

NYi [YbUi Zfi Z. 6fUbXgh]Zhi b[]b XYf GW a]YX]b[ghfU» Y Ui Z[YXYW_h

Dc`]nY]'8cfha i bX'gi W\h'NYi [Yb'bUW\'6fUbXgh]Zhi b[']b'XYf GW\a]YX]b[ghfU $^{\circ}$ Y''<]bk Y]gY'V]hhY'Ub'X]Y'?f]a]bU`k UW\Y°

8 c fha i b X ']gh']b 'X Y f 'B U W h'ni a '&\$" '5 i [i gh'G W U i d `Uhn 'Y]b Y g U `Ufa]Y f Y b X Y b 'J c f Z U ``g '[Y k c f X Y b " I b V Y _Ub b h Y 'H À h Y f 'n Ø b X Y h Y b A Ø ``hc b b Y b ']b 'X Y f 'G W a]Y X]b [ghf U » Y 'Ub ž 'k Ug 'ni 'Y f \ Y V `] W Y a G U W g W U X Y b 'Z Ø \ f h Y " '8]Y 'D c `]n Y] ']gh' b i b 'U i Z 'X Y f 'G i W Y 'b U W N Y i [Y b ž 'X]Y '<]b k Y]g Y 'ni 'X Y b '6 f U b X g h]Z h Y f b '[Y V Y b '_O b b Y b "

; Y[Yb'\$\$.(\$'I\f'kifXYb'DUggUbhYb'UiZa Yf_gUa'UiZ'XUg': YiYfž XUg'cVYf\U`V'XYf'?Uh\Uf]bYbhfYddY'Uig[YVfcW\Yb'kUf"'G]Y]bZcfa]YfhYb'ia[Y\YbX'Y]b'GhfY]ZYbhYUa'XYf'Dc`]nY]'8cfhaibXž XUg'XUfUiZ\]b'gW\bY``fYU[]YfhY"'8]Y'@U[Y'kifXY'`c_U`]g]Yfh'ibX X]Y': YiYfkY\f'kifXY'U`Ufa]Yfhžia'X]Y'VfYbbYbXYb'A Ø``hcbbYb ni'`ÒgW\Yb"'Hfchn'XYg'ia[Y\YbXYb'9]b[fY]ZYbg'YbhghUbX'XifW\X]Y'[fc>Yb':`UaaYb'ibX'X]Y'YfnYi[hY'<]hnY'Yfbgh\UZhYf'GW\UXYbUb'Y]bYa'Ub[fYbnYbXYb'; YVÀiXY"

8]Y 5i gk]f_i b[Yb XYg 6fUbXYg

8 i fW. 'XUg': Yi Yf'g]bX'nU\`fY]WXY': YbghYfgWXY]VYb'XYg
VYhfcZZYbYb'; YVÀi XYg'nYfgd`]hhYfh'cXYf'gc[Uf'nYfVfcWXYb"'8Yf
[YbUi Y'I a ZUb['XYg'GWXUXYbg'`Àggh'g]WX'V]g\Yf'bcWX'b]WXh
VYn]ZZYfbž'YXcWX']gh'_`Ufž'XUgg'X]Y'fi bX'i a 'X]Y'GWXa]YX]b[ghfU»Y
k c\bYbXYb'5bk c\bYf'Xi fWX'X]YgYb'J cfZU``']b'[fc»Y'Gcf[Y
j YfgYhnh'k YfXYb'a i gghYb"'8]Y'Dc`]nY]'[Y\h'j cf`Ài Z]['j cb
6fUbXgh]Zhi b['Ui g'i bX'j YfZc`[h'Yfbgh\UZh'U``Y'D]ghYbž'X]Y'ni 'Y]bYf
5i Z_`Àfi b['XYg'GUWXj Yf\U`hg'ZØ\fYb'_ObbhYb"

±b 'Y]bYf'GhUXhž']b 'XYf'; Ya Y]bgW\UZh'i bX'BUW\VUfgW\UZh'Y]bY VYXYi hYbXY'F c ``Y'gd]Y `Ybž']gh'Y]b 'gc `W\Yf'J cfZU```b]W\h'bi f'Y]b d\mg]gW\Ygž'gcbXYfb 'Ui W\'Y]b 'dgmW\cgcn]U`Yg'DfcV`Ya "'9g'gcf[h ZØf'Y]b'; YZØ\``XYf'I bg]W\Yf\Y]h'i bhYf'XYb'9]bk c\bYfbž'k Ybb gc `W\Y'_f]a]bY``Yb'5_h]j]hÀhYb'ni bY\a Yb"'8]Y'6Øf[Yf'g]bX'XU\Yf Y]b[Y`UXYbž'k UW\gUa 'ni 'gY]b'i bX'j YfXÀW\h][Y'6YcVUW\hi b[Yb i a [Y\YbX'XYf'Dc`]nY]'ni 'a Y`XYb"

5 i Zfi Z'ni f'A]h\]`ZY

8]Y'Dc`]nY]'8cfha i bX'a UW\h'XYi h`]W\ž'k]Y'k]W\h]['X]Y'A]h\]'ZY'XYf

2 ZZYbh`]W_Y]h']b'gc`W\Yb': À``Yb']gh''Gc``hYb'DYfgcbYb'fY`Yj UbhY

4DZcfa Uh]cbYb'ni 'XYa 'JcfZU```cXYf'ni 'XYb'HÀhYfb'\UVYbž'k YfXYb
g]Y'[YVYhYbž'g]W\'a]h'XYf'?f]a]bU`k UW\Y'8cfha i bX'i bhYf'XYf
HY`YZcbbi a a Yf'\$&' \%#\%' &!+((\%']b'JYfV]bXi b['ni 'gYhnYb'''\XXYf
<]bk Y]g'_ObbhY'YbhgW\Y]XYbX'gY]bž'i a 'X]Y'JYfUbhk cfh`]W\Yb'ni f
FYW\YbgW\UZh'ni 'n]Y\Yb'i bX'À\b`]W\Yb'JcfZÀ``Yb']b'XYf'Ni _i bZh
j cfni VYi [Yb"

8]YgYf`6fUbX`]gh`b]W\h`bi f`Y]b`]gc`]YfhYf`J cfZU``/'Yf`_ÒbbhY`HY]`
Y]bYg`[fÒ» YfYb`HfYbXg`j cb`J UbXU`]ga i g`i bX`?f]a]bU`]hÀh`]b
ghÀXh]gW\Yb`; YV]YhYb`gY]b"`9g`]gh`XU\Yf`j cb`6YXYi hi b[žX]Y
5i Za Yf_gUa _Y]h`Ui Z`X]Y`G]W\Yf\Y]h`]b`XYb`GhUXhj]YfhY`b`ni
f]W\hYbži a `XUg`K c\`VYZ]bXYb`XYf`6Øf[Yf`ni `[Yk À\f`Y]ghYb`i bX
Y]b`[Yk]ggYg`A U» `Ub`G]W\Yf\Y]h`]b`XYf`; Ya Y]bgW\UZh`ni `ZÒfXYfb"

Ni gUa a YbZUggYbX``Àggh'g]W\`gU[YbžXUgg`X]Y`; YgW\Y\b]ggY`]b

XYf`GW\a]YX]b[ghfU*Y`X]Y`BchkYbX][_Y]h'Y]bYg`ghUf_Yb

A]hY]bUbXYfg`i bX`Y]bYf`Yf\O\hYb`K UW\gUa_Y]h`]b`8cfha i bX
i bhYfghfY]W\Yb"`6fUbXgh]Zhi b[`]gh`Y]b`YfbghYg`JYf[Y\Ybž`XUg`b]W\h
bi f`a UhYf]Y``Y`GW\AXYb`j Yfi fgUW\hž`gcbXYfb`Ui W\`XUg

G]W\Yf\Y]hg[YZØ\``XYf`6Yk c\bYf`VYY]bhfAW\h][h"\8]Y`Dc`]nY]`gYhnh
g]W\`a]h`BUW\Xfi W_`XUZØf`Y]bž`XYb`JcfZU```Ui Zni_`AfYbž`i bX`^YXY
I bhYfghØhni b[`Ui g`XYf`6Yj O`_Yfi b[`]gh`XUVY]`j cb`k YgYbh`]W\Yf
6YXYi hi b["

6fUbXgh]Zhi b[Yb]b8cfhaibX.9]b

VYgcf[b]gYffY[YbXYf HfYbX

 $8]Y'' 6 f U b X g h] Z hi b ['] b' X Y f' G W A]Y X] b [g h f U w Y'] g h h' b Y Y f f Y f g h Y Y f h' A Y' X i b [Y b' Ø V Y f' 6 f U b X g h] Z hi b [Y b Z'] b g V Y g c b X Y f Y'] b g h A X h] g W Y b'; Y V] Y h Y b''' \(\delta \) X Y f' F Y [Y \) \(U b X Y \) h' Y g' g] W 'i a A \(\Omega \) h c b b Y b' c X Y f'': U \ f n Y i [Y Z' X] Y'] b' 6 f U b X' [Y g Y h n h' k Y f X Y b''' 8] Y g Y J c f Z A \) Y 'V Y `U g h Y b' b] W h' b i f' X] Y': Y i Y f k Y \ f'' i b X' D c `] n Y] Z' g c b X Y f b j Y f i f g U W Y b' U i W 'Y f \ Y V `] W Y' G W A X Y b' Z Ø f' X] Y' 5 b k c \ b Y f' i b X' X U g ; Y a Y] b k Y g Y b''' \)$

8]Y'8i b_Y`n]ZZYf'gc`W\Yf'8Y`]_hY'_ÒbbhY'XYi h`]W\'\Ò\Yf'gY]bž'XUb]W\h'YXYf'JcfZU```[Ya Y`XYh'k]fX"'@Ui h'GhUh]gh]_Yb'XYf'Dc`]nY]8cfha i bX'[UV'Yg'&\$&&']b'XYf'GhUXh'a Y\fYfY'8i hnYbX': À``Y'j cb6fUbXgh]Zhi b[Yb"'8]Yg'ZØ\fh'ni 'Y]bYf'Yf\Ò\hYb'6Ygcf[b]g']b'XYf6Yj Ò`_Yfi b["'8]Y'Dc`]nY]'gi W\h'XU\Yf'b]W\h'bi f'bUW\iba]hhY`VUfYb'NYi [Yb'gc`W\Yf'JcfZÀ``Yž'gcbXYfb'Ui W\'bUW\`Ub[Zf]gh][Yb'@Ògi b[Yb'ni f'DfÀj Ybh]cb"

8]Y 5i gk]f_i b[Yb Ui Z X]Y ; Ya Y]bgW UZh

6fUbXgh]Zhi b[Yb^\UVYb^b]W\hrbi fii ba]hhY^VUfY
g]W\Yf\Y]hghYW\b]gW\Y^5i gk]f_i b[Ybz^gcbXYfb^Ui W\gcn]U^Y^i bX
k]fhgW\UZh`]W\Y^: c`[Yb"Gc^_ObbYb^5bk c\bYf^g]W\i bg]W\Yf^ZØ\`Yb
i bX^X]Y^@YVYbgei U`]hÀh^]b^VYhfcZZYbYb^J]YfhY`b^VYY]bhfÀW\h][h
k YfXYb"I bhYfbY\a Yb^]b^XYf^BA\Y^gc^W\Yf^JcfZA``Y^_ObbhYb^X]Y
5i gk]f_i b[Yb^YVYbZU^`g^gdØfYbz^XU^dchYbn]Y^`Y^?i bXYb
UV[YgW\fYW_hk YfXYb"8]Y^K]YXYf\YfghY^`i b['j cb^6fUbXcdZYfb
YfZcfXYfh^cZhYf\YV^]W\Y^Z]bUbn]Y^`Y^A]hhY^z^k Ug^X]Y^k]fhgW\UZh`]W\Y
GhUV]`]hÀh^XYf'; Ya Y]bgW\UZh^[YZA\fXYb^_Ubb"

8]Y'Dc`]nY]'8cfha i bX'fi Zh'X]Y'6Øf[Yf'XUni 'Ui Zž'Y[`]W\Y
j YfXÀW\h][Y'6YcVUW\hi b[Yb'ni 'a Y`XYbž'i a 'ni _ØbZh][Y'JcfZÀ``Y
ni 'j Yf\]bXYfb"'=b'j Yf[Ub[YbYb': À``Yb'\UVYb'H]ddg'j cb
5bk c\bYfb'cZh'ni 'YbhgW\Y]XYbXYb'<]bk Y]gYb'[YZØ\fh"

JYfghÀf_i b[XYf DfÀj Ybh]cbga U»bU\a Yb

8]Y'Dc`]nY]'8cfha i bX'\Uh']b'FYU_h]cb'Ui Z'X]Y'ghY][YbXY'5bnU\`
j cb'6fUbXgh]Zhi b[Yb'gdYn]Y``Y'DfÀj Ybh]cbg!'i bX
5i Z_`Àfi b[g_Ua dU[bYb']bg'@YVYb'[Yfi ZYb"'N]Y``]gh'Ygž'XUg
6Yk i gghgY]b']b'XYf'6Yj O`_Yfi b['ni 'gW\ÀfZYb'i bX'X]Y
BUW\VUfgW\UZhgØVYfk UW\i b['ni 'ZOfXYfb"'Gc`W\Y'=b]h]Uh]j Yb
i a ZUggYb'=bZcfa Uh]cbgj YfUbghU`hi b[Ybž']b'XYbYb'6Øf[Yf'ØVYf
X]Y'; YZU\fYb'j cb'6fUbXgh]Zhi b[']bZcfa]Yfh'i bX'ØVYf'X]Y
A O[`]W_Y]hYb'ni f'A Y`Xi b['j cb'J YfXUW\hga ca YbhYb'Ui Z[Y_`Àfh k YfXYb"

9gʻ]ghʻYbhgW\Y]XYbXžʻXUggʻX]Yʻ; Ya Y]bgW\UZhʻni gUa a YbUfVY]hYhž i a ʻgc`W\Y`8Y`]_hYʻni ʻa]b]a]YfYb"'8]Yʻ6YhY]`][i b[ʻXYfʻ5bk c\bYf UbʻdfÀj Ybh]j Ybʻ5_h]cbYbʻ_UbbʻXUni ʻZØ\fYbžʻXUggʻg]W\`XUg G]W\Yf\Y]hg[YZØ\``]bʻVY`UghYhYbʻJ]YfhY`bʻj YfVYggYfhʻi bX 6fUbXqh]ZhYfʻYbha i h][hˈk YfXYb"

.

8 YhU]`g

6Ygi WXYb G]Y i bg Ui Z b!U["XY