**QBANK BIOCHEMISTRY**

**Semester 4 (2021)**

**Chapter: TISSUE BIOCHEMISTRY**

**Topic: Collagen**

**SubTheme: Structure**

1. Which of the following amino acid is present in abundance in Collagen?
2. Alanine
3. Valine
4. Glycine
5. Serine

Ans: C

1. Which of the following protein comprises of repeating tripeptide sequence of Gly–X–Y, where X is often proline?
2. Hemoglobin
3. Elastin
4. Proteoglycans
5. **Collagen**

Ans:D

**Chapter: TISSUE BIOCHEMISTRY**

**Topic: Collagen**

**SubTheme: Function/Clinical significance**

1. Which of the following protein is the major fibrous element of skin, and blood vessels?
2. Hemoglobin
3. Elastin
4. Proteoglycans
5. **Collagen**

Ans:D

1. Which of the following protein is the major fibrous element of bones, tendons, cartilage?
2. Hemoglobin
3. Elastin
4. Proteoglycans
5. **Collagen**

Ans:D

1. Which of the following protein provides structural support to the extracellular space of connective tissues?
2. Hemoglobin
3. **Collagen**
4. Myoglobin
5. Enzymes

Ans:B

1. Which of the following protein provides rigidity and resistance to stretching?
2. Hemoglobin
3. **Collagen**
4. Myoglobin
5. Enzymes

Ans:B

1. Which of the following type of collagen is found in Skin?
2. **Type I**
3. Type II
4. Type IV
5. Type IX

Ans:A

1. Which of the following type of collagen is found in Cornea?
2. **Type I**
3. Type II
4. Type IV
5. Type IX

Ans:A

1. Ehlers–Danlos syndrome is the disease characterized by the deficiency of which protein?
2. Hemoglobin
3. **Collagen**
4. Myoglobin
5. Enzymes

Ans:B

**Chapter: TISSUE BIOCHEMISTRY**

**Topic: Elastin and Extracellular Matrix Components**

**SubTheme: Structure**

1. Which of the following protein is found in the form of fibres?
2. Hemoglobin
3. **Elastin**
4. Myoglobin
5. Chlorophyll

Ans:B

1. Which of the following protein is connective tissue protein with rubber-like properties?
2. Hemoglobin
3. **Elastin**
4. Myoglobin
5. Chlorophyll

Ans:B

**Chapter: TISSUE BIOCHEMISTRY**

**Topic: Elastin and Extracellular Matrix Components**

**SubTheme: Function/Clinical Significance**

1. Which of the following protein is responsible to recoil the proteins to their original shape when the stretching force is relaxed?
2. Hemoglobin
3. **Elastin**
4. Myoglobin
5. Chlorophyll

Ans:B

1. Which of the following protein is a major component of lung tissue?
2. Hemoglobin
3. **Elastin**
4. Myoglobin
5. Chlorophyll

Ans:B

1. Which of the following protein is a major component of articular cartilage?
2. Hemoglobin
3. **Elastin**
4. Myoglobin
5. Chlorophyll

Ans:B

1. Which of the following protein is a major component of intervertebral disc?
2. Hemoglobin
3. **Elastin**
4. Myoglobin
5. Chlorophyll

Ans:B

1. Which of the following protein is a major component of Adipose Tissues?
2. Hemoglobin
3. **Elastin**
4. Myoglobin
5. Chlorophyll

Ans:B

1. Which of the following protein is a major component of Skin?
2. Hemoglobin
3. **Elastin**
4. Myoglobin
5. Chlorophyll

Ans:B

**Chapter: TISSUE BIOCHEMISTRY**

**Topic: Elastin and Extracellular Matrix Components**

**SubTheme: Disorder**

1. Loss of tissue elasticity is one of the hallmarks of which of the following?
2. Mutation
3. sclerosis
4. **Ageing**
5. Beri Beri

Ans:C

1. Defect in the gene for elastin/fibrillin is characterized by which of the following?
2. **Marfan syndrome**
3. sclerosis
4. Ageing
5. Beri Beri

Ans: A

**Chapter: TISSUE BIOCHEMISTRY**

**Topic: Biochemistry of Proteoglycans**

1. In biochemistry, protein-polysaccharide complexes are referred to as which of the following molecule?
2. Polymer
3. Oligosaccharide
4. Polypeptide
5. **Proteoglycan**

Ans:D

1. Which of the following functions in lubrication and shock absorption?
2. Elastin
3. Collagen
4. **Proteoglycan**
5. Hemoglobin

Ans:C

1. The Proteoglycan of extracellular matrix of cartilage is known as?
2. Polymer
3. **aggrecan**
4. Polypeptide
5. Glycosaminoglycan

Ans:B

**Chapter: TISSUE BIOCHEMISTRY**

**Topic: Bone & Teeth**

**SubTheme: Function/Clinical Significance**

1. What is the composition of minerals in Tooth?
2. **>90%**
3. >80%
4. >70%
5. >60%

Ans:A

1. What is the composition of proteins in Tooth?
2. >1
3. >2
4. >3
5. >**4**

Ans:D

1. Which of the following is a specialized form of connective tissue?
2. Brain
3. **Bones**
4. Kidney
5. Liver

Ans: b

1. Which of the following comprises of **mineralized**extracellular matrix?
2. Brain
3. **Bones**
4. Kidney
5. Liver

Ans: b

1. Which of the following is the function of bone?
2. Elasticity to the body
3. Production of enzymes
4. Production of Hormones
5. **Storage of phosphate**

Ans: D

1. Which of the following is the function of bone?
2. **Weight bearing**
3. Production of enzymes
4. Production of Hormones
5. Nerve impulse conduction

Ans: A

**Chapter: TISSUE BIOCHEMISTRY**

**Topic: Muscle & Cytoskeleton**

**SubTheme: Function/Clinical Significance**

1. Whichof the following cell organelle controls the shape of the cell?
2. Ribosomes
3. Mitochondria
4. **Cytoskeleton**
5. Nucleus

Ans: C

1. Whichof the following cell organelle controls the movement of the cell?
2. Ribosomes
3. Mitochondria
4. **Cytoskeleton**
5. Nucleus

Ans: C

1. Whichof the following performs mechanically supportive function in the cell?
2. **Microfilaments**
3. Intermediate filaments
4. Microtubules
5. Golgi Bodies

Ans: A

1. Which of the following proteins that provide mechanical strength?
2. Microfilaments
3. **Intermediate filaments**
4. Microtubules
5. Golgi Bodies

Ans: B

1. The alternating dark A band and light I band, in the middle of which are the H zone and Z line is present in which of the following structure?
2. Sarcoplasm
3. **Sarcomere**
4. Myofibril
5. sarcoplasmic reticulum
6. The major constituent of the thin filament is defined as?
7. sarcoplasmic reticulum
8. **Actin**
9. Myosin
10. Myosin head
11. The major constituent of the thick filament is defined as?
12. sarcoplasmic reticulum
13. Actin
14. **Myosin**
15. Golgi Bodies
16. The combination of thick filament and thin filament along with Troponin and Tropomyosin is defined as?
17. Sarcoplasm
18. Sarcomere
19. **Myofibril**
20. sarcoplasmic reticulum

**Chapter: METABOLISM BIOENERGETICS**

**Topic: Introduction to Bioenergetics**

**SubTheme: Metabolism/ Synthesis &Regulation**

1. The transference and utilization of energy in biologic systems refers to as which of following?
2. Molecular Biology
3. **Bioenergetics**
4. Molecular Genetics
5. Biochemistry
6. Changes in free energy of a chemical reaction in biologic systems refer to as which of following?
7. Molecular Biology
8. **Bioenergetics**
9. Molecular Genetics
10. Biochemistry

**Chapter: METABOLISM BIOENERGETICS**

**Topic: Electron Transport Chain and Oxidative Phosphorylation**

**SubTheme: Structure**

1. Electron transport and oxidative phosphorylation occur in which cell organelle?
2. Ribosome
3. **Mitochondria**
4. Nucleus
5. Cytosol
6. Where the process transport and oxidative phosphorylation occur within mitochondria?
7. Outer membrane
8. Periplasm
9. DNA
10. **Inner membrane**
11. In Electron transport chain Complex I refers to which of the following?
12. **NADH-Q reductase**
13. FMN-Q reductase
14. Q-Cytochrome C Reductase
15. Cytochrome C Oxidase
16. In Electron transport chain Complex III refers to which of the following?
17. NADH-Q reductase
18. FMN-Q reductase
19. **Q-Cytochrome C Reductase**
20. succinate-Q reductase
21. In Electron transport chain Complex III refers to which of the following?
22. NADH-Q reductase
23. FMN-Q reductase
24. **Q-Cytochrome C Reductase**
25. Cytochrome C Oxidase
26. In Electron transport chain Complex IV refers to which of the following?
27. NADH-Q reductase
28. FMN-Q reductase
29. Q-Cytochrome C Reductase
30. **Cytochrome C Oxidase**
31. In Electron transport chain, **NADH-Q reductase** refers to which of the following?
32. **Complex I**
33. Complex II
34. Complex III
35. Complex IV
36. In Electron transport chain, **succinate-Q reductase** refers to which of the following?
37. Complex I
38. **Complex II**
39. Complex III
40. Complex IV
41. In Electron transport chain, **Q-Cytochrome C Reductase** refers to which of the following?
42. Complex I
43. Complex II
44. **Complex III**
45. Complex IV
46. In Electron transport chain, **Cytochrome C Oxidase** refers to which of the following?
47. Complex I
48. Complex II
49. Complex III
50. **Complex IV**

**Chapter: METABOLISM BIOENERGETICS**

**Topic: Electron Transport Chain and Oxidative Phosphorylation**

**SubTheme: Function/Clinical Significance**

1. The NADH2 oxidation during Electron transport chain yields how many ATPs?
2. 1
3. 2
4. **3**
5. 4
6. The FADH2 oxidation during Electron transport chain yields how many ATPs?
7. 1
8. **2**
9. 3
10. 4
11. The enzyme associated directly in ATP generation during Oxidative phosphorylation refers to which of the following?
12. NADH-Q reductase
13. succinate-Q reductase
14. Q-Cytochrome C Reductase
15. **ATP Synthase**
16. Which of the following is an Electron carrier Proteins?
17. Hemoglobin
18. Myoglobin
19. **Cytochrome C Oxidase**
20. Elastin
21. Which of the following is an Electron carrier Proteins?
22. Hemoglobin
23. Myoglobin
24. **NADH-Q reductase**
25. Elastin
26. Which of the following is an Electron carrier Proteins?
27. Hemoglobin
28. Myoglobin
29. **succinate-Q reductase**
30. Elastin
31. Which of the following is an Electron carrier Proteins?
32. Hemoglobin
33. Hexokinase
34. **Cytochrome C Oxidase**
35. Collagen
36. Which of the following cycles, the implies chemiosmotic phenomena?
37. Glycolysis
38. Gluconeogenesis
39. Pentose Phosphate Pathway
40. **Electron Transport Chain**
41. Which of the following cycles, the implies [Oxidative phosphorylation?](https://www.khanacademy.org/science/ap-biology/cellular-energetics/cellular-respiration-ap/a/oxidative-phosphorylation-etc)

1. Pentose Phosphate Pathway
2. **Electron Transport Chain**
3. Glycolysis
4. Gluconeogenesis

**Chapter: METABOLISM OF CARBOHYDRATES**

**Topic: Digestion & Absorption of Carbohydrates**

**Subtheme: Metabolism/Synthesis & Regulation**

1. Which of the following is the macronutrient in the human diet?
2. ATP
3. Glucose
4. **Carbohydrate**
5. Insulin
6. Carbohydrate digestion begins in the mouth via which enzyme?
7. **Amylase**
8. Insulin
9. Glucagon
10. sucrase
11. Which of the following is unable to provide energy to the body?
12. Fats
13. Carbohydrates
14. Glucose
15. **Fibers**

**Chapter: METABOLISM OF CARBOHYDRATES**

**Topic: Digestion & Absorption of Carbohydrates**

**Subtheme: Clinical Significance**

1. An increase in simple carbohydrates may contribute to which of the following?
2. Multiple Sclerosis
3. **Obesity**
4. Anemia
5. thalassemia

**Chapter: METABOLISM OF CARBOHYDRATES**

**Topic: Glycolysis & its Regulation**

**Subtheme: Metabolism/Synthesis & Regulation**

1. State the number of regulatory steps in Glycolysis?
2. 1
3. 2
4. **3**
5. 4
6. Under aerobic conditions, pyruvate can be converted which of the following?
7. Lactic Acid
8. Alcohol
9. Ketone Bodies
10. **Acetyl Coenzyme A**
11. Glycolysis converts one molecule of glucose into how many molecules of pyruvate?
12. 1
13. **2**
14. 3
15. 4
16. In Glycolysis, Phosphoenolpyruvate is converted into Pyruvate via which enzyme?
17. Hexokinase
18. Enolase
19. Mutase
20. **Pyruvate Kinase**

**Chapter: METABOLISM OF CARBOHYDRATES**

**Topic: Citric Acid Cycle**

**Subtheme: Metabolism/Synthesis & Regulation**

1. Which of the following step produces NADH2 in the Citric Acid Cycle?
2. **α-Ketoglutarate**
3. Citrate
4. Malate
5. Acetyl CoA
6. Which of the following step produces NADH2 in the Citric Acid Cycle?
7. **Succinyl-CoA**
8. Citrate
9. Malate
10. Acetyl CoA
11. Which of the following step produces NADH2 in the Citric Acid Cycle?
12. **Oxaloacetate**
13. Citrate
14. Malate
15. Acetyl CoA
16. Which of the following step produces FADH2 in the Citric Acid Cycle?
17. Citrate
18. Malate
19. Acetyl CoA
20. **Fumarate**

**Chapter: METABOLISM OF CARBOHYDRATES**

**Topic: Citric Acid Cycle**

**Subtheme: Function/Clinical Significance**

1. Identify the energy carriers produced during Citric Acid Cycle?
2. Pyruvate
3. NAD+
4. **NADH2**
5. FAD+
6. Identify the energy carriers produced during Citric Acid Cycle?
7. Pyruvate
8. NAD+
9. **FADH2**
10. FAD+

**Chapter: METABOLISM OF CARBOHYDRATES**

**Topic: Metabolism of Glycogen**

**Subtheme: Function/Clinical Significance**

1. Which biomolecule degradation is crucial for providing energy during exercise?
2. Lactic acid
3. ATP
4. Fructose
5. **Glycogen**
6. Which biomolecule degradation is crucial for maintaining blood glucose level during starvation condition?
7. Lactic acid
8. ATP
9. Fructose
10. **Glycogen**
11. The storage of glycogen within the cell takes place in which of the following?
12. **Cytoplasm**
13. Mitochondria
14. Nucleus
15. Cell wall
16. Which biomolecule energy is reserve for muscular activity between the meals or starvation condition?
17. Lactic acid
18. Fiber
19. Fructose
20. **Glycogen**

**Chapter: METABOLISM OF CARBOHYDRATES**

**Topic: Metabolism of Glycogen**

**Subtheme: Metabolism/ Synthesis &Regulation**

1. Which of the following is key enzyme for Glycogen degradation?
2. Glycogen Kinase
3. Glycogen Mutase
4. **Glycogen phosphorylase**
5. Glycogenin
6. Which of the following is key enzyme for Glycogen degradation?
7. Glycogen Kinase
8. Glycogen Mutase
9. **glycogen-debranching enzyme**
10. Glycogenin
11. Which of the following is key enzyme for Glycogen synthesis?
12. Glycogen Kinase
13. glycogen synthetase
14. **glycogen synthase**
15. Glycogenin

**Topic: Gluconeogenesis and regulation of blood glucose**

**Subtheme: Function/Clinical Significance**

1. The pathway that synthesizes glucose from non-carbohydrate precursors
2. Pentose Phosphate Pathway
3. Phosphogluconate Pathway
4. Hexose Monophosphate Shunt
5. **Gluconeogenesis**
6. Gluconeogenesis occurs mainly in which of the following organ?
7. **Liver**
8. Retina
9. Brain
10. Cytosol
11. Gluconeogenesis occurs mainly in which of the following organ?
12. **Kidney**
13. Retina
14. Brain
15. Cytosol
16. Which metabolic pathway meets the need of the body for glucose when sufficient carbohydrate is not available from the diet or glycogen reserves?
17. Pentose Phosphate Pathway
18. Glycolysis
19. Hexose Monophosphate Shunt
20. **Gluconeogenesis**
21. Which metabolic pathway meets the requirement of the brain for glucose when sufficient carbohydrate is not available from the diet or glycogen reserves?
22. Pentose Phosphate Pathway
23. Glycolysis
24. Hexose Monophosphate Shunt
25. **Gluconeogenesis**

**Topic: Gluconeogenesis and regulation of blood glucose**

**Subtheme: Metabolism/ Synthesis & Regulation**

1. Which of the following is the precursor of glucose in Gluconeogenesis?
2. **Lactic acid**
3. Glucose-6-Phosphate
4. Ribulose
5. Fructose-6-Phosphate
6. Which of the following is the precursor of glucose in Gluconeogenesis?
7. **Amino acid**
8. Glucose-6-Phosphate
9. Ribulose
10. Fructose-6-Phosphate

**Chapter: METABOLISM OF CARBOHYDRATES**

**Topic: Pentose Phosphate Pathway & its Significance**

**Subtheme: Function/Clinical Significance**

1. NADPH and ribose 5-phosphate are the products of which metabolic pathway?
2. **Pentose Phosphate Pathway**
3. Glycolysis
4. Citric Acid Cycle
5. Gluconeogenesis
6. NADPH is required for synthetic pathways of which biomolecule?
7. Amino acid
8. Glucose-6-Phosphate
9. Ketone Bodies
10. **Fatty acids**
11. NADPH is required for synthetic pathways of which biomolecule?
12. Amino acid
13. Glucose-6-Phosphate
14. Ketone Bodies
15. **Steriods**

**Chapter: METABOLISM OF CARBOHYDRATES**

**Topic: Pentose Phosphate Pathway & its Significance**

**Subtheme: Metabolism/ Synthesis &Regulation**

1. In Pentose Phosphate Pathway, how many NADPH are synthesized?
2. 1
3. **2**
4. 3
5. 4

**Chapter: METABOLISM OF LIPIDS**

**Topic: Digestion & Absorption of Lipids**

**Subtheme: Sources**

1. The first step in the digestion of triacylglycerols and phospholipids begins in the mouth as lipids encounter which of the following?
2. **Saliva**
3. Gastric Juice
4. Bile salt
5. Acid
6. The fat is converted into which of the following upon encounter with emulsifier?
7. Amino acid
8. **Fat droplet**
9. Hydrophilic droplet
10. Carbohydrate
11. Which of the enzyme is chiefly associated with the digestion of triacylglycerol?
12. Peptidase
13. Protease
14. Amylase
15. **Lipase**
16. The digestion and uptake processes are aided by the detergent-like properties of which of the following?
17. Saliva
18. Gastric Juice
19. **Bile salt**
20. Acid

**Chapter: METABOLISM OF LIPIDS**

**Topic: Metabolism & Clinical Significance of Lipoproteins**

**Subtheme: Function/Clinical Significance**

1. What is the nature of core of lipoproteins?
2. Hydrophilic
3. Acidic
4. **Hydrophobic**
5. Basic
6. How many types of lipoproteins are there in a biological System?
7. 1
8. 3
9. **5**
10. 7
11. Which of the following transport dietary (exogenous) triacylglycerols and cholesterol from the intestines to other tissues in the body?
12. **Chylomicrons**
13. LDLs
14. HDLs
15. Apoproteins
16. Which of the following transport endogenous cholesterol from the tissues to the liver?
17. Chylomicrons
18. LDLs
19. **HDLs**
20. Apoproteins
21. Which of the following biomolecule is responsible to transport fats/lipids through blood?
22. Glucose
23. Amino acids
24. **Lipoproteins**
25. Peptidoglycans

**Chapter: METABOLISM OF LIPIDS**

**Topic: Fatty acid oxidation biosynthesis and metabolism of Triacylglycerol**

**Subtheme: Function/Clinical Significance**

1. Which of the following metabolic pathway characterizes the Fatty acid breakdown?
2. **β-oxidation**
3. Deamination
4. Transamination
5. Hexose Monophosphate Shunt
6. The Catalyzation of Fatty acid breakdown provides which of the following energy carrier?
7. GTP
8. **FADH2**
9. NADPH2
10. ATP
11. The Catalyzation of Fatty acid breakdown provides which of the following energy carrier?
12. GTP
13. **NADH2**
14. NADPH2
15. ATP

**Chapter: METABOLISM OF LIPIDS**

**Topic: Fatty acid oxidation biosynthesis and metabolism of Triacylglycerol**

**Subtheme: Metabolism/ Synthesis &Regulation**

1. Which of the following is the precursor of Triacylglycerols synthesis?
2. Glucose-6-Phosphate
3. Fructose-6-Phosphate
4. Glycogen
5. **Glyceraldehyde-3- Phosphate**
6. Hydrolysis of Triacylglycerol is under the control of which hormone?
7. **Glucagon**
8. Insulin
9. Thyroid Hormone
10. Follicle Stimulating Hormone

**Topic: Metabolism & clinical Significance of Cholesterol**

**Subtheme: Function/Clinical Significance**

1. **Which** of the following is the precursor of Bile Salt?
2. Glucose-6-Phosphate
3. Fructose-6-Phosphate
4. **Cholesterol**
5. Glyceraldehyde-3- Phosphate
6. **Which** of the following is the precursor of Vitamin D?
7. Glucose-6-Phosphate
8. Fructose-6-Phosphate
9. **Cholesterol**
10. Glyceraldehyde-3- Phosphate

**Topic: Metabolism & clinical Significance of Cholesterol**

**Subtheme: Metabolism/ Synthesis & Regulation**

1. How many carbon atoms are present in Cholesterol molecule?
2. 24
3. **27**
4. 28
5. 30

**Topic: Metabolism of Eicosanoids**

**Subtheme: Function/Clinical Significance**

1. How many carbon atoms are present in Eicosanoids molecule?
2. **20**
3. 24
4. 27
5. 28
6. Inflammatory response is elicited by which of the following?
7. Cholesterol
8. Vitamin D
9. Amino acid
10. **Eicosanoids**

**Topic: Metabolism of Eicosanoids**

**Subtheme: Metabolism/ Synthesis & Regulation**

1. Eicosanoids are synthesized from which of the following biomolecule?
2. Protein
3. **Fatty Acid**
4. Amino acid
5. Glucose
6. Eicosanoids are synthesized from which of the following?
7. **Arachidonate**
8. eicosapentaenoic acid
9. α-linolenic acid
10. omega−3 fatty acids

**Chapter: METABOLISM OF PROTEINS & AMINO ACIDS**

**Topic: Digestion of Proteins & Absorption of Amino Acids**

1. The dietary proteins are broken into their constituent amino acids in the stomach and intestine via which of the following?
2. Nucleases
3. **Protease**
4. Amylase
5. Lipase
6. Which of the following enzyme is present in the stomach?
7. Amylase
8. ENteropeptidase
9. Exopeptidase
10. **Pepsinogen**

**Topic: Transamination & Deamination of Amino Acids and urea cycle**

**Subtheme: Metabolism/ Synthesis &Regulation**

1. Which of these are the precursors of Amino acids
2. **Pyruvate**
3. Glucose 6 phosphate
4. Malonyl CoA
5. Malate
6. amino acids that are degraded to acetyl CoA are called
7. **ketogenic**
8. glucogenic
9. Essential
10. Non-essential

**Topic: Transamination & Deamination of Amino Acids and urea cycle**

**Subtheme: Normal Value**

1. The number of ATPs utilized in Urea cycle are:

a) 2

b) **3**

c) 4

d) 5

**Topic: Transamination & Deamination of Amino Acids and urea cycle**

**Subtheme:** Function/Clinical Significance

1. Which of the following pathways plays an important role in the regulation and coordination of the metabolism of amino acids and carbohydrates?
2. Deamination
3. **Transamination**
4. Urea cycle
5. Glycolysis
6. What is the site for Urea synthesis?
7. Kidney
8. **Liver**
9. Retina
10. Brain
11. What is the site for Urea excreation?
12. **Kidney**
13. Liver
14. Retina
15. Brain

**Topic: Specialized products formed from Amino Acids**

**Subtheme: Function/Clinical Significance**

1. Heme is the essential prosthetic group in which of protein?
2. **Hemoglobin**
3. Hexokinase
4. Chlorophyll
5. Pyruvate kinase
6. Heme is the essential prosthetic group in which of protein?
7. **Myoglobin**
8. Hexokinase
9. Chlorophyll
10. Pyruvate kinase

**Topic: Specialized products formed from Amino Acids**

**Subtheme:** Metabolism/ Synthesis &Regulation

1. The precursor of heme synthesis is
2. **Glycine**
3. δ-Aminolaevulinate
4. Porphobilinogen
5. Porphyrin
6. The precursor of Chlorophyll synthesis is
7. **Glycine**
8. δ-Aminolaevulinate
9. Porphobilinogen
10. Porphyrin