

8] $Y'(-! \Rightarrow A \setminus f][Y'Uig'; Of']hn. < UZhVYZY \$ $k Y[Yb'ibVYnU\`hYf'; Y`XghfUZY$

6i bXYgdc`]nY]'j Yf\UZhYh'(-!^À\f][Y': fUi ']b'; Òf`]hn'k Y[Yb Ui gghY\YbXYf'; Y`XghfUZY"'<UZhVYZY\`'XYf GhUUhgUbk U`hgW\UZh'8 fYgXYb°

; Of`]hn'fb'hgŁ

 $9]bY'Fcih]bY_cbhfc``Y'XYf'6ibXYgdc`]nY]'UiZ'XYa'`AUf]Ybd`Uhn']b; Of`]hn'Ua'`&$"'5i[igh'&$&(`\Uh'ni'Y]bYf'U_ihYb': YghbU\aY'Y]bYf(-!'A\f][Yb':fUi'[YZØ\fh''8]Y'6YUahYb'\UhhYb'X]Y':fUi'k\A\fYbX]\fYf'DUhfci]``Y'b\A\Yf']bg'J]g]Yf'[YbcaaYb'ibX'YbhgW\`cggYbž]\fY'DYfgcbU`]Yb'ni'@VYfdfØZYb''8]YgYg'Jcf[Y\Yb'gc``hY'g]W\'U`gkY]hfY]W\YbX'\YfUigghY``Ybž'U`g'g]Y'UiZ'Y]bYb'VYghY\YbXYb<<UZhVYZY\``ghc`>Yb''$

 $<]bhYf[fibX`XYf": YghbU\a Y`]ghY]b`Jc``ghfYW_ib[g\UZhYYZY\`ž`XYfjcb`XYf`GhUUhgUbk U`hgWkUZh`8fYgXYb`[Y[Yb`X]Y": fUi `Yf`UggYbkifXY"`8]Yg`]gh'b]Wkh'bifY]b`Y]bZUWkYf`fYWkh`]WkYf`GWkf]hhžgcbXYfb`Ui WkY]b`XYih`]WkYf`5igXfiW_`XYf`_cbgYeiYbhYbGhfUZJYfZc`[ib[']a': U``'jcb'8]YVghU\`"'8]Y`(-!\A\f][Y`kUf`VYfY]hg]a'5df]``&$&('jca'5ahg[Yf]Wkh'8fYgXYb'jYfifhY]`h'kcfXYbžbUWkXYa'g]Y`]bYY]bYa'8]YVghU\`": U``']a'@c_U`'jYfifhY]`h'kifXY"5bghY``Y'Y]bYf'; YZÀb[b]gghfUZY'kifXY'X]Y': fUi 'ni 'Y]bYf'; Y`XghfUZY'jcb'', %ž$$'9ifc'jYfifhY]`hž'ni 'XYf'UiWkUY'ZY'J'b'g_cghYb'nÀ\`hYb"$

$8Yf' < UZhVYZY \setminus ``ibX'gY]bY': c`[Yb$

8]Y ?cbgYei YbnYbžX]Y 'Ui g'XYa 'J YfgÀi a b]g'XYf'NU\`i b['XYf ; Y`XghfUZY 'fYgi `h]YfYbž'g]bX 'Y]bXYi h][. '8 U 'X]Y ': fUi 'b]W\h']b'XYf

@U[Y'k Ufž'X]Y'[YZcfXYfhY'Gi a a Y'ni 'VY['Y]WXYbž'g]Y\h'XUg; YgYhn'j cfž'XUgg'g]Y'bi b'Y]bY'9fgUhnZfY]\Y]hgghfUZY'UbhfYhYb a i gg"8]Yg'VYXYi hYhž'XUgg'g]Y'Y]bYb'VYgh]a a hYb'NY]hfUi a ']a; YZÀb[b]g'j YfVf]b[Yb'a i ggž'UbghUhh'XYb'Z]bUbn]Y``Yb JYfdZ]WXhi b[Yb'bUWXni _ca a Yb"'Gc`WXY'G]hi Uh]cbYb'g]bX']b'XYf FYWXhgdfYWXi b['b]WXh'gY`hYb'i bX'nY][Yb'X]Y'<ÀfhY'XYg fYWXh`]WXYb'FU\a Ybgž'XYf'DYfgcbYb'a]h'j Yf\Àb[hYb'; Y`XghfUZYb[Y[YbØVYfhf]hh"

8]Y: YghbU\a Yik UfiY]bi9f[YVb]giXYfi_`UfYbii bXiYZZ]n]YbhYb?ca a i b]_Uh]cbi]bbYf\UiViXYfi6i bXYgdci]nY]"i9gi]ghi]\fYi5i Z[UVYžb]Wkhibi fiZØfiX]YiÒZZYbhi]WkYiG]WkYf\Y]hini igcf[YbžigcbXYfbiUi Wkg]WkYfni ghYiiYbžiXUggiF]WkhYfj YfZØ[i b[Ybii bXi<UZhVYZY\iYXi fWk[YgYhnhik YfXYb"8]Ygii bhYfghfY]WkhiX]Yik]Wkh][YiFciiYiXYfDci]nY]i]a iXYi hgWkYbiFYWkhggmghYa ži]bgVYgcbXYfYi]bi: ÀiiYbžiX]YUi Zi8]YVghU\icXYfiB]WkhnU\iib[ijcbiGhfUZYbiUVn]YiYb"

8]Y: YghbU\a Y:X]YgYf: fUi 'k]fZh'ni XYa : fU[Yb'Ui Zž'X]Y'ØVYf']\fYdYfgÒb`]W\Y'G]hi Uh]cb'\]bUi g[Y\Yb"'G]Y'j YfXYi h`]W\h'X]Y < YfUi gZcfXYfi b[Ybž'a]h'XYbYb'j]Y`Y'A YbgW\Yb'_cbZfcbh]Yfh'g]bXžk Ybb'g]Y'a]h'XYa '> gh]ngmghYa ']b'?cbZ]_h'[YfUhYb"'K Ug'_ObbYbDYfgcbYb']b'À\b`]W\Yb'G]hi Uh]cbYb'hi bž'i a ']\fY'fYW\h`]W\YbDfcV`Ya Y'ni 'VYk À`h][Yb3'9g'gW\Y]bhž'XUgg'XYf'Ni [Ub['nifYW\h`]W\Yf'I bhYfghØhni b['cZh'YbhgW\Y]XYbX']ghž'i a 'gc`W\YG]hi Uh]cbYb'ni 'j Yfa Y]XYb"

9]b '6`]W_'Ui Z'X]Y 'fYW\h`]W\Yb FU\a YbVYX]b[i b[Yb

8]YgYg'9fY][b]g'gd]Y[Y'h'Y]b'[fÒ» YfYg'A i ghYf']b'XYf'; YgY``gW\UZh k]XYfž'VY]'XYa ; Y`XghfUZYb'U`g'GhfUZa U» '[Ybca a Yb'k YfXYb" J]Y`ZÀ`h][Y'gcn]U`Y'i bX'k]fhgW\UZh`]W\Y': U_hcfYb'_ObbYb'XUni ZØ\fYbž'XUgg'\DX']j]Xi Yb'b]W\h']b'XYf'@U[Y'g]bXž'; Y`XghfUZYb'ni nU\`Ybž'k Ug'XUbb'ni 'Y]bYa '?fY]g`Ui Z'j cb'GW\i `XYb'i bX fYW\h`]W\Yb': c`[Yb'ZØ\fh"<]YfVY]'ghY``h'g]W\'X]Y': fU[Yž'k]Y'XUg GmghYa 'XYb'i bhYfgW\]YX`]W\Yb'6YXØfZb]ggYb'i bX <YfUi gZcfXYfi b[Yb'gY]bYf'6Øf[Yf'[YfYW\h'k YfXYb'_Ubb"

9gʻ]ghʻVYXYi hgUa žʻXUfUi Zʻ\]bni k Y]gYbžʻXUggʻ]a ʻXYi hgWXYb i gh]ngmghYa ʻb]WX hʻbi fʻGhfUZYbʻj Yf\Ab[hʻk YfXYbžʻgcbXYfbʻUi WX A Ò[`]WX_Y]hYbʻni fʻFY\UV]`]hUh]cbʻi bXʻNU\`i b[gYf`Y]WX hYfi b[Yb VYghY\Yb'''<]`Zgcf[Ub]gUh]cbYbʻi bXʻ5bk A`hYʻ_ÒbbYbʻcZh i bhYfghØhnYbʻi bX`VYfUhYbžʻk]Yʻa Ubʻa]hʻgc`WXYbʻG]hi Uh]cbYb i a [Y\Ybʻ_Ubb''8Ufi a 'k AfYʻYgʻk]WXh][žʻUi WX`ØVYfʻX]YgY Cdh]cbYbʻ]bZcfa]Yfhʻni ʻgY]bžʻi a 'X]Yʻ; YgY``gWXUZhʻ]bʻ]\fYf ; YgUa h\Y]hʻni ʻi bhYfghØhnYbʻi bX'ni ʻZÒfXYfb''

8]Y: YghbU\a Y'Y]bYf'(-!^\A\f][Yb: fUi 'Xi fW\'X]Y'6i bXYgdc`]nY]
ghY\h'gma Vc`]gW\'ZØf'X]Y'< YfUi gZcfXYfi b[Ybz'XYbYb'g]W\
A YbgW\Yb']a 'XYi hgW\Yb'FYW\hggmghYa 'ghY``Yb'a ØggYb"'8]Y
: fU[Y'V`Y]Vhz'k]Y'Y]bY'6U`UbWY'nk]gW\Yb'GhfUZa U»'i bX'gcn]U`Yf
I bhYfghØhni b['[YZi bXYb'k YfXYb'_Ubbz'i a 'Y]bYb'g]bbj c``Yb'i bX
[YfYW\hgUa Yb'l a [Ub['a]h'gc`W\Yb': A``Yb'ni '[Yk A\f`Y]ghYb"

<]bhYf[fi bX]bZcfa Uh]cbYb ni f ? f]a]bU`]hAhgYbhk]W_`i b[']b'; Of`]hn</pre>

8]Y'GhUXh'; Òf`]hnž'[Y`Y[Yb'Ub'XYf'; fYbnY'ni 'Dc`Ybž'\Uh']b'XYb
`YhnhYb'\\\fYb'Y]bYb'5bgh]Y['XYf'?f]a]bU`]h\\\h'j YfnY]W\\bYh\\\\
]bgVYgcbXYfY']b'6Yni ['Ui Z'9][Ybhi a gXY`]_hY''@Ui h'XYb
Dc`]nY]`]W\\Yb'?f]a]bU`ghUh]gh]_Yb']gh'X]Y'NU\``XYf'fY[]ghf]YfhYb
8]YVgh\\`Y'gY]h'\&\\-'i a 'Yhk U'\%) | '[Ygh]Y[Yb'''9]b'; fi bX'\Z\Øf
X]YgYb'5bgh]Y['_\ObbhY'\X]Y'gcn]c\O_cbca]g\W\Y'\@U[Y']b'\XYf'FY[]cb
gY]b\(\f X)Y\xi fW\'UVbY\\\a Yb\XY'\6Yj\O`_Yfi b[gnU\`Yb'i bX'Y]bY'\c\Y
5fVY]hg`cg][_Y]h'[Y_YbbnY]\W\\\bYh']gh''

8]Y 'gcn]U`Yb '6YX]b[i b[Yb']b'; Òf`]hn 'gd]Y[Y`b 'g]W\']b 'XYb
@YVYbgfYU`]hÀhYb'j]Y`Yf'9]bk c\bYf'k]XYf" 8]YgY:: U_hcfYb'_ÒbbYb
dchYbn]Y``ni 'Y]bYf'Ni bU\a Y'j cb'8Y`]_hYb'ZØ\fYbž'XU'A YbgW\Yb
]b 'gW\k]Yf][Yb'k]fhgW\UZh`]W\Yb'@U[Yb'cZha U`g'ni '_f]a]bY``Yb
<UbX`i b[Yb'[fY]ZYbž'i a ']\fYb'@YVYbgi bhYf\U`h'ni 'g]W\Yfb"'5i W\
X]Y'[fYbnbU\Y'@U[Y'ni 'Dc`Yb'\Uh'5i gk]f_i b[Yb'Ui Z'X]Y
?f]a]bU`]hÀhgghfi _hi f']b 'XYf'FY[]cbž'XU'X]Yg'ni 'Y]bYa '5bgh]Y['j cb
[fYbnØVYfgW\fY]hYbXYf'?f]a]bU`]hÀh'ZØ\fYb'_Ubb"

GhUh]gh]_Yb ni f ?? f]a]b U`]hÀh]b 8 Yi hgW `Ub X

9]bY'U_hi Y``Y'5bU`mgY'XYf'Dc`]nY]`]W\Yb'?f]a]bU`ghUh]gh]_'cZZYbVUfh Y]b][Y']bhYfYggUbhY'9f_Ybbhb]ggY' \emptyset VYf'X]Y'?f]a]bU`]hÀhg`U[Y']b 8 Yi hgW\`UbX"'=a '\\\J\f'&\\$&\k' i fXYb'Vi bXYgk Y]h']bg[YgUa h'fi bX) ž\k' A]``]cbYb'GhfUZhUhYb'fY[]ghf]Yfhž'k Ug'Y]bYa '5bgh]Y['j cb'\\$ž'\]a 'JYf[`Y]W\'ni a 'Jcf'U\f'Ybhgdf]W\h''6YgcbXYfg'\Yfj cfni \YVYb g]bX'X]Y'9][Ybhi a gXY`]_hYž'ni 'XYbYb'8]YVgh\\\Yž'9]bVf\@W\Y'i bX FUi V\@VYfZ\\`Y'n\\\Yb''8]YgY'a UW\Yb'Yhk U'(\\$i 'XYf \YgUa hXY`]_hY'Ui g"

8]Y'GhfUZhUhYb'g]bX'XUVY]'i bhYfgW\]YX`]W\'j YfhY]`h/'gc'g]bX']b ghÀXh]gW\Yb'; YV]YhYb'\Ài Z]['\Ò\YfY'?f]a]bU`]hÀhgfUhYb'ni VYcVUW\hYb'U`g']b'`ÀbX`]W\Yb'FY[]cbYb"'8]Y'8i b_Y`n]ZZYfž'U`gc'X]Yb]W\h'YfZUgghYb'GhfUZhUhYbž'V`Y]Vh'k Y]hYf\]b'\cW\"'GW\Àhni b[Yb[Y\Yb'XUj cb'Ui gž'XUgg'Yhk U')\$i 'U``Yf'9][Ybhi a gXY`]_hY'b]W\h ni f'5bnY][Y'[YVfUW\h'k YfXYb"

² ZZY b h`]WX Y `F Y U_h]c b Y b `Ui Z'? f]a]b U`]hÀ h`i b X X Y f Y b `9]b Z`i gg `Ui Z'X]Y `Dc`]h]_

8]Y'ni bY\a YbXY'?f]a]bU`]hÀh'\Uh'Ui W\ 'OZZYbh`]W\Y'8]g_i gg]cbYb
Ui g[Y`Ogh'i bX'ZØ\fhY']b'j]Y`Yb'GhÀXhYbž'Y]bgW\`]Y»`]W\'; Of`]hnž'ni
Y]bYa 'j YfghÀf_hYb'dc`]h]gW\Yb': c_i g'Ui Z'G]W\Yf\Y]hga U» bU\a Yb"

\$\Dot{F}YU_h]cb'Ui Z'X]Y'ghY][YbXYb'?f]a]bU`]hÀhgfUhYb'\UVYb

j YfgW\]YXYbY'GhÀXhY'Dfc[fUa a Y']b]h]]Yfhž'X]Y'Ui Z'DfÀj Ybh]cb'i bX
5i Z_`Àfi b['UVn]Y`Yb"'8Uni 'nÀ\`Yb'i bhYf'UbXYfYa
5i Z_`Àfi b[g]b]h]Uh]j Yb']b'GW\i Yb'i bX'X]Y'j YfghÀf_hY'DfÀgYbn'j cb
G]W\Yf\Y]hq_fÀZhYb']b'DfcV'Ya [YV]YhYb"

9gʻ]ghʻk]W\h]['ni 'Yfk À\bYbž'XUggʻgc`W\Yʻ9bhk]W_`i b[Ybʻb]W\h'bi f
`c_U`YžʻgcbXYfbʻUi W\ 'Vi bXYgk Y]hYʻ5i gk]f_i b[Ybʻ\UVYb"

Dc`]h]gW\YʻDUfhY]Ybʻbi hnYbʻ\Ài Z]['X]YʻÒZZYbh`]W\YʻK U\fbY\a i b[
j cbʻ?f]a]bU`]hÀhʻni ']\fYa 'J cfhY]`žʻi a ': cfXYfi b[YbʻbUW\
ghfYb[YfYbʻ; YgYhnYbʻi bXʻa Y\fʻDc`]nY]dfÀgYbnʻni 'i bhYfghØhnYb"

8]Ygʻ_Ubbʻ`Ub[Zf]gh]['ni 'J YfÀbXYfi b[Ybʻ]bʻXYfʻ; YgYhn[YVi b[
i bX']a 'G]W\Yf\Y]hga UbU[Ya Ybh'ZØ\fYb"

 $8]Y `6U` Ub WY `nk]g W Yb `Y ZZY _h]j Yb `G] W Yf Y] hgghf UhY []Yb `i b X `X Ya G W i hn `X Yf `6Øf [Yff Y W hY `V `Y] V h `X U V Y] `Y]b `n Y b hf U `Y g `5b `]Y [Yb `]b X Yf `d c `]h]g W Yb `8 Y V Uhh Y "$

8 YhU]`g

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