

NSC207 List of eExam Questions in the Bank

Latex formatted questions may not properly render

- Q1 The glycolytic pathway can be divided into stages
- Q2 Anaerobic fermentations of glucose lead to formation of ____.
- Q3 Reactions of glycolysis occur in the .
- Q4 In aerobic organisms, glycolysis preludes ____.
- Q5 The end product of Glycolysis that enters the citric acid cycle is
- Q6 The second stage of Glycolysis consists of chemical reaction steps
- Q7 Which of the following minerals is a non essential minerals found as contaminants in foodstuffs
- Q8 Glyceraldehyde 3-phosphate contains carbon units
- Q9 Glycolysis yields energy inform of
- Q10 ATP contains molecules of phosphates
- Q11 Cellular energy currency is in form of
- Q12 Stage 3 glycolysis is comprised of steps of chemical reactions
- Q13 The end product of stage 3 glycolysis is
- Q14 The final step of production of pyruvate is catalyzed by
- Q15 The breakdown of one molecule of Glucose will yield molecules of pyruvate
- Q16 The fate of Pyruvate includes conversion to ____.
- Q17 The breakdown of one molecule of glucose will produce a net yield of molecule of ATP
- Q18 Most of the energy yield in glycolysis is harvested in the ____.
- Q19 Pyruvate kinase is synthesized and secreted by ____.
- Q20 Tricarboxylic acid (TCA) cycle is a strict pathway.
- Q21 The principal entry substrate into TCA cycle and electron transport chain is ____.
- Q22 TCA is the final common pathway for the oxidation of molecules

Q23 Energy harvested in the TCA is conserved in the reduced electron carriers such as

Q24 The conserved energy, in the later stages of TCA, is released and stored as .

Q25 TCA in eukaryotes occurs in the

Q26 The starting substrate in the TCA is

Q27 Constant cellular energy balance of the TCA Cycle indicates its nature.

Q28 Replenishing the metabolic intermediates in the TCA cycle indicates its nature.

Q29 Synthesis of several amino acids in the TCA is from .

Q30 Mobilization of free fatty acids from fat stores is herald through of triglycerides into glycerol and free fatty acids

Q31 Fatty acid oxidation occurs in the matrix

Q32 Ketone bodies are products of fatty acid and amino acid ____.

Q33 The enzyme involved in ketogenesis is ____.

Q34 The ketone bodies are composed of .

Q35 Ketone bodies are synthesized and released from .

Q36 HMG CoA is used for synthesis in the cytosol of many tissues

Q37 HMG CoA is used for hepatic mitochondrial ketogenesis by an isozyme of .

Q38 Non pathologic form of ketosis is due to .

Q39 The group of compounds that have vitamin A activities include

Q40 Retinoids are cleaved in the mucosa by carotene dioxygenase

Q41 The digestive enzyme that completes digestion of small peptides within the intestinal mucosal cells is ____.

Q42 The pro-enzyme, trypsinogen is converted to active trypsin by

Q43 Proteolytic enzymes in pancreatic juice include

Q44 Free Amino Acids are degraded to yield

Q45 An essential minerals with unknown functions is

Q46 Vitamin D is also known as

Q47 Naturally produced vitamin D can be produced in the skin from activation of 7-dehydrocholesterol

Q48 Vitamin E is also known as

Q49 Vitamin has an important role in the synthesis of blood clotting proteins

Q50 Beriberi signals the deficiency of

Q51 Cheilosis signals the deficiency of

Q52 Deficiency of folic acid can cause anaemia

Q53 Utilization of fatty acids for energy production occurs in

Q54 An inhibitor of electron transport chain is .

Q55 In the TCA, Oxaloacetate is regenerated through the formation of

Q56 The tricarboxylic acid cycle (TCA) cycle is also known as cycle.

Q57 Under aerobic conditions, complete oxidation of pyruvate releases and H_2O .

Q58 The glucose molecule has carbons.

Q59 An enzyme that Transfers a phosphoryl group from ATP to an acceptor is called a .

Q60 Glycolysis degrades to generate ATP.

Q61 Ascorbic acid promotes synthesis of _____.

Collagen fibres
Nor Epinephrine
Amino acids
All of the above

Q62 Vitamin _____ do not have any known toxic effects

A
D
E
K

Q63 Vitamin A deficiency will lead to _____.

Blindness
Hypoguesia
Growth retardation
All of the above

Q64 Sources of Vitamin A include _____

Cod liver oil
Dark green vegetables
Dairy products
All of the above

Q65 Ketones are excellent fuels for many non hepatic tissues such as

Brain
Cardiac muscles
Skeletal muscles
All of the above

Q66 The key enzyme for utilization of ketone bodies is found in _____ tissues.

Brain
Kidneys
Skeletal muscles
None of the above

Q67 Disorders of fatty acid oxidation include _____.

Carnitine deficiency
Jamaican vomiting sickness
Ketoacidosis
All of the above

Q68 The process of β -oxidation of fatty acids includes oxidation of _____.

Fatty acyl coA
 β -hydroxy derivative
Pyruvic acid
Acyl Carnitine

Q69 The carnitine fatty acyl carrier system consists of all but

_____.
Carnitine acyl transferase 1
Carnitine acyl transferase II
Carnitine acyl translocase
Acyl Carnitine

Q70 Mobilization of free fatty acids from fat stores is herald through _____ of triglycerides into glycerol and free fatty acids

Ketolysis
Lipolysis
Glycogenolysis

Gluconeogenesis

Q71 Fatty Acid activation is triggered by all these hormones except

Epinephrine
Insulin
Glucagon
Somatostatin

Q72 During prolonged fasting, the body source its major metabolic fuel through hepatic _____.

Conversion of acetyl CoA from fatty acids
Ketogenesis
Glycogenolysis
Gluconeogenesis

Q73 Utilization of fatty acids for energy production is absent in _____

Cardiac muscle
Skeletal muscles
Brain
Red Blood Cells

Q74 An inhibitor of electron transport chain is _____.

Sodium Amytal
Rotenone
Pericardine A
All of the above

Q75 Beriberi is caused by deficiency of _____.

Citrate
Riboflavin
Thiamine
Niacin

Q76 Citrate is used for the synthesis of all but _____.

Lipids
Carbohydrate
Proteins
Amino acids

Q77 Synthesis of several amino acids in the TCA is from _____.

Isocitrate
 α -ketoglutarate
Oxaloacetate
Fumarate

Q78 The major source of oxaloacetate in the TCA is _____
pyruvate

Carboxylation

Decarboxylation
Dehydrogenation
Isomerization

Q79 In the TCA, Oxaloacetate is regenerated through the formation of _____

Isocitrate
 α -ketoglutarate
Oxaloacetate
Fumarate

Q80 The starting substrate in the TCA is _____

Isocitrate
 α -ketoglutarate
Oxaloacetate
Fumarate

Q81 TCA in eukaryotes occurs in the _____

Cytosol
Mitochondrion
Nucleus
Ribosome

Q82 The conserved energy, in the later stages of TCA, is released and stored as _____.

ATP
FADH₂
NADH
AMP

Q83 Energy harvested in the TCA is conserved in the reduced electron carriers such as _____

ATP and Pi
NADH and FADH₂
ADP and Pi
AMP

Q84 TCA is the final common pathway for the oxidation of _____ molecules

Protein
Carbohydrate
Fat
All of the above

Q85 Lactic Acidosis is a form of metabolic acidosis caused by _____.

Overproduction of Lactate
Underutilization of lactate
Inhibition of Pyruvate dehydrogenase

All of the above

Q86 Oxidative decarboxylation of Pyruvate in the mitochondria heralds the formation of _____.

- Acetyl coA
- Pyruvate
- Lactate
- Ethanol

Q87 The principal entry substrate into TCA cycle and electron transport chain is

_____.

- Acetyl coA
- Pyruvate
- Lactate
- Ethanol

Q88 Tricarboxylic acid (TCA) cycle is an _____ pathway.

- Strict oxidative
- Strict anaerobic
- Facultative oxidative
- Facultative anaerobic

Q89 Hexokinase is allosterically inhibited by _____

- Glucose 6 Phosphate
- Pyruvate
- Lactate
- Ethanol

Q90 Pyruvate kinase is synthesized and secreted by _____.

- Liver
- Skeletal muscles
- A & B
- None of the above

Q91 Most of the energy yield in glycolysis is harvested in the

_____.

- Krebb's cycle
- Tricarboxylic acid cycle
- Citric Acid Cycle
- All of the above

Q92 The breakdown of one molecule of glucose will produce a net yield of _____ molecule of ATP

- One
- Two
- Three
- Four

Q93 Clinical conditions that impair glycolysis include _____.

Lactic acidosis
Pyruvate Kinase deficiency
A & B
None of the above

Q94 The fate of Pyruvate includes conversion to _____.

Acetyl coA
Ethanol
Lactate
All of the above

Q95 The enzyme catalyzing the committed step (the first irreversible reaction) in the glycolytic pathway is _____.

Hexosekinase
Phosphofructokinase
Pyruvate kinase
Phosphofructokinase

Q96 The rate of Glycolysis is regulated by all the following enzymes except _____.

Hexosekinase
Phosphofructokinase
Enolase
Isoglucokinase

Q97 The breakdown of one molecule of Glucose will yield _____ molecules of pyruvate

Two
Three
Four
Five

Q98 The final step of production of pyruvate is catalyzed by _____.

2 – phosphoglyceromutase
Enolase
Pyruvate kinase
None of the above

Q99 The end product of stage 3 glycolysis is _____.

Lactose
Pyruvate
Ethanol
Fructose

Q100 Cellular energy currency is in form of _____.

ATP
ADP

AMP
All of the above

Q101 ATP contains _____ molecules of phosphates

Two
Three
Four
Five

Q102 ATP means _____

Adenosine Triphosphate
Adenine Triphosphate
Alanine Triphosphate
All of the above

Q103 Splitting of Fructose 1, 6 biphosphate is catalyzed by

_____.
Aldolase
Triose phosphate isomerase
Hexokinase
Phosphofructokinase

Q104 _____ is a ketose sugar isomer

Glyceraldehydes 3-phosphate
Fructose 1,6-biphosphate
Dihydroxyacetone phosphate
None of the above

Q105 Glyceraldehydes 3-phosphate is a/an _____ sugar.

Aldose
Ketose
Hexose
Fructose

Q106 Glyceraldehyde 3-phosphate contains _____ carbon units

Two
Three
Four
Five

Q107 The end product of Glycolysis that enters the citric acid cycle is

_____.
Lactose
Pyruvate
Glucose
Fructose

Q108 In aerobic organisms, glycolysis preludes _____.

Electron Transport Chain

Tricarboxylic acid cycle
Citric Acid Cycle
All of the above

Q109 Reactions of glycolysis occur in the _____.

Cytosol
Mitochondrion
Nucleus
Ribosome

Q110 Anaerobic fermentations of glucose lead to formation of

_____.

CO₂
Pyruvic acid
Ethanol
NO₂

Q111 In the presence of inadequate oxygen, within active muscles, pyruvate oxidation yields _____.

CO₂
Pyruvic acid
O₂
NO₂

Q112 The breakdown of ATP, catalyzed by Kinases, releases

_____.

ADP
ASP
ALT
AST

Q113 An allosteric enzyme is _____.

Hexokinase
Phosphofructokinase
Fructose 6 Phosphate
Isoglucokinase

Q114 The first step of the first stage of Glycolysis, phosphorylation of glucose is catalyzed by _____.

Hexokinase
Phosphofructokinase
Phosphoglucose Isomerase
Isoglucokinase

Q115 During the first stage of Glycolysis, phosphorylation reaction happens _____ times

Once
Twice
Thrice

None

Q116 The first stage of the glycolytic pathway has _____ chemical reaction steps

- Two
- Three
- Four
- Five

Q117 The most energy yielding process of glucose breakdown occurs in the _____

- Glycolysis
- Tricarboxylic acid cycle
- Pentose Phosphate Pathway
- Embbed Meyerhoff pathway

Q118 Glycolysis yields energy inform of _____

- ATP
- ASP
- ALT
- AST

Q119 Oxidation of pyruvate occurs in the _____

- Cytosol
- Mitochondrion
- Nucleus
- Ribosome

Q120 The glycolytic pathway can be divided into _____ stages

- Two
- Three
- Four
- Five