we generate

⇒ sphingomyelin and DAG

18) the carrier of activated alcohol in synthesis of phospholipid is

⇒ CDP

19) accumulation of cholesterol in blood in case of hypercholesterolemia is done by

a- defect in LDL receptor.

b- ----

c- ----

d- ----

e- ----

} others related to cholelithiasis.

20) the first molecule in cholesterol synthesis that doesn't have pyrophosphate in it is:-

Ⓐ squalene.

b- squalene epoxide

c- mevalonate

d- ----

e- ----

Q21). which lipoprotein migrate the fastest in electrophoresis. test :-

⇒ HDL.

Q22). Apo C-II, which is correct ⇒ activate lipoprotein lipase.

Q23). which is wrong about lipoprotein.

a- only HDL contain (A) apoprotein

b- IDL is more density than LDL.

c- ---

d- ---

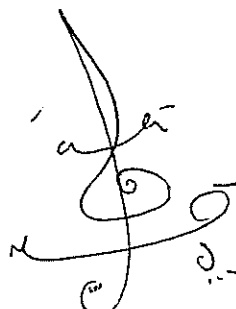
e- ---

Q24). ?!

The end.

* مدة الامتحان (35 min)

* عدد الاسئلة (24 Q.)



2009 ٢٠٠٩

E. in the cytosol of the cell.

Inhibitor of ETC at FMN \rightarrow CoQ is:

- A. Amytal
- B. Rotenon
- C. Antimycin
- D. Cyanide
- E. A & B

Dr. Sami Tahseen Al-Nafe'

079/5188355

What is the net yield of NADH when 1 mole of glucose 6-phosphate is oxidized by aerobic glycolysis to yield pyruvate?

- A. 0 mole NADH
- B. 1 mole NADH
- C. 2 mole NADH
- D. 3 mole NADH

(8) The most important controlled step in the glycolytic pathway is

- A. the formation of fructose 1,6 bisphosphate by PFK1
- B. the formation of glucose-6-phosphate.
- C. the formation of fructose-6-phosphate.
- D. the formation of glyceraldehyde-3-phosphate.
- E. the formation of phosphoenolpyruvate.

Activators of the enzyme pyruvate kinase include:

- A. Insulin.
- B. Fructose-1, 6-bisphosphate.
- C. Fructose-2, 6-bisphosphate.
- D. A + B

Glucagon controls the entry of glucose into glycolysis by altering the enzymatic function of PFK-2. This inhibition results in the conversion of:

- A. Fructose-6-phosphate into fructose-2,6-bisphosphate.
- B. Fructose-1,6-bisphosphate into fructose-2,6-bisphosphate.
- C. Fructose-2,6-bisphosphate into fructose-6-phosphate.

Which of the following enzyme of glycolysis catalyzes the reaction of phosphoenolpyruvate (PEP) to pyruvate while making one molecule of ATP in the process?

- A. Enolase.
- B. Phosphoglycerate kinase.
- C. Pyruvate kinase.
- D. Aldolase.

An enzyme in liver which is part of both the glycolytic and gluconeogenic pathways is:

- A. Glucose 6-phosphatase.
- B. PEP carboxykinase.
- C. Fructose 1, 6-bisphosphatase.
- D. Glucokinase.

E. Glyceraldehyde 3-phosphate dehydrogenase.

Fructose 2, 6-bisphosphate:

- A. Is required for gluconeogenesis
- B. Synthesis is stimulated by insulin
- C. Is increased by cyclic AMP
- D. Inhibits phosphofructokinase (PFK1)
- E. stimulates fructose 1,6-bisphosphatase

Glycolysis will cease if:

- A. Phosphofructokinase is activated.
- B. Mitochondria are not present in the cell.
- C. NADH is not oxidized.

The rate of glycolysis is increased by:

- A. Increased Insulin / Glucagon ratio
- B. ATP
- C. Citrate.

Under anaerobic conditions, a primary product of glycolysis is

- a. pyruvate.
- b. lactate.
- d. ethanol.

Most of the ATP made during catabolism is generated during:

- A. 1st stage of catabolism
- B. 2nd stage of catabolism
- C. 3rd stage of catabolism

Which of the following enzymes of glycolysis is/are regulated?

- A. Glucokinase/hexokinase.
- B. Aldolase.
- C. Pyruvate kinase.
- D. A and C.

The rate-limiting enzyme in glycolysis is:

- A. Hexokinase.
- B. Glucokinase.
- C. Phosphatase-1.
- D. Phosphofructokinase-1.
- E. Aldolase.

The enzyme that has low k_m and low V_{max} for glucose is:

- A. Hexokinase.
- B. Glucokinase.
- C. Phosphofructokinase-1.
- D. Aldolase.

Pyruvate carboxylase:

- a) Requires acetyl CoA for activity.
- b) Occurs in the cytosol.
- c) Catalyzes an irreversible reaction in glycolysis.
- e) Produces carbon dioxide.

Inhibited by glucose-6-phosphate

- A. Glucokinase

- B. Hexokinase
- C. Both A and B are true
- D. None of the above

(10) Under anaerobic conditions, skeletal muscle tissue may continue to generate ATP from glucose metabolism (via glycolysis), resulting in the conversion of glucose to

- A. acetyl-CoA.
- B. succinate.
- C. lactate.
- D. citrate.
- E. malonate

(53) Glucokinase, the liver enzyme, has which of the following properties:

- A. a lower K_m for glucose than hexokinase
- B. can be inhibited by glucose-6-phosphate
- C. a higher K_m for glucose than hexokinase

Dr. Sami Tahseen Al-Nafe'
079/5188355

Which of the following enzymes is absent in muscle, but is present in liver?

- A. Hexokinase.
- B. Lactate dehydrogenase
- C. Glucose 6-phosphatase
- D. Glycogen phosphorylase

Which enzyme would be impaired in case of Biotin deficiency?

- A. Fructose 1, 6-bisphosphatase.
- B. Pyruvate kinase.
- C. PEP carboxykinase.
- D. Pyruvate carboxylase.
- E. Malate dehydrogenase

Which of the following is (are) unique reaction(s) for Gluconeogenesis:

- a. Pyruvate to oxaloacetate
- b. Glucose 6-phosphate to glucose
- c. Fructose 1,6 bisphosphate to fructose 6-phosphate
- d. All of the above
- e. None of the above

In the Cori cycle, carbons in the form of lactate are carried by the blood to the liver and then returned to muscle tissue by the blood in the form of

- a. glucose.
- b. pyruvate.
- e. glutamine.

Gluconeogenesis occur in...

- A. Adipose tissue
- B. Liver.
- C. Brain.
- D. Red blood cells.

The end product of gluconeogenesis is:

- A. Fructose.
- B. Glucose phosphate.
- C. D-Glucose.
- D. Sucrose.
- E. L-Glucose.

All of the following are gluconeogenic precursors, EXCEPT:

- a) Glycerol.
- b) Lactate.
- c) Acetyl CoA.
- d) Oxaloacetate.
- e) Ethanol.

The shuttle that circulates lactate and glucose between liver and muscle is:

- a) Krebs cycle
- b) Cori cycle
- c) Lactate-glucose cycle.
- d) Glucose-lactate cycle.
- e) None of the above.

All of the following are positive effectors of gluconeogenesis EXCEPT

- A. ATP
- B. Citrate
- C. Acetyl CoA
- E. AMP

The conversion of pyruvate to phosphoenolpyruvate in gluconeogenesis requires which of the following enzymes?

- A. lactate dehydrogenase and pyruvate kinase
- B. pyruvate dehydrogenase
- C. glucose-6-phosphate dehydrogenase
- D. pyruvate carboxylase and phosphoenolpyruvate carboxykinase
- E. phosphofructokinase and aldolase

All of the following are Citric acid cycle intermediates, EXCEPT:

- a. Citrate
- b. Alpha ketoglutarate

- c. lactate
- d. Succinate
- e. Malate

One of the following is NOT an energy yielding reaction of the TCA cycle:

- a. Isocitrate to α ketoglutarate
- b. Alpha ketoglutarate to succinyl CoA
- c. Fumarate to Malate
- d. Malate to Oxaloacetate
- e. Succinyl CoA to succinate

The number of ATP molecules produced from oxidation of one molecule of acetyl-CoA is.

- a. 9
- b. 2
- c. 10
- d. 24

Which of the following statements concerning TCA cycle is FALSE?

- A. It occurs in mitochondrion.
- B. One FADH₂ and two NADH are generated in this cycle.
- C. Aerobic environment is must for the reactions of this cycle.

The tricarboxylic acid cycle is initiated by the condensation of acetyl-CoA and:

- A- Malate.
- B- Citrate.
- C- Pyruvate.
- D- Oxaloacetate
- E- HCO₃⁻.

Which of the following enzymic activities would you expect to be decreased in thiamine deficiency?

- a) Pyruvate carboxylase.
- b) Malate dehydrogenase.
- c) Fumarase.
- d) α -ketoglutarate dehydrogenase.
- e) Lactate dehydrogenase

All of the following are involved in the pyruvate-dehydrogenase complex EXCEPT:

- A. NAD.
- B. lipoic acid.
- C. thiamine pyrophosphate.
- D. pyridoxal phosphate.
- E. coenzyme A.

Substrate level phosphorylation to form GTP in the tricarboxylic acid cycle is catalyzed by which of the following enzymes?

- A. lactate dehydrogenase

- B. succinate dehydrogenase
- C. succinate thiokinase (also called succinyl-CoA synthetase)
- D. pyruvate kinase
- E. fumarase

NADH is produced in reactions catalyzed by the following enzymes in the tricarboxylic acid cycle EXCEPT WHICH ONE?

- A. isocitrate dehydrogenase
- B. malate dehydrogenase
- C. succinate dehydrogenase
- D. alpha-ketoglutarate dehydrogenase

All of the following are required cofactors in the pyruvate dehydrogenase enzyme complex EXCEPT:

- A. lipoic acid.
- B. thiamine pyrophosphate.
- C. flavin adenine dinucleotide (FAD).
- D. nicotinamide adenine dinucleotide (NAD⁺).
- E. All of the above are required.

Which of the following would be expected to slow the rate of the tricarboxylic acid cycle?

- A. AMP and pyruvate
- B. ATP and NADH and succinyl-CoA
- C. NAD⁺ and ADP
- D. calcium ion
- E. fumarate

Which of the following is the first enzyme unique to the pentose phosphate pathway?

- A. Glucose 6-phosphate dehydrogenase.
- B. 6-Phosphogluconate dehydrogenase.
- C. Transaldolase.

Most of the reducing equivalents (NADPH) utilized for the synthesis of fatty acids can be generated from:

- A. Glycolysis
- B. The pentose phosphate pathway.
- C. The TCA cycle.
- D. Gluconeogenesis.

Hexose monophosphate pathway produces:

- a. NADH
- b. FADH₂

- c. HADPH
- d. AIP
- e. GTP

Which one of the following metabolites is not directly produced in the hexose monophosphate shunt (HMP)

- a. Fructose-6-phosphate
- b. Dihydroxyacetone phosphate
- c. CO₂
- d. Erythrose 4-phosphate
- e. Gluconolactone 6-phosphate

Reactions occurring in the mitochondria exclude:

- a) Pentose phosphate pathway.
- b) Pyruvate carboxylation.
- c) Fatty acid synthesis.
- d) Fatty acid oxidation.

The products of oxidation of one mole of glucose 6-phosphate through the oxidative portion of the pentose phosphate pathway are

- A. one mole of ribulose 5-phosphate, one mole of carbon dioxide and two moles of NADH.
- B. one mole of ribulose 5-phosphate, one mole of carbon dioxide and two moles of NADP.
- C. one mole of sedoheptulose 7-phosphate, one mole of carbon dioxide and two moles of NADPH.
- D. one mole of ribulose 5-phosphate, one mole of carbon dioxide and two moles of NADPH.
- E. one mole of fructose 6-phosphate and two moles of NADPH.

The pentose phosphate pathway serves as an important source of which of the following?

- 1. NADPH and Ribose 5-phosphate
- 2. ATP
- 4. Glucose 6-phosphate

Which of the following is NOT an intermediate in, or product of, the pentose phosphate pathway?

- A. NADPH
- B. CO₂
- C. ribose-5-phosphate
- D. NADH and ATP
- E. fructose-6-phosphate

Dr. Sami Tahseen Al-Nafe'
079/5188355

Which of the following are disaccharides?

- a. sucrose
- b. maltose

- c. lactose
- d. a and b
- e. all of the above

Which of the following carbohydrates is a ketose sugar?

- a. Galactose
- b. Fructose
- c. Glucose
- d. Mannose
- e. Glyceraldehyde

(5) A carbohydrate having (a) α 1,4 glycosidic linkage(s) only is:

- A. amylose.
- B. sucrose.
- C. maltose.
- D. glycogen.
- E. lactose.

Sucrose is a disaccharide composed of _____ linked to _____.

- A. galactose, glucose
- B. glucose, glucose
- C. galactose, fructose
- D. fructose, fructose
- E. glucose, fructose

All the following statements about D-glucose are correct EXCEPT:

- A. it is a C-4 epimer of galactose.
- B. it is a reducing sugar.
- C. in combination with galactose, it forms lactose.
- D. the α and β configurations are determined at C-2 (carbon 2).

The common disaccharide, sucrose, contains which of the following monosaccharide residues?

- A. glucose and galactose
- B. glucose and mannose
- C. glucose and fructose
- D. glucose only
- E. mannose and galactose

α -1,4 glycosidic bond is found in?

- ... Sucrose

- B. Maltose
- C. Lactose
- D. Galactose

Which of the following enzymes forms alpha-1, 6 linkages in glycogen?

- A. α -1,6 glucosidase.
- B. Glycogen synthase.
- C. Glucose 6-phosphatase.
- D. Glycogen branching enzyme.
- E. Phosphorylase kinase.

Which of the following statements apply to glycogen phosphorylase?

- A) Produces glucose-1-phosphate.
- C) Its activity is increased by high levels of glucose-6-phosphate.
- D) The inactive form is phosphorylated.

Animals store carbohydrates in the form of:

- A. Glucose.
- B. Starch.
- C. Cellulose
- D. Glycogen
- E. Sucrose.

In the liver, glycogen is degraded to:

- a. Glucose-6-phosphate
- b. Glucose-1-phosphate
- c. Glucose-1,6-bisphosphate
- d. Glucose
- e. Pyruvate

Glycogen is built up from:

- a. D-glucose
- b. L-glucose
- c. L-fructose
- d. D-fructose
- e. Galactose

Branching in glycogen is important for:

- a. Increases solubility
- b. Increases synthesis rate
- c. Increases degradation rate
- d. All of the above
- e. None of the above

Glycogen contains which of the following structural features?;

- a) Glucosyl residues
- b) Alpha, 1-6 link
- c) Alpha, 1-4 link
- d) D-galactose, ,

Twenty four hours after a meal, the primary source of glucose for the brain is:

- A) Breakdown of muscle glycogen.
- B) Hepatic gluconeogenesis.

Insulin promotes glycogen synthesis in the liver by:

- A. inhibiting glycogen synthase.
- B. binding to phosphorylase.
- C. causing the dephosphorylation of both phosphorylase and glycogen phosphorylase.
- D. activating phosphorylase.
- E. facilitating the transport of glucose into the cell.

Which is an unlikely metabolic fate of glucose-6-phosphate in muscle?

- A. Conversion to fructose-6-phosphate.
- B. Conversion to glucose-1-phosphate.
- C. Hydrolysis to dihydroxyacetone phosphate and glyceraldehyde-3-phosphate.
- D. Hydrolysis to glucose.
- E. Conversion to lactate.

The basic structure of glycogen is based on which type of glycosidic linkage between glucose residues?

- A. beta-[1-4] glycosidic links
- B. alpha-[1-4] glycosidic links
- C. beta-[1-6] glycosidic links
- D. beta-[1-3] glycosidic links
- E. alpha-[1-3] glycosidic links

Branch points in glycogen are formed by

- A. beta-[1-6] glycosidic links.
- B. alpha-[1-4] glycosidic links.
- C. alpha-[1-6] glycosidic links.
- D. beta-[1-3] glycosidic links.
- E. alpha-[1-3] glycosidic links.

From the following list, choose the enzyme that catalyzes the metabolic process or reaction cleavage of glucose residues from the ends of glycogen chains

- A. glycogen phosphorylase
- B. debranching enzyme
- C. glycogen synthase

phosphorylase kinase

E. phosphoprotein phosphatase

From the following list, choose the enzyme that catalyzes the metabolic process or reaction

inactivation of phosphorylase kinase

- A. glycogen phosphorylase
- B. debranching enzyme
- C. glycogen synthase
- D. phosphorylase kinase
- E. phosphoprotein phosphatase

From the following list, choose the enzyme that catalyzes the metabolic process or reaction

activation of glycogen phosphorylase

- A. glycogen phosphorylase
- B. debranching enzyme
- C. glycogen synthase
- D. phosphorylase kinase
- E. phosphoprotein phosphatase

Both glucagon and epinephrine stimulate _____ and inhibit _____.

- A. glycogen synthesis/glycogen breakdown
- B. glycogen breakdown/glycogen synthesis
- C. glycolysis/gluconeogenesis
- D. glucose uptake by muscle/glucose release from the liver
- E. cAMP breakdown/cAMP formation

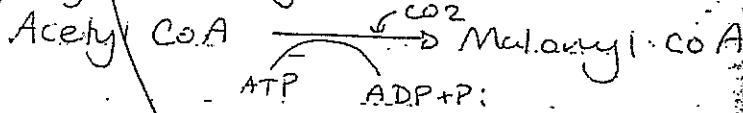
A substrate for glycogen synthase is

- A. glucose-6-phosphate
- B. glucose-1-phosphate
- C. free glucose
- D. UDP-glucose
- E. None of the above are correct

Questions

Biochemistry

① Fatty acid Synthesis



Regulatory Step

* Acetyl CoA carboxylase (ACC) (BIOTIN) *

② Regulation of ACC

③ Malonyl CoA Inhibits fat degradation via Carnitine Shuttle

④ NADPH needed for F.A. Synthesis from Malic Enzymes

⑤ Calculating Synthesis Products

ATP & NADPH & acetyl CoA

eg. C14 = 7 acetyl CoA

6 malonyl CoA \Rightarrow 12 NADH - 6 ATP

eg. 10 carbons

5 acetyl CoA

4 malonyl

4 acetyl CoA

8 NADPH

= 4 ATP (used)

⑥ mono-unsaturated FA Synthesis

⑨ desaturase (max number)

↳ can't add beyond carbon 10

⑦ TAG Synthesis \Rightarrow phosphatidic acid

Conjoined usage \Rightarrow TAG Synthesis &

PL Synthesis

⑧ PL Synthesis the methyl donor is

3 SAM (S-adenosyl methionine)

⑨ degradation of polyunsaturated FAs

Require \triangleright Isomerase

\triangleright NADPH

\triangleright Reductase

⑩ ω oxidation = in peroxisomes

same as β oxidation except 1st step

