Actions	(1,4) – 6.30	Perpendicular states	Justification
Up	Moving to (1,5) – 6.52 (0.8 x 6.52) + (0.1) x (6.02 + 6.30) = 6.448	(1,3) & (1,4)	This is because if moved to (2,4), there is a probability of ending up in an inaccessible state
Right	Moving to (2,4) – 6.52 (0.8 x 6.52) + (0.1) x (6.52 + 6.30) = 6.498	(1,5) & (1,4)	They are the two highest states
Left	Not possible, hence same as (1,4) (0.8 x 6.30) + (0.1) x (6.52 + 6.30) = 6.322	(1,5) & (1,4)	They are the two highest states
Down	Moving to (1,3) – 6.02 (0.8 x 6.02) + (0.1) x (6.52 + 6.30) = 6.098	(1,5) & (1,4)	This is because if moved to (2,4), there is a probability of ending up in an inaccessible state

Optimal policy = 6.498 as this is the highest value, therefore moving to the right is the best option

Actions	(2,3) – 5.82	Perpendicular states	Justification
Up	Moving to (2,4) – 6.52 (0.8 x 6.52) + (0.1) x (5.46 + 6.02) = 6.364	(2,2) & (1,3)	This is because if moved to (2,4), there is a probability of ending up in an inaccessible state
Right	Moving to (3,3) – -5 (0.8 x -5) + (0.1) x (6.52 + 6.02) = -2.746	(1,3) & (2,4)	They are the two highest states
Left	Moving to (1,3) – 6.02 (0.8 x 6.02) + (0.1) x (5.82+ 5.46) = 5.944	(2,3) & (2,2)	If moved up, can end up in inaccessible state, and if moved to the right, it is a terminal point and can also end up in an inaccessible state
Down	Moving to (2,2) – 5.46 (0.8 x 5.46) + (0.1) x (5.82 + 6.02) = 5.552	(2,3) & (1,3)	If moved up, can end up in inaccessible state, and if moved to the right, it is a terminal point and can also end up in an inaccessible state

Optimal policy = 6.364 as this is the highest value, therefore moving to up is the best option

Actions	(4,5) – 7.33	Perpendicular states	Justification
Up	Not possible, hence same as (4,5) (0.8 x 7.33) + (0.1) x (7.58 + 7.08) = 7.33	(1,5) & (1,3)	Going up is not an option, and down is inaccessible, also the state is already inaccessible
Right	Moving to (1,5) – 7.58 (0.8 x 7.58) + (0.1) x (7.08 + 7.33) = 7.505	(4,5) & (3,5)	Going up is not an option, and down is inaccessible
Left	Moving to (1,3) – 7.08 (0.8 x 7.08) + (0.1) x (7.33 + 7.58) = 7.155	(1,5) & (1,4)	Going up is not an option, and down is inaccessible
Down	Not possible, hence same as (4,5) (0.8 x 7.33) + (0.1) x (7.58 + 7.08) = 7.33	(1,5) & (1,3)	Going up is not an option, and down is inaccessible, also the state is already inaccessible

Optimal policy = 7.505 as this is the highest value, therefore moving to the right is the best option