

Q4 – Ass 5

1. unify[t (s (s), G, s, p, t(k), s), t (s (G), G, s, p, t(k), U)]

$A = t (s (s), G, s, p, t(k), s)$

$B = t(s(G), G, s, p, t(K), U)$

$s = \{U=s\}$

$A^{\circ}_{sub} = t (s(s), G, s, p, t(k), s)$

$B^{\circ}_{sub} = B = t(s(G), G, s, p, t(K), s)$

$s = \{G=s\}$

$A^{\circ}_{sub} = t (s(s), s, s, p, t(k), s)$

$B^{\circ}_{sub} = B = t(s(s), s, s, p, t(K), s)$

2. unify[g(l, M, g, G, U, g, v(M)), g(l , v(U), g, v(M), v(G), g, v(M))]

$A = g(l, M, g, G, U, g, v(M))$

$B = g(l, v(U), g, v(M), v(G), g, v(M))$

$s = \{M=v(U)\}$

$A^{\circ}_{sub} = g(l, v(U), g, G, U, g, v(v(U)))$

$B^{\circ}_{sub} = g(l, v(U), g, v(v(U)), v(G), g, v(v(U)))$

$s = \{M=v(U), G=v(v(U))\}$

$A^{\circ}_{sub} = g(l, v(U), g, v(v(U)), U, g, v(v(U)))$

$B^{\circ}_{sub} = g(l, v(U), g, v(v(U)), v(v(v(U))), g, v(v(U)))$

No such substitute exists (Circular occurrence: [U=v(v(v(U)))])

3. unify[m(M,N), n(M,N)]

No such substitute exists

4.unify[p([v | [V | VV]]), p([[v | V] | VV)]

$A = p([v | [V | VV]])$

$B = p([[v | V] | VV])$

Answer: No such substitute exists ([v=[v | V]])

5. Unify[g ([T]), g(T)]

No such substitute exists (Circular occurrence: [T = [T]])