It is the component of proteins.Glutathione also plays a key role in detoxification by reacting with the hydrogen peroxide and organic peroxides, the harmful byproduct formed during the metabolic reactions.Homocysteine, an intermediate in the synthesis of methionine, s–adenosylmethionine a biological methylating agent Purines and pyrimidines are derived in part from amino acids.Glutathione: (g –Glu–Cys–Gly) a tripeptide containing sulfhydril group protects red cell from oxidative damage.Glycine and g – aminobutyric acid (a glutamate decarboxylation product) and dopamine (a tyrosine product) are neurotransmeters.The neurotransmitter, 5– hydroxytryptamine (serotonin) and the nicotinamide ring of NAD are synthesized from tryptophan.Heme of hemoglobin is synthesized from the amino acid glycine and succinyl CoA.Creatine phosphate (a high energy molecule) present in muscle is synthesized from glycine, arginine and methionine.Tyrosine is the precursor of the hormones thyroxine, epinephrine.Citrulline and ornithine are important intermediates in urea cycle.Sphingosine an intermediate in the synthesis of sphingolipids comes from serine.Histamine (the decarboxylation product of histidine), a vasodialator.The pigment melanin is also derived form tyrosine.NO, a vasodilator is .produced from the amino acid arginine