

General Protein Metabolism

I-MCO:

Choose the correct answer:

1. Which out of the followings is required as a coenzyme for the transamination reactions ?
 - a) Coenzyme A
 - b) Pyridoxal phosphate
 - c) Folic acid
 - d) Cobalamine
 2. Which of the followings is a common nitrogen collector for all reactions involving transaminases ?
 - a) α - Keto glutarate
 - b) Pyruvate
 - c) Oxaloacetate
 - d) Glutamate
 3. Which of the followings is a common nitrogen acceptor for all reactions involving transaminases ?
 - a) α - Keto glutarate
 - b) Pyruvate
 - c) Oxaloacetate
 - d) Acetoacetate
 4. Which out of the following statements about glutamate dehydrogenase is not correct?
 - a) Required for transdeamination reactions
 - b) Universally present in all the cells of the body
 - c) Can utilize either of NAD^+ / NADP^+
 - d) Catalyzes conversion of glutamate to glutamine
 5. Positive nitrogen balance is seen in all of the following conditions except?
 - a) Pregnancy
 - b) Growth
 - c) Fever
 - d) Convalescence
 6. Celiac disease is immune mediated damage to small intestine in response to ingestion of
 - a) Keratin
 - b) Collagen
 - c) Gluten
 - d) Albumin
-
-

7. In a 55-year-old man, who has been diagnosed with cirrhosis of liver, Ammonia is not getting detoxified and can damage brain. Which of the following amino acids can covalently bind ammonia, transport and store in a non toxic form?
- Aspartate
 - Glutamate
 - Serine
 - Cysteine
8. The first line of defense in brain in conditions of hyperammonemia is?
- Urea formation
 - Glutamine synthesis
 - Glutamate synthesis
 - Asparagine formation
9. Urea is synthesized in?
- Cytoplasm
 - Mitochondria
 - Both cytoplasm and mitochondria
 - In lysosomes
10. The two nitrogen of urea are derived from?
- Aspartate and Ammonia
 - Glutamate and ammonia
 - Argino succinate and ammonia
 - Alanine and ammonia
11. A 55-year-old man suffers from cirrhosis of liver. Toxins such as ammonia are not properly metabolized by the liver and can damage brain. Which of the following compounds is expected to be in lowest concentration in brain as a result of detoxification of ammonia?
- Alpha keto glutarate
 - Glutamate
 - Glutamine
 - GABA
12. Normal plasma level of urea
- 50-100 mg/dl
 - <0.05 mg/dl
 - 1-2 mg/dl
 - 10-50mg /dl
13. Normal plasma level of ammonia
- 50-100 mg/dl
 - <0.05 mg/dl
 - 1-2 mg/dl
 - 10-50 mg /dl

14. The most common hereditary hyperammonemia disorder

- Type I hyperammonemia
- Type II hyperammonemia
- Citrullinuria
- Argininosuccinate academia

15. The major site of urea synthesis is

- Brain
- Kidney
- Liver
- Muscles

16. N-acetylglutamate synthase is allosterically activated by:

- CAPSI
- Arginine
- Ornithine
- Citrulline

17. Deficiency of γ -aminobutyric acid leads to:

- Convulsions
- Coma
- Mental retardation
- All of the above

MCO Answers

1-b	2-d	3-a	4-d	5-c	6-c	7-b	8-b	9-c	10-a
11-a	12-d	13-b	14-b	15-c	16-b	17-a			

II- Define:

- Biological value
- Nitrogen balance
- Transamination

III- Write short notes on

- Celiac disease (Cause, symptoms and treatment)
- Nitrogen balance (Definition and types)
- Diagnostic value of plasma aminotransferases.
- Catabolic and excretory fate of ammonia
- Types of hyperammonemia
- Regulation of urea cycle