DT AND RAD

BIOCHEMISTRY

ASSIGNMENT FOR VIVA

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**(STEPS INVOLVED IN URIC ACID FORMATION )**

***Ans: The uric acid is formed by the breakdown of purine nucleotide . Uric acid is waste product of created during the normal breakdown of purine. And it is normally cleaned out by the kidneys, and passes out of the body along with urine. The normal range of uric acid in our body is 3-7 mg.***

 ***The purine nucleotide are of three types :***

***1)Adenosine.***

***2)Guanosine.***

***3)Inosine.***

***The steps involved in the formation of uric acid.***

***When the breakdown of purine occur so the process begins:***

* ***Adenosine monophosphate .***
* ***Guanosine monophosphate.***
* ***Inosine monophosphate.***
1. ***The adenosine monophosphate change into adenosine.***
2. ***The guanosine monophosphate change into guanosine.***
3. ***The Inosine monophosphate change into Inosine.***

***Amp imp gmp***

 /nucleotide -p /nucleotide -p / nucleotide -p ***Adenosine Inosine guanosine***

 ***/ /-ribose1-p from both /***

 ***From both hypoxanthine forms genuine***

 ***From the hypoxanthine and genuine***

 ***Xanthine forms***

 ***From xanthine and genuine***

 ***Uric acid forms***

***So we get uric acid by this process.***

 ***Or***

 ***Steps involved:***

1. ***Conversion of nucleotide to nucleoside.***
2. ***Conversion of nucleoside to Inosine.***
3. ***Synthesis of hypoxanthine.***
4. ***Formation of xanthine.***
5. ***Conversion of xanthine to uric acid.***

***1) Conversion of nucleotide to nucleoside.***

***In the presence of nucleotide enzymes adenosine monophosphate is converted into adenosine and inorganic phosphate***

***2) Conversion of nucleoside to Inosine:***

***In this step nucleoside i.e adenosine is converted into inosine with the liberation of NH3 in the presence of adenosine deaminase enzyme.***

***3)synthesis of hypoxanthine:***

***In the presence of nucleoside phosphorylase enzyme . Inosine is converted into hypoxanthine along with pentose sugar.***

***4)formation of xanthine :***

***Hypoxanthine is converted into xanthine by the addition of oxygen molecule in the presence of xanthine oxidase enzyme.***

***5)conversion of xanthine to uric acid:***

***This is the final step of purine degradation in which xanthine is converted into final product uric acid by the addition of oxygen molecule in the presence of xanthine oxidase.***

***Ans the formation of uric acid is formed***

 ***The end!***