

Name - Shubham Jc

Roll - 11T2018146

$$Q^{t+1}(1,1,\downarrow) = Q^t(1,1,\downarrow) + \alpha [R(1,1,\downarrow, (1,1)) + \gamma \max_{a'} Q^t(1,1,a') - Q^t(1,1,\downarrow)]$$

$$= 9.6 + 0.1 [5 + 0.9(9.6) - 9.6]$$

$$= 9.6 + 0.1 [5 + 8.64 - 9.6]$$

$$= 9.6 + 0.1 [5 - 0.96]$$

$$= 9.6 + 0.1 (4.04)$$

$$= 9.6 + 0.404$$

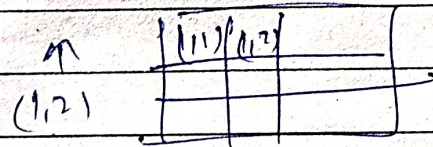
$$= 10.004$$

\uparrow (1,1)
(1,2)

(Q2) (a)



(1,2)

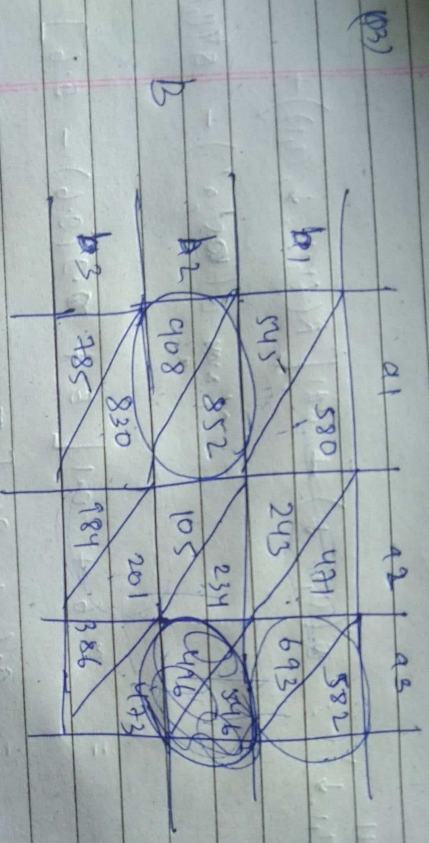


$$Q^{t+1}(1,2,\uparrow) = 2.3 + 0.1 [5 + 0.9(9.6) - 2.3]$$

\uparrow

$Q^{t+1}(1,2,\uparrow) = \text{value increases}$

A



g. b