

: f]YXYb`cXYf`? f]Y[ 3'8Yf`K UbXY`XYf  
[ YgY`gWUZh`]WU Yb`K YfhY`]b`8Yi hgWU`UbX

9fZc fgWU Yb`G]Y`]b`i bgYfYa`5fh`\_Y`X]Y`U\_hi Y`Y`8YVUhhY`ØVYf  
: f]YXYb`i bX`? f]Y[`]b`XYf`; YgY`gWUZh`"Jcb`B]WU`Yg`; Yk]bb  
VY]a`9i fcj]g]cb`Gcb[`7cbhYgh`V]g`]b`ni`XYb`dfcj`c\_Uh]j`Yb  
?cbnYdhYb`XYf`FØghi b[ g]bXi ghf]Y`k]f`VY`Yi WU hYbžk]Y`XYf  
6Y[f]ZZ` : f]YXYb`ni a`bYi Yb`GWU]a dZk cfh[ Yk cfXYb`]gh  
i bX`k Y`WU Y` : fU[ Yb`g]WU`Ub[ Yg]WU hg`XYf`a`]hÅf]gWU Yb  
F`Yhc f]\_i bX`XYg[ YgY`gWUZh`]WU Yb`K UbXY`g`ghY`Yb`  
9fZU`fYb`G]Y`a Y`f`ØVYf`X]Y`GdUbbi b[ Yb`nk]gWU Yb  
]XYU`]gh]gWU Yb`5bg]WU hYb`i bX`XYf`FYU`]hÅh`XYg`? f]Y[ Yg`



Jcf`(%:J\fyb`YfcVYfhY`X]Y`WUfa UbhY`GWU`U[ YfgÅb[ Yf]b`B]WU`Y  
a]h]`fYa`@YX`9]b`V]ggWU Yb` : f]YXYb`X]Y`6Ø\bY`XYg`9i fcj]g]cb  
Gcb[`7cbhYghg`9]b`Gcb[ žXYf`ZØf`j]Y`Y`XUa U`g`k]Y`Y]b`K]hn`\_`Ub[.  
9]b`V]ggWU Yb` : f]YXYb`žY]b`V]ggWU Yb`HfÅi a Ybži bX`XUgg`X]Y  
A YbgWU Yb`b]WU h`gc`cZ`ik Y]bYb`"8cWU`X]Y`NY]hYb`UVYb`g]WU  
[YXfY`h`fcb]gWU`Uba i hYbXY`FYU\_h]cbYb`j`cb`XYf`Di b`!8]gWU!  
6UbX`85: žX]Y`a]h`9]b`V]ggWU Yb`? f]Y[`]cbhYfhY`žYfgWU Y]bYb

\Yi hY`ZUgh'dfcd\Yh]gWk"8Ybb`k Å\fybX`X]Y`Y]Wk hYb`A Y`cX]Yb  
j Yf[ Ub[ YbYf`HU[ Y`j Yf`i b[ Yb`g]bXžk ]fX`XUg`K cfh` : f]YXYb  
\Yi hY`a Y`f`XYbb`Y`a ]h`G\_Ydg]g`VYhfUWk hYh"

⇒ Y]bYf`K Y`hž`]b`XYf`XUg`D`ÅXcmYf`ZØf` : f]YXYb`U`g`bUj` UV[ YhUb  
k ]fXž`g]bX`X]Y`A YbgWk Yb`[ YgdU`hYb"8]Y`Gh]a a Ybž`X]Y`fi ZYbž`XUgg  
k ]f`i bg`j YfhY`X][ Yb`a ØggYbž`Ui Wk`c`bY`5b[ fY]ZYfž`k YfXYb`]a a Yf  
`Ui hYf" GWk YfY`NY]hYb` `X]YgY`A YhUd`Yfb`XYg`@Y]XYbgž`X]Y`XYf  
8]Wk hYf`9f]Wk : f]YX`Y]bgh`Zcfa i`]YfhYž`gWk Y]bYb`U`hi Y`Yf`XYbb`Y`  
⇒ XYb`A YX]Yb`g]bX`X]Y`6Yf]Wk hY`b]Wk h`k Yb][ Yf`j Yfgh`ØfYbX"8]Y  
FØghi b[ g]bXi`ghf]Y`YfV`Ø`h`b`X]YgYf`5b[ ghž`X]Y`XUg`@Ub`X`Yf[ fY]Zž  
i bX`X]Y`Dc`]h]\_`gdf]Wk hij`cb`Y]bYa` `f]Y[ gVYfY]hYb`8Yi hgWk`UbX"

## 8]Y`A`UggY`Yf`YVh`g]Wk`ZØf`XYb` : f]YXYb

5a`8cbbYfghU[ `j YfgUa a`Y`hYb`g]Wk`VYY]bXfi W`YbXY` "\$\$\$\$  
A YbgWk Yb`]b`6Yf`]bž`i a`ZØf`XYb` : f]YXYb`ni`XYa`cbghf]YfYb"5i Z  
XYb`HfUbgdUfYb hYb`ghUbX`X]Y`6chgWk UZi`\_`Uf`i bX`XYi`h`]Wk.  
 : f]YXYb`]gh`\_Y]bY`GWk]a dZk`cfh` `8cWk`]ba ]hYb`XYf`Fi ZY`bUWk  
 : f]YXYb`gWk`k ]b[ h`X]Y` ; YZU`f`a ]hž`XUgg`a UbWk Yfcfhg`Y]b` ? f]Y[  
U`g`YfghfYVYb`gk Yfh`Ub[ YgY`Yb`k ]fX"8]Y`9i d`cf]Y`XYf  
J Yf[ Ub[ Yb`Y]h`]ghj`cfVY]ž`i bX`XYf`gWk`Y]Wk YbXYž`Yfb`ghY`Hcb  
YfgYhnh`X]Y`i bVYgWk`YfhYb`A`Y`cX]Yb"

⇒ XYf`dc`]h]gWk Yb`8]g`\_i`gg]cb`k ]fX`XYf`Fi Z`Ui`hž`Y]bY  
`fYU`]gh]gWk Y`9]bghY`i b[ `ni`f`B`5HC`ni`Yb`hk ]W`Y`b"8cWk`k Ug  
VYXYi`hYh`XUg`k ]f`\_]Wk`3`K`Å\fybX`↑ b[ Y`A`ÅbbYf`]b`XYb`A`YX]Yb`Ub  
X]Y`K`UZZYb`fi ZYb` ` : U`g`]Wk`\_`Åa`dZYž`XUbb`ZØf`9i`fcdU` ` `V`Y]Vh  
XYf`K ]XYfgdfi Wk`VYghY`Yb.`gh`X]Yg`bcWk`X]Y`Gh]a a Y`XYf  
J Yfbi bZi`cXYf`XYf`j Yfnk Y]ZY`hYb`FYU`]h`h3

## 9]b`?`Ua`dZ`nk ]gWk`Yb`<`c`ZZbi`b[ `i`b`X J`Yfnk`Y]Z`i`b[

⇒ X]YgYb`gWk`k YfYb`NY]hYbž`k`c`ZØf`j ]Y`Y` : f]YXYb` `i`bX` ? f]Y[  
\_Y]bY`nk`Y]`GY]hYb`XYfgY`VYb`A`YXU`]`Y`a`Y`f`g]bXž`ghY`h`g]Wk`X]Y  
 : fU[ Y.`K ]Y`j ]Y` : f]YXYb`VfUi`Wk`Yb`k ]f`k ]f`\_]Wk`3`C`XYf`[ Y`h`Yg

j ]Y`Y]W\h'b]W\h'ia Y\`f'i a : f]YXYbž'gcbXYfb'i a `Y]b', VYf`YVYb`]b  
Y]bYf`VYXfc\`]W\Yb`K Y`h3'8]Y`8Ya cbghfUh]cbYb`]b`6Yf`]b`g]bX`Y]b  
`YVYbX][ Yg`NYi [ b]g`XYg`?Ua dZYg`nk ]gW\Yb`X]YgYf`<cZZbi b[ `Ui Z  
: f]YXYb`i bX`XYf`h]YZj Yfk i fnY`hYb`5b[ ghj cf`XYa `?f]Y[ ``8Yf  
GdU[ Uhik ]fX`]a a Yf`gW\ a U`Yf`

8YhU]`g

6Ygi W\Yb`G]Y`i bg`Ui Z.`a Y]b!VYf`]b`bYh