Appendices

APPENDIX I

Example 1 : X = {a, b, c}

τ = {ϕ, X, {a}} **Closed set = {ϕ, X, {b, c}}**

α-open sets ϕ ,X, {a}, {a, b},{a, c}	**α-closed sets** ϕ, X, {b}, {c},{b,c}
semi-open sets ϕ, X, {a}, {a,b}, {a,c}	**semi-closed sets** ϕ,X,{b},{c},{b,c}
pre-open sets ϕ, X, {a},{a,b}, {a,c}	**pre-closed sets** ϕ, X, {b},{c},{b,c}
regular open sets ϕ, X	**regular closed sets** ϕ, X
regular semi open sets ϕ, X	**regular closed sets** ϕ, X
π-open sets ϕ, X	**π-closed sets** ϕ, X
Semi pre open sets ϕ, X, {a},{a,b},{a,c}	**Semi pre closed sets** ϕ,X,{b},{c},{b,c}
b-open sets ϕ, X, {a}, {a,b}, {a,c}	**b-closed sets** ϕ, X, {b}, {c}, {b,c}
g-open sets ϕ, X, {a}, {b}, {c}, {a,b}, {a,c}	**g-closed sets** ϕ, X, {b},{c},{a,b}, {a,c}, {b,c}
Mildly g-open sets ϕ,X, {a}, {a,b}, {a,c}	**Mildly g-closed sets** ϕ, X, {b}, {c}, {b,c}
g^*-open sets ϕ, X, {a}	**g^*-closed sets** ϕ, X, {b,c}
αg-open sets ϕ, X, {a}, {b}, {c}, {a,b}, {a,c}	**αg-closed sets** ϕ, X, {b}, {c}, {a,b}, {a,c}, {b,c}
$g^{\#}$-open sets ϕ, X, {a}	**$g^{\#}$-closed sets** ϕ, X, {b,c}

$\hat{g}$-open sets ϕ, X, {a}	**$\hat{g}$-closed sets** ϕ, X, {b,c}
$\alpha\hat{g}$ -open sets ϕ,X, {a}, {b}, {c}, {a,b}, {a,c}	**$\alpha\hat{g}$ -closedsets** ϕ, X, {b}, {c}, {a,b}, {a,c}, {b,c}
*g -open sets ϕ, X, {a}, {b}, {c}, {a,b}, {a,c}	***g -closed sets** ϕ, X, {b},{c},{a,b},{a,c},{b,c}
$^{\#}$gs -open sets ϕ, X, {a}, {a,b}, {a,c}	**$^{\#}$gs -closed sets** ϕ, X, {b}, {c}, {b,c}
gp-open sets ϕ, X, {a}, {b}, {c}, {a,b}, {a,c}	**gp-closed sets** ϕ, X, {b}, {c}, {a,b}, {a,c}, {b,c}
g*p-open sets ϕ, X, {a}, {a,b}, {a,c}	**g*p-closed sets** ϕ, X, {b},{c},{b,c}
gs-open sets ϕ, X, {a}, {b}, {c}, {a,b}, {a,c}	**gs-closed sets** ϕ, X, {b}, {c}, {a,b}, {a,c}, {b,c}
g*s-open sets ϕ, X, {a}, {a,b}, {a,c}	**g*s-closed sets** ϕ, X, {b},{c},{b,c}
g$^{\#}$s -open sets ϕ, X, {a}, {a,b}, {a,c}	**g$^{\#}$s -open sets** ϕ, X, {b}, {c}, {b,c}
δ-open sets ϕ, X	**δ-closed sets** ϕ, X
δg-open sets ϕ, X, {a}, {b}, {c}, {a,b}, {a,c}	**δg-closed sets** ϕ, X, {b}, {c}, {a,b}, {a,c}, {b,c}
gδ-open sets **P(X)**	**gδ-closed sets** **P(X)**
δg*-open sets ϕ, X, {a}	**δg*-closed sets** ϕ, X, {b,c}
wδg* -open sets ϕ, X, {a}, {b}, {c}, {a,b}, {a,c}	**wδg* -closed sets** ϕ, X, {b}, {c}, {a,b}, {a,c}, {b,c}
δg‡-open sets **P(X)**	**δg‡-closed sets** **P(X)**
$\delta\hat{g}$ -open sets ϕ, X, {a}, {b}, {c}, {a,b}, {a,c}	**$\delta\hat{g}$ -closed sets** ϕ, X, {b}, {c}, {a,b}, {a,c}, {b,c}
Δ^{*}-open sets **ϕ, X, {a}**	**Δ^{*}-closed sets** **ϕ, X, {b, c}**

πg-open sets P(X)	**πg-closed sets** P(X)
πgs-open sets P(X)	**πgs-closed sets** P(X)
πgα-open sets P(X)	**πgα-closed sets** P(X)
πgp-open sets P(X)	**πgp-closed sets** P(X)
πgsp-open sets P(X)	**πgsp-closed sets** P(X)
πgb-open sets P(X)	**πgb-closed sets** P(X)
rg-open sets P(X)	**rg-closed sets** P(X)
rw- open sets P(X)	**rw- closed sets** P(X)
rwg- open sets P(X)	**rwg- closed sets** P(X)
gpr- open sets P(X)	**gpr – closed sets** P(X)
gprw- open sets P(X)	**gprw- closed sets** P(X)
gspr- open sets P(X)	**gspr- closed sets** P(X)
(gs)* - open sets ϕ,X,{a}	**(gs)* - closed sets** ϕ,X,{b,c}
δ- dense sets X, {a}, {b}, {c}, {a,b}, {b,c}, {a,c}	**δg^{*}- dense sets** X, {a}, {a,b}, {a,c}
Δ^{*}-dense sets X, {a}, {a,b}, {a,c}	**πg-dense sets** X
δLC-sets ϕ, X	**Δ^{*}LC-sets** ϕ, X, {a}, {b,c}
$\Delta^{*}LC^{*}$-sets ϕ, X, {a}	**$\Delta^{*}LC^{**}$-sets** ϕ, X, {b,c}

Example2 : X = {a, b, c}

τ = {ϕ, X, {a,b}} **Closed Set = {ϕ, X, {c}}**

α-open sets ϕ, X, {a,b}	**α-closed sets** ϕ, X, {c}
semi-open sets ϕ, X, {a,b}	**semi-closed sets** ϕ, X, {c}
pre-open sets ϕ, X, {a}, {b}, {a,b}, {a,c}, {b,c}	**pre-closed sets** ϕ, X, {a}, {b}, {c}, {a,c}, {b,c}
regular open sets ϕ, X	**regular closed sets** ϕ, X
regular semi open sets ϕ, X	**regular semi closed sets** ϕ, X
π-open sets ϕ, X	**π-closed sets** ϕ, X
Semi pre open sets ϕ, X, {a}, {b}, {a,b}, {a,c}, {b,c}	**Semi pre closed sets** ϕ, X, {a}, {b}, {c}, {a,c}, {b,c}
b-open sets ϕ, X, {a}, {b}, {a,b}, {a,c}, {b,c}	**b-closed sets** ϕ, X, {a}, {b}, {c}, {a,c}, {b,c}
g-open sets ϕ, X, {a}, {b}, {a,b}	**g-closed sets** ϕ,X,{c},{a,c},{b,c}
Mildly g-open sets ϕ, X, {a}, {b}, {a,b}, {a,c}, {b,c}	**Mildly g-closed sets** ϕ, X, {a}, {b}, {c}, {a,c}, {b,c}
g^*-open sets ϕ, X, {a}, {b}, {a,b}	**g^*-closed sets** ϕ, X, {c}, {a,c}, {b,c}
αg-open sets ϕ, X, {a}, {b}, {a,b}	**αg-closed sets** ϕ,X,{c},{a,c},{b,c}
$g^{\#}$-open sets ϕ, X, {a}, {b}, {a,b}	**$g^{\#}$-closed sets** ϕ, X, {c}, {a,c}, {b,c}
$\hat{g}$-open sets ϕ, X, {a}, {b}, {a,b}	**$\hat{g}$-closed sets** ϕ, X, {c}, {a,c}, {b,c}
$\alpha\hat{g}$-open sets ϕ, X, {a}, {b}, {a,b}	**$\alpha\hat{g}$-open sets** ϕ, X, {c}, {a,c}, {b,c}
$^*g$-open sets ϕ, X, {a}, {b}, {a,b}	**$^*g$-closed sets** ϕ, X, {c}, {a,c}, {b,c}

$^{\#}$gs-open ϕ, X, {a}, {b}, {a,b}	**$^{\#}$gs-closed** ϕ, X, {c}, {a,c}, {b,c}
gp-open sets ϕ, X, {a}, {b}, {a,b}, {a,c}, {b,c}	**gp-closed sets** ϕ, X, {a}, {b}, {c}, {a,c}, {b,c}
g*p-open sets ϕ, X, {a}, {b}, {a,b}, {a,c}, {b,c}	**g*p-closed sets** ϕ, X, {a}, {b}, {c}, {a,c}, {b,c}
gs-open sets ϕ, X, {a}, {b}, {a,b}	**gs-closed sets** ϕ, X, {c}, {a,c}, {b,c}
g*s-open sets ϕ, X, {a}, {b}, {a,b}	**g*s-closed sets** ϕ, X, {c}, {a,c}, {b,c}
g$^{\#}$s-open sets ϕ, X, {a}, {b}, {a,b}	**g$^{\#}$s-open sets** ϕ, X, {c}, {a,c}, {b,c}
δ-open sets ϕ, X	**δ-closed sets** ϕ, X
δg-open sets ϕ, X, {a}, {b}, {a,b}	**δg-closed sets** ϕ, X, {c}, {a,c}, {b,c}
gδ-open sets P(X)	**gδ-closed sets** P(X)
δg*-open sets ϕ, X, {a}, {b}, {a,b}	**δg*-closed sets** ϕ, X, {c}, {a,c}, {b,c}
wδg*-open sets X, ϕ, {a}, {b}, {a, b}	**wδg*-closed sets** ϕ, X, {c}, {a,c}, {b,c}
δg‡-open sets P(X)	**δg‡-closed sets** **P(X)**
$\delta\hat{g}$ -open sets ϕ, X, {a}, {b}, {a,b}	**$\delta\hat{g}$ -closed sets** ϕ, X, {c}, {a,c}, {b,c}
Δ^{*}-open sets **ϕ, X, {a}, {b}, {a,b}**	**Δ^{*}-closed sets** **ϕ, X, {c}, {a,c}, {b,c}**
πg-open sets P(X)	**πg-closed sets** P(X)
πgs-open sets P(X)	**πgs-closed sets** P(X)
πgα-open sets P(X)	**πgα-closed sets** P(X)

πgp-open sets P(X)	**πgp-closed sets** P(X)
πgsp-open sets P(X)	**πgsp-closed sets** P(X)
πgb-open sets P(X)	**πgb-closed sets** P(X)
rg-open sets P(X)	**rg-closed sets** P(X)
rw- open sets P(X)	**rw- closed sets** P(X)
rwg - open sets P(X)	**rwg - closed sets** P(X)
gpr-open sets P(X)	**gpr-closed sets** P(X)
gprw - open sets P(X)	**gprw - closed sets** P(X)
gspr- open sets P(X)	**gspr- closed sets** P(X)
(gs)*- open sets ϕ,X,{a,b}	**(gs)*- closed sets** ϕ,X,{c}
δ-dense sets X, {a}, {b}, {c}, {a,b}, {b,c}, {a,c}	**δg^*-dense sets** **X, {a,b}**
Δ^*-dense sets X, {a,b}	**πg-dense sets** X
δLC-sets ϕ, X	**Δ^*LC-sets** P(X)
Δ^*LC^*-sets ϕ, X, {a}, {b}, {a,b}	**Δ^*LC^{**}-sets** ϕ, X, {c}, {a,c}, {b,c}

EXAMPLE 3 :X = {a, b, c}

τ = {ϕ, X, {a}, {a,b}} **Closed Set ={ϕ, X, {c}, {b,c}}**

α-open sets ϕ, X, {a}, {a,b}, {a,c}	**α-closed sets** ϕ, X ,{b},{c},{b,c}
semi-open sets ϕ, X, {a}, {a,b}, {a,c}	**semi-closed sets** ϕ, X,{b},{c},{b,c}

pre-open sets ϕ, X, {a}, {a,b}, {a,c}	**pre-closed sets** ϕ, X, {b}, {c}, {b,c}
regular open sets ϕ, X	**regular closed sets** ϕ, X
regular semi open sets ϕ, X	**regular semi closed sets** ϕ, X
π-open sets sets ϕ, X	**π-closed sets** ϕ, X
Semi pre open sets ϕ, X, {a}, {a,b}, {a,c}	**Semi pre closed sets** ϕ, X, {b}, {c}, {b,c}
b-open sets ϕ, X, {a}, {a,b}, {a,c}	**b- closed sets** ϕ, X, {b}, {c}, {b,c}
g-open sets ϕ, X, {a}, {b}, {a,b}	**g-closed sets** ϕ, X, {c}, {a,c}, {b,c}
Mildly g-open sets ϕ, X, {a}, {b}, {a,b}, {a,c}	**Mildly g-closed sets** ϕ, X, {b}, {c}, {b,c}, {a,c}
g*-open sets ϕ, X, {a}, {b}, {a,b}	**g*-closed sets** ϕ, X, {c}, {b,c}, {a,c}
αg-open sets ϕ, X, {a}, {b}, {a,b}, {a,c}	**αg-closed sets** ϕ, X, {b},{c}, {b,c}, {a,c}
g‡- open sets ϕ, X, {a},{a,b}	**g‡-closed sets** ϕ, X, {c}, {b,c}
$\hat{g}$-open sets ϕ, X, {a}, {a,b}	**$\hat{g}$-closed sets** ϕ, X, {c}, {b,c}
$\alpha\hat{g}$ -open sets ϕ, X, {a}, {b}, {a,b}, {a,c}	**$\alpha\hat{g}$ -open sets** ϕ, X, {b}, {c}, {a,c}, {b,c}
*g -open sets ϕ, X, {a}, {b}, {a,b}	***g -closed sets** ϕ, X, {c}, {a,c}, {b,c}
$^{\#}$gs -open ϕ, X, {a}, {b}, {a,b}, {a,c}	**$^{\#}$gs -closed** ϕ, X, {b}, {c}, {a,c}, {b,c}
gp-open sets ϕ, X, {a}, {b}, {a,b}, {a,c}	**gp-closed sets** ϕ, X, {b}, {c}, {a,c}, {b,c}
g*p-open sets ϕ, X, {a}, {b}, {a,b}, {a,c}	**g*p-closed sets** ϕ, X, {b}, {c}, {a,c}, {b,c}

gs-open sets ϕ, X, {a}, {b}, {a,b}}, {a,c}	**gs-closed sets** ϕ, X, {b}, {c}, {a,c}, {b,c}
g^*s -open sets ϕ, X, {a}, {a,b}, {a,c}	**g^*s -closed sets** ϕ, X, {b}, {c}, {b,c}
$g^{\#}s$ -open sets ϕ, X, {a}, {a,b}, {a,c}	**$g^{\#}s$ -closed sets** ϕ, X, {b}, {c}, {b,c}
δ-open sets ϕ, X	**δ-closed sets** ϕ, X
δg-open sets ϕ, X, {a}, {b}, {a,b}	**δg-closed sets** ϕ, X, {c}, {a,c}, {b,c}
gδ-open sets **P(X)**	**gδ-closed sets** **P(X)**
δg^*-open sets ϕ, X, {a}, {b}, {a,b}	**δg^*-closed sets** ϕ, X, {c}, {a,c}, {b,c}
wδg^* -open sets ϕ, X, {c}, {a,c}, {b,c}	**wδg^*-closed sets** ϕ, X, {c}, {a,c}, {b,c}
$\delta g^{\ddagger}$-open sets **P(X)**	**$\delta g^{\ddagger}$-closed sets** **P(X)**
$\delta\hat{g}$ -open sets ϕ, X, {a}, {b}, {a,b}	**$\delta\hat{g}$ -closed sets** ϕ, X, {c}, {a,c}, {b,c}
Δ^*-open sets **ϕ, X, {a}, {b}, {a,b}**	**Δ^*-closed sets** **ϕ, X, {c}, {a,c}, {b,c}**
πg-open sets P(X)	**πg-closed sets** P(X)
πgs- open sets P(X)	**πgs-closed sets** P(X)
$\pi g\alpha$- open sets P(X)	**$\pi g\alpha$-closed sets** P(X)
πgp- open sets P(X)	**πgp-closed sets** P(X)
πgsp- open sets P(X)	**πgsp-closed sets** P(X)
πgb- open sets P(X)	**πgb-closed sets** P(X)

rg- open sets P(X)	**rg-closed sets** P(X)
rw- open sets P(X)	**rw-closed sets** P(X)
rwg- open sets P(X)	**rwg-closed sets** P(X)
gpr-open sets P(X)	**gpr-closed sets** P(X)
gprw- open sets P(X)	**gprw-closed sets** **P(X)**
gspr- open sets P(X)	**gspr-closed sets** **P(X)**
(gs)* - open sets ϕ, X, {a}, {a,b}	**(gs)* -closed sets** ϕ, X, {c}, {b,c}
δ-dense sets **P(X) $-\phi$**	**δg^*-dense sets** **X, {a, b}**
Δ^*-dense sets ϕ, X, {a,b}	**πg-dense sets** X
δLC-sets ϕ, X	**Δ^*LC-sets** P(X)
Δ^*Lc*-sets ϕ, X, {a}, {b}, {a,b}	**Δ^*Lc**-sets** ϕ, X, {c}, {a,c}, {b,c}

Example 4 :X = {a, b, c}

τ = {ϕ, X, {a}, {b, c}} **Closed set = {ϕ, X, {a}, {b, c}}**

α-open sets ϕ, X, {a}, {b,c}	**α-closed sets** ϕ, X, {a}, {b,c}
semi-open sets ϕ, X, {a}, {b,c}	**semi-closed sets** ϕ, X, {a}, {b,c}
pre-open sets **P(X)**	**pre-closed sets** **P(X)**
regular open sets ϕ, X, {a}, {b,c}	**regular closed sets** ϕ, X, {a}, {b,c}
regular semi open sets ϕ, X, {a}, {b,c}	**regular semi closed sets** ϕ, X, {a}, {b,c}

π-open sets ϕ, X, {a}, {b,c}	**π-closed sets** ϕ, X, {a}, {b,c}
Semi pre open sets **P(X)**	**Semi pre closed sets** **P(X)**
b-open sets **P(X)**	**b-closed sets** **P(X)**
g-open sets **P(X)**	**g-closed sets** **P(X)**
Mildly g-open sets **P(X)**	**Mildly g-closed sets** **P(X)**
g*-open sets ϕ, X, {a}, {b,c}	**g*-closed sets** ϕ, X, {a}, {b,c}
αg-open sets **P(X)**	**αg-closed sets** **P(X)**
$g^{\ddagger}$-open sets ϕ, X, {a}, {b,c}	**$g^{\ddagger}$-closed sets** ϕ, X, {a}, {b,c}
$\hat{g}$-open sets **P(X)**	**$\hat{g}$-closed sets** **P(X)**
α$\hat{g}$ -open sets ϕ, X, {a}, {b,c}	**α$\hat{g}$ -open sets** ϕ, X ,{a}, {b,c}
*g -open sets ϕ, X, {a}, {b,c}	***g -closed sets** ϕ, X, {a}, {b,c}
$^{\#}$gs -open sets **P(X)**	**$^{\#}$gs -closed sets** **P(X)**
gp-open sets **P(X)**	**gp-closed sets** **P(X)**
g*p-open sets **P(X)**	**g*p-closed sets** **P(X)**
gs-open sets **P(X)**	**gs-closed sets** **P(X)**
g*s-open sets ϕ, X, {a}, {b,c}	**g*s--closed sets** ϕ, X, {a}, {b,c}
$g^{\#}$s-open sets ϕ, X, {a}, {b,c}	**$g^{\#}$s--closed sets** ϕ, X, {a}, {b,c}

δ-open sets ϕ, X, {a}, {b,c}	**δ-closed sets** ϕ, X, {a}, {b,c}
δg-open sets **P(X)**	**δg-closed sets** **P(X)**
gδ-open sets **P(X)**	**gδ-closed sets** **P(X)**
δg*-open sets ϕ, X, {a}, {b,c}	**δg*-closed sets** ϕ, X, {a}, {b,c}
wδg*-open sets X, ϕ, {a}, {b}, {c}, {a, b}, {a, c}, {b, c}	**wδg*-closed sets** X, ϕ, {a}, {b}, {c}, {a, b}, {a, c}, {b, c}
$\delta g^{\ddagger}$-open sets **P(X)**	**$\delta g^{\ddagger}$-closed sets** **P(X)**
$\delta\hat{g}$ **-open sets** ϕ, X, {a}, {b,c}	$\delta\hat{g}$ **-closed sets** ϕ, X, {a}, {b,c}
Δ^{*}-open sets **ϕ, X, {a}, {b,c}**	**Δ^{*}--closed sets** **ϕ, X, {a}, {b,c}**
πg-open sets **P(X)**	**πg-closed sets** **P(X)**
πgs- open sets **P(X)**	**πgs-closed sets** **P(X)**
πgα- open sets **P(X)**	**πgα-closed sets** **P(X)**
πgp- open sets **P(X)**	**πgp-closed sets** **P(X)**
πgsp- open sets **P(X)**	**πgsp-closed sets** **P(X)**
πgb- open sets **P(X)**	**πgb-closed sets** **P(X)**
rg- open sets **P(X)**	**rg-closed sets** **P(X)**
rw- open sets **P(X)**	**rw-closed sets** **P(X)**
rwg- open sets **P(X)**	**rwg-closed sets** **P(X)**

gpr- open sets **P(X)**	**gpr-closed sets** **P(X)**
gprw- open sets **P(X)**	**gprw-closed sets** **P(X)**
gspr- open sets **P(X)**	**gspr-closed sets** **P(X)**
(gs)* - open sets ϕ, X, {a}, {b}, {b,c}	**(gs)* -closed sets** ϕ, X, {a}, {a,c}, {b,c}
δ-dense sets X, {a,b}, {a,c}	**δg^*-dense sets** X , {a,b},{a,c}
Δ^*-dense sets ϕ, X, {a, b}, {a, c}	**πg-dense sets** **X**
δLC-sets ϕ, X,{a}, {b,c}	**Δ^*LC-sets** ϕ, X, {a}, {b,c}
Δ^*Lc^*-sets ϕ, X, {a},{b,c}	**Δ^*Lc^{**}-sets** ϕ,X, {a}, {b,c}

Example 5 : X = {a, b, c}

τ = {ϕ, X, {a}, {a, b}, {a, c}} **Closed set = { ϕ, X, {b}, {c}, {b, c}}**

α-open sets ϕ, X, {a}, {a,b}, {a,c}	**α-closed sets** ϕ, X, {b}, {c}, {b,c}
semi-open sets ϕ, X, {a}, {a,b}, {a,c}	**semi-closed sets** ϕ, X, {b}, {c}, {b,c}
pre-open sets ϕ, X, {a}, {a,b}, {a,c}	**pre-closed sets** ϕ, X, {b}, {c}, {b,c}
regular open sets ϕ, X	**regular closed sets** ϕ, X
regular semi open sets ϕ, X	**regular semi closed sets** ϕ, X
π-open sets ϕ, X	**π-closed sets** ϕ, X
Semi pre open sets ϕ, X, {a}, {a,b}, {a,c}	**Semi pre closed sets** ϕ, X, {b}, {c}, {b,c}

b-open sets ϕ, X, {a}, {a,b}, {a,c}	**b-closed sets** ϕ, X, {b}, {c}, {b,c}
g-open sets ϕ, X, {a}, {a,b}, {a,c}	**g-closed sets** ϕ, X, {b}, {c}, {b,c}
Mildly g-open sets ϕ, X, {a}, {a,b}, {a,c}	**Mildly g-closed sets** ϕ, X, {b}, {c}, {b,c}
g*-open sets ϕ, X, {a}, {a,b}, {a,c}	**g*-closed sets** ϕ, X, {b}, {c}, {b,c}
αg-open sets ϕ, X, {a}, {a,b}, {a,c}	**αg-closed sets** ϕ, X, {b}, {c}, {b,c}
$g^{\#}$-open sets ϕ, X, {a}, {a,b}, {a,c}	**$g^{\#}$-closed sets** ϕ, X, {b}, {c}, {b,c}
$\hat{g}$-open sets ϕ, X, {a}, {a,b}, {a,c}	**$\hat{g}$-closed sets** ϕ, X, {b}, {c}, {b,c}
$\alpha\hat{g}$ -open sets ϕ, X, {a}, {a,b}, {a,c}	**$\alpha\hat{g}$ -open sets** ϕ, X, {b}, {c}, {b,c}
*g -open sets ϕ, X ,{a}, {a,b}, {a,c}	***g -closed sets** ϕ, X, {b}, {c}, {b,c}
$^{\#}$gs -open sets ϕ, X, {a}, {a,b}, {a,c}	**$^{\#}$gs -closed sets** ϕ, X, {b}, {c}, {b,c}
gp-open sets ϕ, X, {a}, {a,b}, {a,c}	**gp-closed sets** ϕ, X ,{b}, {c}, {b,c}
g*p-open sets ϕ, X, {a}, {a,b}, {a,c}	**g*p-closed sets** ϕ, X, {b}, {c}, {b,c}
gs-open sets ϕ, X, {a}, {a,b}, {a,c}	**gs-closed sets** ϕ, X, {b}, {c}, {b,c}
g*s-open sets ϕ, X, {a}, {a,b}, {a,c}	**g*s-closed sets** ϕ, X, {b}, {c}, {b,c}
$g^{\#}s$ -open sets ϕ, X, {a}, {a,b}, {a,c}	**$g^{\#}s$ -open sets** ϕ, X, {b}, {c}, {b,c}
δ-open sets ϕ,X	**δ-closed sets** ϕ,X
δg-open sets ϕ,X,{a}	**δg-closed sets** ϕ,X,{b,c}

gδ-open sets **P(X)**	**gδ-closed sets** **P(X)**
δg*-open sets ϕ,X,{a}	**δg*-closed sets** ϕ,X,{b,c}
$w\delta g^{*}$ -open sets X, ϕ, {a}	**$w\delta g^{*}$ -closed sets** X, ϕ, {b, c}
$\delta g^{\ddagger}$-open sets **P(X)**	**$\delta g^{\ddagger}$-closed sets** **P(X)**
$\delta \hat{g}$ -open sets ϕ,X,{a}	**$\delta \hat{g}$ -closed sets** ϕ,X,{b,c}
Δ^{*}-open sets **ϕ, X, {a}, {b}, {c}, {a, b}, {a, c}**	**Δ^{*}-closed sets** **ϕ, X, {b}, {c}, {a ,b}, {a, c}, {b, c}**
πg-open sets **P(X)**	**πg-closed sets** **P(X)**
πgs-open sets P(X)	**πgs-closed sets** P(X)
πgα-open sets P(X)	**πgα-closed sets** P(X)
πgp- open sets P(X)	**πgp-closed sets** P(X)
πgsp- open sets P(X)	**πgsp-closed sets** P(X)
πgb- open sets P(X)	**πgb-closed sets** P(X)
rg- open sets P(X)	**rg-closed sets** P(X)
rw- open sets P(X)	**rw-closed sets** P(X)
rwg- open sets P(X)	**rwg-closed sets** P(X)
gpr- open sets P(X)	**gpr-closed sets** P(X)
gprw- open sets P(X)	**gprw-closed sets** P(X)

gspr- open sets P(X)	**gspr-closed sets** P(X)
(gs)* -open sets ϕ, X, {a}, {a,b}, {a,c}	**(gs)* -closed sets** ϕ, X, {b}, {c}, {b,c}
δ-dense sets X, {a}, {b}, {c}, {a,b},{b,c}, {a,c}	**δg*-dense sets** X, {a}, {a,b}, {a,c}
Δ*-dense sets X, {a}	**πg-dense sets** **X**
δLC-sets ϕ, X	**Δ*LC-sets** P(X)
Δ*Lc*-sets ϕ, X, {a}, {b}, {c}, {a,b}, {a,c}	**Δ*Lc**-sets** ϕ, X, {b}, {c}, {a,b}, {b,c}

Example 6 : X = {a, b, c}

τ = {ϕ, X, {a}, {b}, {a, b}} **Closed set = {ϕ, X, {c}, {a ,c}, {b, c}}**

α-open sets ϕ, X, {a}, {b}, {a,b}	**α-closed sets** ϕ, X, {c}, {a,c}, {b,c}
semi-open sets ϕ, X, {a}, {b}, {a,b}, {a,c}, {b,c}	**semi-closed sets** ϕ, X, {a}, {b}, {c}, {a,c}, {b,c}
pre-open sets ϕ, X, {a}, {b}, {a,b}	**pre-closed sets** ϕ, X, {c}, {a,c}, {b,c}
regular open sets ϕ, X, {a}, {b}	**regular closed sets** ϕ, X, {a,c}, {b,c}
regular semi open sets ϕ, X, {a}, {b}, {a,c}, {b,c}	**regular semi closed sets** ϕ, X, {a}, {b}, {a,c}, {b,c}
π-open sets ϕ, X, {a}, {b}, {a,b}	**π-closed sets** ϕ, X, {c}, {a,c}, {b,c}
Semi pre open sets ϕ, X, {a}, {b}, {a,b}, {b,c}, {a,c}	**Semi pre closed sets** ϕ, X, {a}, {b}, {c}, {a,c}, {b,c}
b-open sets ϕ, X, {a}, {b}, {a,b}, {b,c}, {a,c}	**b-closed sets** ϕ, X, {a}, {b}, {c}, {a,c}, {b,c}
g-open sets ϕ, X, {a}, {b}, {a,b}	**g-closed sets** ϕ, X, {c}, {a,c}, {b,c}
Mildly g-open sets ϕ, X, {a}, {b}, {a,b}	**Mildly g-closed sets** ϕ, X, {c}, {a,c}, {b,c}

g*-open sets ϕ, X, {a}, {b}, {a,b}	**g*-closed sets** ϕ, X, {c}, {a,c}, {b,c}
αg-open sets ϕ, X, {a}, {b}, {a,b}	**αg-closed sets** ϕ, X, {c}, {a,c}, {b,c}
$g^{\ddagger}$-open sets **P(X)**	**$g^{\ddagger}$-closed sets** **P(X)**
$\hat{g}$-open sets ϕ, X, {a}, {b}, {a,b}	**$\hat{g}$-closed sets** ϕ, X, {c}, {a,c}, {b,c}
$\alpha\hat{g}$-open sets ϕ, X, {a}, {b}, {a,b}	**$\alpha\hat{g}$-open sets** ϕ, X, {c}, {a,c}, {b,c}
$^{*}g$-open sets ϕ, X, {a}, {b}, {a,b}	**$^{*}g$-closed sets** ϕ, X, {c}, {a,c}, {b,c}
$^{\#}gs$-open sets ϕ, X, {a}, {b}, {a,b}, {a,c}, {b,c}	**$^{\#}gs$-closed sets** ϕ, X, {a}, {b}, {c}, {a,c}, {b,c}
gp-open sets ϕ, X, {a}, {b}, {a,b}	**gp-closed sets** ϕ, X, {c}, {a,c}, {b,c}
g*p-open sets ϕ, X, {a}, {b}, {a,b}	**g*p-closed sets** ϕ, X, {c}, {a,c}, {b,c}
gs-open sets ϕ, X, {a}, {b}, {a,b}, {a,c}, {b,c}	**gs-closed sets** ϕ, X, {a}, {b}, {c}, {a,c}, {b,c}
g*s-open sets ϕ, X, {a}, {b}, {a,b}, {a,c}, {b,c}	**g*s-closed sets** ϕ, X, {a}, {b}, {c}, {a,c}, {b,c}
$g^{\#}s$-open sets ϕ, X, {a}, {b}, {a,b}, {a,c}, {b,c}	**$g^{\#}s$-closed sets** ϕ, X, {a}, {b}, {c}, {a,c}, {b,c}
δ-open sets ϕ, X ,{a}, {b}, {a,b}	**δ-closed sets** ϕ, X, {c}, {a,c}, {b,c}
δg-open sets ϕ, X, {a}, {b}, {a,b}	**δg-closed sets** ϕ, X, {c}, {a,c}, {b,c}
gδ-open sets ϕ, X ,{a}, {b}, {a,b}	**gδ-closed sets** ϕ, X, {c}, {a,c}, {b,c}
δg*-open sets ϕ, X, {a}, {b}, {a,b}	**δg*-closed sets** ϕ, X, {c}, {a,c}, {b,c}
$w\delta g^{*}$-open sets $X,\phi,\{c\},\{a,c\},\{b,c\}$	**$w\delta g^{*}$-closed sets** $X,\phi,\{c\},\{a,c\},\{b,c\}$

$\delta g^{\ddagger}$-open sets ϕ, X ,{a}, {b}, {a,b}	**$\delta g^{\ddagger}$-closed sets** ϕ, X, {c}, {a,c}, {b,c}
$\delta\hat{g}$ **-open sets** ϕ, X, {a}, {b}, {a,b}	$\delta\hat{g}$ **-closed sets** ϕ, X, {c}, {a,c}, {b,c}
Δ^{*}-open sets **ϕ, X, {a}, {b}, {a, b}**	**Δ^{*}-closed sets** **ϕ, X, {c}, {a, c}, {b, c}**
πg-open sets ϕ, X, {a}, {b}, {a,b}	**πg-closed sets** ϕ, X, {c}, {a,c}, {b,c}
πgs- open sets ϕ, X, {a}, {b}, {a,b}, {b,c}, {a,c}	**πgs-closed sets** ϕ, X, {a}, {b}, {c}, {a,c}, {b,c}
πgα- open sets **P(X)**	**πgα-closed sets** ϕ, X, {c}, {a,c}, {b,c}
πgp- open sets ϕ, X, {a}, {b}, {a,b}	**πgp-closed sets** ϕ, X, {c}, {a,c}, {b,c}
πgsp- open sets ϕ, X, {a}, {b}, {a,b}, {b,c}, {a,c}	**πgsp-closed sets** ϕ, X, {a}, {b}, {c}, {a,c}, {b,c}
πgb- open sets ϕ, X, {a}, {b}, {a,b}, {b,c}, {a,c}	**πgb-closed sets** ϕ, X, {a}, {b}, {c}, {a,c}, {b,c}
rg- open sets ϕ, X, {a}, {b}, {c}, {a,b}	**rg-closed sets** ϕ, X, {c}, {a,b}, {b,c}, {a,c}
rw- open sets ϕ, X, {a}, {b}, {a,b}	**rw-closed sets** ϕ, X, {c}, {a,c}, {b,c}
rwg- open sets ϕ, X, {a}, {b}, {c}, {a,b}	**rwg-closed sets** ϕ, X, {c}, {a,b}, {b,c}, {a,c}
gpr- open sets ϕ, X, {a}, {b}, {a,b}	**gpr-closed sets** ϕ, X, {c}, {a,b}, {b,c}, {a,c}
gprw- open sets ϕ, X, {a}, {b}, {a,b}	**gprw-closed sets** ϕ, X, {c}, {a,c}, {b,c}
gspr- open sets **P(X)**	**gspr-closed sets** **P(X)**
(gs)* - open sets ϕ, X, {a}, {b}, {a,b}	**(gs)* -closed sets** ϕ, X, {c}, {a,c}, {b,c}
δ-dense sets X, {a,b}	**δg^{*}-dense sets** X, {a,b}
Δ^{*}-dense sets X, {a, b}	**πg-dense sets** X, {a,b}

δLC-sets P(X)	**Δ^*LC-sets** P(X)
Δ^*Lc*-sets P(X)	**Δ^*Lc**-sets** P(X)

Example 7 : X = {a, b, c}

τ = {ϕ, X, {a}, {b}, {a,b}, {a,c}} **Closed set = {ϕ, X, {b}, {c}, {a,c}, {b,c}}**

α-open sets ϕ, X, {a}, {b} ,{a,b}, {a,c}	**α-closed sets** ϕ, X, {b}, {c}, {a,c}, {b,c}
semi-open sets ϕ, X, {a}, {b}, {a,b}, {a,c}	**semi-closed sets** ϕ, X, {b}, {c}, {a,c}, {b,c}
pre-open sets ϕ, X, {a}, {b}, {a,b}, {a,c}	**pre-closed sets** ϕ, X, {b}, {c}, {a,c}, {b,c}
regular open sets ϕ, X, {b}, {a,c}	**regular closed sets** ϕ, X, {b}, {a,c}
regular semi open sets ϕ, X, {b}, {a,c}	**regular semi closed sets** ϕ, X, {b}, {a,c}
π-open sets ϕ, X, {b}, {a,c}	**π-closed sets** ϕ, X, {b}, {a,c}
Semi pre open sets ϕ, X, {a}, {b}, {a,b}, {a,c}	**Semi pre closed sets** ϕ, X, {b}, {c}, {a,c}, {b,c}
b-open sets ϕ, X, {a}, {b}, {a,b} ,{a,c}	**b-closed sets** ϕ, X, {b}, {c}, {a,c}, {b,c}
g-open sets ϕ, X, {a}, {b}, {a,b}, {a,c}	**g-closed sets** ϕ, X, {b}, {c}, {a,c} ,{b,c}
Mildly g-open sets ϕ, X, {a}, {b}, {a,b}, {a,c}	**Mildly g-closed sets** ϕ, X, {b}, {c}, {a,c}, {b,c}
g*-open sets ϕ, X, {a}, {b}, {a,b}, {a,c}	**g*-closed sets** ϕ, X, {b}, {c}, {a,c} ,{b,c}
αg-open sets ϕ, X, {a}, {b}, {a,b}, {a,c}	**αg-closed sets** ϕ, X, {b}, {c}, {a,c}, {b,c}
$g^{\ddagger}$-open sets ϕ, X, {a}, {b} ,{a,b}, {a,c}	**$g^{\ddagger}$-closed sets** ϕ, X, {b}, {c}, {a,c}, {b,c}

$\hat{g}$**-open sets** ϕ, X, {a}, {b}, {a,b}, {a,c}	$\hat{g}$**-closed sets** ϕ, X, {b}, {c}, {a,c}, {b,c}
$\alpha\hat{g}$ **-open sets** ϕ, X, {a}, {b}, {a,b}, {a,c}	$\alpha\hat{g}$ **-open sets** ϕ, X, {b}, {c}, {a,c}, {b,c}
$^{*}g$ **-open sets** ϕ, X, {a}, {b}, {a,b}, {a,c}	$^{*}g$ **-closed sets** ϕ, X, {b}, {c}, {a,c}, {b,c}
$^{\#}gs$ **-open sets** ϕ, X, {a}, {b}, {a,b}, {a,c}	$^{\#}gs$ **-closed sets** ϕ, X, {b}, {c}, {a,c}, {b,c}
gp-open sets ϕ, X, {a}, {b}, {a,b}, {a,c}	**gp-closed sets** ϕ, X, {b}, {c}, {a,c}, {b,c}
g*p-open sets ϕ, X, {a}, {b}, {a,b}, {a,c}	**g*p-closed sets** ϕ, X ,{b}, {c}, {a,c}, {b,c}
gs-open sets ϕ, X, {a}, {b}, {a,b}, {a,c}	**gs-closed sets** ϕ, X ,{b}, {c}, {a,c}, {b,c}
g*s-open sets ϕ, X, {a}, {b}, {a,b} ,{a,c}	**g*s-open sets** ϕ, X, {b}, {c}, {a,c}, {b,c}
g$^{\#}$s-open sets ϕ, X, {a}, {b}, {a,b}, {a,c}	**g$^{\#}$s-open sets** ϕ, X, {b}, {c}, {a,c}, {b,c}
δ-open sets ϕ, X, {b}, {a,c}	**δ-closed sets** ϕ, X, {b}, {a,c}
δg-open sets ϕ, X, {a}, {b} ,{a,b}, {a,c}	**δg-closed sets** ϕ, X, {b}, {c}, {a,c}, {b,c}
gδ-open sets P(X)	**gδ-closed sets** P(X)
δg*-open sets ϕ ,X, {a}, {b}, {a,b}, {a,c}	**δg*-closed sets** ϕ, X, {b}, {c}, {a,c}, {b,c}
wδg* -open sets ϕ, X, {a}, {b}, {a,b}, {a,c}	**wδg* -closed sets** ϕ, X, {b}, {c}, {a,c}, {b,c}
δg‡-open sets P(X)	**δg‡-closed sets** P(X)
$\delta\hat{g}$ **-open sets** ϕ, X, {a}, {b}, {a,b}, {a,c}	$\delta\hat{g}$ **-closed sets** ϕ, X, {b}, {c}, {a,c}, {b,c}
Δ^{*}-open sets **ϕ, X, {a}, {b}, {a,b}, {a,c}**	**Δ^{*}-closed sets** **ϕ, X, {b}, {c}, {a,c}, {b,c}**

πg-open sets P(X)	**πg-closed sets** P(X)
πgs- open sets P(X)	**πgs-closed sets** P(X)
πgα- open sets P(X)	**πgα-closed sets** P(X)
πgp- open sets P(X)	**πgp-closed sets** P(X)
πgsp- open sets P(X)	**πgsp-closed sets** P(X)
πgb- open sets P(X)	**πgb-closed sets** P(X)
rg- open sets P(X)	**rg-closed sets** P(X)
rw- open sets P(X)	**rw-closed sets** P(X)
rwg- open sets P(X)	**rwg-closed sets** P(X)
gpr- open sets P(X)	**gpr-closed sets** P(X)
gprw- open sets P(X)	**gprw-closed sets** P(X)
gspr- open sets **P(X)**	**gspr-closed sets** P(X)
(gs)* - open sets ϕ, X, {a}, {b}, {a,b}, {a,c}	**(gs)* -closed sets** ϕ, X, {b}, {c}, {a,c}, {b,c}
δ-dense sets X, {a,b}, {b,c}	**δg*-dense sets** X, {a,b}
Δ*-dense sets X, {a, b}	**πg-dense sets** X
δLC-sets ϕ, X, {b}, {a,c}	**Δ*LC-sets** P(X)
Δ*Lc*-sets ϕ, X, {a}, {b,c}	**Δ*Lc**-sets** ϕ, X, {a}, {b,c}

APPENDIX - II

Example 1 : X = {a, b, c,d}

τ = {ϕ, X, {a}} **Closed set = {ϕ, X, {b, c, d}}**

α-open sets ϕ,X,{a},{a,b}{a,c}{a,d}{a,b,c},{a,b,d},{a,c,d}	**α-closed sets** ϕ,X,{b},{c},{d},{b,c},{b,d},{c,d},{b,c,d}
semi-open sets ϕ,X,{a},{a,b}{a,c}{a,d}{a,b,c},{a,b,d},{a,c,d}	**semi-closed sets** ϕ,X,{b},{c},{d},{b,c},{b,d},{c,d},{b,c,d}
pre-open sets ϕ,X,{a},{a,b}{a,c}{a,d}{a,b,c},{a,b,d},{a,c,d}	**pre-closed sets** ϕ,X,{b},{c},{d},{b,c},{b,d},{c,d},{b,c,d}
regular open sets ϕ,X	**regular closed sets** ϕ,X
π-open sets ϕ,X	**π-closed sets** ϕ,X
Semi pre open sets ϕ,X,{a},{a,b}{a,c}{a,d}{a,b,c},{a,b,d},{a,c,d}	**Semi pre closed sets** ϕ,X,{b},{c},{d},{b,c},{b,d},{c,d}, {b,c,d}
regular semi open sets ϕ,X	**regular semi closed sets** ϕ,X
b-open sets ϕ,X,{a},{a,b}{a,c}{a,d}{a,b,c},{a,b,d},{a,c,d}	**b-closed sets** ϕ,X,{b},{c},{d},{b,c},{b,d},{c,d}, {b,c,d}
g-open sets **P(X)-{b,c,d}**	**g-closed sets** **P(X)-{a}**
Mildly g-open sets ϕ,X,{a},{a,b}{a,c}{a,d}{a,b,c},{a,b,d},{a,c,d}	**Mildly g-closed sets** ϕ,X,{b},{c},{d},{b,c},{b,d},{c,d},{b,c,d}
g*-open sets ϕ,X,{a}	**g*-closed sets** ϕ,X,{b,c,d}
αg-open sets ϕ,X,{a},{b},{c},{d}{a,b}{a,c}{a,d}{b,c},{b,d}, {c,d},{a,b,c},{a,b,d},{a,c,d}	**αg-closed sets** ϕ,X,{b},{c},{d}{a,b}{a,c}{a,d}{b,c},{b,d}, {c,d},{a,b,c},{a,b,d},{a,c,d},{b,cd}
$\hat{g}$-open sets ϕ,X,{a}	**$\hat{g}$-closed sets** ϕ,X,{b,c,d}
α$\hat{g}$ -open sets ϕ,X,{a},{b},{c},{d},{a,b},{a,c},{a,d},{b,c},	**α$\hat{g}$ -open sets** ϕ,X,{b},{c},{d},{a,b},{a,c},{a,d},{b,c},

{b,d},{c,d},{a,b,c},{a,b,d},{a,c,d}	{b,d},{c,d},{a,b,c},{a,b,d},{a,c,d},{b,cd}
*g **-open sets** ϕ,X,{a},{b},{c},{d}, {a,b}, {a,c}, {a,d},{b,c}, {b,d,{c,d},{a,b,c},{a,b,d},{a,c,d}	*g **-closed sets** ϕ,X,{b},{c},{d}, {a,b}, {a,c}, {a,d}, {b,c}, {b,d},{c,d},{a,b,c},{a,b,d},{a,c,d},{b,c,d}
$^{\#}$gs **-open sets** ϕ,X,{a},{a,b},{a,c},{a,d},{a,b,c},{a,b,d}, {a,c,d}	$^{\#}$gs **-closed sets** ϕ,X,{b},{c},{d},{b,c},{b,d},{c,d},{b,cd}
gp-open sets ϕ,X,{a},{b},{c},{d}{a,b}{a,c}{a,d}{b,c},{b,d}, {c,d},{a,b,c},{a,b,d},{a,c,d}	**gp-closed sets** ϕ,X,{b},{c},{d}{a,b}{a,c}{a,d}{b,c},{b,d}, {c,d},{a,b,c},{a,b,d},{a,c,d},{b,cd}
g*p-open sets ϕ,X,{a},{a,b},{a,c},{a,d},{a,b,c},{a,b,d}, {a,c,d}	**g*p-closed sets** ϕ,X,{b},{c},{d},{b,c},{b,d},{c,d},{b,c,d}
gs-open sets **P(X)-{b,c,d}**	**gs-closed sets** **P(X)-{a}**
g*s-open sets ϕ,X,{a},{a,b},{a,c},{a,d},{a,b,c},{a,b,d}, {a,c,d}	**g*s-open sets** ϕ,X,{b},{c},{d},{b,c},{b,d},{c,d},{b,c,d}
g$^{\#}$s- open sets ϕ,X,{a},{a,b},{a,c},{a,d},{a,b,c},{a,b,d}, {a,c,d}	**g$^{\#}$s- open sets** ϕ,X,{b},{c},{d},{b,c},{b,d},{c,d},{b,c,d}
δ-open sets ϕ,X	**δ-closed sets** ϕ,X
δg-open sets **P(X)-{b,c,d}**	**δg-closed sets** **P(X)-{a}**
gδ-open sets **P(X)**	**gδ-closed sets** **P(X)**
δg*-open sets ϕ,X,{a}	**δg*-closed sets** ϕ,X{b,c,d}
wδg* - open sets X,ϕ ,{a},{b},{c},{d},{a,b},{a,c},{a,d}, {b,c},{b,d},{c,d},{a,b,c},{a,b,d},{a,c,d}	**wδg* - closed sets** X,ϕ ,{b},{c},{d},{a,b},{a,c},{a,d},{b,c}, {b,d},{c,d},{a,b,c},{a,b,d},{a,c,d},{b,c,d}
δg‡-open sets **P(X)**	**δg‡-closed sets** **P(X)**
δ$\hat{g}$ -open sets ϕ,X,{a},{b},{c},{d}{a,b}{a,c}{a,d}{b,c}, {b,d},{c,d},{a,b,c},{a,b,d},{a,c,d}	**δ$\hat{g}$ -closed sets** ϕ,X,{b},{c},{d}{a,b}{a,c}{a,d}{b,c},{b,d}, {c,d},{a,b,c},{a,b,d},{a,c,d},{b,cd}

Δ^*-open sets **ϕ, X, {a}**	**Δ^*-closed sets** **ϕ, X, {b,c,d}**
πg-open sets **P(X)**	**πg-closed sets** **P(X)**
πgs- open sets ϕ,X,{a},{b},{c}	**πgs-closed sets** ϕ,X,{a,b,d},{a,cd},{b,c,d}
πgα- open sets **P(X)**	**πgα-closed sets** **P(X)**
πgp- open sets **P(X)**	**πgp-closed sets** **P(X)**
πgsp- open sets **P(X)**	**πgsp-closed sets** **P(X)**
πgb- open sets **P(X)**	**πgb-closed sets** **P(X)**
rg- open sets **P(X)**	**rg-closed sets** P(X)
rw- open sets **P(X)**	**rw-closed sets** **P(X)**
rwg- open sets **P(X)**	**rwg-closed sets** **P(X)**
gprw- open sets **P(X)**	**gprw-closed sets** **P(X)**
gspr- open sets **P(X)**	**gspr-closed sets** **P(X)**
(gs)* - open sets ϕ,X,{a}	**(gs)* -closed sets** ϕ,X,{b,c,d}

Example 2 : X = {a, b, c,d}

τ = {ϕ, X, {a, b}} **Closed set = {ϕ, X, {c, d}}**

α-open sets ϕ,X,{a,b},{a,b,c},{a,b,d}	**α-closed sets** ϕ,X,{c},{d},{c,d}

semi-open sets ϕ,X,{a,b},{a,b,c},{a,b,d}	**semi-closed sets** ϕ,X,{c},{d},{c,d}
pre-open sets ϕ,X,{a},{b},{a,b},{a,c},{a,d},{b,c},{b,d}, {a,b,c},{a,b,d},{a,c,d},{b,c,d}	**pre-closed sets** ϕ,X,{a},{b},{c},{d},{a,c},{a,d},{b,c},{b,d}, {c,d},{a,c,d},{b,c,d}
regular open sets ϕ,X	**regular closed sets** ϕ,X
π-open sets ϕ,X	**π-closed sets** ϕ,X
Semi pre open sets ϕ,X,{a},{b},{a,b},{a,c},{a,d},{b,c},{b,d}, {a,b,c},{a,b,d},{a,c,d},{b,c,d}	**Semi pre closed sets** ϕ,X,{a},{b},{c},{d},{a,c},{a,d},{b,c},{b,d}, {c,d},{a,c,d},{b,c,d}
regular semi open sets ϕ,X	**regular semi closed sets** ϕ,X
b-open sets **P(X)**	**b-closed sets** **P(X)**
g-open sets ϕ,X,{a},{b},{c},{d}{a,b}{a,c}{a,d}{b,c},{b,d}, {a,b,c},{a,b,d}	**g-closed sets** ϕ,X,{c},{d}{a,c}{a,d},{b,c},{b,d},{c,d}, {a,b,c},{a,b,d},{a,c,d},{b,c,d}
Mildly g-open sets ϕ,X,{a},{b},{c},{d},{a,c}{a,d}{b,c},{b,d}, {c,d},{a,c,d},{b,c,d}	**Mildly g-closed sets** ϕ,X,{a},{b},{a,b}{a,c},{a,d},{b,c}{b,d}, {a,b,c},{a,b,d},{a,c,d},{b,c,d}
g*-open sets ϕ,X,{a},{b},{a,b}	**g*-closed sets** ϕ,X,{c,d},{a,c,d},{b,c.,d}
αg-open sets ϕ,X,{a},{b},{c},{d}{a,b}{a,c}{a,d}{b,c},{b,d}, {a,b,c},{a,b,d}	**αg-closed sets** ϕ,X,{c},{d}{a,c}{a,d},{b,c},{b,d},{c,d}, {a,b,c},{a,b,d},{a,c,d},{b,c,d}
$\hat{g}$-open sets ϕ,X,{a},{b},{a,b}	**$\hat{g}$-closed sets** ϕ,X,{c,d},{a,c,d},{b,c,d}
$\alpha\hat{g}$ **-open sets** ϕ,X,{a},{b},{c},{d}{a,b}{a,c}{a,d}{b,c},{b,d}, {a,b,c},{a,b,d}	$\alpha\hat{g}$ **-closed sets** ϕ,X,{c},{d}{a,c}{a,d},{b,c},{b,d},{c,d}, {a,b,c},{a,b,d},{a,c,d},{b,c,d}
*g **-open sets** ϕ,X,{a},{b},{c},{d}{a,b}{a,c}{a,d}{b,c},{b,d}, {a,b,c},{a,b,d}	*g **-closed sets** ϕ,X,{c},{d}{a,c}{a,d},{b,c},{b,d},{c,d}, {a,b,c},{a,b,d},{a,c,d},{b,c,d}
$^{\#}$gs **-open sets** ϕ,X,{a},{b},{a,b},{a,b,c}{a,b,d}	$^{\#}$gs **-closed sets** ϕ,X,{c},{d},{c,d},{a,c,d},{b,c,d}
gp-open sets **P(X)-{c,d}**	**gp-closed sets** **P(X)-{a,b}**

g*p-open sets ϕ,X,{a},{b},{a,b},{b,c},{a,c},{a,d},{b,d}, {a,b,c},{a,c,d},{a,b,d},{b,c,d}	**g*p-closed sets** ϕ,X,{a},{b},{c},{d},{b,c},{c,d},{a,c},{a,d}, {b,d},{a,c,d},{b,c,d}
gs-open sets ϕ,X,{a},{b},{c},{d},{a,b},{a,c}{a,d}{b,c}, {b,d},{a,b,c},{a,b,d}	**gs-closed sets** ϕ,X,{c},{d}{a,c}{a,d},{b,c},{b,d},{c,d}, {a,b,c},{a,b,d},{a,c,d},{b,c,d}
g*s-open sets ϕ,X,{a},{b},{a,b},{a,b,c},{a,b,d}	**g*s-open sets** ϕ,X,{c},{d},{c,d},{a,c,d},{b,c,d}
$g^{\#}$s- open sets ϕ,X,{a},{b},{a,b},{a,b,c},{a,b,d}	**$g^{\#}$s-open sets** ϕ,X,{c},{d},{c,d},{a,c,d},{b,c,d}
δ-open sets ϕ,X,	**δ-closed sets** ϕ,X,
δg-open sets ϕ,X,{a},{b},{c},{d},{a,b},{a,c}{a,d}{b,c}, {b,d},{a,b,c},{a,b,d}	**δg-closed sets** ϕ,X,{c},{d}{a,c}{a,d},{b,c},{b,d},{c,d}, {a,b,c},{a,b,d},{a,c,d},{b,c,d}
gδ-open sets **P(X)**	**gδ-closed sets** **P(X)**
δg^{*}-open sets ϕ,X,{a},{b},{a,b}	**δg^{*}-closed sets** ϕ,X,{c,d},{a,c,d},{b,c,d}
wδg^{*} - open sets X,ϕ ,{a},{b},{c},{d},{a,b},{a,c},{a,d}, {b,c},{b,d}, {a,b,c},{a,b,d}	**wδg^{*} - closed sets** X,ϕ ,{c},{d},{a,c},{a,d},{b,c},{b,d},{c,d}, {a,b,c},{a,b,d},{a,c,d},{b,c,d}
δ$g^{\ddagger}$-open sets **P(X)**	**δ$g^{\ddagger}$-closed sets** **P(X)**
δ$\hat{g}$ -open sets ϕ,X,{a},{b},{c},{d},{a,b},{a,c},{a,d},{b,c}, {b,d},{a,b,c},{a,b,d}	**δ$\hat{g}$ -closed sets** ϕ,X,{c},{d}{a,c}{a,d},{b,c},{b,d},{c,d}, {a,b,c},{a,b,d},{a,c,d},{b,c,d}
Δ^{*}-open sets **ϕ, X, {a}, {b}, {a,b}**	**Δ^{*}-closed sets** **ϕ, X, {c,d}, {a,c,d}, {b,c,d}**
πg-open sets P(X)	**πg-closed sets** P(X)
πgs- open sets P(X)	**πgs-closed sets** P(X)
πgα- open sets P(X)	**πgα-closed sets** P(X)
πgp- open sets P(X)	**πgp-closed sets** P(X)

πgsp- open sets P(X)	**πgsp-closed sets** P(X)
πgb- open sets P(X)	**πgb-closed sets** P(X)
rg- open sets P(X)	**rg-closed sets** P(X)
rw- open sets P(X)	**rw-closed sets** P(X)
rwg- open sets P(X)	**rwg-closed sets** **P(X)**
gprw- open sets P(X)	**gprw-closed sets** P(X)
gspr- open sets P(X)	**gspr-closed sets** P(X)
(gs)*-open sets ϕ, X,{a},{b},{a,b}	**(gs)*-closed sets** ϕ,X,{c,d},{a,c,d},{b,c,d}

Example 3 :X = {a, b, c,d}

τ = {ϕ, X, {a}, {a, b}} **Closed set ={ϕ, X, {c, d}, {b, c ,d}}**

α-open sets ϕ,X,{a},{a,b},{a,c},{a,d},{a,b,c},{a,b,d},{a,c,d}	**α-closed sets** ϕ,X,{b},{c},{d},{b,c},{b,d},{c,d},{b,c,d}
semi-open sets ϕ,X,{a},{a,b},{a,c},{a,d},{a,b,c},{a,b,d},{a,c,d}	**semi-closed sets** ϕ,X,{b},{c},{d},{b,c},{b,d},{c,d},{b,c,d}
pre-open sets ϕ,X,{a},{a,b},{a,c},{a,d},{a,b,c},{a,b,d},{a,c,d}	**pre-closed sets** ϕ,X,{b},{c},{d},{b,c},{b,d},{c,d},{b,c,d}
regular open sets ϕ,X	**regular closed sets** ϕ,X
π-open sets ϕ,X	**π-closed sets** ϕ,X
Semi pre open sets ϕ,X,{a},{a,b},{a,c},{a,d},{a,b,c},{a,b,d},{a,c,d}	**Semi pre closed sets** ϕ,X,{b},{c},{d},{b,c},{b,d},{c,d},{b,c,d}

regular semi open sets ϕ,X	**regular semi closed sets** ϕ,X
b-open sets ϕ,X,{a},{a,b},{a,c},{a,d},{a,b,c},{a,b,d},{a,c,d}	**b-closed sets** ϕ,X,{b},{c},{d},{b,c},{b,d},{c,d},{b,c,d}
g-open sets ϕ,X,{a},{b},{c},{d},{a,b},{a,c},{a,d},{b,c}{b,d},{a,b,c},{a,b,d}	**g-closed sets** ϕ,X,{c},{d},{a,c},{a,d},{b,c},{b,d},{c,d}{a,b,c},{a,b,d},{a,c,d},{b,c,d}
Mildly g-open sets ϕ,X,{a},{a,b},{a,c},{a,d},{a,b,c},{a,b,d},{a,c,d}	**Mildly g-closed sets** ϕ,X,{b},{c},{d},{b,c},{b,d},{c,d},{b,c,d}
g*-open sets ϕ,X,{a},{b},{a,b}	**g*-closed sets** ϕ,X,{c,d},{a,c,d},{b,c,d}
αg-open sets ϕ,X,{a},{b},{c},{d},{a,b},{a,c},{a,d},{b,c},{b,d},{a,b,c},{a,c,d},{a,b,d}	**αg-closed sets** ϕ,X,{b},{c},{d},{a,c},{a,d},{b,c},{b,d},{c,d},{a,b,c},{a,b,d},{a,c,d},{b,c,d}
$\hat{g}$-open sets ϕ,X,{a},{a,b}	**$\hat{g}$-closed sets** ϕ,X,{c,d},{b,c,d}
$\alpha\hat{g}$ **-open sets** ϕ,X,{a},{b},{c},{d},{a,b},{a,c},{a,d},{b,c},{b,d},{a,b,c},{a,c,d},{a,b,d}	$\alpha\hat{g}$ **-closed sets** ϕ,X,{b}{c},{d},{a,c},{a,d},{b,c},{b,d},{c,d},{a,b,c},{a,b,d},{a,c,d},{b,c,d}
*g **-open sets** ϕ,X,{a},{b},{c},{d},{a,b},{a,c},{a,d},{b,c}{b,d},{a,b,c},{a,b,d}	*g **-closed sets** ϕ,X,{c},{d},{a,c},{a,d},{b,c},{b,d},{c,d},{a,b,c},{a,b,d},{a,c,d},{b,c,d}
$^{\#}$gs **-open sets** ϕ,X,{a},{b},{a,b},{a,c},{a,d},{a,b,c},{a,b,d},{a,c,d}	$^{\#}$gs **-closed sets** ϕ,X,{b},{c},{d},{b,c},{b,d},{c,d},{a,c,d},{b,c,d}
gp-open sets ϕ,X,{a},{b},{c},{d},{a,b},{a,c},{a,d},{b,c},{b,d},{a,b,c},{a,b,d},{a,c,d}	**gp-closed sets** ϕ,X,{b},{c},{d},{a,c},{a,d},{b,c},{b,d},{c,d},{a,b,c},{a,b,d},{a,c,d},{b,c,d}
g*p-open sets ϕ,X,{a},{b},{a,b},{a,c},{a,d},{a,b,c},{a,b,d},{a,c,d}	**g*p-closed sets** ϕ,X,{b},{c},{d},{b,c},{b,d},{c,d},{a,c,d},{b,c,d}
gs-open sets ϕ,X,{a},{b},{c},{d},{a,b},{a,c},{a,d},{b,c},{b,d},{a,b,c},{a,b,d},{a,c,d}	**gs-closed sets** ϕ,X,{b},{c},{d},{a,c},{a,d},{b,c},{b,d},{c,d},{a,b,c},{a,b,d},{a,c,d},{b,c,d}
g*s-open sets ϕ,X,{a},{a,b},{a,c},{a,d},{a,b,c},{a,b,d},{a,c,d}	**g*s-open sets** ϕ,X,{b},{c},{d},{b,c},{b,d},{c,d},{b,c,d}
g$^{\#}$s-open sets ϕ,X,{a},{a,b},{a,c},{a,d},{a,b,c},{a,b,d},{a,c,d}	**g$^{\#}$s-open sets** ϕ,X,{b},{c},{d},{b,c},{b,d},{c,d},{b,c,d}

δ-open sets ϕ,X	**δ-closed sets** ϕ,X
δg-open sets ϕ,X,{a},{b},{c},{d},{a,b},{a,c},{a,d},{b,c},{b,d},{a,b,c},{a,b,d}	**δg-closed sets** ϕ,X,{c},{d},{b,c},{c,d},{a,c},{a,d},{b,d},{a,b,c},{a,c,d},{a,b,d},{b,c,d}
gδ-open sets **P(X)**	**gδ-closed sets** **P(X)**
δg*-open sets ϕ,X,{a},{b},{a,b}	**δg*-closed sets** ϕ,X,{c,d},{b,c,d},{a,c,d}
wδg* - open sets X,ϕ ,{a},{b},{c},{d},{a,b},{a,c},{a,d},{b,c},{b,d},{a,b,c},{a,b,d}	**wδg* - closed sets** X,ϕ ,{c},{d},{a,c},{a,d},{b,c},{b,d},{c,d},{a,b,c},{a,b,d},{a,c,d},{b,c,d}
δg‡-open sets **P(X)**	**δg‡-closed sets** **P(X)**
δĝ **-open sets** ϕ,X,{a},{b},{c},{d},{a,b},{a,c},{a,d},{b,c},{b,d},{a,b,c},{a,c,d}	δĝ **-closed sets** ϕ,X,{b},{d},{a,c},{a,d},{b,c},{b,d},{c,d},{a,b,c},{a,b,d},{a,c,d},{b,c,d}
Δ*-open sets **ϕ, X, {a}, {b}, {c}, {a,b}, {a,c}, {b,c}, {a,b,c}**	**Δ*-closed sets** **ϕ, X, {d}, {a,d}, {b,d}, {c,d}, {a,b,d}, {a,c,d}, {b,c,d}**
πg-open sets P(X)	**πg-closed sets** P(X)
πgs- open sets P(X)	**πgs-closed sets** P(X)
πgα- open sets P(X)	**πgα-closed sets** P(X)
πgp- open sets P(X)	**πgp-closed sets** P(X)
πgsp- open sets P(X)	**πgsp-closed sets** **P(X)**
πgb- open sets P(X)	**πgb-closed sets** **P(X)**
rg- open sets P(X)	**rg-closed sets** P(X)

rw- open sets P(X)	**rw-closed sets** P(X)
rwg- open sets P(X)	**rwg-closed sets** P(X)
gprw- open sets P(X)	**gprw-closed sets** P(X)
gspr- open sets P(X)	**gspr-closed sets** P(X)
(gs)* - open sets ϕ,X,{a},{a,b}	**(gs)* -closed sets** ϕ,X,{c,d},{b,c,d}

Example 4 : X = {a, b, c, d}

τ = {ϕ, X, {a}, {b,c}, {a,b,c}} **Closed set = {ϕ, X, {d}, {a,d}, {b,c,d}}**

α-open sets ϕ,X,{a},{b,c},{a,b,c}	**α-closed sets** ϕ, X, {d}, {a,d}, {b,c,d}
semi-open sets ϕ,X,{a},{b,c},{a,d},{a,b,c},{b,c,d}	**semi-closed sets** ϕ,X,{a},{d},{b,c},{a,d},{b,c,d}
pre-open sets ϕ,X,{a},{b},{c},{a,b},{b,c},{a,c},{a,b,c}, {a,b,d}, {a,c,d}	**pre-closed sets** ϕ,X,{b},{c},{d},{a,d},{b,d},{c,d},{a,b,d}, {a,c,d}, {b,c,d}
regular open sets ϕ,X,{a},{b,c}	**regular closed sets** ϕ,X,{b,c,d},{a,d}
π-open sets ϕ,X,{a},{b,c},{a,b,c}	**π-closed sets** ϕ,X,{d},{b,c,d},{a,d}
Semi pre open sets P(X)−{d}	**Semi pre closed sets** P(X)−{a,b,c}
regular semi open sets ϕ,X,{a},{b,c},{a,d},{a,c,d},{a,b,d},{b,c,d}	**regular semi closed sets** ϕ,X,{a},{b},{c},{b,c},{a,d},{b,c,d}
b-open sets ϕ,X,{a},{b},{c},{a,b},{b,c},{a,c},{a,d}, {a,b,c}, {a,b,d},{a,c,d},{b,c,d}	**b-closed sets** ϕ,X,{a},{b},{c},{d},{b,c},{c,d},{a,d},{b,d}, {a,b,d},{a,c,d},{b,c,d}

g-open sets ϕ,X,{a},{b},{c},{a,b},{b,c},{a,c},{a,b,c}	**g-closed sets** ϕ,X,{d},{c,d},{a,d},{b,d},{a,b,d},{a,c,d},{b,c,d}
Mildly g-open sets ϕ,X,{a},{b},{c},{a,b},{b,c},{a,c},{a,b,c}, {a,c,d},{a,b,d}	**Mildly g-closed sets** ϕ,X,{b},{c},{d},{c,d},{a,d},{b,d},{a,b,d}, {a,c,d},{b,c,d}
g*-open sets ϕ,X,{a},{b},{c},{a,b},{b,c},{a,c},{a,b,c}	**g*-closed sets** ϕ,X,{d},{c,d},{a,d},{b,d},{a,b,d},{a,c,d}, {b,c,d}
αg-open sets ϕ,X,{a},{b},{c},{a,b},{b,c},{a,c},{a,b,c}	**αg-closed sets** ϕ,X,{d},{c,d},{a,d},{b,d},{a,b,d},{a,c,d}, {b,c,d}
$\hat{g}$-open sets ϕ,X,{a},{b},{c},{a,b},{b,c},{a,c},{a,b,c}	**$\hat{g}$-closed sets** ϕ,X,{d},{c,d},{a,d},{b,d},{a,b,d},{a,c,d}, {b,c,d}
$\alpha\hat{g}$ -open sets ϕ,X,{a},{b},{c},{a,b},{b,c},{a,c},{a,b,c}	**$\alpha\hat{g}$ -closed sets** ϕ,X,{d},{c,d},{a,d},{b,d},{a,b,d},{a,c,d}, {b,c,d}
*g -open sets ϕ,X,{a},{b},{c},{a,b},{b,c},{a,c},{a,b,c}, {a,b,d}, {a,c,d}	***g -closed sets** ϕ,X,{b},{c},{d},{a,d},{b,d},{c,d},{a,b,d}, {a,c,d}, {b,c,d}
$^{\#}$gs -open sets ϕ,X,{a},{b,c},{a,d},{a,b,c},{b,c,d}	**$^{\#}$gs -closed sets** ϕ,X,{a},{d},{b,c},{a,d},{b,c,d}
gp-open sets ϕ,X,{a},{b},{c},{a,b},{b,c},{a,c},{a,b,c}, {a,b,d}, {a,c,d}	**gp-closed sets** ϕ,X,{b},{c},{d},{a,d},{b,d},{c,d},{a,b,d}, {a,c,d}, {b,c,d}
g*p-open sets ϕ,X,{a},{b},{c},{a,b},{b,c},{a,c},{a,b,c}, {a,b,d}, {a,c,d}	**g*p-closed sets** ϕ,X,{b},{c},{d},{a,d},{b,d},{c,d},{a,b,d}, {a,c,d}, {b,c,d}
gs-open sets ϕ,X,{a},{b},{c},{a,b},{b,c},{a,c},{a,d}, {a,b,c},{a,b,d}, {a,c,d},{b,c,d}	**gs-closed sets** ϕ,X,{a},{b},{c},{d},{b,c},{c,d},{a,d},{b,d}, {a,b,d},{a,c,d},{b,c,d}
g*s-open sets ϕ,X,{a},{b,c},{a,d},{a,b,c},{b,c,d}	**g*s-open sets** ϕ,X,{a},{d},{b,c},{a,d},{b,c,d}
$g^{\#}$s- open sets ϕ,X,{a},{b},{c},{a,b},{b,c},{a,c},{a,d}, {a,b,c}	**$g^{\#}$s-open sets** ϕ,X,{d},{b,c},{c,d},{a,d},{b,d},{a,b,d},{a,c,d}, {b,c,d}
δ-open sets ϕ,X,{a},{b,c},{a,b,c}	**δ-closed sets** ϕ,X,{d},{a,d},{b,c,d}
δg-open sets ϕ,X,{a},{b},{c},{a,b},{b,c},{a,c},{a,b,c}	**δg-closed sets** ϕ,X,{d},{c,d},{a,d},{b,d},{a,b,d},{a,c,d},{b,c,d}

gδ-open sets ϕ,X,{a},{b},{c},{a,b},{b,c},{a,c},{a,b,c}	**gδ-closed sets** ϕ,X,{d},{c,d},{a,d},{b,d},{a,b,d},{a,c,d},{b,c,d}
δg^{*}-open sets ϕ,X,{a},{b},{c},{a,b},{b,c},{a,c},{a,b,c}	**δg^{*}-closed sets** ϕ,X,{d},{c,d},{a,d},{b,d},{a,b,d},{a,c,d},{b,c,d}
wδg^{*}-open sets ϕ,X,{a},{b},{c},{a,b},{b,c},{a,c},{a,b,c}	**wδg^{*}-closed sets** ϕ,X,{d},{c,d},{a,d},{b,d},{a,b,d},{a,c,d},{b,c,d}
$\delta g^{\ddagger}$-open sets ϕ,X,{a},{b},{c},{a,b},{b,c},{a,c},{a,b,c}	**$\delta g^{\ddagger}$-closed sets** ϕ,X,{d},{c,d},{a,d},{b,d},{a,b,d},{a,c,d},{b,c,d}
$\delta\hat{g}$ -open sets ϕ,X,{a},{b},{c},{a,b},{b,c},{a,c},{a,b,c}	**$\delta\hat{g}$ -closed sets** ϕ,X,{d},{c,d},{a,d},{b,d},{a,b,d},{a,c,d},{b,c,d}
Δ^{*}-open sets **ϕ, X, {a}, {b}, {c}, {a,b}, {b,c}, {a,c}, {a,b,c}**	**Δ^{*}-closed sets** **ϕ, X, {d}, {c,d}, {a,d}, {b,d}, {a,b,d}, {a,c,d}, {b,c,d}**
πg-open sets ϕ,X,{a},{b},{c},{a,b},{b,c},{a,c},{a,b,c}	**πg-closed sets** ϕ,X,{d},{c,d},{a,d},{b,d},{a,b,d},{a,c,d},{b,c,d}
πgs- open sets ϕ,X,{a},{b},{c},{a,b},{b,c},{a,c},{a,d}, {a,b,c},{a,c,d},{a,b,d},{b,c,d}	**πgs-closed sets** ϕ,X,{a},{b},{c},{d},{b,c},{c,d},{a,d},{b,d}, {a,c,d},{a,b,d},{b,c,d}
πgα- open sets ϕ,X,{a},{b},{c},{a,b},{b,c},{a,c},{a,b,c}	**πgα-closed sets** ϕ,X,{d},{c,d},{a,d},{b,d},{a,b,d},{a,c,d},{b,c,d}
πgp- open sets ϕ,X,{a},{b},{c},{a,b},{b,c},{a,c},{a,b,c}, {a,c,d},{a,b,d}	**πgp-closed sets** ϕ,X,{b},{c},{d},{c,d},{a,d},{b,d},{a,b,d},{a,c,d}, {b,c,d}
πgsp- open sets ϕ,X,{a},{b},{c},{a,b},{b,c},{c,d},{a,c}, {a,d},{b,d}, {a,b,c},{a,c,d},{a,b,d},{b,c,d}	**πgsp-closed sets** ϕ,X,{a},{b},{c},{d},{a,b},{b,c},{c,d},{a,c}, {a,d},{b,d}, {a,c,d},{a,b,d},{b,c,d}
πgb- open sets ϕ,X,{a},{b},{c},{a,b},{b,c},{a,c},{a,d}, {a,b,c},{a,c,d},{a,b,d},{b,c,d}	**πgb-closed sets** ϕ,X,{a},{b},{c},{d},{b,c},{c,d},{a,d},{b,d}, {a,c,d},{a,b,d},{b,c,d}
rg- open sets ϕ,X,{a},{b},{c},{d},{a,b},{b,c},{a,c}, {c,d}, {b,d},{a,b,c}	**rg-closed sets** ϕ,X,{d},{a,b},{c,d},{a,c},{a,d},{b,d},{a,b,c}, {a,c,d},{a,b,d},{b,c,d}
rw- open sets ϕ,X,{a},{d},{b,c},{a,b,c}	**rw-closed sets** ϕ,X,{d},{a,d},{a,b,c},{b,c,d}
rwg- open sets ϕ,X,{a},{b},{c},{d},{a,b},{b,c},{c,d}, {a,c}, {a,d}, {b,d}, {a,b,c},{a,c,d},{a,b,d}	**rwg-closed sets** ϕ,X,{b},{c},{d},{a,b},{b,c},{c,d},{a,c},{a,d}, {b,d}, {a,b,c},{a,c,d},{a,b,d},{b,c,d}

gprw- open sets ϕ,X,{a},{b},{c},{d},{a,b},{b,c},{c,d}, {a,c},{b,d}, {a,b,c},{a,c,d},{a,b,d}	**gprw-closed sets** ϕ,X,{b},{c},{d},{a,b},{c,d},{a,c},{a,d}, {b,d}, {a,b,c},{a,c,d},{a,b,d},{b,c,d}
gspr- open sets P(X)	**gspr-closed sets** P(X)
(gs)*-open sets ϕ, X,{a},{b,c},{a,b},{a,b,c}	**(gs)*-closed sets** ϕ,X,{d},{a,d},{c,d},{b,c,d}

Example 5 :X = {a, b, c,d}

τ = {ϕ, X, {a,b,c}} **Closed set = {ϕ, X, {d}}**

α-open sets ϕ,X,{a,b,c}	**α-closed sets** ϕ,X,{d}
semi-open sets ϕ,X,{a,b,c}	**semi-closed sets** ϕ,X,{d}
pre-open sets ϕ,X,{a},{b},{c},{a,b},{a,c},{a,d},{b,c}, {b,d},{c,d},{a,b,c},{a,b,d},{a,c,d},{b,c,d}	**pre-closed sets** ϕ,X,{a},{b},{c},{d},{a,b},{a,c},{a,d},{b,c}, {b,d},{c,d},{a,b,d},{a,c,d},{b,c,d}
Semi pre open sets ϕ,X,{a},{b},{c}	**Semi pre closed sets** ϕ,X, {a,b,d},{a,c,d},{b,c,d}
regular open sets ϕ,X	**regular closed sets** ϕ,X
π-open sets ϕ,X	**π-closed sets** ϕ,X
Regular semi open sets ϕ,X	**Regular semi closed sets** ϕ,X
b-open sets **P(X)**	**b-closed sets** **P(X)**
g-open sets ϕ,X,{a},{b},{c},{a,b},{a,c},{b,c},{a,b,c}	**g-closed sets** ϕ,X,{d},{a,d},{b,d},{c,d},{a,b,d},{a,c,d},{b,c,d}

Mildly g-open sets P(X)-{d}	**Mildly g-closed sets** P(X)-{a,b,c}
g*-open sets ϕ,X,{a},{b},{c},{a,b},{a,c},{b,c},{a,b,c}	**g*-closed sets** ϕ,X,{d},{a,d},{b,d},{c,d},{a,b,d},{a,c,d}, {b,c,d}
αg-open sets ϕ,X,{a},{b},{c},{a,b},{a,c},{b,c},{a,b,c}	**αg-closed sets** ϕ,X,{d},{a,d},{b,d},{c,d},{a,b,d},{a,c,d}, {b,c,d}
$\hat{g}$-open sets ϕ,X,{a},{b},{c},{a,b},{a,c},{b,c},{a,b,c}	**$\hat{g}$-closed sets** ϕ,X,{d},{a,d},{b,d},{c,d},{a,b,d},{a,c,d}, {b,c,d}
$\alpha\hat{g}$-open sets ϕ,X,{a},{b},{c},{a,b},{a,c},{b,c},{a,b,c}	**$\alpha\hat{g}$-closed sets** ϕ,X,{d},{a,d},{b,d},{c,d},{a,b,d},{a,c,d}, {b,c,d}
*g-open sets ϕ,X,{a},{b},{c},{a,b},{a,c},{b,c},{a,b,c}	***g-closed sets** ϕ,X,{d},{a,d},{b,d},{c,d},{a,b,d},{a,c,d}, {b,c,d}
$^{\#}$gs-open sets ϕ,X,{a},{b},{c},{a,b},{a,c},{b,c},{a,b,c}	**$^{\#}$gs-closed sets** ϕ,X,{d},{a,d},{b,d},{c,d},{a,b,d},{a,c,d}, {b,c,d}
gp-open sets ϕ,X,{a},{b},{c},{d},{a,b},{a,c},{a,d},{b,c}, {b,d},{c,d},{a,b,d},{a,c,d},{b,c,d}	**gp-closed sets** ϕ,X,{a},{b},{c},{d},{a,b},{a,c},{a,d},{b,c}, {b,d},{c,d},{a,b,d},{a,c,d},{b,c,d}
g*p-open sets ϕ,X,{a},{b},{c},{d},{a,b},{a,c},{a,d},{b,c}, {b,d},{c,d},{a,b,d},{a,c,d},{b,c,d}	**g*p-closed sets** ϕ,X,{a},{b},{c},{d},{a,b},{a,c},{a,d},{b,c}, {b,d},{c,d},{a,b,d},{a,c,d},{b,c,d}
gs-open sets ϕ,X,{a},{b},{c},{a,b},{a,c},{b,c},{a,b,c}	**gs-closed sets** ϕ,X,{d},{a,d},{b,d},{c,d},{a,b,d},{a,c,d}, {b,c,d}
g*s-open sets ϕ,X,{a},{b},{c},{a,b},{a,c},{b,c},{a,b,c}	**g*s-open sets** ϕ,X,{d},{a,d},{b,d},{c,d},{a,b,d},{a,c,d}, {b,c,d}
g$^{\#}$s-open sets ϕ,X,{a},{b},{c},{a,b},{a,c},{b,c},{a,b,c}	**g$^{\#}$s-open sets** ϕ,X,{d},{a,d},{b,d},{c,d},{a,b,d},{a,c,d}, {b,c,d}
δ-open sets ϕ,X	**δ-closed sets** ϕ,X
δg-open sets ϕ,X,{a},{b},{c},{a,b},{a,c},{b,c},{a,b,c}	**δg-closed sets** ϕ,X,{d},{a,d},{b,d},{c,d},{a,b,d},{a,c,d},{b,c,d}

gδ-open sets ϕ,X,{a},{b},{c},{d},{a,b},{a,c},{a,d},{b,c},{b,d},{c,d},{a,b,d},{a,c,d},{b,c,d}	**gδ-closed sets** ϕ,X,{a},{b},{c},{d},{a,b},{a,c},{a,d},{b,c},{b,d},{c,d},{a,b,d},{a,c,d},{b,c,d}
δg*-open sets ϕ,X,{a},{b},{c},{a,b},{a,c},{b,c},{a,b,c}	**δg*-closed sets** ϕ,X,{d},{a,d},{b,d},{c,d},{a,b,d},{a,c,d},{b,c,d}
wδg* - open sets X,ϕ ,{a},{b},{c},{a,b},{a,c},{b,c},{a,b,c}	**wδg* - closed sets** X,ϕ ,{d},{a,d},{b,d},{c,d},{a,b,d},{a,c,d},{b,c,d}
δg‡ - open sets P(X)	**δg‡ - closed sets** P(X)
δ$\hat{g}$ -open sets ϕ,X,{a},{b},{c},{a,b},{a,c},{b,c},{a,b,c}	**δ$\hat{g}$ -closed sets** ϕ,X,{d},{a,d},{b,d},{c,d},{a,b,d},{a,c,d},{b,c,d}
Δ*-open sets **ϕ, X, {a}, {b}, {c}, {a,b}, {a,c}, {b,c}, {a,b,c}**	**Δ*-closed sets** **ϕ, X, {d}, {c,d}, {a,d}, {b,d}, {a,c,d}, {a,b,d}, {b,c,d}**
πg-open sets **P(X)**	**πg-closed sets** **P(X)**
πgs- open sets **P(X)**	**πgs-closed sets** **P(X)**
πgα- open sets **P(X)**	**πgα-closed sets** **P(X)**
πgp- open sets **P(X)**	**πgp-closed sets** **P(X)**
πgsp- open sets **P(X)**	**πgsp-closed sets** **P(X)**
πgb- open sets **P(X)**	**πgb-closed sets** **P(X)**
rg- open sets **P(X)**	**rg-closed sets** **P(X)**
rw- open sets **P(X)**	**rw-closed sets** **P(X)**
rwg- open sets **P(X)**	**rwg-closed sets** **P(X)**

gprw- open sets **P(X)**	**gprw-closed sets** **P(X)**
gspr- open sets **P(X)**	**gspr-closed sets** **P(X)**
(gs)* - open sets ϕ,X,{d},{c,d},{a,d},{b,d},{a,c,d},{a,b,d},{b,c,d}	**(gs)* -closed sets** ϕ,X,{a},{b},{c},{a,b},{a,c},{b,c},{a,b,c}

Example 6 :X = {a, b, c, d} τ = {ϕ, X, {a}, {c}, {a,b}, {a,c}, {a,b,c}, {a,c,d}}

Closed set = {ϕ, X, {b}, {d}, {b,d}, {c,d}, {a,b,d}, {b,c,d}}

α-open sets ϕ ,X,{a},{c},{a,b},{a,c},{a,b,c},{a,c,d}	**α-closed sets** ϕ ,X,{b},{d},{b,d},{c,d},{a,b,d}{b,c,d}
semi-open sets ϕ ,X,{a},{c},{a,b},{c,d},{a,c},{a,d},{a,b,c}, {a,c,d},{a,b,d}	**semi-closed sets** ϕ ,X,{b},{c},{d},{a,b},{b,c},{c,d},{b,d}, {a,b,d},{b,c,d}
pre-open sets ϕ ,X,{a},{c},{a,b},{a,c},{a,b,c},{a,c,d}	**pre-closed sets** ϕ ,X,{b},{d},{b,d},{c,d},{a,b,d}{b,c,d}
regular open sets ϕ ,X,{c},{a,b}	**regular closed sets** ϕ ,X,{c,d},{a,b,d}
π-open sets ϕ ,X,{c},{a,b},{a,b,c}	**π-closed sets** ϕ ,X,{d},{c,d},{a,b,d}
Semi pre open sets ϕ ,X,{a},{c},{a,b},{c,d},{a,c},{a,d},{a,b,c}, {a,c,d},{a,b,d}	**Semi pre closed sets** ϕ ,X,{b},{c},{d},{a,b},{b,c},{c,d},{b,d}, {a,b,d},{b,c,d}
regular semi open sets ϕ ,X,{c},{a,b},{c,d},{a,b,d}	**regular semi closed sets** ϕ ,X,{c},{a,b},{c,d},{a,b,d}
b-open sets ϕ ,X,{a},{c},{a,b},{c,d},{a,c},{a,d},{a,b,c}, {a,c,d},{a,b,d}	**b-closed sets** ϕ ,X,{b},{c},{d},{a,b},{b,c},{c,d},{b,d},{a,b,d}, {b,c,d}
g-open sets ϕ ,X,{a},{c},{a,b},{a,c},{a,b,c},{a,c,d}	**g-closed sets** ϕ ,X,{b},{d},{b,d},{c,d},{a,b,d}{b,c,d}

Mildly g-open sets ϕ ,X,{a},{c},{a,b},{a,c},{a,b,c},{a,c,d}	**Mildly g-closed sets** ϕ ,X,{b},{d},{b,d},{c,d},{a,b,d}{b,c,d}
g*-open sets ϕ ,X,{a},{c},{a,b},{a,c},{a,b,c},{a,c,d}	**g*-closed sets** ϕ ,X,{b},{d},{b,d},{c,d},{a,b,d},{b,c,d}
αg-open sets ϕ ,X,{a},{c},{a,b},{a,c},{a,b,c},{a,c,d}	**αg-closed sets** ϕ ,X,{b},{d},{b,d},{c,d},{a,b,d},{b,c,d}
$\hat{g}$-open sets ϕ ,X,{a},{c},{a,b},{a,c},{a,b,c},{a,c,d}	**$\hat{g}$-closed sets** ϕ ,X,{b},{d},{b,d},{c,d},{a,b,d}{b,c,d}
$\alpha\hat{g}$ **-open sets** ϕ ,X,{a},{c},{a,b},{a,c},{a,b,c},{a,c,d}	$\alpha\hat{g}$ **-closed sets** ϕ ,X,{b},{d},{b,d},{c,d},{a,b,d}{b,c,d}
*g **-open sets** ϕ ,X,{a},{c},{a,b},{a,c},{a,b,c},{a,c,d}	*g **-closed sets** ϕ ,X,{b},{d},{b,d},{c,d},{a,b,d}{b,c,d}
$^{\#}$gs**-open sets** ϕ ,X,{a},{c},{a,b},{a,c},{a,d},{c,d}, {a,b,c},{a,c,d},{a,b,d}	$^{\#}$gs**-closed sets** ϕ ,X,{b},{c},{d},{a,b},{b,c},{b,d},{c,d}, {a,b,d}{b,c,d}
gp-open sets ϕ ,X,{a},{c},{a,b},{a,c},{a,b,c},{a,c,d}	**gp-closed sets** ϕ ,X,{b},{d},{b,d},{c,d},{a,b,d}{b,c,d}
g*p-open sets ϕ ,X,{a},{c},{a,b},{a,c},{a,b,c},{a,c,d}	**g*p-closed sets** ϕ ,X,{b},{d},{b,d},{c,d},{a,b,d}{b,c,d}
gs-open sets ϕ ,X,{a},{c},{a,b},{a,c},{a,d},{c,d}, {a,b,c},{a,c,d},{a,b,d}	**gs-closed sets** ϕ ,X,{b},{c},{d},{a,b},{b,c},{b,d},{c,d}, {a,b,d}{b,c,d}
g*s-open sets ϕ ,X,{a},{c},{a,b},{a,c},{a,d},{c,d}, {a,b,c},{a,c,d},{a,b,d}	**g*s-open sets** ϕ ,X,{b},{c},{d},{a,b},{b,c},{b,d},{c,d}, {a,b,d}{b,c,d}
g$^{\#}$s- open sets ϕ ,X,{a},{c},{a,b},{a,c},{a,d},{c,d}, {a,b,c},{a,c,d},{a,b,d}	**g$^{\#}$s-open sets** ϕ ,X,{b},{c},{d},{a,b},{b,c},{b,d},{c,d}, {a,b,d}{b,c,d}
δ-open sets ϕ ,X,{c},{a,b},{a,b,c}	**δ-closed sets** ϕ ,X,{d},{c,d},{a,b,d}
δg-open sets ϕ ,X,{a},{c},{a,b},{a,c},{a,b,c}	**δg-closed sets** ϕ ,X,{d},{b,d},{c,d},{a,b,d},{b,c,d}
gδ-open sets ϕ ,X,{a},{b},{c},{a,b},{a,c},{b,c},{a,b,c}, {a,c,d}	**gδ-closed sets** ϕ ,X,{b},{d},{a,d},{b,d},{c,d},{a,b,d},{a,c,d} {b,c,d}

δg^*-open sets ϕ ,X,{a},{c},{a,b},{a,c},{a,b,c}	**δg^*-closed sets** ϕ ,X,{d},{b,d},{c,d},{a,b,d},{b,c,d}
$w\delta g^*$ - open sets X,ϕ ,{a},{c},{a,b},{a,c},{a,b,c}	**$w\delta g^*$ - closed sets** X, ϕ ,{d},{b,d},{c,d},{a,b,d},{b,c,d}
$\delta g^\ddagger$-open sets ϕ ,X,{a},{b},{c},{a,b},{a,c},{b,c},{a,b,c}	**$\delta g^\ddagger$-closed sets** ϕ ,X,{d},{a,d},{b,d},{c,d},{a,b,d},{b,c,d},{a,c,d} }
$\delta\hat{g}$ -open sets ϕ ,X,{a},{c},{a,b},{a,c},{a,b,c}	**$\delta\hat{g}$ -closed sets** ϕ ,X,{d},{b,d},{c,d},{a,b,d},{b,c,d}
Δ^*-open sets **ϕ, X, {a}, {b}, {c}, {a,b}, {b,c}, {a,c}, {a,b,c}**	**Δ^*-closed sets** **ϕ, X, {d}, {a,d}, {b,d}, {c,d}, {a,b,d}, {a,c,d}, {b,c,d}**
πg-open sets ϕ ,X,{a},{b},{c},{a,b},{a,c},{b,c},{a,b,c}, {a,c,d}	**πg-closed sets** ϕ ,X,{b},{d},{a,d},{b,d},{c,d},{a,b,d},{a,c,d} {b,c,d}
πgs- open sets ϕ ,X,{a},{b},{c},{a,b},{a,c},{a,d},{b,c}, {c,d},{a,b,c}, {a,c,d},{a,b,d},{b,c,d}	**πgs-closed sets** ϕ ,X,{a},{b},{c},{d},{a,b},{a,d},{b,c},{b,d}, {c,d},{a,b,d},{a,c,d},{b,c,d}
$\pi g\alpha$- open sets ϕ ,X,{a},{b},{c},{a,b},{a,c},{b,c},{a,b,c}, {a,c,d}	**$\pi g\alpha$-closed sets** ϕ ,X,{b},{d},{a,d},{b,d},{c,d},{a,b,d},{a,c,d} {b,c,d}
πgp- open sets ϕ ,X,{a},{b},{c},{a,b},{a,c},{b,c},{a,b,c}, {a,c,d}	**πgp-closed sets** ϕ ,X,{b},{d},{a,d},{b,d},{c,d},{a,b,d},{a,c,d} {b,c,d}
πgsp- open sets ϕ ,X,{a},{b},{c},{a,b},{a,c},{a,d},{b,c}, {c,d},{a,b,c}, {a,c,d},{a,b,d},{b,c,d}	**πgsp-closed sets** ϕ ,X,{a},{b},{c},{d},{a,b},{a,d},{b,c},{b,d}, {c,d},{a,b,d},{a,c,d},{b,c,d}
πgb- open sets ϕ ,X,{a},{b},{c},{a,b},{a,c},{a,d},{b,c}, {c,d},{a,b,c}, {a,c,d},{a,b,d},{b,c,d}	**πgb-closed sets** ϕ ,X,{a},{b},{c},{d},{a,b},{a,d},{b,c},{b,d}, {c,d},{a,b,d},{a,c,d},{b,c,d}
rg- open sets ϕ ,X,{a},{b},{c},{d},{a,b},{a,c},{b,c}, {a,d},{b,d},{a,b,c},{a,c,d}	**rg-closed sets** ϕ ,X,{b},{d},{b,c},{c,d},{a,c},{a,d},{b,d}, {a,b,c}, {a,c,d},{a,b,d},{b,c,d}
rw- open sets ϕ ,X,{a},{b},{c},{d},{a,b},{a,c},{b,c}, {a,d},{b,d},{a,b,c},{a,c,d}	**rw-closed sets** ϕ ,X,{b},{d},{b,c},{c,d},{a,c},{a,d},{b,d}, {a,b,c}, {a,c,d},{a,b,d},{b,c,d}
rwg- open sets ϕ ,X,{a},{b},{c},{d},{a,b},{a,c},{b,c}, {a,d},{b,d},{a,b,c},{a,c,d}	**rwg-closed sets** ϕ ,X,{b},{d},{b,c},{c,d},{a,c},{a,d},{b,d}, {a,b,c}, {a,c,d},{a,b,d},{b,c,d}
gprw- open sets ϕ ,X,{a},{b},{c},{d},{a,b},{a,c},{b,c}, {a,d},{b,d},{a,b,c},{a,c,d}	**gprw-closed sets** ϕ ,X,{b},{d},{b,c},{c,d},{a,c},{a,d},{b,d}, {a,b,c}, {a,c,d},{a,b,d},{b,c,d}

gspr- open sets P(X)	**gspr-closed sets** P(X)
(gs)*-open sets ϕ,X,{a},{c},{a,b},{a,c},{a,b,c},{a,c,d}	**(gs)*-closed sets** ϕ,X,{b},{d},{b,d},{c,d},{a,b,d},{b,c,d}

APPENDIX III

X = {a, b, c}

τ_1 = {ϕ , X, {a}}; **τ_2 = {ϕ , X, {a, b}};** **τ_3 = {ϕ , X, {a}, {a, b}};**

τ_4 = {ϕ , X, {a}, {b, c}}; **τ_5 = {ϕ , X, {a}, {a, b}, {a, c}};**

τ_6 = {ϕ , X, {a}, {b}, {a, b}}; **τ_7 = {ϕ , X, {a}, {b}, {a, b}, {a,c}};**

(1, 2)-Δ^*-closed sets : ϕ , X, {b, c} (1, 3)-Δ^*-closed sets : ϕ , X, {b, c} (1, 4)-Δ^*-closed sets : ϕ , X, {a}, {b, c} (1, 5)-Δ^*-closed sets : ϕ , X, {b, c} (1, 6)-Δ^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (1, 7)-Δ^*-closed sets : ϕ , X, {b}, {b, c}, {a, c}	(1, 2)-δg-closed sets : P(X)−{a} (1, 3)-δg-closed sets : P(X)−{a} (1, 4)-δg-closed sets : P(X) (1, 5)-δg-closed sets : P(X)−{a} (1, 6)-δg-closed sets : P(X)−{a} (1, 7)-δg-closed sets : P(X)−{a}
(2, 1)-Δ^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (2, 3)-Δ^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (2, 4)-Δ^*-closed sets : ϕ , X, {a}, {c}, {b, c}, {a, c} (2, 5)-Δ^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (2, 6)-Δ^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (2, 7)-Δ^*-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c}	(2, 1)-δg-closed sets : ϕ , X, {c}, {b, c}, {a, c} (2, 3)-δg-closed sets : ϕ , X, {c}, {b, c}, {a, c} (2, 4)-δg-closed sets : ϕ , X, {a}, {c}, {b, c},{a, c} (2, 5)-δg-closed sets : ϕ , X, {c}, {b, c}, {a, c} (2, 6)-δg-closed sets : ϕ , X, {c}, {b, c}, {a, c} (2, 7)-δg-closed sets : ϕ , X, {b}, {c}, {b, c}, {a,c}
(3, 1)-Δ^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (3, 2)-Δ^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (3, 4)-Δ^*-closed sets : ϕ , X, {a}, {c}, {b, c}, {a,c} (3, 5)-Δ^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (3, 6)-Δ^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (3, 7)-Δ^*-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c}	(3, 1)-δg-closed sets : ϕ , X, {c}, {b, c}, {a, c} (3, 2)-δg-closed sets : ϕ , X, {c}, {b, c}, {a, c} (3, 4)-δg-closed sets : ϕ , X, {a}, {c}, {b, c}, {a, c} (3, 5)-δg-closed sets : ϕ , X, {c}, {b, c}, {a, c} (3, 6)-δg-closed sets : ϕ , X, {c}, {b, c}, {a, c} (3, 7)-δg-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c}
(4, 1)-Δ^*-closed sets : ϕ , X (4, 2)-Δ^*-closed sets : ϕ , X (4, 3)-Δ^*-closed sets : ϕ , X (4, 5)-Δ^*-closed sets : ϕ , X (4, 6)-Δ^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (4, 7)-Δ^*-closed sets : ϕ , X, {b}, {a, c}	(4, 1)-δg-closed sets : ϕ , X, {a, b}, {a, c} (4, 2)-δg-closed sets : ϕ , X, {a, b}, {a, c} (4, 3)-δg-closed sets : ϕ , X, {a, b}, {a, c} (4, 5)-δg-closed sets : ϕ , X, {a, b}, {a, c} (4, 6)-δg-closed sets : P(X)−{a} (4, 7)-δg-closed sets : ϕ , X, {b}, {a, b},{a, c}
(5, 1)-Δ^*-closed sets : P(X)−{a} (5, 2)-Δ^*-closed sets : P(X)−{a} (5, 3)-Δ^*-closed sets : P(X)−{a} (5, 4)-Δ^*-closed sets : P(X) (5, 6)-Δ^*-closed sets : P(X)−{a} (5, 7)-Δ^*-closed sets : P(X)−{a}	(5, 1)-δg-closed sets : ϕ , X, {b, c} (5, 2)-δg-closed sets : ϕ , X, {b, c} (5, 3)-δg-closed sets : ϕ , X, {b, c} (5, 4)-δg-closed sets : ϕ , X, {a}, {b, c} (5, 6)-δg-closed sets : ϕ , X, {c}, {b, c}, {a, c} (5, 7)-δg-closed sets : ϕ , X, {b}, {c}, {b, c},{a,c}}

(6, 1)-Δ^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (6, 2)-Δ^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (6, 3)-Δ^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (6, 4)-Δ^*-closed sets : ϕ , X, {a}, {c}, {b, c}, {a, c} (6, 5)-Δ^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (6, 7)-Δ^*-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c}	(6, 1)-δg-closed sets : ϕ , X, {c}, {b, c}, {a, c} (6, 2)-δg-closed sets : ϕ , X, {c}, {b, c}, {a, c} (6, 3)-δg-closed sets : ϕ , X, {c}, {b, c}, {a, c} (6, 4)-δg-closed sets : ϕ , X, {a}, {c}, {b, c}, {a, c} (6, 5)-δg-closed sets : ϕ , X, {c}, {b, c}, {a, c} (6, 7)-δg-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c}
(7, 1)-Δ^*-closed sets : ϕ , X, {b, c} (7, 2)-Δ^*-closed sets : ϕ , X, {b, c} (7, 3)-Δ^*-closed sets : ϕ , X, {b, c} (7, 4)-Δ^*-closed sets : ϕ , X, {a}, {b, c} (7, 5)-Δ^*-closed sets : ϕ , X, {b, c} (7, 6)-Δ^*-closed sets : ϕ , X, {c}, {b, c}, {a, c}	(7, 1)-δg-closed sets : ϕ , X, {b, c} (7, 2)-δg-closed sets : ϕ , X, {b, c} (7, 3)-δg-closed sets : ϕ , X, {b, c} (7, 4)-δg-closed sets : ϕ , X, {a}, {b, c} (7, 5)-δg-closed sets : ϕ , X, {b, c} (7, 6)-δg-closed sets : ϕ , X, {c}, {b, c}, {a, c}

(1, 2)-regular closed sets : ϕ , X (1, 3)-regular closed sets : ϕ , X (1, 4)-regular closed sets : ϕ , X, {b, c} (1, 5)-regular closed sets : ϕ , X (1, 6)-regular closed sets : ϕ , X, {b, c} (1, 7)-regular closed sets : ϕ , X, {b, c}	(1, 2)-αg-closed sets : P(X)−{a} (1, 3)-αg-closed sets : P(X)−{a} (1, 4)-αg-closed sets : P(X)−{a} (1, 5)-αg-closed sets : P(X)−{a} (1, 6)-αg-closed sets : P(X)−{a} (1, 7)-δg-closed sets : P(X)−{a}
(2, 1)-regular closed sets : ϕ , X (2, 2)-regular closed sets : ϕ , X (2, 3)-regular closed sets : ϕ , X (2, 4)-regular closed sets : ϕ , X (2, 5)-regular closed sets : ϕ , X (2, 6)-regular closed sets : ϕ , X	(2, 1)-αg-closed sets : ϕ , X, {a, b} (2, 3)-αg-closed sets : ϕ , X, {b}, {c}, {b, c},{a, c} (2, 4)-αg-closed sets : ϕ , X, {a}, {c}, {b, c}, {a, c} (2, 5)-αg-closed sets : ϕ , X, {b}, {c}, {b, c},{a, c} (2, 6)-αg-closed sets : ϕ , X, {c}, {b, c}, {a, c} (2, 7)-δg-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c}
(3, 1)-regular closed sets : ϕ , X (3, 2)-regular closed sets : ϕ , X (3, 4)-regular closed sets : ϕ , X, {b, c} (3, 5)-regular closed sets : ϕ , X (3, 6)-regular closed sets : ϕ , X, {b, c} (3, 7)-regular closed sets : ϕ , X, {b, c}	(3, 1)-αg-closed sets : ϕ , X, {b}, {c}, {b, c},{a, c} (3, 2)-αg-closed sets : ϕ , X, {c}, {b, c}, {a, c} (3, 4)-αg-closed sets : ϕ , X, {a}, {c}, {b, c}, {a, c} (3, 5)-αg-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c} (3, 6)-αg-closed sets : ϕ , X, {c}, {b, c}, {a, c} (3, 7)-αg-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c}
(4, 1)-regular closed sets : ϕ , X, {a} (4, 2)-regular closed sets : ϕ , X (4, 3)-regular closed sets : ϕ , X, {a} (4, 5)-regular closed sets : ϕ , X, {a} (4, 6)-regular closed sets : ϕ , X, {a}, {b, c} (4, 7)-regular closed sets : ϕ , X, {a}, {b, c}	(4, 1)-αg-closed sets : P(X)−{a} (4, 2)-αg-closed sets : ϕ , X, {c}, {a, b}, {a, c} (4, 3)-αg-closed sets : P(X)−{a} (4, 5)-αg-closed sets : P(X)−{a} (4, 6)-αg-closed sets : P(X)−{a} (4, 7)-αg-closed sets : P(X)−{a}
(5, 1)-regular closed sets : ϕ , X (5, 2)-regular closed sets : ϕ , X (5, 3)-regular closed sets : ϕ , X (5, 4)-regular closed sets : ϕ , X, {b} (5, 6)-regular closed sets : ϕ , X, {b} (5, 7)-regular closed sets : ϕ , X, {b}	(5, 1)-αg-closed sets : ϕ , X, {b}, {c}, {b, c} (5, 2)-αg-closed sets : ϕ , X, {c}, {b, c} (5, 3)-αg-closed sets : ϕ , X, {b}, {c}, {b, c},{a, c} (5, 4)-αg-closed sets : ϕ , X, {a}, {b, c} (5, 6)-αg-closed sets : ϕ , X, {c}, {b, c}, {a, c} (5, 7)-αg-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c}

(6, 1)-regular closed sets : ϕ , X (6, 2)-regular closed sets : ϕ , X (6, 3)-regular closed sets : ϕ , X, {a, c} (6, 4)-regular closed sets : ϕ , X, {b, c}, {a, c} (6, 5)-regular closed sets : ϕ , X, {a, c} (6, 7)-regular closed sets : ϕ , X, {b, c}, {a, c}	(6, 1)-αg-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c} (6, 2)-αg-closed sets : ϕ , X, {c}, {b, c}, {a, c}} (6, 3)-αg-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c} (6, 4)-αg-closed sets : ϕ , X, {a}, {c}, {b, c}, {a, c} (6, 5)-αg-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c} (6, 7)-αg-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c}
(7, 1)-regular closed sets : ϕ , X, {a} (7, 2)-regular closed sets : ϕ , X, {a, b} (7, 3)-regular closed sets : ϕ , X, {a}, {a, b} (7, 4)-regular closed sets : ϕ , X, {a} (7, 5)-regular closed sets : ϕ , X, {a}, {a, b},{a, c} (7, 6)-regular closed sets : ϕ , X, {a}, {b}, {a, b}	(7, 1)-αg-closed sets : ϕ , X, {b}, {c}, {b, c} (7, 2)-αg-closed sets : ϕ , X, {c}, {b, c}, {a, c} (7, 3)-αg-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c} (7, 4)-αg-closed sets : ϕ , X, {a}, {b, c} (7, 5)-αg-closed sets : ϕ , X, {b}, {c}, {b, c} (7, 6)-αg-closed sets : ϕ , X,{c}, {b, c}, {a, c}
(1, 2)-g-closed sets : P(X)−{a} (1, 3)-g-closed sets : P(X)−{a} (1, 4)-g-closed sets : P(X) (1, 5)-g-closed sets : P(X)−{a} (1, 6)-g-closed sets : P(X)−{a} (1, 7)-g-closed sets : P(X)−{a}	(1, 2)-gδ-closed sets : P(X) (1, 3)-gδ-closed sets : P(X) (1, 4)-gδ-closed sets : P(X) (1, 5)-gδ-closed sets : P(X) (1, 6)-gδ-closed sets : P(X) (1, 7)-gδ-closed sets : P(X)
(2, 1)-g-closed sets : ϕ , X, {c}, {b, c}, {a, c} (2, 3)-g-closed sets : ϕ , X, {c}, {b, c},{a, c}} (2, 4)-g-closed sets : ϕ , X, {a}, {c}, {b, c}, {a, c} (2, 5)-g-closed sets : ϕ , X, {c}, {b, c},{a, c} (2, 6)-g-closed sets : ϕ , X, {c}, {b, c}, {a, c} (2, 7)-g-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c}	(2, 1)-gδ-closed sets : P(X) (2, 3)-gδ-closed sets :P(X) (2, 4)-gδ-closed sets : P(X) (2, 5)-gδ-closed sets : P(X) (2, 6)-gδ-closed sets :P(X) (2, 7)-gδ-closed sets :P(X)
(3, 1)-g-closed sets : ϕ , X, {c}, {b, c},{a, c} (3, 2)-g-closed sets : ϕ , X, {c}, {b, c}, {a, c} (3, 4)-g-closed sets : ϕ , X, {a}, {c}, {b, c}, {a, c} (3, 5)-g-closed sets : ϕ , X, {c}, {b, c}, {a, c} (3, 6)-g-closed sets : ϕ , X, {c}, {b, c}, {a, c} (3, 7)-g-closed sets : ϕ , X, {b}, {c}, {a, c}}	(3, 1)-gδ-closed sets : P(X) (3, 2)-gδ-closed sets : P(X) (3, 4)-gδ-closed sets : P(X) (3, 5)-gδ-closed sets : P(X) (3, 6)-gδ-closed sets : P(X) (3, 7)-gδ-closed sets : P(X)
(4, 1)-g-closed sets : ϕ , X, {a, b}, {a, c} (4, 2)-g-closed sets : ϕ , X, {a, b}, {a, c} (4, 3)-g-closed sets : ϕ , X, {a, b}, {a, c} (4, 5)-g-closed sets : ϕ , X, {a, b}, {a, c} (4, 6)-g-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c} (4, 7)-g-closed sets : ϕ , X, {b}, {a, b}, {a, c}	(4, 1)-gδ-closed sets :P(X)−{a} (4, 2)-gδ-closed sets : ϕ , X, {c}, {a, b}, {a, c}} (4, 3)-gδ-closed sets : ϕ , X, {b},{c},{a, b}, {b, c},{a,c} (4, 5)-gδ-closed sets : ϕ ,X, {b},{c}, {a, b}, {b, c},{a,c} (4, 6)-gδ-closed sets : ϕ ,X,{b}, {c}, {a, b}, {b, c}, a,c} (4, 7)-gδ-closed sets : ϕ , X, {b},{c}, {a, b},{b,c},{a, c}
(5, 1)-g-closed sets : ϕ , X, {b, c} (5, 2)-g-closed sets : ϕ , X, {b, c} (5, 3)-g-closed sets : ϕ , X, {b, c} (5, 4)-g-closed sets : ϕ , X, {a}, {b, c} (5, 6)-g-closed sets : ϕ , X, {c}, {b, c}, {a, c} (5, 7)-g-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c}	(5, 1)- gδ-closed sets : P(X) (5, 2)- gδ-closed sets : P(X) (5, 3)- gδ-closed sets : P(X) (5, 4)- gδ-closed sets : P(X) (5, 6)- gδ-closed sets : P(X) (5, 7)- gδ-closed sets : P(X)
(6, 1)-g-closed sets : ϕ , X, {c}, {b, c}, {a, c}} (6, 2)-g-closed sets : ϕ , X, {c}, {b, c}, {a, c}} (6, 3)-g-closed sets : ϕ , X, {c}, {b, c}, {a, c}} (6, 4)-g-closed sets : ϕ , X, {a}, {c}, {b, c}, {a, c} (6, 5)-g-closed sets : ϕ , X, {c}, {b, c}, {a, c} (6, 7)-g-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c}	(6, 1)-gδ-closed sets : ϕ , X, {c}, {b, c}, {a, c} (6, 2)-gδ-closed sets : ϕ , X, {c}, {b, c}, {a, c} (6, 3)-gδ-closed sets : ϕ , X, {c}, {b, c}, {a, c} (6, 4)-gδ-closed sets : ϕ , X, {a}, {c}, {b, c}, {a, c} (6, 5)-gδ-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c} (6, 7)-gδ-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c}
(7, 1)-g-closed sets : ϕ , X, {b, c} (7, 2)-g-closed sets : ϕ , X, {b, c} (7, 3)-g-closed sets : ϕ , X, {b, c}	(7, 1)-gδ-closed sets : ϕ , X, {a, b}, {b, c} (7, 2)-gδ-closed sets : ϕ , X, {c}, {a, b}, {b, c} (7, 3)-gδ-closed sets : ϕ , X, {c}, {a, b}, {b, c}

(7, 4)-g-closed sets : ϕ , X, {a}, {b, c} (7, 5)-g-closed sets : ϕ , X, {b, c} (7, 6)-g-closed sets : ϕ , X, {c}, {b, c}, {a, c}	(7, 4)-gδ-closed sets : ϕ , X, {a}, {a, b}, {b, c} (7, 5)-gδ-closed sets : ϕ , X, {b}, {c}, {a, b}, {b, c} (7, 6)-gδ-closed sets : P(X)−{b}
(1, 2)-δg^*-closed sets : ϕ , X, {b, c} (1, 3)-δg^*-closed sets : ϕ , X, {b, c} (1, 4)-δg^*-closed sets : ϕ , X, {a}, {b, c} (1, 5)-δg^*-closed sets : { ϕ , X, {b, c} (1, 6)-δg^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (1, 7)-δg^*-closed sets : ϕ , X, {b}, {b, c}, {a, c}	(1, 2)-$\delta g^{\ddagger}$-closed sets : P(X) (1, 3)-$\delta g^{\ddagger}$-closed sets : P(X) (1, 4)-$\delta g^{\ddagger}$-closed sets : P(X) (1, 5)-$\delta g^{\ddagger}$-closed sets : P(X) (1, 6)-$\delta g^{\ddagger}$-closed sets : P(X) (1, 7)-$\delta g^{\ddagger}$-closed sets : P(X)
(2, 1)-δg^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (2, 3)-δg^*-closed sets : ϕ , X, {c}, {b, c},{a, c} (2, 4)-δg^*-closed sets : ϕ , X, {a}, {c}, {b, c}, {a, c} (2, 5)-δg^*-closed sets : ϕ , X, {c}, {b, c},{a, c} (2, 6)-δg^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (2, 7)-δg^*-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c}	(2, 1)-$\delta g^{\ddagger}$-closed sets : P(X) (2, 3)-$\delta g^{\ddagger}$-closed sets : P(X) (2, 4)-$\delta g^{\ddagger}$-closed sets : P(X) (2, 5)-$\delta g^{\ddagger}$-closed sets : P(X) (2, 6)-$\delta g^{\ddagger}$-closed sets : P(X) (2, 7)-$\delta g^{\ddagger}$-closed sets : P(X)
(3, 1)-δg^*-closed sets : ϕ , X, {c}, {b, c},{a, c} (3, 2)-δg^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (3, 4)-δg^*-closed sets : ϕ , X, {a}, {c}, {b, c}, {a, c} (3, 5)-δg^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (3, 6)-δg^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (3, 7)-δg^*-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c}	(3, 1)-$\delta g^{\ddagger}$-closed sets : P(X) (3, 2)-$\delta g^{\ddagger}$-closed sets : P(X) (3, 4)-$\delta g^{\ddagger}$-closed sets : P(X) (3, 5)-$\delta g^{\ddagger}$-closed sets : P(X) (3, 6)-$\delta g^{\ddagger}$-closed sets : P(X) (3, 7)-$\delta g^{\ddagger}$-closed sets : P(X)
(4, 1)-δg^*-closed sets : ϕ , X, {a, b}, {a, c} (4, 2)-δg^*-closed sets : ϕ , X} (4, 3)-δg^*-closed sets : ϕ , X} (4, 5)-δg^*-closed sets : ϕ , X} (4, 6)-δg^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (4, 7)-δg^*-closed sets : ϕ , X, {b}, {a, c}	(4, 1)-$\delta g^{\ddagger}$-closed sets : ϕ , X, {a, b}, {a, c} (4, 2)-$\delta g^{\ddagger}$-closed sets : ϕ , X, {a, b}, {a, c} (4, 3)-$\delta g^{\ddagger}$-closed sets : ϕ , X, {a, b}, {a, c} (4, 5)-$\delta g^{\ddagger}$-closed sets : ϕ , X, {a, b}, {a, c} (4, 6)-$\delta g^{\ddagger}$-closed sets : P(X)−{a} (4, 7)-$\delta g^{\ddagger}$-closed sets : ϕ , X, {b}, {a, b}, {a, c}
(5, 1)-δg^*-closed sets : ϕ , X, {b, c} (5, 2)-δg^*-closed sets : ϕ , X, {b, c} (5, 3)-δg^*-closed sets : ϕ , X, {b, c} (5, 4)-δg^*-closed sets : ϕ , X, {a}, {b, c} (5, 6)-δg^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (5, 7)-δg^*-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c}	(5, 1)-$\delta g^{\ddagger}$-closed sets : ϕ , X, {b, c} (5, 2)-$\delta g^{\ddagger}$-closed sets : ϕ , X, {b, c} (5, 3)-$\delta g^{\ddagger}$-closed sets : ϕ , X, {b, c} (5, 4)-$\delta g^{\ddagger}$-closed sets : ϕ , X, {a}, {b, c} (5, 6)-$\delta g^{\ddagger}$-closed sets : ϕ , X, {c}, {b, c}, {a, c} (5, 7)-$\delta g^{\ddagger}$-closed sets : ϕ , X, {b}, {c}, {b, c},{a,c}
(6, 1)-δg^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (6, 2)-δg^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (6, 3)-δg^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (6, 4)-δg^*-closed sets : ϕ , X, {a}, {c}, {b, c}, {a, c} (6, 5)-δg^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (6, 7)-δg^*-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c}	(6, 1)-$\delta g^{\ddagger}$-closed sets : ϕ , X, {c}, {b, c}, {a, c} (6, 2)-$\delta g^{\ddagger}$-closed sets : ϕ , X, {c}, {b, c}, {a, c} (6, 3)-$\delta g^{\ddagger}$-closed sets : ϕ , X, {c}, {b, c}, {a, c} (6, 4)-$\delta g^{\ddagger}$-closed sets : ϕ , X, {a}, {c}, {b, c}, {a, c} (6, 5)-$\delta g^{\ddagger}$-closed sets : ϕ , X, {c}, {b, c}, {a, c} (6, 7)-$\delta g^{\ddagger}$-closed sets : ϕ , X, {b}, c}, {b, c}, {a, c}

(7, 1)-δg^*-closed sets : ϕ , X, {b, c} (7, 2)-δg^*-closed sets : ϕ , X, {b, c} (7, 3)-δg^*-closed sets : ϕ , X, {b, c} (7, 4)-δg^*closed sets : ϕ , X, {a}, {b, c} (7, 5)-δg^*-closed sets : ϕ , X, {b, c} (7, 6)-δg^*-closed sets : ϕ , X, {c}, {b, c}, {a, c}	(7, 1)-$\delta g^{\ddagger}$-closed sets : ϕ , X, {b, c} (7, 2)-$\delta g^{\ddagger}$-closed sets : ϕ , X, {b, c} (7, 3)-$\delta g^{\ddagger}$-closed sets : ϕ , X, {b, c} (7, 4)-$\delta g^{\ddagger}$closed sets : ϕ , X, {a}, {b, c} (7, 5)-$\delta g^{\ddagger}$-closed sets : ϕ , X, {b, c} (7, 6)-$\delta g^{\ddagger}$-closed sets : ϕ , X, {c}, {b, c}, {a, c}
(1, 2)-gp-closed sets : P(X) (1, 3)-gp-closed sets : P(X)−{a} (1, 4)-gp-closed sets : P(X) (1, 5)-gp-closed sets : P(X)−{a} (1, 6)-gp-closed sets : P(X)−{a} (1, 7)-gp-closed sets : P(X)−{a}	(1, 2)-gs-closed sets : P(X)−{a} (1, 3)-gs-closed sets : P(X)−{a} (1, 4)-gs-closed sets : P(X)−{a} (1, 5)-gs-closed sets : P(X)−{a} (1, 6)-gs-closed sets : P(X)−{a} (1, 7)-gs-closed sets : P(X)−{a}
(2, 1)-gp-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c} (2, 3)-gp-closed sets : ϕ , X, {b}, {c}, {b, c},{a, c} (2, 4)-gp-closed sets : P(X) (2, 5)-gp-closed sets : ϕ , X, {b}, {c}, {b, c},{a, c} (2, 6)-gp-closed sets : ϕ , X, {c}, {b, c}, {a, c} (2, 7)-gp-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c}	(2, 1)-gs-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c} (2, 3)-gs-closed sets : ϕ , X, {b}, {c}, {b, c},{a, c} (2, 4)-gs-closed sets : ϕ , X, {a}, {c}, {b, c}, {a, c} (2, 5)-gs-closed sets : ϕ , X, {b}, {c}, {b, c},{a, c} (2, 6)-gs-closed sets : ϕ , X, {a},{b}, {c}, {b, c},{a,c} (2, 7)-gs-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c}
(3, 1)-gp-closed sets : ϕ , X, {b}, {c}, {b, c},{a, c} (3, 2)-gp-closed sets : ϕ , X,{a}, b},{c},{b, c},{a,c} (3, 4)-gp-closed sets : P(X) (3, 5)-gp-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c} (3, 6)-gp-closed sets : ϕ , X, {c}, {b, c}, {a, c} (3, 7)-gp-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c}	(3, 1)-gs-closed sets : ϕ , X, {b}, {c}, {b, c},{a, c} (3, 2)-gs-closed sets : ϕ , X, {c}, {b, c}, {a, c} (3, 4)-gs-closed sets : ϕ , X, {a}, {c}, {b, c}, {a, c} (3, 5)-gs-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c} (3, 6)-gs-closed sets : ϕ , X, {a}, {b}, {c}, b, c},{a,c} (3, 7)-gs-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c}
(4, 1)-gp-closed sets : P(X)−{a} (4, 2)-gp-closed sets : P(X) (4, 3)-gp-closed sets : P(X)−{a} (4, 5)-gp-closed sets : P(X)−{a} (4, 6)-gp-closed sets : P(X)−{a} (4, 7)-gp-closed sets : P(X)−{a}	(4, 1)-gs-closed sets : P(X)−{a} (4, 2)-gs-closed sets : ϕ , X, {c}, {a, b}, {a, c} (4, 3)-gs-closed sets : P(X)−{a} (4, 5)-gs-closed sets : P(X)−{a} (4, 6)-gs-closed sets : P(X) (4, 7)-gs-closed sets : P(X)−{a}
(5, 1)-gp-closed sets : ϕ , X, {b}, {c}, {b, c} (5, 2)-gp-closed sets : ϕ , X, a}, {b},{c},{b,c},{a,c} (5, 3)-gp-closed sets : ϕ , X, {b}, {c}, {b, c} (5, 4)-gp-closed sets :P(X) (5, 6)-gp-closed sets : ϕ , X, {c}, {b, c}, {a, c} (5, 7)-gp-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c}	(5, 1)-gs-closed sets : ϕ , X, {b}, {c}, {b, c} (5, 2)-gs-closed sets : ϕ , X, {c}, {b, c} (5, 3)-gs-closed sets : ϕ , X, {b}, {c}, {b, c} (5, 4)-gs-closed sets : ϕ , X, {a}, {b, c} (5, 6)-gs-closed sets : ϕ , X,{a},{b},{c}, {b, c},{a, c} (5, 7)-gs-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c}
(6, 1)-gp-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c} (6, 2)-gp-closed sets : ϕ , X,{a},{b},{c},{b,c},{a,c} (6, 3)-gp-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c} (6, 4)-gp-closed sets : P(X) (6, 5)-gp-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c} (6, 7)-gp-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c}	(6, 1)-gs-closed sets : ϕ , X, {b}, {c}, {b, c} (6, 2)-gs-closed sets : ϕ , X, {c}, {b, c}, {a, c} (6, 3)-gs-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c} (6, 4)-gs-closed sets : ϕ , X, {a}, {c}, {b, c}, {a, c} (6, 5)-gs-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c} (6, 7)-gs-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c}
(7, 1)-gp-closed sets : ϕ , X, {b}, {c}, {b, c} (7, 2)-gp-closed sets : ϕ ,X,{a},{b},{c},{b, c},{a, c} (7, 3)-gp-closed sets : ϕ , X, {b}, {c}, {b, c} (7, 4)-gp-closed sets : P(X) (7, 5)-gp-closed sets : ϕ , X, {b}, {c}, {b, c} (7, 6)-gp-closed sets : ϕ , X, {c}, {b, c}, {a, c}	(7, 1)-gs-closed sets : ϕ , X, {b}, {c}, {b, c} (7, 2)-gs-closed sets : ϕ , X, {c}, {b, c} (7, 3)-gs-closed sets : ϕ , X, {b}, {c}, {b, } (7, 4)-gs-closed sets : ϕ , X, {a}, {b, c}} (7, 5)-gs-closed sets : ϕ , X, {b}, {c}, {b, c} (7, 6)-gs-closed sets : ϕ ,X,{a},{5b},{c},{b, c}, a, c}
(1, 2)-g^*-closed sets : ϕ , X, {b, c}	(2, 1)-g^*-closed sets : ϕ , X, {c}, {b, c}, {a, c}

(1, 3)-g^*-closed sets : ϕ , X, {b, c} (1, 4)-g^*-closed sets : ϕ , X, {a}, {b, c} (1, 5)-g^*-closed sets : { ϕ , X, {b, c} (1, 6)-g^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (1, 7)-g^*-closed sets : ϕ , X, {b}, {b, c}, {a, c}	(2, 3)-g^*-closed sets : ϕ , X, {c}, {b, c},{a, c} (2, 4)-g^*-closed sets : ϕ , X, {a}, {c}, {b, c}, {a, c} (2, 5)-g^*-closed sets : ϕ , X, {c}, {b, c},{a, c} (2, 6)-g^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (2, 7)-g^*-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c}
(3, 1)-g^*-closed sets : ϕ , X, {c}, {b, c},{a, c} (3, 2)-g^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (3, 4)-g^*-closed sets : ϕ , X, {a}, {c}, {b, c}, {a, c} (3, 5)-g^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (3, 6)-g^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (3, 7)-g^*-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c}	(4, 1)-g^*-closed sets : ϕ , X} (4, 2)-g^*-closed sets : ϕ , X} (4, 3)-g^*-closed sets : ϕ , X} (4, 5)-g^*-closed sets : ϕ , X} (4, 6)-g^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (4, 7)-g^*-closed sets : ϕ , X, {b}, {a, c}
(5, 1)-g^*-closed sets : ϕ , X, {b, c} (5, 2)-g^*-closed sets : ϕ , X, {b, c} (5, 3)-g^*-closed sets : ϕ , X, {b, c} (5, 4)-g^*-closed sets : ϕ , X, {a}, {b, c} (5, 6)-g^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (5, 7)-g^*-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c}	(6, 1)-g^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (6, 2)-g^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (6, 3)-g^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (6, 4)-g^*-closed sets : ϕ , X, {a}, {c}, {b, c}, {a, c} (6, 5)-g^*-closed sets : ϕ , X, {c}, {b, c}, {a, c} (6, 7)-g^*-closed sets : ϕ , X, {b}, {c}, {b, c}, {a, c}