



BIOLOGY 105

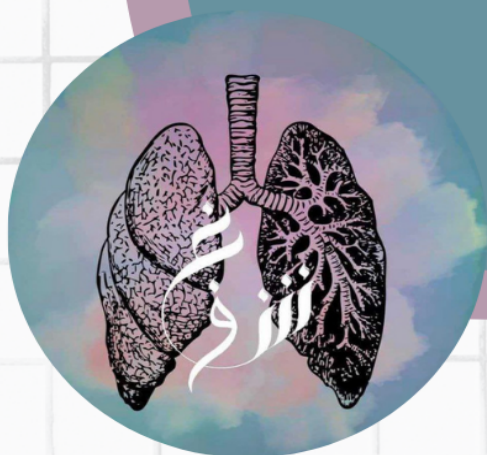
PAST PAPERS – SECOND EXAM

chapter no: **10**

Done by :

Sadeen Alsharqi

Sara Lafi



H^+

NADH/H⁺

NAD⁺

H₂O



00 : 28 : 2

Question 21 / 40

How many molecules of ATP are produced by substrate-level phosphorylation from the complete breakdown of a single molecule of glucose in the presence of oxygen?

- 2
- 4
- 3
- About 32 ATP

Next

00 : 18 : 27

2- Question 28 / 40

At the end of electron transport chain, the electrons combine with oxygen and carbon to form CO₂

1. True
2. False

Next

00 : 29 : 18

3.

Question 20 / 40

The breakdown of glucose in cellular respiration is a catabolic reaction.

1. True
2. False

Next

4.

Question 11 / 40

One turn of the citric acid cycle produces

1. 2 NADH, 2 FADH₂, 2 ATP.
2. 3 NADH, 1 FADH₂, 1 ATP.
3. 1 NADH, 3 FADH₂, 2 ATP.
4. 3 NADH, 2 FADH₂, 1 ATP.

Next

Question 14 / 40

5. Carbon dioxide (CO_2) is released during which of the following stages of cellular respiration?

1. glycolysis and the oxidation of pyruvate to acetyl CoA
2. oxidation of pyruvate to acetyl CoA and the citric acid cycle
3. the citric acid cycle and oxidative phosphorylation
4. oxidative phosphorylation and fermentation

6.

Question 16 / 40

Acetyl-CoA is produced from citric acid cycle and it is a coenzyme.

- True
- False

Next

00 : 13 : 14

7.

Question 33 / 40

The enzyme that transforms $\text{ADP} + \text{P} \rightarrow \text{ATP}$ as H^+ flows down a gradient from the intermembrane space into the matrix is:

1. the sodium-potassium pump
2. ATP synthase
3. dehydrogenase
4. NADP reductase

Next

00 : 14 : 26

8. Question 32 / 40

Which process reduces molecular oxygen to water?

1. the citric acid cycle
2. glycolysis
3. the electron transport chain
4. fermentation

Next

01 : 02 : 27

Question 7 / 60

9-

Where are the proteins of the electron transport chain located?

1. cytosol
2. mitochondrial inner membrane
3. mitochondrial intermembrane space
4. mitochondrial matrix

Next



1 2 3 4 5 6 7 8 9
21 22 23 24 25 26 27 28 29



Aa



00

10-

Question 39 / 40

Glycolysis is a catabolic process.

- 1. True
- 2. False

Previous



11-

سؤال 50 / 23

مميز هذا السؤال

The final electron acceptor in glycolysis is oxygen

True .1

False .2

التالي

السابق



12-

سؤال 22 / 50

مبر هذا السؤال

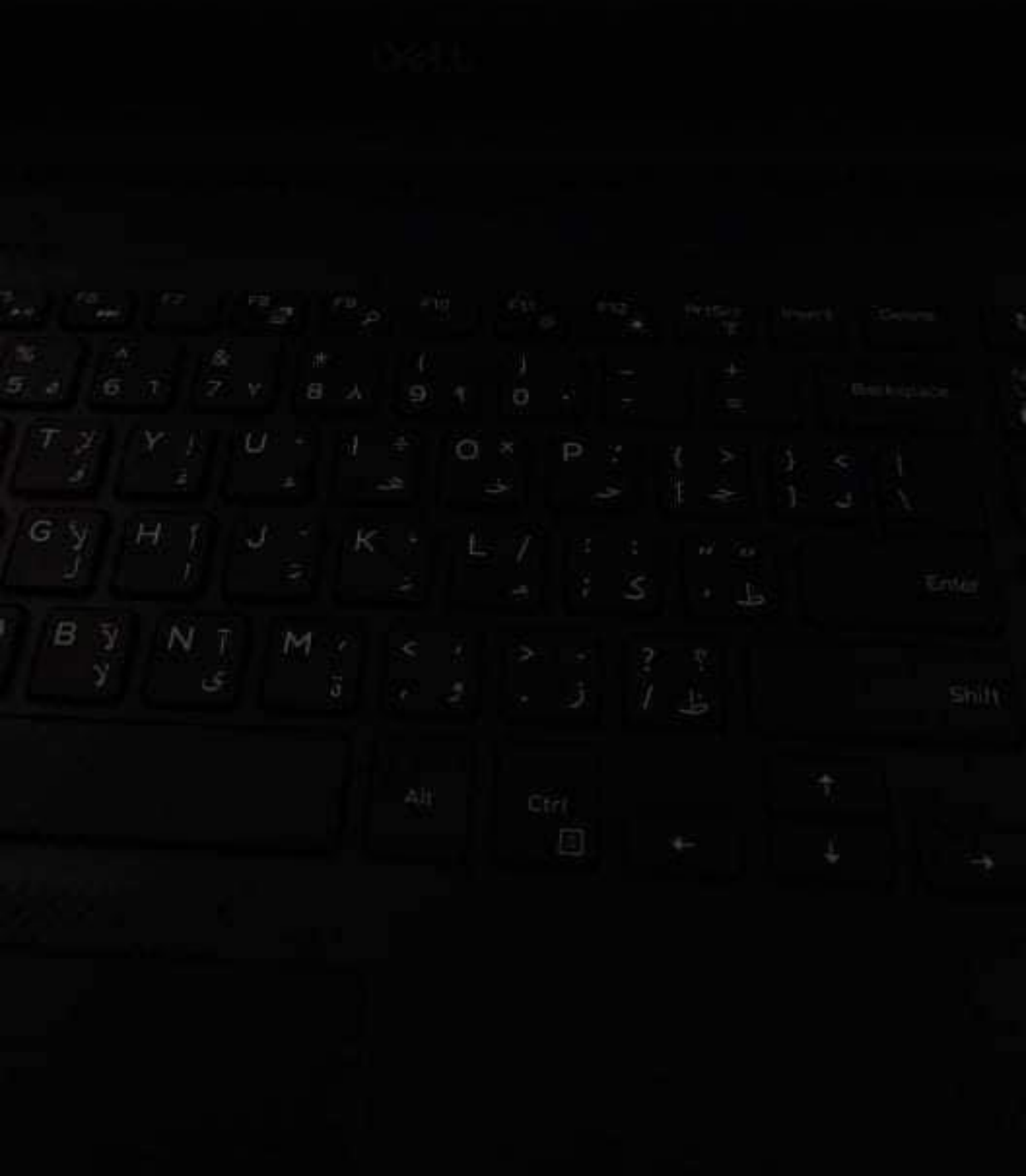
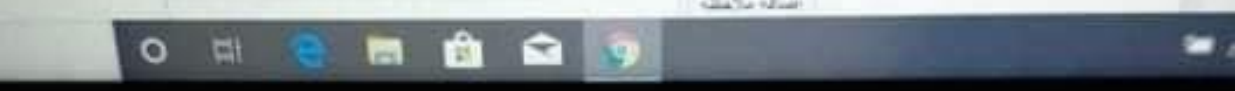
At the end of electron transport chain, the electrons combine with oxygen and carbon to form CO2

True 1

False 2

التالي السابق

إضافة ملاحظة



13-

سؤال 25 / 50

مبر هذا السؤال

The ATP made during glycolysis is generated by

- 1. substrate-level phosphorylation
- 2. +oxidation of NADH to NAD
- 3. photophosphorylation
- 4. chemiosmosis

السابق

إضافة ملاحظة



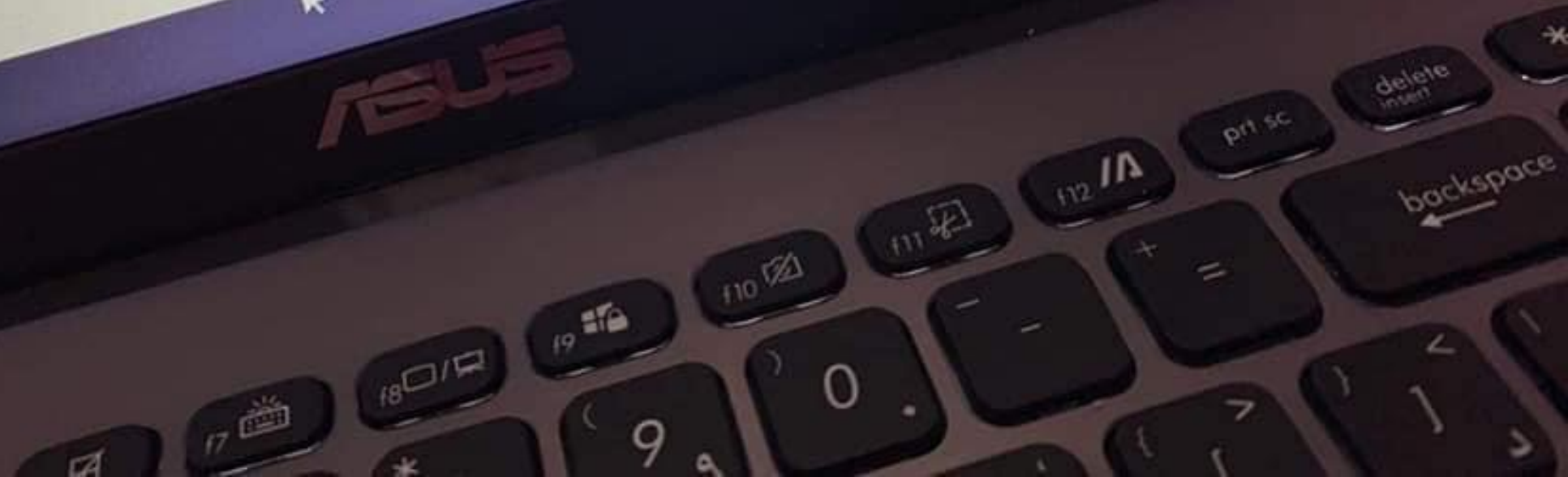
14.

مميز هذا السؤال
?How many reduced coenzymes would be produced with four turns of the citric acid cycle

$4\text{FADH}_2 + 12\text{NADH}$ ←

- FADH₂ and 4 NADH 1
- FADH₂ and 8 NADH 2
- FADH₂ and 12 NADH 4
- +FAD and 4 NAD 1

ASUS





Aa



00 : 34 : 57

Question 23 / 40

Which statement is NOT correct about redox (oxidation reduction) reactions?

- A molecule is reduced if it loses electrons.
- A molecule is oxidized if it loses electrons.
- An electron donor is called a reducing agent.
- An electron acceptor is called an oxidizing agent.

Previous

Next

Calculator

http://www2.hawaii.edu/...

IS



16 -

سؤال 22 / 50

مبرز هذا السؤال

.+Both alcohol fermentation and lactic acid fermentation oxidize NADH to NAD

- True .1
- False .2

التالي السابق



ASUS



17.

سؤال 25 / 50

مراجعة السؤال

?What is the name of the process in which glucose is converted to pyruvate with the production of ATP and NADH

- 1. chemiosmotic theory
- 2. glycolysis
- 3. fermentation
- 4. the citric acid cycle

التالي

السابق

18-

How many molecules of carbon dioxide (CO_2) would be produced by FIVE turns of the citric acid cycle?

1. 2

2. 5

3. 10

4. 12

التالي

السابق

ميم هذا السؤال

The correct sequence for breakdown of glucose in cellular respiration is

- glycolysis--Formation of Acetyly CoA--cirtric acid cycle--electron transport system .1
- Formation of Acetyly CoA --glycolysis---electron transport--citric acid cycle .2
- electron transport chain--citric acid cycle-- Formation of Acetyly CoA --glycolysis .3
- None of the choices are correct .4

التالي

السابق

مميز هذا السؤال

20-

_____ ATP production in the electron transport system depends on

the establishment of an electrochemical gradient .1

carrier proteins .2

ATP synthase .3

All of the above .4

التالي

السابق

:The most important function of the citric acid cycle to cellular respiration is

.production of large quantities of ATP .1

creation of proton gradients .2

reduction of glucose and corresponding oxidation of carbon dioxide .3

oxidation of food completely and the reduction of coenzymes .4

21-

ميز هذا السؤال

.Acetyl-CoA is produced from citric acid cycle and it is a coenzyme

True 1

False 2

التالي

السابق

إضافة ملاحظة

22 -

23 -

سؤال 23 / 50

 ميز هذا السؤال

.Only sugars are used as fuel for cellular respiration

True 1False 2

التالي

السابق

إضافة ملاحظة

24-

سؤال 24 / 50

مميز هذا السؤال

?Which of the following statements about NAD⁺ is FALSE

- 1. NAD⁺ is reduced to NADH during both glycolysis and the citric acid cycle
- 2. NAD⁺ has more chemical energy than NADH
- 3. NAD⁺ can receive electrons for use in oxidative phosphorylation
- 4. In the absence of NAD⁺, glycolysis cannot function

التالي

السابق

إضافة ملاحظة

25 -

Which process produces both NADH and FADH₂

- 1 the citric acid cycle
- 2 glycolysis
- 3 the electron transport system
- 4 fermentation

الاجابة

الاجابة

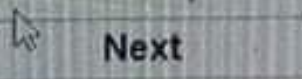
00 : 46 : 46

26.

Question 8 / 45

What is the oxidizing agent in the following reaction? $\text{Pyruvate} + \text{NADH} + \text{H}^+ \longrightarrow \text{Lactate} + \text{NAD}^+$

1. pyruvate
2. lactate
3. NADH
4. NAD⁺

 Next

27.

سؤال 25 / 30

مراجعة السؤال

During aerobic respiration, energy flows in which sequence

- 1. food - citric acid cycle - ATP - NAD
- 2. food - NADH - electron transport chain - proton motive force - ATP
- 3. glucose - pyruvate - ATP - oxygen
- 4. glucose - ATP - electron transport chain - NADH

التالي

السابق

28

?Which of the following represents the major (but not the only) energy source of the citric acid cycle

formation of NADH and FADH₂ .1

utilization of O₂ .2

formation of CO₂ .3

formation of ATP .4

التالي

السابق

29-

سؤال 26 / 50

مميز هذا السؤال

?During the reaction $C_6H_{12}O_6 + 6O_2 \rightarrow 6CO_2 + 6H_2O$, which compound is reduced as a result of the reaction

- 1. Oxygen
- 2. Glucose
- 3. carbon dioxide
- 4. Water

التالي

السابق

إضافة ملاحظة

30-

سؤال 22 / 50

ميمز هذا السؤال

.Beta oxidation breaks fatty acids down to two-carbon fragments that can enter the citric acid cycle as acetyl CoA

True .1

False .2

التالي

السابق

إضافة ملاحظة

31 -

سؤال 23 / 50

مميز هذا السؤال

↳ Muscle cells in absence of oxygen convert pyruvate to lactate and in this step regenerate NAD

True .1

False .2

التالي

السابق

إضافة ملاحظة

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40
41 42 43 44 45 46 47 48 49 50

00 : 35 : 4

32-

سؤال 23 / 50

ميز هذا السؤال

.In alcohol fermentation, NAD^+ is regenerated from NADH during the oxidation of pyruvate to acetyl CoA

True .1

False .2

✗

التالي

السابق

مميز هذا السؤال

33- When a molecule of NAD^+ gains a hydrogen atoms (not a hydrogen ion) the molecule becomes

- .1 .hydrogenated
- .2 .oxidized
- .3 .reduced
- .4 .a reducing agent

التالي

السابق

إضافة ملاحظة

34-

✓ ميمز هذا السؤال

The primary energy carrier (electron shuttle) between the Krebs cycle and the electron transport system is

- 1. NADH
- 2. FADH₂
- 3. (water (H₂O)
- 4. (carbon dioxide (CO₂

التالي

السابق

إضافة ملاحظة

21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40
41 42 43 44 45 46 47 48 49 50

00 : 32 : 12

35-

سؤال 26 / 50

ميم هذا السؤال

The oxygen consumed during cellular respiration is involved directly in which process or event

1. glycolysis
2. accepting electrons at the end of the electron transport chain
3. the citric acid cycle
4. the oxidation of pyruvate to acetyl CoA

التالي

السابق

00:34:1

36-

سؤال 50 / 24

مميز هذا السؤال

?During aerobic respiration, which of the following directly donates electrons to the electron transport chain at the lowest energy level

- 1. +NAD
- 2. NADH
- 3. ADP + Pi
- 4. FADH₂

التالي

السابق

إضافة ملاحظة

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50										

37~

00 : 31 : 9

3

سؤال 27 / 50

ميز هذا السؤال

?In addition to ATP, what are the end products of glycolysis

1. CO₂ and H₂O
2. CO₂ and pyruvate
3. NADH and pyruvate
4. CO₂ and NADH

التالي

السابق

38-When hydrogen ions are pumped from the mitochondrial matrix across the inner membrane and into the intermembrane space, the result is the:

1. Formation of ATP
2. Reduction of NAD+
3. Restoration of the Na⁺/k⁺ balance across the membrane
4. Creation of a proton gradient

39

2

سؤال 26 / 50

مميز هذا السؤال

During respiration in a eukaryotic cell, reactions of the citric acid cycle occur

- 1. in the cytosol
- 2. in the matrix of the mitochondrion
- 3. in the cristae of the mitochondrion
- 4. in the intermembrane space of the mitochondrion

التالي

السابق

40

00 : 44 : 57

3

سؤال 25 / 50

مميز هذا السؤال

The correct sequence for breakdown of glucose in cellular respiration is

- 1. glycolysis--Formation of Acetyly CoA--cirtric acid cycle--electron transport system
- 2. Formation of Acetyly CoA --glycolysis--electron transport--citric acid cycle
- 3. electron transport chain--citric acid cycle-- Formation of Acetyly CoA --glycolysis
- 4. None of the choices are correct

التالي

السابق

إضافة ملاحظة

41

00 : 45 : 48

4

سؤال 22 / 50

ميز هذا السؤال

.Acetyl-CoA is produced from citric acid cycle and it is a coenzyme

True .1

False .2

التالي

السابق

إضافة ملاحظة

42

00 : 45 : 34

5

سؤال 23 / 50

ميز هذا السؤال

.Only sugars are used as fuel for cellular respiration

True .1

False .2

التالي

السابق

إضافة ملاحظة

43

00 : 45 : 24

6

سؤال 24 / 50

ميز هذا السؤال

?Which of the following statements about NAD⁺ is FALSE

- 1. NAD⁺ is reduced to NADH during both glycolysis and the citric acid cycle
- 2. NAD⁺ has more chemical energy than NADH
- 3. NAD⁺ can receive electrons for use in oxidative phosphorylation
- 4. In the absence of NAD⁺, glycolysis cannot function

التالي

السابق

إضافة ملاحظة

44

12:31 € 73% ID

0.00K/s 100% JO

21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40
41 42 43 44 45 46 47 48 49 50

00 : 43 : 7

7

سؤال 16 / 50

ميز هذا السؤال

?Which is NOT true about mitochondria

- 1. A mitochondrion has two membranes
- 2. Mitochondria are the site of cellular respiration
- 3. Mitochondria are found in prokaryotic and eukaryotic cells
- 4. Mitochondria contain DNA and ribosomes

التالي

السابق

45

12:39 71%

147B/s JO 100

1 2 3 4 5 6 7 8 10 11 12 13 14 16 17 18 19 20
21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40
41 42 43 44 45 46 47 48 49 50

00 : 35 : 4

8

سؤال 23 / 50

ميز هذا السؤال

.In alcohol fermentation, NAD^+ is regenerated from $NADH$ during the oxidation of pyruvate to acetyl CoA

True .1

False .2

التالي

السابق

46

12:42 71%

0.00K/s JO 100

21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40
41 42 43 44 45 46 47 48 49 50

00 : 32 : 12

9

سؤال 26 / 50

ميز هذا السؤال

?The oxygen Consumed during cellular respiration is involved directly in which process or event

glycolysis .1

accepting electrons at the end of the electron transport chain .2

the citric acid cycle .3

the oxidation of pyruvate to acetyl CoA .4

التالي

السابق

47

12:40 71% 0.00K/s JO 100

41 42 43 44 45 46 47 48 49 50

00 : 34 : 1

10 50 / 24 سؤال
ميز هذا السؤال

?During aerobic respiration, which of the following directly donates electrons to the electron transport chain at the lowest energy level

- 1. +NAD
- 2. NADH
- 3. ADP + Pi
- 4. FADH₂

التالي السابق

إضافة ملاحظة

48

12:43 71% 0.00K/s JO 100

21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

41 42 43 44 45 46 47 48 49 50

00 : 31 : 9

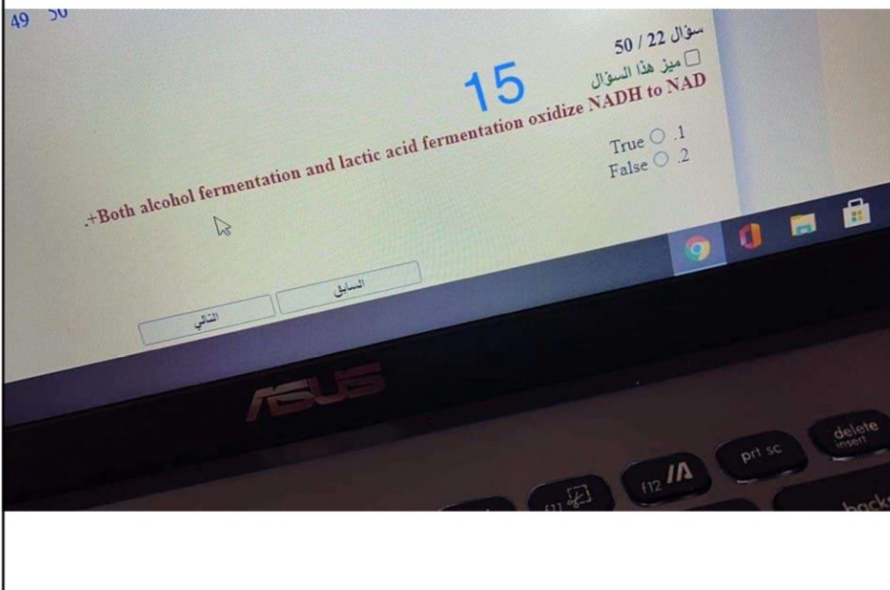
11 50 / 27 سؤال
ميز هذا السؤال

?In addition to ATP, what are the end products of glycolysis

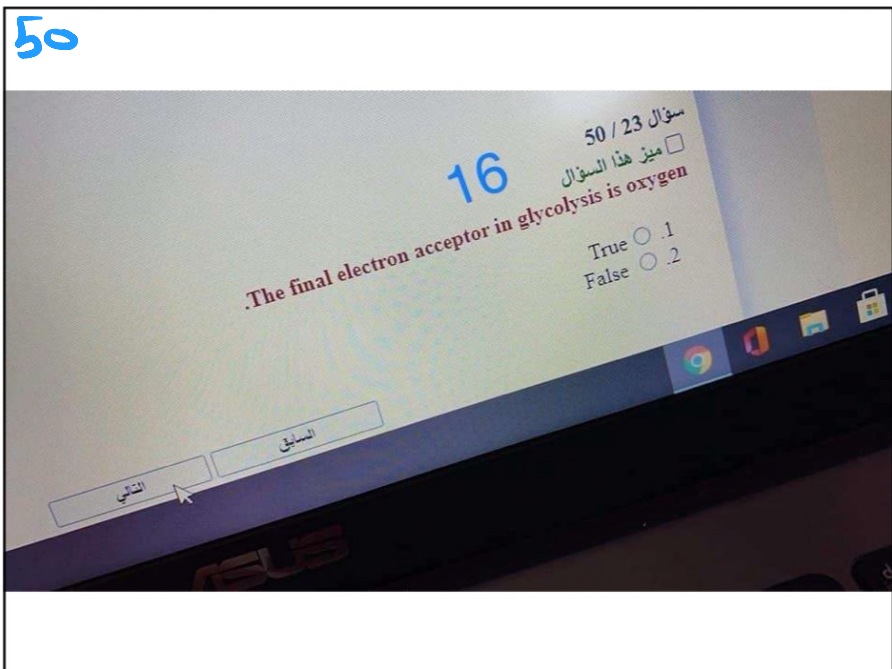
- 1. CO₂ and H₂O
- 2. CO₂ and pyruvate
- 3. NADH and pyruvate
- 4. CO₂ and NADH

التالي السابق

49

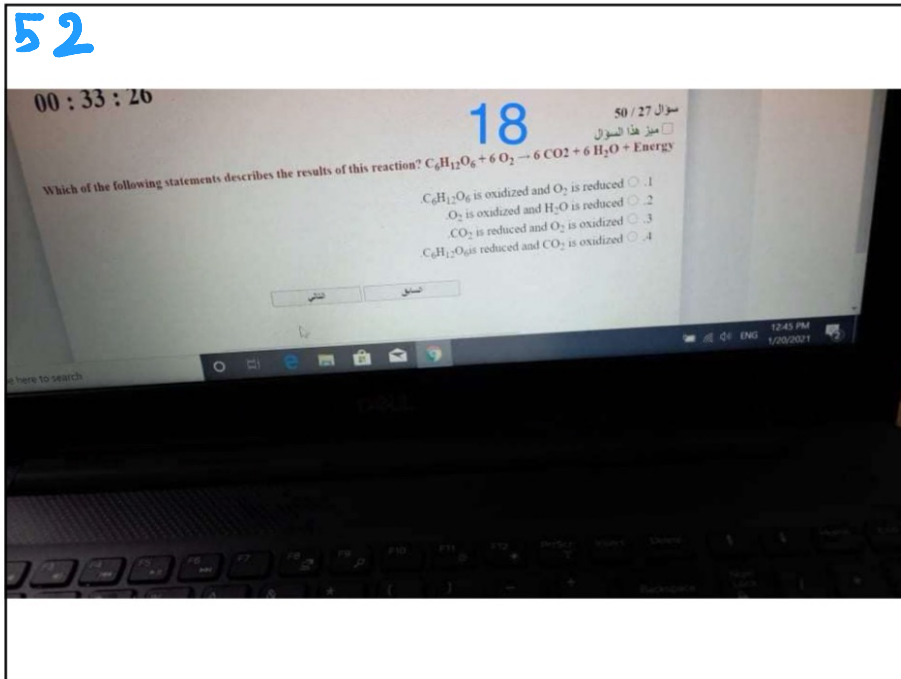


50



51- how many reduced co-enzymes would be produced with four turns of the citric acid cycle :

- 1.(1 FADH₂ and 4 NADH)
- 2.(2 FADH₂ and 8 NADH)
- 3.(4 FADH₂ and 12 NADH)
- 4.(1 FAD and 4 NAD⁺)



53 -how many carbon atoms enter into the citric acid cycle as a result of the oxidation of one pyruvate molecule?

- 1.(2)
- 2.(4)
- 3.(6)
- 4.(8)

54

سؤال 25 / 50

20 ميز هذا السؤال

The ATP made during glycolysis is generated by

- .1 substrate-level phosphorylation
- .2 +oxidation of NADH to NAD
- .3 photophosphorylation
- .4 chemiosmosis

55- at the end of the electron transport chain electrons combine with oxygen and carbon to form CO₂ :

- 1.True**
- 2.False**

56-most of the ATP produced during cellular respiration comes from which of the following processes :

- 1. Glycolysis.**
- 2. Oxidative phosphorylation**
- 3. Substrate level phosphorylation.**
- 4. The citric acid cycle**

57-ATP generally energizes a cellular process by direct chemical transfer of a phosphate group :

- 1. True.**
- 2. False.**

سؤال 27 من 30

مبر هذا السؤال

58

25

Substrate-level phosphorylation accounts for approximately what percentage of the ATP formed during glycolysis

0% .1
100% .2
10% .3
38% .4

التالي السابق

إشارة ملاحظة

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59

سؤال 28 / 50
26 امين هذا السؤال

?Which of the following comparisons is NOT correct

- 1. Chloroplast-double membrane organelle
- 2. Mitochondrion -double membrane organelle
- 3. Mitochondrion matrix -location of glycolysis
- 4. Chloroplast stroma-location of Calvin cycle

السابق

إضافة ملاحظة

60

سؤال 26 / 50
27 امين هذا السؤال

?During the reaction $C_6H_{12}O_6 + 6O_2 \rightarrow 6CO_2 + 6H_2O$, which compound is reduced as a result of the reaction

- 1. Oxygen
- 2. Glucose
- 3. Carbon dioxide
- 4. Water

التالي السابق

إضافة ملاحظة

61

28

سؤال 25 / 50
مميز هذا السؤال

The primary energy carrier (electron shuttle) between the Krebs cycle and the electron transport system is

- .1 NADH
- .2 FADH2
- .3 H2O
- .4 CO2

التالي

السابق

إضافة ملاحظة

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62

29

سؤال 24 / 50

مميز هذا السؤال

When a molecule of NAD^+ gains a hydrogen atoms (not a hydrogen ion) the molecule becomes

- .1 Hydrogenated
- .2 Oxidized
- .3 Reduced
- .4 A reducing agent

التالي

السابق

إضافة ملاحظة

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63

30

سؤال 22 / 50

ميمز هذا السؤال

.Beta oxidation breaks fatty acids down to two-carbon fragments that can enter the citric acid cycle as acetyl CoA

True .1

False .2

التالي

السابق

إضافة ملاحظة

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64

31

سؤال 23 / 50

ميمز هذا السؤال

Muscle cells in absence of oxygen convert pyruvate to lactate and in this step regenerate NAD^+

True .1

False .2

التالي

السابق

إضافة ملاحظة

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65. When ATP is produced in the mitochondria, a pH gradient is established across the mitochondrial membrane

1. True
2. false

66. In alcohol fermentation, NAD^+ is regenerated from NADH during the oxidation of pyruvate to acetyl CoA

1. true
2. false

67

The most important function of the citric acid cycle to cellular respiration is

- 34
- .1 production of large quantities of ATP
 - .2 creation of proton gradients
 - .3 reduction of glucose and corresponding oxidation of carbon dioxide
 - .4 oxidation of food completely and the reduction of coenzymes

68

سؤال 26 / 50

35

مميز هذا السؤال

_____ ATP production in the electron transport system depends on

the establishment of an electrochemical gradient .1

carrier proteins .2

ATP synthase .3

All of the above .4

التالي السابق

69. Which process produces both NADH and FADH₂
1. The citric acid cycle
 2. Glycolysis
 3. The electron transport system
 4. Fermentation.

70

? Which of the following represents the major (but not the only) energy source of the citric acid cycle

37

formation of NADH and FADH₂ .1

utilization of O₂ .2

formation of CO₂ .3

formation of ATP .4

التالي السابق

71-during aerobic respiration energy flows in which sequence

1.Food → citric acid cycle → ATP → NAD+

2.Food → NADH → electron transport chain → proton motive force → ATP

3.glucose → pyruvate → ATP → oxygen

4.glucose → ATP → electron transport chain → NADH

72

سؤال 27 / 50

42

میز هذا السؤال

Complete breakdown of glucose results in _____ ATP molecules

1. 2

2. 4

3. 28

4. 30-32

التالي السابق

73

سؤال 25 / 50

43

میز هذا السؤال

?What is the name of the process in which glucose is converted to pyruvate with the production of ATP and NADH

1. chemiosmotic theory

2. glycolysis

3. fermentation

4. the citric acid cycle

التالي السابق

F4

44

سؤال 24 / 50

مميز هذا السؤال

?How many molecules of carbon dioxide (CO₂) would be produced by FIVE turns of the citric acid cycle

- 1. 2
- 2. 5
- 3. 10
- 4. 12

التالي

السابق

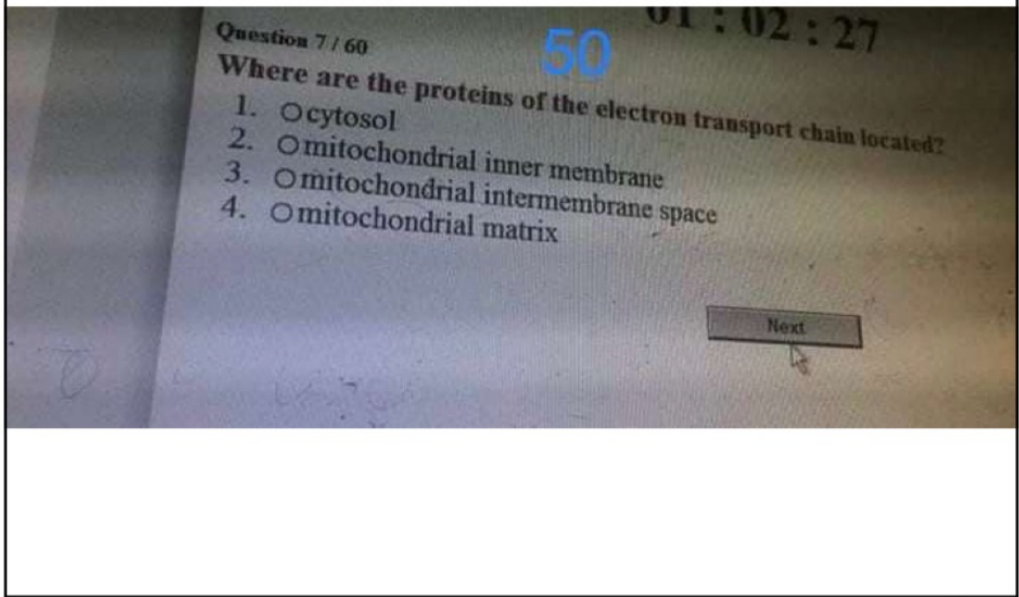
75. Which statement is NOT correct about redox reactions?

1. A molecule is reduced if it loses electrons.
2. a molecule is oxidized if it loses electrons
3. An electron donor is called reducing agent.
4. An electron acceptor is called an oxidizing agent

76. Glycolysis is a catabolic process

1. True
2. False.

77



78. Carbon dioxide is released during which of the following stages of cellular respiration.

1. Glycolysis and oxidation of pyruvate to acetyl CoA
2. Oxidation of pyruvate to acetyl CoA and the citric acid cycle.
3. the citric acid cycle and oxidative phosphorylation
4. Oxidative phosphorylation and fermentation

79-The enzyme that transforms $ADP + P \rightarrow ATP$ as H^+ flows down a gradient from the intermembrane space into the matrix is

1. The sodium potassium pump.
2. ATP synthase.
3. Dehydrogenase.
4. NADP reductase

80

00 : 14 : 26

55

Question 32 / 40

Which process reduces molecular oxygen to water?

- the citric acid cycle
- glycolysis
- the electron transport chain
- fermentation

Next

81

Question 11 / 40

One turn of the citric acid cycle produces

- 2 NADH, 2 FADH₂, 2 ATP.
- 3 NADH, 1 FADH₂, 1 ATP.
- 1 NADH, 3 FADH₂, 2 ATP.
- 3 NADH, 2 FADH₂, 1 ATP.

57

Next

82-The breakdown of glucose and cellular respiration is a catabolic reaction

1.True

2.False

83

00 : 28 : 2

Question 21 / 40

61

How many molecules of ATP are produced by substrate-level phosphorylation from the complete breakdown of a single molecule of glucose in the presence of oxygen?

1. 2
2. 4
3. 3
4. About 32 ATP

Next

1- 2	21- 4
2- 2	22- 2
3- 1	23- 2
4- 2	24- 2
5- 2	25- 1
6- 2	26- 1
7- 2	27- 2
8- 3	28- 1
9- 2	29- 1
10- 1	30- 1
11- 2	31- 1
12- 2	32- 2
13- 1	33- 3
14- 3	34- 1
15- 1	35- 2
16- 1	36- 4
17- 2	37- 3
18- 3	
19- 1	
20- 4	

38-4	61-1
39-2	62-3
40-1	63-1(T)
41 -2(F)	64-1(T)
42 -2(F)	65-2(F)
43 -2	66-2(F)
44 -3	67-4
45 -2(F)	68-4
46-2	69-1
47-4	70-1
48-3	71-2
49-1(T)	72-4
50-2(F)	73-2
51-3	74-3
52-1	75-1
53-1	76-1(T)
54-1	77-2
55-2(F)	78-2
56 -2	79-2
57-1(T)	80-3
58-2	81-2
59-3	82-1(T)
60-1	83-2



- ضاعت الأحلام واندثرت الأمنيات والصلوات
عمّ المكان

شهداء العلم والمعرفة
إلى جنّات الخلد
اللهم ارحم طلاب جامعة العلوم والتكنولوجيا



#الدعاء_اليومي..

اللهم إني أستودعك أهل غزة ، اللهم كُنْ لهم عونًا ، اللهم
إنا لا نملك لغزة إلا الدعاء فيارب لا ترد لنا دعاء ولا تخيب
لنا رجاء وأنت أرحم الراحمين ...

اللهم احفظ فلسطين وأهلها .. اللهم كن لأهلنا هناك عونًا
ومعينا .. وللمسجد الاقصي حافظًا وامينا .. اللهم إنا
نستودعك غزة فأحفظها بحفظك يا خير الحافظين ...