

بسم الله الرحمن الرحيم

دور ما هو ص 11
كيفية
الجزء

Term: Final Exam
Marks: 60 marks
Time Allowed: 1.5 hours

Biochemistry

Kafr Elsheikh University
Faculty of Dentistry
First year

Choose the correct answer: (1X30=30 Marks)

1- Niacin is synthesized in the body from

- A. Tryptophan
- B. Tyrosine
- C. Glutamate
- D. Aspartate

2- Iron is stored in the form of

- A. Ferritin and transferrin
- B. Transferrin and haemosiderin
- C. Haemoglobin and myoglobin
- D. Ferritin and haemosiderin

3- Zn is present as prosthetic group in this enzyme:

- A. Carbonic anhydrase
- B. Carboxy peptidase
- C. Lactate dehydrogenase
- D. All of these

4- In competitive enzyme activity inhibition

- A. Apparent Km is decreased
- B. Apparent Km is increased
- C. Vmax is increased
- D. Vmax is decreased

5- Which of the following is an example of the secondary structure of a protein?

- A. Interaction with other polypeptide chains
- B. The sequence ala-cys-gly-ser
- C. Beta sheets
- D. The overall three dimensional folding of the protein

6- Deficiency of Vitamin A causes

- A. Xerophthalmia
- B. Hypoprothrombinemia
- C. Megaloblastic anemia
- D. Pernicious anemia

7- β -carbon of a fatty acid is

- A. Carbon number 2
- B. Carbon number 3
- C. The last carbon
- D. The ω -3 carbon

8- Which of the following provides the most energy?

- A. Anaerobic glycolysis
- B. Aerobic glycolysis
- C. Gluconeogenesis
- D. β oxidation of palmitic acid

9- Ketone bodies serve as a fuel for

- A. Extrahepatic tissues
- B. Hepatic tissues
- C. Erythrocytes
- D. Mitochondria

10- Multiple forms of the same enzymes are known as

- A. Zymogens
- B. Isoenzymes
- C. Proenzymes
- D. Pre-enzymes

11- Which of the normal range of ionized calcium in plasma is

- A. 2-4 mg/dl
- B. 2-4 mEq/L
- C. 4-5 mg/dl
- D. 4-5 mEq/L

12- Riboflavin deficiency causes

- A. Cheilosis
- B. Loss of weight
- C. Mental deterioration
- D. Dermatitis

13- Fluorosis is caused due to

- A. Excessive intake of fluorine
- B. Low intake of fluorine
- C. Discoloration of the teeth due to low intake
- D. All of these

14- Which of the following is not considered a pyrimidine?

- A. Cytosine
- B. Thymine
- C. Uracil
- D. Guanine

15- Which of the following refers to particularly stable arrangements of amino acid residues in a protein that is not affected by denaturation ?

- A. Primary structure
- B. Secondary structure
- C. Tertiary structure
- D. Quaternary structure

16- Which of the following statements about the reaction catalyzed by carbamoyl phosphate synthetase I is incorrect

- A. It takes place in the mitochondrial matrix
- B. It involves the cleavage of 2 ATP molecules per urea molecule
- C. It consumes two molecules of ammonia per urea molecule
- D. The enzyme that catalyzes it is regulated by N-acetylglutamate

17- Which of the following statements about high density lipoproteins (HDLs) is correct?

- HDLs transport dietary triacylglycerols (TAG). .A
- HDLs are the largest of the lipoprotein particles. .B
- HDLs are synthesized by the intestinal mucosal cells. .C
- HDLs can transport cholesterol from the tissues to the liver. .D

18- Saliva contains all of the following except

- A. Hormones
- B. Amylase
- C. Bacteria-killing enzymes
- D. Lysozymes

19- How many types of lipoproteins are there?

- A. 2
- B. 6
- C. 4
- D. 5

20- Which of the following is required as a component of blood hemoglobin?

- A. Iron
- B. Calcium
- C. Magnesium
- D. Copper

21- Adding _____ to a breakfast of cereal will help your body absorb iron.

- A. Milk
- B. Coffee
- C. Orange juice
- D. Water

22- Vitamin B₁₂ is useful in the prevention and treatment of

- A. Pernicious anemia
- B. Beri-beri
- C. Scurvy
- D. Cataract

23- Cholesterol is the precursor of

- A. Steroid hormones
- B. Vitamin A
- C. Both (A) and (B)

24- The sugar which forms major component of nucleic acids (DNA and RNA) is

- A. Ribose
- B. Mannose
- C. Galactose
- D. Maltose

25- Hydrolysis of sucrose yields

- A. Galactose and fructose
- B. Glucose and fructose
- B. Galactose and glucose
- D. Fructose and galactose

26- Amino acids are added to the _____ of the growing polypeptide chain

- A. Amino terminus
- B. Carboxy terminus
- C. In the middle

27- Humans are unable to digest

- A. Starch
- B. Denatured proteins
- C. Complex carbohydrates
- D. Cellulose

Term: Final Exam
Marks: 60 marks
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Biochemistry

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Faculty of Dentistry

First year

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لغز الأول
كبار صوب
درست ٢١٧

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A. Amino terminus
B. Carboxy terminus
C. In the middle
- 27- Humans are unable to digest
A. Starch
B. Denatured proteins
C. Complex carbohydrates
D. Cellulose
- 28- Vitamin-C is considered as a
A. Water soluble
B. Fat soluble
C. Fat and water soluble
D. None of these

29- An example of the oxidative deamination is

- A. aspartate + α -ketoglutarate = glutamate + oxaloacetate
- B. glutamate = α -ketoglutarate + NH_3
- C. aspartate + hexanoic acid = glutamate + Oxaloacetate

30- The total amount of calcium in an average adult man is about

- A. 100 gm
- B. 500 gm
- C. 1 kg
- D. 10 kg

Answer the following questions (3x10=30 Marks)

1- What's meant by primary structure of protein?

2- Importance of cholesterol

3- Define trace elements

4- Classification of carbohydrates

5- Importance of non functional plasma enzymes

6- Location, Structure and functions of Glycogen.

7- Importance of vitamin A

8- Types of enzyme inhibitors

9- Importance of calcium

10- What is the importance of lactose ?

Good luck

Define

1- Isoelectric point

2- Amylopectin

3- Rancidity

4- Ph

5- Importance of lactose

العروض الامتحان

Term: Final exam
Time Allowed: 3 hours

Total Assessment Marks: 60 marks

كبير المحاسبين

Kafr Elsheikh University
Faculty of Dentistry

دور يونيو ٢٠١٦

1- Define. (5x2=10)

Vitamer , mucosal block, gluconeogenesis, isoenzymes ,
fatty acid 18:7,9,11.

2- Give short account on : (9x5=45)

- Factors affecting iron absorption
- Competitive inhibitors
- Importance of vitamin A and its deficiency
- Importance of cholesterol
- Committed step of urea cycle and mention sources of free ammonia
- Calculate the energy produced from oxidation of one molecule of palmetoyl coA (16c)
- Calculate the energy produced from complete oxidation of one molecule of glucose.
- Chemical properties of amino acids
- Isotonic saline

3- Compare between Functional and non-functional plasma enzymes
(5 marks)

Good luck ☺

سوف يعقد الامتحان الشفوي غدا الاحد 6 /12 الساعة التاسعة و النصف صباحا.

Term: Final Exam
Marks: 80 marks
Time Allowed: 3 Hours

Kafr Elsheikh University
Faculty of Dentistry

First year

كيمياء دور سينمير
٢٠١٥ / ٢٠١٦

1- Give a short account on each of the following: (8x5=40 MARKS)

Classification of carbohydrates

Naming of the enzymes

Nonfunctional plasma enzymes

Rancidity

Amphoteric properties of amino acids

2ry structure of proteins

Factors affecting blood calcium level

Causes of deficiency of vitamin K

2- Calculate the energy produced from oxidation of one molecule of palmitic acid (16c) (10 marks)

3- Compare between functional and non-functional plasma enzymes (10 marks)

سوف يتم عقد امتحان العملي و الشفهي غذا في تمام الساعة التاسعة و النصف صباحاً.

Good luck 😊

Term: Final Exam
Marks: 60 marks
Time Allowed: 2 hours

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ
بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ
بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Kafr Elsheikh University
Faculty of Dentistry

First year

1- Define the following:

(2x10=20 marks)

Essential amino acids, primary structure of proteins , allosteric enzymes, trace elements , mucosal block, buffer , invert sugar , gluconeogenesis, rancidity, neutral fat

2- Give a short account on : (2.5x10= 25 marks)

- a- Properties of carboxylic group in carbohydrates
- b- Body fats
- c- Biochemical derivatives of cholesterol
- d- Energetic of beta oxidation for palmitic acid.
- e- Factors affecting calcium absorption
- f- Functions of copper
- g- Mitochondrial step of urea cycle
- h- Primary structure of collagen
- i- Competitive inhibitors
- j- Chemical properties of amino acids

3- Compare between (3x5=15 marks)

- 1- Muscle and liver glycogen
- 2- HDL and LDL
- 3- Functional and non functional plasma enzymes

Good luck ☺

سيتم عقد المتحان الشفهي غدا في التاسعة و نصف صباحا ان شاء الله

Term: Final exam
Time Allowed: 3 hours

Total Assessment Marks: 60 marks

الفظة الأول

الليبار الجوى

طابع 0.17

Kafr Elsheikh University
Faculty of Dentistry

1- Define. (5x2=10)

Vitamer , mucosal block, gluconeogenesis, isoenzymes ,
fatty acid 18:7,9,11.

2- Give short account on : (9x5=45)

- Factors affecting iron absorption
- Competitive inhibitors
- Importance of vitamin A and its deficiency
- Importance of cholesterol
- Committed step of urea cycle and mention sources of free ammonia
- Calculate the energy produced from oxidation of one molecule of palmetoyl coA (16c)
- Calculate the energy produced from complete oxidation of one molecule of glucose.
- Chemical properties of amino acids
- Isotonic saline

3- Compare between Functional and non-functional plasma enzymes (5 marks)

Good luck ☺

سوف يعقد الامتحان الشفوي غدا الاحد 6/12 الساعة التاسعة و النصف صباحا.

Term: Final Exam
Marks: 60 marks

Time Allowed: 2 hours

المؤسسة الأولى
دور ما بعد
الدراسة
(2x10=20 marks)

Kafr Elsheikh University
Faculty of Dentistry

First year

1- Define the following:

Essential amino acids, primary structure of proteins , allosteric enzymes, trace elements , mucosal block, buffer , invert sugar , gluconeogenesis, rancidity, neutral fat

2- Give a short account on : (2.5x10= 25 marks)

- a- Properties of carboxylic group in carbohydrates
- b- Body fats
- c- Biochemical derivatives of cholesterol
- d- Energetic of beta oxidation for palmitic acid.
- e- Factors affecting calcium absorption
- f- Functions of copper
- g- Mitochondrial step of urea cycle
- h- Primary structure of collagen
- i- Competitive inhibitors
- j- Chemical properties of amino acids

3- Compare between (3x5=15 marks)

- 1- Muscle and liver glycogen
- 2- HDL and LDL
- 3- Functional and non functional plasma enzymes

Good luck 😊

سيتم عقد المتحان الشفهي غدا في التاسعة و نصف صباحا ان شاء الله

Term: Final exam
Time Allowed: 3 hours
Total Assessment Marks: 60 marks

بيو كيمياء
Biochemistry

Kafr Elsheikh University
Faculty of Dentistry
First year

دور سينير / ٢٠١٤ / ٢٠١٥

1- Define the following : (2 X 5)

Glycogenolysis – vitamers- functional plasma enzymes- isotonic saline- isoenzymes.

2- Give short account on the following : (5 X 10)

Importance of phospholipids.

Enzyme nomenclature.

Derivatives of cholesterol.

Primary structure of proteins.

Factors affecting blood Calcium level.

Classification of polysaccharides.

Characters of the amino group of amino acids

Functions of zinc.

Deficiency of vit C.

Functions of vit E.

Good luck :)

Term: Midyear Exam
Marks: 10 marks
Time Allowed: 30 Minutes

Kafr Elsheikh University
Faculty of Dentistry

First year

MODEL B

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D/ (amees)

1- Carnitine is required for the transport of

- (A) Triglycerides out of liver
- (B) Triglycerides into mitochondria
- (C) Long chain fatty acids into mitochondria

2- The number of molecules of ATP produced by the total oxidation of acetyl CoA in TCA cycle is

- (A) 6
- (B) 8
- (C) 10
- (D) 12

3- High biological value proteins are those proteins that

- a) have high caloric value.
- b) contain all the essential amino acids.
- c) are not hydrolyzed by digestive enzymes.
- d) are obtained usually from plants.

4- Glucose on oxidation does not give

- (A) Glycoside
- (B) Glucosaccharic acid
- (C) Gluconic acid
- (D) Glucuronic acid

5- Storage form of carbohydrate in mammalian cells is

- a) starch.
- b) glycogen
- c) dextrin.
- d) cellulose

6- Amino acids of proteins

- a) have the amino group and carboxyl group attached to the same carbon atom.
- b) have the amino group attached to the alpha, beta or gamma carbon.
- c) neither (a) nor (b).

7- Neutral fats are esters of fatty acids with

- a) glycerol.
- b) high molecular weight monohydric alcohols
- c) both (a) and (b).
- d) neither (a) nor (b).

8- Dietary fats after absorption appear in the circulation as

- (A) HDL
- (B) VLDL
- (C) LDL
- (D) Chylomicron

9- Which of the following is considered a catabolic pathway?

- a) storing of excess fuel in adipose tissue.
- b) conversion of glucose to glycogen.
- c) oxidation of fatty acids for energy production.
- d) synthesis of tissue proteins.

10- The key regulatory enzyme of fatty acid synthesis is :

- a) Acyl co A synthetase
- b) Acetyl co A carboxylase
- c) Keto acyl synthase
- d) Thioesterase

11- A saturated fatty acid

- a) can't be hydrogenated.
- b) can't be dissolved.
- c) both (a) and (b).
- d) neither (a) nor (b).

12- Saponification is :

- (A) Hydrolysis of fats by alkali
- (B) Hydrolysis of glycerol by lipases
- (C) Esterification
- (D) Reduction

13- The sugar found in milk is

- (A) Galactose
- (B) Glucose
- (C) Fructose
- (D) Lactose

14- During starvation, ketone bodies are used as a fuel by :

- (A) Erythrocytes
- (B) Brain
- (C) Liver
- (D) All of these

15- A fatty acid with 14 carbon atoms will undergo how many cycles of beta oxidation

- a) 7
- b) 4
- c) 6
- d) 5

16- How many amino acids share in the biosynthesis of all known proteins?

- a) 10.
- b) 30.
- c) 20.
- d) 50.

17- A lipoprotein inversely related to the incidence of coronary arteriosclerosis

- (A) VLDL
- (B) IDL
- (C) LDL
- (D) HDL

18 Reducing sugars include all except

- a) glucose, fructose and galactose.
- b) glucose , maltose and mannose.
- c) glucose , galactose and sucrose.

19- Invert sugar is

- (A) Lactose
- (B) Mannose
- (C) Fructose
- (D) Hydrolytic product of sucrose

20 . Starch is a

- (A) Polysaccharide
- (B) Monosaccharide
- (C) Disaccharide
- (D) None of these

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A																				
B																				
C																				
D																				

Term: Midyear Exam
Marks: 10 marks
Time Allowed: 30 Minutes

Name :

Seat no :

Model A

Kafr Elsheikh University
Faculty of Dentistry

First year

1- A decrease of pH from 2 to 1 means

- a) decrease of hydrogen ion concentration than the original value.
- b) increase of hydrogen ion concentration than the original value.
- c) no change in hydrogen ion concentration.

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2- Amino acids of proteins

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3-How many amino acids share in the biosynthesis of all known proteins?

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- b) 30.
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4-At isoelectric point , an amino acid carries

- a) one or more positive charges.
- b) one or more negative charges.
- c) equal positive and negative charges.
- d) no electric charges

5- Essential amino acids do not include

- a) valine , leucine, and isoleucine.
- b) threonine, methionine, and tryptophan.
- c) histidine, lysine , and arginine.
- d) tyrosine, cysteine, and glutamine.

6- High biological value proteins are those proteins that

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7- Invert sugar is

- a) mannose and glucose.
- b) found in blood.
- c) reducing.
- d) produced by liver cells.

8- Storage form of carbohydrate in mammalian cells is

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- c) dextrin.
- d) cellulose

9- Reducing sugars include all except

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- b) glucose , maltose and mannose.
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10- Scleroproteins

- a) are fibrous proteins not soluble in most protein solvents and not digested in the intestine.
- b) include keratin, collagen and elastin which have structural functions.
- c) are present only in animal tissue not in plants.
- d) all the above.

11- Neutral fats are esters of fatty acids with

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Name :

Seat no :

Model B

Kafr Elsheikh University
Faculty of Dentistry

First year

1- Storage form of carbohydrate in mammalian cells is

- a) starch. b) glycogen c) dextrin. d) cellulose

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b) threonine, methionine, and tryptophan.
c) histidine, lysine , and arginine.
d) tyrosine, cysteine, and glutamine.

Term: Midyear Exam
Marks: 10 marks
Time Allowed: 30 Minutes

Name :

Seat no :

Model C

Kafr Elsheikh University
Faculty of Dentistry

First year

1- Cholesterol

- a) is associated with the development of atherosclerosis.
b) has no role apart from synthesizing steroid hormones.
c) both (a) and (b).
d) neither (a) nor (b).

2- A saturated fatty acid

- a) can't be hydrogenated.
b) can't be dissolved.
c) both (a) and (b).
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3- A fatty acid with 14 carbon atoms will undergo how many cycles of beta oxidation

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d) no electric charges

8- When glucose is converted to lactate by anaerobic glycolysis, the equivalent of _____ ATPs are derived. When glucose is completely oxidized to CO₂ , the equivalent of _____ ATPs are derived.

- a) 7; 20
b) 2; 38
c) 2; 12
e) 2; 25

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b) glucose , maltose and mannose.
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