

9ei]h]Yg:]fgh']gh'Y]b'ib[YbUbbhYf GWXi`XbYf'XYf'Ub[YgWX`U[YbYb'?fmdhc! :]fa U'7Y`g]ig

9]b a mghYf]ÒgYf GWki `XbYf j cb 7Y`g]i g B Yhk cf_ž Ui Z XYb ']b XYb *bgc`j YbnUbhfÀ[Yb XYg ? fmd hc!? fYX]h[YVYfg j Yfk]YgYb k]fXž]gh 9ei]h]Yg:]fghž Y]b 'gdYn]U`]g]YfhYg :]bUbni bhYfbY\a Ybž XUg Ua 'VYghYb 'XUZØf 'VY_Ubbh]ghž 6Uf[Y`X 'Ub : Ø\fi b[g_fÀZhY 'ni 'j Yf`Y]\Ybž X]Y 'Xi fWk ']\fY 5_h]YbVYghÀbXY [Yg]Wk Yfh g]bX" 8 Yf '7 9C 'j cb '7 Y`g]i gž 5`Yl A Ug\]bg_mž gU[hY 'Ua '8 cbbYfghU[']b 'Y]bYa ; Yf]Wk hgj YfZU\fYbž XUgg gY]bYa 'I bhYfbY\a Yb '(' - A]``]cbYb '8 c``Uf 'j cb 'Y]bYf' df]j UhYb '? fYX]hd`UhhZcfa [YgWki `XYh ki fXYbž X]Y 'Yf b]Wk h]XYbh]Z]n]YfhY" Nk Y] 'a]h XYf 5b[Y`Y[Yb\Y]h'j YfhfUi hY 'DYfgcbYb 'gU[hYbž X]Y 'D`UhhZcfa 'gY] 9ei]h]Yg:]fgh" 8 Ug '; Y`Xž XUg '9ei]h]Yg:]fgha]h G]hn]b *bX]UbUdc`]g gWki `XYhž V]`XYh Y]bYb 'VYXYi hYbXYb 'HY]` 'XYg J Yfa Ò[Ybg'j cb '7 Y`g]i gž Ui Z`XUg 'g]Wk '<i bXYfhhUi gYbXY gY]bYf ?i bXYb 'j Yf`UggYb '/ Ua d \Y``]d/

9]b a mghYf]ÒgYf GWXi `XbYf j cb '7 Y `g]i g B Yhk cf_ž Ui Z XYb]b 'XYb \ \pmgc `j Yb nUb hfÀ[Yb 'XYg '? fmd hc!? fYX]h[YVYfg j Yfk]YgYb 'k]fXž]gh 9ei]h]Yg:]fghž Y]b 'gd Yn]U`]g]YfhYg :]b Ub ni b hYfb Y\a Yb ž XUg 'Ua VYghYb 'XUZØf 'VY_Ub bh]ghž 6Uf[Y`X 'Ub ': Ø\fi b [g_fÀ ZhY 'ni j Yf`Y]\Yb ž X]Y 'Xi fWX ']\fY '5_h]Yb VYghÀb XY '[Yg]WX Yfh 'g]b X"

8 Y f '7 9 C 'j c b '7 Y `g]i gž 5 `Y I 'A Ug\]bg_mž gU[hY 'Ua '8 c b b Y fghU[']b Y]b Ya '; Y f]W\hgj Y f ZU\fY b ž X Ugg 'gY]b Ya 'I b hY f b Y\a Yb '('-A]``]c b Y b '8 c ``Uf 'j c b 'Y]b Y f 'd f]j UhY b '? f Y X]hd `Uhh Zc fa '[Y g W X i `X Y h k i f X Y b ž 'X]Y 'Y f 'b]W\h']X Y b h]Z]n]Y f hY "Nk Y] 'a]h `X Y f '5 b [Y `Y [Y b \ Y]h j Y f h f Ui hY 'D Y f g c b Y b 'g U[h Y b ž X]Y 'D `Uhh Zc fa 'g Y] '9 e i]h]Y g:]f g h "

8 Ug; Y`XžXUg'9ei]h]Yg:]fgha]h'G]hn']b'\DX]UbUdc`]g'gWi`XYhz

V]`XYh`Y]bYb`VYXYi hYbXYb`HY]``XYg`JYfa Ò[Ybg`j cb`7Y`g]i gž`Ui Z XUg`g]W\`<i bXYfhhUi gYbXY`gY]bYf`?i bXYb`j Yf`UggYb`k YfXYbž`i a ni a]bXYgh`Y]bYb`HY]``]\fYf`9fgdUfb]ggY`ni fØW_ni Yf\U`hYb"

A Ug\]bg_m'gU[hY']b'gY]bYf'9]bfY]W\i b['VY]a ' \pm bgc\j Ybn[Yf]W\hž XUgg'7Y\g]i g'J YfV]bX\]W_Y]hYb']b'< O(Y') cb') Z(Y) 'A fX"

9ei]h]Yg:]fgh'VYZ]bXYh'g]W\']b``Ui ZYbXYb'; YgdfÀW\Yb'a]h i bgYfYa '?i bXYb'i bX'VY]XY'DUfhY]Yb'\UVYb'j YfY]bVUfhž'i bgYfY J YfdZ]W\hi b[Yb'ni 'j Yf`\Ab[Yfb \ \tigu[hY'9ei]h]Yg:]fgh''.7Y`g]i g Ubhk cfhYhY'b]W\h'Ui Z'Y]bY'6]hhY'i a 'GhY``i b[bU\a Y''

#D'XYf'; Yf]Wk hgU_hY'\Y]» h'Ygž'XUgg'X]Y'j cb'9ei]h]Yg:]fgh
[YgWki `XYhYb'GWki `XYb']b'< O\Y'j cb'(' - 'A]c"'I G8ž'X]Y']b'XYa
8 c_i a Ybh'b]Wk h'[YbUbbh'k YfXYbž'i fgdfØb[`]Wk'Ui g
HfUbgU_h]cbYb'YbhghUbXYb'k UfYbž'VY]'XYbYb'7Y`g]i g'XYf
?fYX]hbY\a Yf'k Uf"</pre>

7Y`g]i gʻVY[Ubbʻ]a ˈ¾J\fʻ&\$%- žʻ?fYX]hYʻj cbʻ9ei]h]Yg:]fghʻUi Z VYg]W\YfhYfʻ6Ug]gʻUi Zni bY\a Ybžʻi a ˈ]\fYbʻ6Yhf]YVʻni i bhYfghØhnYb žʻ\Y]» hʻYgʻ]bʻXYfʻ9]bfY]W\i b["'A Ug\]bg_mʻgU[hYž XUggʻYgʻXUa U`gʻ Y]bYbʻA Ub[Y``Ubʻ]bgh]hi h]cbY``Ybʻ?fYX]hYbʻZØf ?fmdhck À\fi b[gi bhYfbY\a Ybʻ [UV"

DZc`[YXYggYb'k UbXY`hY'g]W\'7Y`g]i g'j cb'Y]bYa '?fYX]hbY\a Yfini Y]bYa 'I bhYfbY\a Ybž'XYa '9ei]h]Yg:]fgh') \$- 'A]c"' I G8 'Ui Z i b[Yg]W\YfhYf'6Ug]g'gW\i `XYhY"'?fmdhck À\fi b[g[Yg]W\YfhY ?fYX]hY'g]bX'cZh'ØVYfVYg]W\Yfhž'k Ug'VYXYi hYhž'XUgg'Y]b'[fÒ»YfYf?fmdhck Yfh'U`g'G]W\Yf\Y]h'j YfdZÀbXYh'k]fX'U`g'XYf'[Y`]Y\YbY 6YhfU["

8]Y'GWXi`XYb'kifXYb'gY]h'GYdhYaVYf'`YhnhYb'*J\fYg'`Ub[gUanifØW_[YnU\`h"8]Y'U_hiY``Yb'FØW_nU\`ib[Yb'VY`UiZYb'g]WX'UiZ')
A]c"'IG8'dfc'AcbUh"8]Y'UigghY\YbXYb'('-'A]``]cbYb'8c``UfgYhnYb'g]WX'Uig''*%'A]``]cbYb'8c``Uf']b'VUf'ibX''"+*)'6]hWc]bnigUaaYbž'\Y]»h'Yg']b'XYf'5_hY"

7Y`g]i g`\Uh`9bXY`&\$&%'*\$\$`A]``]cbYb`I G!8c``Uf`Ub`9][Yb_Ud]hU``]bYa '8YU``Ui Z[YVfUW\hž`XYf`j cb`XYf`\bj Ygha YbhZ]fa U`K Ygh7Ud i bX`?UbUXUg`nk Y]h[fÒ» hYa 'DYbg]cbgZcbXg`7U]ggY`XY`XÅdĐh`Yh D`UWYa Ybh`Xi 'E i ÅVYWUb[YZØ\fh`k i fXY"'8Yf`8YU``VYk YfhYhY 7Y`g]i g`a]h`' 'A]``]UfXYb`8c``Uf"

8]Y'9ei]h]Yg:]fgh!GW\i`Xž'X]Y'7Y`g]ig'ibX'AUg\]bg_m'V]g\Yf'b]W\hcZZYb[Y`Y[h'\UhhYbž'V]YhYh'Y]bYb'?cbhYlh'ni'XYb'GW\k]Yf][_Y]hYbža]h'XYbYb'XYf'?fmdhc!?fYX]h[YVYf']b'X]YgYa'\\J\f'_cbZfcbh]YfhkUfž'U`g'X]Y'?fmdhc!AÀf_hY'nigUaaYbVfUW\Yb"

7Y`g]i gʻZfcf``YhnhYbʻA cbUh'?i bXYbUV\YVi b[YbʻY]bžʻbUWXXYa 'Yg Y]bYbʻ5bghi fa 'Ui ZʻgY]bYʻ9]b`U[YbʻYf`]hhYbʻ\UhhYžʻi bXʻVYUbhfU[hY 5bZUb['X]YgYfʻK cWXYʻ\bgc`j YbngW\i hn"

9ei]h]Yg:]fgh'kifXY'&\$\$&'jcb'5`YlUbXYf'7\f]ghm'[Y[fØbXYhž'XYfXUg'lbhYfbY\aYb'bcWX'\YihY'`Y]hYh"'G]Y']gh'gdYn]U`]g]Yfh'UiZ?fYX]hYž'X]Y'XifWX'lbhYfbY\aYbgU_h]Yb'VYg]WXYfh'g]bX"

± Y]bYa '5df]`! ± hYfj]Yk 'a]h'XYf': UWknY]hgWkf]Zh'<i VV]g'gU[hY'XYfG]b[Udif!; YgWkÀZhgZØ\fYf'XYg'IbhYfbY\aYbgž'XUgg'9ei]h]Yg:]fgh Yhk U'&\$%* 'XUa]h'VY[cbbYb'\UVYž'?fYX]hY'[Y[Yb'?fmdhc'nijYf[YVYb"

: fØ\Yf'k UfYb'k]f'fY]bY'5_h]Ybž'V]g'k]f'j cf'Yhk U'gYW\g'\J\fYb VY[UbbYbž'Ui W\'?fYX]hY'[Y[Yb'?fmdhck À\fi b['Ubni V]YhYbž'i bX X]YgY'5_h]j]hÀh'\Uh']b'XYb'`YhnhYb'Y]b'cXYf'nk Y]'\J\fYb'k]f_`]W\ : U\fh'Ui Z[Ybca a Yb ž'gU[hY'XYf'; YgW\ÀZhgZØ\fYf"

@Ui h'XYa '±bhYfj]Yk '`U['X]Y'?fYX]hj Yf[UVY'j cb'9ei]h]Yg:]fgh']a?fmdhc!6YfY]W\']b'XYf'FY[Y`'VY]'*\$'DfcnYbh'@cUb!hc!JU`i Yž UV[Yg]W\Yfh'Xi fW\'?fmdhck À\fi b[Yb'k]Y'6]hWc]b'i bX'9h\Yf"

9]b 5bk U`hij cb 9ei]h]Yg:]fgh'gWX `cgg'g]WX `Ua 8]YbghU['Y]bYa gYdUfUhYb I G!?fmdhc! \(\delta gc \) YbnZU```Ubž'XYa 'XYg'[YgWX Y]hYfhYb < YX[YZcbXg'H\fYY 5ffck g'7 Ud]hU`" \(\delta \) XYf 5_hY '\Y]» h'Ygž 9ei]h]Yg:]fgh'gY]'Y]b '; 'Ài V][Yf" Ghi bXYb 'gdÀhYf'fY]WX hY 'XYf 5bk U`h'gY]bYb 'F \(\Omega \) M_hf]hh'Y]b"

EiY``Y.::]bUbW]U``H]a Yg

8 YhU]`g

6Ygi WXYb G]Y i bg Ui Z _fmdhc!bYk g"Uh