List of Figures

Figure	Title	page
3.1	A comparison of quantum discord for generalized GHZ and $ \chi angle$ states	48
4.1	Maximum payoffs of players vs angle η of the initial state $ ho_{\mathit{new}}$ in the game setting 1	70
4.2 4.3	NE payoffs and strategies of players vs angle η of the initial state $ ho_{new}$ when Player 1	
	applies an amplitude damping noise in the game setting 1	71
	NE payoffs and strategies of players vs angle η of the initial state $ ho_{new}$ when Player 1 applies a phase damping noise in the game setting 1	71
4.4	NE payoffs and strategies of players vs angle η of the initial state ρ_{new} when Player 1	71
	applies a depolarizing noise in the game setting 1	72
4.5	Maximum payoffs of players vs angle η of the initial state $ ho_{\mathit{new}}$ in the game setting 2	72
4.6	NE payoffs and strategies of players vs angle η of the initial state $ ho_{\it new}$ when Player 1	
	applies an amplitude damping noise in the game setting 2	73
4.7	NE payoffs and strategies of players vs angle η of the initial state $ ho_{new}$ when Player 1	
	applies a phase damping noise in the game setting 2	74
4.8	NE payoffs and strategies of players vs angle η of the initial state $ ho_{new}$ when Player 1	74
	applies a depolarizing noise in the game setting 2	74
5.1	Success probability of winning Vaidman's game using GHZ-type states	79
5.2	Success probability of winning Vaidman's game using W-type states	79
5.3	Success probability of winning Vaidman's game using W_n states	80
5.4	Success probability of winning the proposed game where the rule-maker is entangled	
	with the players using a standard W state	82
5.5	Success probability of winning the proposed game where the rule-maker is entangled with the players using a standard GHZ state	83
5.6	Success probability of winning the game with respect to noise parameter ($D_1=D_2$) using the standard W state	84
5.7	Success probability of winning the game with respect to both the noise parameters	
	$(D_1 eq D_2)$ using the standard W state	84
5.8	Success probability of winning the game with respect to noise parameter $\left(D_1=D_2 ight)$	
	using a maximally entangled GHZ state	85
5.9	Success probability of winning the game with respect to both the noise parameters $(D_{1}, (D_{2}))$ with the maximum theorem and CUZ states	05
F 10	$(D_1 \neq D_2)$ using a maximally entangled GHZ state	85
5.10	Success probability of winning the proposed game where the rule-maker is entangled with the players using a four-qubit maximally entangled GHZ state	90
6.1	Relation between the sum of payoffs of players with the concurrence for a combination	
	of BoS and common interest anti-coordination games when different quantum states	00
	are shared among the players Relation between the sum of payoffs of players with the concurrence for a combination	98
6.2	of BoS and Chicken games when different quantum states are shared among the players	102
6.3	Relation between the sum of payoffs of players with the concurrence of a general	102
2	two-qubit Bell state for Bayesian game representation of the tilted Bell-CHSH operator	109

6.4	Relation between the sum of payoffs of players in tilted CHSH game with the concurrence	
	of the Horodecki state for Bayesian game representation of the tilted Bell-CHSH operator	110
6.5	Relation between the sum of payoffs of players in tilted CHSH game with the concurrence	

of the defined mixed state for Bayesian game representation of the tilted Bell-CHSH operator 111