DT AND RAD NAME .. TANZEEL

ID NO 15762

2ND SEMESTER SEC B DT

BIOCHEMISTRY

ASSIGNMENT FOR VIVA

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

**ANS... URIC ACID FORMATION.**

STEPS INVOLVED IN URIC ACID FORMATIOM .

1.. Synthesis of carbomyl phosphate.

2.. Synthesis of citrulline.

3..Synthesis of arginosuccinate.

4..Cleavage of arginosuccinate.

5..Cleavage of arginine to form ornithine.

PROCESS.

Part of urea cycle occurs in mitochondria and part of it occurs in cytoplasm.

1.SYNTHESIS OF CARBOMYL PHOSPHATE. In thee first step Ammonia ion CO2 and phosphate of ATP combine together to form carbomyl phosphate in the presence of enzyme called carbomyl synthase.I.This reaction occurs in mitochondria.

2..SYNTHESIS OF CITRULLINE.

In the 2nd step the carbomyl reacts with ornithine in the presence of catalyst called ornithine transcarbo which will form citrulline and inorganic phosphate.

3..SYNTHESIS OF ARGININOSUCCINATE.

In the 3rd step the citrulline formed in the 2nd step is now transported out of the mitochondria into the cytoplasm where it reacts with amino group of asparate to form Argininosuccinate.This process occur in the presence of enzyme called Arginino synthetase.

4..ARGININO SUCCINATE.

In the 4th step the cleavage of arginino succinate occurs in the presence of an enzyme called arginino succinase which results in the formation of Arginine and Fumurate.

5.CLEAVAGE OF ARGININE.

In the last step the arginine formed in the 4th step is cleaved to form ornithine and urea.The reaction is catalysed by an enzyme called Arginase.The ornithine produced im the final step is transported to mitochondria where it is used as a sunstrate in the 2nd step.

The urea produced in the reaction enters blood circulation and is excreted in urine.

