

Question of 1st Biochemistry Quiz

PART I\ One Best Response

- 1- Which of the following contribute nitrogen atoms to both purine & pyrimidine bases:
- a. Carbamoyl phosphate.
 - b. N10- formyl tetrahydrofolate.
 - c. Glycine.
 - d. Aspartic acid. ✓
 - e. Glutamic acid.
- 2- Concerning ribonucleotide reductase:
- a. It converts ribonucleoside triphosphates into their deoxy-form.
 - b. Binding of dATP to activity site of the enzyme turns the enzyme on.
 - c. NADPH is the immediate donors for the hydrogen atoms needed for reduction.
 - d. It is one-unit enzyme that has both catalytic & regulatory regions.
 - e. Thioredoxin is an essential immediate in the regeneration of enzyme into its active, reduce form. ✓
- 3- Regarding de novo purine & pyrimidine nucleotide biosyntheses:
- a. The committed-step in purine synthesis is catalyzed by PRPP synthetase.
 - b. The committed-step in pyrimidine synthesis is catalyzed by CPS 1.
 - c. The rate of purine & pyrimidine syntheses is controlled by the intracellular concentration of PRPP. ✓
 - d. A deoxyribose is required for adenine nucleotide synthesis whereas a ribose is required for uracil nucleotide synthesis.
 - e. The end product of purine synthesis is dATP.
- 4- Acyclovir is:
- a. Thymine analog.
 - b. A substrate for thymidine kinase ✓
 - c. Folic acid analog.
 - d. PABA analog.
 - e. An inhibitor of thymidylate synthase.
- 5- Carbamoyl phosphate synthase II:
- a. Is a mitochondrial enzyme.
 - b. Requires biotin as a co-enzyme.
 - c. Is activated by ATP. ✓
 - d. Is a bifunctional enzyme.
 - e. Deficiency leads to orotic aciduria.



- 6- A one year old female patient is anemic. Her urine contain as elevated level of orotic acid. The intake of which one of the following compounds is most likely to control her condition:
- Thymidine.
 - Hypoxanthine.
 - Uridine. ✓
 - Allopurinol.
 - Adenine
- 7- The least soluble degradation product of purine or pyrimidine bases is:
- Uric acid. ✓
 - β -aminoisobutyric.
 - Allatoin.
 - Xanthine.
 - β -alanine.
- 8- Adenosine deaminase deficiency is:
- X-linked syndrome
 - Characterized by the accumulation of dGTP in red cells
 - manifested by mental retardation & self mutilation.
 - Characterized by sever combined immunodeficiency (SCID). ✓
 - Associated with hyperuricemia.
- 9- All the following are considered unusual bases, EXCEPT:
- Acetylcytosine
 - 5-methyluracil. ✓
 - Dimethyladenine.
 - Dihydrouracil.
 - Hydroxymethylguanine.

PART II\ True & False

- Adenosine & cytosine are both ribonucleosides. F
- S-adenosyl methionine is the methyl donor required for conversion of dUMP into dTMP. F
- Mycophenolic acid is potent competitive inhibitor of IMP dehydrogenase. F
- PRPP is required for the salvage of pyrimidine nucleosides. F
- Both NMP- & NDP- kinases are reversible enzymes. T



PART III\ STEM

1- Nucleotides:

- | | |
|---|---|
| a. Forms the monomer of both DNA & RNA. | T |
| b. Serve as carriers of activated intermediate of metabolism. | T |
| c. are important regulatory compounds of metabolic pathways. | T |
| d. Play an important role as " energy currency " of the cell. | T |

شكر لـ N.R

الرجاء عدم إحضار الأسئلة للكلية

... ولا تنسونا من دعائكم ...

أبو عمر

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