

# GWX k YfYf'5i ZZU\fi bZU``'Ui Z'XYf'5' 'VY] BØfbVYf[' 'GYWXg'J Yf`YhnhY'i bX'`Ub[Y GhUi g

5i Z'XYf'5i hcVU\b'' 'VY]'BØfbVYf['\_Ua 'Yg'ni 'Y]bYa
Zc`[YbgWkkYfYb'5i ZZU\fi bZU``ž'XYf'gYWkg'DYfgcbYb
j Yf`YhnhY"'8Yf'J cfZU``'YfY][bYhY'g]Wk'k À\fYbX'XYg
6Yfi Zgj Yf\_Y\fgž'U`g'X]Y': U\fnYi [Y'Ui Z[fi bX'Y]bYg'GhUi g
`Ub[gUa Yf'Zi \fYb"'9]bY'\*(!'À\f][Y': U\fYf]b'VYa Yf\_hY
cZZYbVUf'b]Wkh'fYWkhnY]h][ž'XUgg'X]Y': U\fnYi [Y'j cf']\f'ni a
Gh]``ghUbX'\_Ua Ybž'i bX'Zi \f'Ui Z'XUg'`YhnhY'5i hc'Ui Z''8Yf

5i Z'XYf'5i hcVU\b'' 'VY]'BØfbVYf[ '\_Ua 'Yg'ni 'Y]bYa
Zc`[YbgWkkYfYb'5i ZZU\fi bZU``ž'XYf'gYWkg'DYfgcbYb'j Yf`YhnhY"'8Yf
J cfZU``'YfY][ bYhY'g]Wk'k À\fYbX'XYg'6Yfi Zgj Yf\_Y\fgž'U`g'X]Y
: U\fnYi [Y'Ui Z[ fi bX'Y]bYg'GhUi g'`Ub[ gUa Yf'Zi \fYb"'9]bY
\*(!'À\f][Y': U\fYf]b'VYa Yf\_hY'cZZYbVUf'b]Wkh'fYWkhnY]h][ ž'XUgg'X]Y
: U\fnYi [Y'j cf']\f'ni a 'Gh]``ghUbX'\_Ua Ybž'i bX'Zi \f'Ui Z'XUg'`YhnhY
5i hc'Ui Z''

8 Yf'5i ZdfU```k Uf'\YZh]['i bX'ZØ\fhY'XUni ž'XUgg'a Y\fYfY'5i hcg
]bY]bUbXYf[YgW\cVYb'k i fXYb"'8]YgY'5fh'j cb'?c``]g]cbž'VY]'XYf
Y]b': U\fnYi ['Ui Z'Y]b'ghY\YbXYg'Ui ZgW\`À[hž'\_Ubb'gW\bY```ni 'Y]bYf
?YhhYbfYU\_h]cb'ZØ\fYbž'X]Y'a Y\fYfY'VYhY]`][hY'5i hcg'VYhf]ZZh"'=b
X]YgYa :: U```k YbXYhY'XUg'GW\]W\_gU``Y]bYb'k Y]hYfYb'I bZU```Ubž
XYbb'Y]b'))!'À\f][Yf'A Ubb'\_cbbhY'YVYbZU``g'b]W\h'fYW\hnY]h][
VfYa gYb'i bX'\_c``]X]YfhY'a ]h'nk Y]'XYf'VYfY]hg'VYgW\ÀX][hYb
: U\fnYi [Y"

#### JYf`YhnhYibXFYU\_h]cbYb

8]Y'gYWkg'j Yf`YhnhYb'DYfgcbYb'kifXYb'ia [Y\YbX']b

bU\Y[Y`Y[YbY`?`]b]\_Yb`hfUbgdcfh]Yfh"`9g`\UbXY`h`g]W\
ØVYfk]Y[YbX`ia ``Y]W\hY`JYf`Yhni b[Ybž`gcXUgg`X]Y`DUggU[]YfY
j cfUi gg]W\h`]W\`VU`X`k]YXYf`[YbYgYb`kYfXYb"`@Ui h`Dc`]nY]`k i fXYb
g]Y`gcZcfh`a YX]n]b]gW\`j Yfgcf[hž`YXcW\`]gh`Yg`]a a Yf`k]YXYf
VYXUi Yf`]W\ž`kYbb`]a `GhfU»Ybj Yf\_Y\f`AYbgW\Yb`ni `GW\UXYb
\_ca a Yb"

8]Y'5i hcVU\b'' k Uf'ZØf'Yhk U'XfY]Y]b\U`V'Ghi bXYb'Ui Z[ fi bX'XYf I bZU``Ui ZbU\a Y'i bX'XYb'UbgW\`]Y» YbXYb'FÀi a i b[ gUfVY]hYb j c``ghÀbX][ '[ YgdYffh" 8]Yg'ZØ\fhY'ni 'Yf\YV`]W\Yb JYf\_Y\fgVY\]bXYfi b[ Yb']a '[ YgUa hYb'6YfY]W\" JYf\_Y\fghY]`bY\a Yf'a i gghYb'I a `Y]hi b[ Yb'bi hnYb'i bX'\UhhYb j Yf'Àb[ YfhY'K UfhYnY]hYb"'9]bY'GdYffi b[ 'X]YgYf'5fh'\_Ubb'b]W\h bi f'X]Y'5i hcZU\fYf'VY`UghYbž'gcbXYfb'Ui W\X]Y'9]bgUhn\_fÀZhY'j cb Dc`]nY]'i bX'FYhhi b[ gX]YbghYb']b'GW\k ]Yf][ \_Y]hYb'Vf]b[ Ybž'X]Y gW\bY``i bX'YZZY\_h]j 'Ui Z'gc`W\Y'BchZ\h``Y'fYU[ ]YfYb'a ØggYb"

8]Y'Dc`]nY]'gWXÀhnhY'XYb'XifWX'XYb'I bZU``'YbhghUbXYbYb
GUWXgWXUXYb'Ui Z'fi bX'%\$\$"\$\$\$'9i fc"'8]YgY'Gi a a Y'i a ZUggh
gck c\`'X]Y'GWXÀXYb'Ub'XYb'VYhfcZZYbYb': U\fnYi [Yb'U`g'Ui WX'Ub
XYf'=bZfUghfi\_hi f'XYf'5i hcVU\b"'9g']gh'k]WXh][ž']b'gc`WXYb
G]hi Uh]cbYb'ghYhg'X]Y'[Y`hYbXYb'J cfgWXf]ZhYb'ni f
JYf\_Y\fgg]WXYf\Y]h'ni 'VYUWXhYbž'i a 'XUg'F]g]\_c'j cb'I bZÀ``Yb'ni
a ]b]a ]YfYb"

## Dfàj Ybh]cb i bX J Yf\_Y\fgg]W Yf\Y]h

8 Ug; YgWXY\Yb`Ui Z'XYf`5i hcVU\b`' 'j YfXYi h`]WXhY]ba U``a Y\f`X]Y K ]WXh][\_Y]h`XYg`5VghUbX\U`hYbg`i bX`XYg`5i Za Yf\_gUa Yb`: U\fYbgž VYgcbXYfg`]b`GhUi g]hi Uh]cbYb"`C Zha U`g`i bhYfgWXÀhnYb`5i hc ZU\fYf X]Y`; YZU\fYbž`X]Y`j cb`UVfi dhYb`6fYa gi b[Yb`Ui g[Y\Yb`\_ObbYb" JYf\_Y\fgdgmWXc`c[Yb`kY]gYb`XUfUi Z`\]bž`k]Y`YbhgWXY]XYbX`Yg ]ghž`X]Y`; YgWXk]bX][\_Y]h`ni `XfcggY`bž`k Ybb`g]WX`XYf`JYf\_Y\f j Yf`Ub[gUa h"

 $: \varnothing f`X]Y`JYf\_Y\backslash fghY]`bY\backslash a~Yf`]gh`Yg`j~cb`[~fc ``Yf`6YXYi~hi~b[~ž`g]W \& ghYhg`Ub`X]Y`JYf\_Y\backslash fgfY[~Y`b`ni~`\backslash U`hYb`i~bX`[~Y[~YVYbYbZU``g~bY[~Uh]j~Y`:~c`[~Yb`j~cb`5V`Yb\_i~b[~ž`k~]Y`XUg`6YX]YbYb`j~cb~$ 

A cV]`hY`YZcbYb`i bX`XUg`B]W\hVYUW\hYb`XYf'; YgW\k]bX][\_Y]hž'ni j Yfa Y]XYb"'8Ug'6Yk i gghgY]b`ZØf`G]W\Yf\Y]h`]a `GhfU» Ybj Yf\_Y\f gc``hY`]b`XYb`J cfXYf[ fi bX`[ YfØW\_h`k YfXYbž'i a `gc`W\Y`I bZ\``Y`]b Ni \_i bZh`ni 'j Yf\]bXYfb"'Bi f`Xi fW\'j YfUbhk cfhi b[ gVYk i gghYg JYf\U`hYb`\_ObbYb'; YZU\fYb`]a `GhfU» Ybj Yf\_Y\f'j Yff]b[ Yfh k YfXYb"

K Ug'Y]bYb'k Y]hYfYb'5gdY\_h'VYhf]ZZhž']gh'X]Y'F $\emptyset$ W\_\_Y\f'j cb 5i hc ZU\fYfb'bUW\'Y]bYa 'I bZU\'ž'k c'Yg'k]W\h][']ghž'g]W\'XYf dgmW\'c'c[]gW\Yb'5i gk]f\_i b[Yb'VYk i ggh'ni 'gY]b'''9]b'HY]\'X]YgYf 5i Z\_\'Àfi b['gc\'hY']b'X]Y'JYf\_Y\fgg]W\Yf\Y]hg\_Ua dU[bYb Y]bZ]Y\'Ybž'X]Y'fY[Y`a\A\']['j cb'6Y\\OfXYb'Xi fW\[YZ\Ø\fh'k YfXYb''\= 'K ]ggYb'i a 'X]Y'F]g]\_Yb'i bX'Xi fW\'[Yn]Y'hY'5i Z\_\'Afi b['\_\ObbhYb' j ]Y\'Y]W\'hX]YgY'hfU[]gW\Yb'; YgW\]W\'hYb']b'\Ni \_i bZh'j Yfa ]YXYb k YfXYb''

Gc`WXY'5i ZZU\fi bZÀ``Y'g]bX'Ui Z'XYi hgWXYb'5i hcVU\bYb'b]WXh gY`hYb'i bX'j YfUbgWXUi `]WXYbž'k ]Y'f]g\_Ubh'XYf'GhfU» Ybj Yf\_Y\f']b ghfYgg][Yb'G]hi Uh]cbYb'gY]b'\_Ubb"'\dot\gVYgcbXYfY'VY]'\c\Ya JYf\_Y\fgUi Z\_ca a Ybž'k ]Y'Yg'Ui Z'XYf'5i hcVU\b''']b'A]hhY`ZfUb\_Yb XYf': U```k Ufž']gh'Y]b'\c\Yg'A U»'Ub'5i Za Yf\_gUa \_Y]h'YfZcfXYf`]WX"8Yf'5857'\YVh'\Yfj cfž'XUgg'ØVYf''\\$'i 'XYf'I bZÀ``Y'Ui Z5i hcVU\bYb'Ui Z'5i ZZU\fi bZÀ``Y'ni fØW\_ni ZØ\fYb'g]bXž'k Ug'ghYhg X]Y'K ]WXh][\_Y]h'j cb'G]WXYf\Y]hgj cf\_Y\fi b[Yb'i bX'XYZYbg]j Ya: U\fYb'i bhYfghfY]WXh"

8]Y I bZU``i fgUW.Yb'g]bX'j ]Y`ZÀ`h][ žfY]W.Yb'j cb'i bUi Za Yf\_gUa Yb: U\fYfb'V]g'\]b'ni ii b[Øbgh][Yb'K]hYfi b[gVYX]b[i b[Yb''6Y] X]W.hYa 'JYf\_Y\f'\_ObbYb'Ui W.'\_`Y]bY'JYfnO[Yfi b[Yb'ni gW.k YfYb'?c``]g]cbYb'ZØ\fYb''@Ui h'Y]bYf'GhUh]gh]\_'XYf'8Yi hgW.Yb; YgYhn`]W.Yb'I bZU``j Yfg]W.Yfi b['k YfXYb'A\f`]W.'hUi gYbXY'j cbJYf\_Y\fgi bZÀ``Yb']b'8Yi hgW.`UbX'fY[]ghf]Yfhž'a ]h'a Y\f'U`g'\$\$"\$\$\$'JYf`YhnhYb'''8]Y'5' 'gY`Vghž'Y]bY'XYf'k]W.h][ghYb5i hcVU\bYb'8Yi hgW.`UbXgž'gd]Y`h']b'X]YgYa '?cbhYl h'Y]bYnYbhfU`Y'Fc``Yž'XU'g]Y'ghUf\_Y'JYf\_Y\fgghfOa Y'nk]gW.Yb'BcfX!'i bXGØXXYi hgW.`UbXj'YfV]bXYh'

 $JYf_Y\backslash fgg]W\chi Yf \backslash Y]hii b X j cfVYi [YbXY]$ 

#### A U» bU\a Yb

8]Y'Dc`]nY]'i bX'J Yf\_Y\fgg]W\Yf\Y]hgcf[ Ub]gUh]cbYb'fi ZYb']a a Yfk ]YXYf'XUni 'Ui Zz'G]W\Yf\Y]hgUVgh\bXY'Y]bni \U`hYb'i bX'Ui Z'X]Y JYf\_Y\fgg]hi Uh]cb'ni 'UW\hYb'''9]bY'k ]W\h][ Y'A U» bU\a Yz'X]Y 5i hcZU\fYf'Yf[ fY]ZYb'\_ObbYbz'i a 'gc`W\Y'I bZ\``Y'ni 'j Yfa Y]XYbz' ]gh'XUg'ZfØ\nY]h][ Y'9f\_YbbYb'j cb'GhUi g'''J ]Y`Y'bYi YfY': U\fnYi [ Y g]bX'ni XYa 'a ]h'HYW\bc`c[ ]Yb'Ui g[ YghUhhYhz'X]Y'XUg Ui hca Uh]gW\Y'6fYa gYb'i bhYfghØhnYbz'k Ybb'XYf': U\fYf'b]W\h fYW\hnY]h][ 'fYU[ ]Yfh''

9]bY'k Y]hYfY'dfÀj Ybh]j Y'A U» bU\a Y']gh'X]Y'5i Z\_`Àfi b['ØVYf'X]Y
6YXYi hi b['j cb'; YgWk ]bX][\_Y]hgUbdUggi b[Yb'gck ]Y'XUg
JYfa Y]XYb'j cb'5V'Yb\_i b[Ybž'k]Y'VY]gd]Y`gk Y]gY'X]Y'Bi hni b[
j cb'A cV]`hY`YZcbYb'k À\fYbX'XYf': U\fh"'\#\gVYgcbXYfY']b'NY]hYb
j cb'GhUi 'i bX'ghcW\_YbXYa 'JYf\_Y\f']gh'Yg'k ]W\h][ž
j cfUi ggW\Ui YbX'ni 'ZU\fYb'i bX'Ui Z'X]Y'6Yk Y[i b[Yb'XYf'UbXYfYb
JYf\_Y\fghY]`bY\a Yf'ni 'UW\hYb"

### : c [Yb i b X f Y W h] W Y 5 g d Y hY

8]Y'fYWh']WYb': c`[Yb'Y]bYg'5i ZZU\fi bZU``g'\_ObbYb'Yf\YV']W\
gY]b"'=b'XYb'a Y]ghYb': À``Yb'k YfXYb'X]Y': U\fYfž'X]Y'X]Y
5i ZZU\fi bZÀ``Y'j Yfi fgUW\Ybž'U`g'GW\i `X][Y'Ub[YgY\Ybž'k Ug
?cbgYei YbnYb'ZØf']\fY'JYfg]W\Yfi b[Yb'gck]Y'a O[`]W\Y
ghfUZfYW\h`]W\Y'A U» bU\a Yb'bUW\g]W\n]Y\Yb'\_Ubb"'Ni XYa
\_ca a Yb'XUni 'cZh'n]j ]`fYW\h`]W\Y'5bgdfØW\Yž'k Ybb'Xi fW\'XYb
I bZU```GW\AXYb'Ub'8f]hhYb'cXYf'XYa ': U\fnYi ['XYf'; YgW\AX][hYb

8]Y'JYfg]W\Yfi b[Yb'a ØggYb'XUbb'XYb'Z]bUbn]Y``Yb'GW\UXYb UVXYW\_Ybž'k Ug']b'X]YgYa :: U````Ui h'Dc`]nY]'Ui Z'fi bX'%\$\$"\$\$\$'9i fc [YgW\Ahnh'k]fX"'8]Yg'j YfXYi h`]W\h'Ui W\'X]Y'Z]bUbn]Y``Yb'F]g]\_Ybž X]Y'a]h'JYf\_Y\fgi bZA``Yb'j YfVi bXYb'g]bXž'gck c\``ZØf'X]Y'X]fY\_h VYhY]`][hYb': U\fYf'U`g'Ui W\'ZØf'X]Y'JYfg]W\Yfi b[gi bhYfbY\a Yb"

8 YhU]`g

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