

7 mb h\ ]U`@i a a ]g`gU[ hž`6]XYbg` \$`i `A ]bYf  
GhYi Yf` k ]fX`b]Wł h`dUgg]YfYb

8 ]Y`6]hWł ]b!ZFYi bX`]Wł Y`fYdi V`\_Ub]gWł Y`GYbUhc f]b`7 mb h\ ]U  
@i a a ]g`[ `Ui Vh`b]Wł hž`XUgg`X]Y`j cb`XYf`6]XYb!FY[ ]Yfi b[  
j cf[ YgWł`U[ YbY`J YfVfUi Wł ghYi Yf`j cb`` \$`i `Ui Z`6]hWł ]b!  
A ]bYf`k U\fgWł Y]b`]Wł `b]Wł h`Xi fWł `XUg`F Ydf`AgYbhUbhYb\Ui g  
\_ca a Yb`k ]fX"5i Z`XYf`6Ø\bY`j cb`6]hWł ]b`A ]Ua ]`&\$&'  
i bhYfghØhnhY`XYf`Dc`]h]\_Yf`k Y]hYf\]b`X]Y`A ]bYf`i bX`[ `Ui Vhž  
XUgg`X]Y`J YfVfY]hi b[ `XYf`6fUbWł Y`]b`XYb`J YfY]b][ hYb  
GhUUhYb`Y]bY` : fU[ Y`XYf`bUh]cbU`Yb`G]Wł Yf\Y]h`gY]"`A ]b]b[ .  
GWł a i hn][ `cXYf`gUi VYf3`K `À\fybX`XYf`ϕhYfj ]Yk @i a a ]g  
gdfUWł `a ]h`DYf]UbbY`6cf]b[ ž`Y]bYa `A ]h[ `]YX`XYf`?fmdhc!  
ϕhYfYggYb[ fi ddY`7\Ua VYf`cZ`8][ ]hU`7ca a YfWł ž`ØVYf`X]Y  
J YfVfUi Wł ghYi Yf`6cf]b[ `Yf`\_`ÀfhY ž`XUgg`X]Y`i bhYfbY\ a Yb  
]bbYf\U`V`]`fYf`A ]h[ `]YXgWł UZhž`X]Y` ) \$`i `XYf`<Ug\!F UhY`j cb  
6]hWł ]b`Ui ga UWł Ybž` i b[ `Ui V`]Wł `VYgcf[ h`gY]Ybž`XUgg`g]Y  
/ Ua d^Y`^]d/

8 ]Y`6]hWł ]b!ZFYi bX`]Wł Y`fYdi V`\_Ub]gWł Y`GYbUhc f]b`7 mb h\ ]U  
@i a a ]g`[ `Ui Vh`b]Wł hž`XUgg`X]Y`j cb`XYf`6]XYb!FY[ ]Yfi b[  
j cf[ YgWł`U[ YbY`J YfVfUi Wł ghYi Yf`j cb`` \$`i `Ui Z`6]hWł ]b!A ]bYf  
k U\fgWł Y]b`]Wł `b]Wł h`Xi fWł `XUg`F Ydf`AgYbhUbhYb\Ui g`\_ca a Yb  
k ]fX"i`

5i Z`XYf`6Ø\bY`j cb`6]hWł ]b`A ]Ua ]`&\$&` i bhYfghØhnhY`XYf`Dc`]h]\_Yf  
k Y]hYf\]b`X]Y`A ]bYf`i bX`[ `Ui Vhž`XUgg`X]Y`J YfVfY]hi b[ `XYf  
6fUbWł Y`]b`XYb`J YfY]b][ hYb`GhUUhYb`Y]bY` : fU[ Y`XYf`bUh]cbU`Yb  
G]Wł Yf\Y]h`gY]"`

A ]b]b[ .`GWł a i hn][ `cXYf`gUi VYf3

K Å\fybX`XYf` ðhYfj ]Yk @ a a ]g'gdFUVW`a ]h'DYf]UbbY`6cf]b[ ž  
Y]bYa `A ]h[ `]YX`XYf`?fmdhc! ðhYfYggYb[ fi ddY`7\Ua VYf`cZ'8 ] [ ]hU`  
7ca a YfWž`ØVYf`X]Y`J YfVfUi W\ghYi Yf`

6cf]b[ `Yf\_`ÅfhYž`XUgg`X]Y`i bhYfbY\ a Yb`]bbYf\U`V`] \fyf  
A ]h[ `]YXgWUZh`X]Y`) \$`i `XYf`<Ug\!FUhY`j cb`6]hWc]b`Ui ga UWYbž  
i b[ `Ui V`]W`VYgcf[ h`gY]Ybž`XUgg`g]Y`b`XYb`J YfY]b][ hYb`GhUUhYb  
b]W\h`cdYf]YfYb`\_ØbbhYbž`k Ybb`X]Y`GhYi Yf`Y]b[ YZØ\fh`k ØfXY`

@ a a ]g`fYU[ ]YfhY`a ]h`Y]bYf`6Yfi \][ i b[ `ZØf`6]hWc]bYf`

8Ug`k ]fX`b]W\h`dUgg]YfYb ž`gU[ hY`g]Y`" 9g`]gh`UVgc`i h`k ]W\h][ ž  
XUgg`X]Y`9bhk ]W`i b[ `X]YgYf`HYW\bc`c[ ]Y`gck ]Y`XYg`6]hWc]b!  
A ]b]b[ g`gY`Vgh]b`XYb`J YfY]b][ hYb`GhUUhYb`ghUhhZ]bXYh`

6]XYbg`J YfVfUi W\ghYi Yf`k i fXY`gh]`gW\k Y][ YbX  
Yf\cVYb`Y]b[ YZØ\fh`]b`gY]bYa` <Ui g`U`hgd`Ub`ZØf`&\$&( ž`XYf`Ui W\  
bYi Y`F Y[ Y`b`ZØf`XYb`?fmdhc!K Ug\!<UbXY`i bX`?Ud]hU`[ Yk ]bbY  
Ybh\]Y`h`5bZUb[ `X]YgYg`A cbUhg`j YfØZYbh]W\hY`XYf`F Uh`XYf  
K ]fhgWUZh`VYfUhYf`XYg`DfÅg]XYbhYb`gY]bY  
J YfØZYbh]W\i b[ `Cf]Ybh]Yfi b[ g\`ZY`K Ybb`XYf`?cb[ fYgg`X]Y  
GhYi Yf`[ YbY\ a ] [ hž`a i gg`Yf`a ]h`?cbgYei YbnYb`fYW\Ybž`k Y]`Yf  
`c\_U`Y`i a k Y`hj YfgW\ a i hni b[ `i bX` \Ø\YfY`9bYf[ ]YdfY]gY  
j Yfi fgUW\h`

9bh[ Y[ Yb`] \fyb`6Y\Ui dhi b[ Yb`[ `Ui Vh`@ a a ]gž`XUgg`6]hWc]b!  
A ]b]b[ `Y\Yf`Y]b`GY[ Yb`ZØf`X]Y`i a k Y`hi bX`X]Y`9bYf[ ]YbYhnY`U`g  
Y]b`GW\UXYb`]gh` ð`]\fy a` <Y]a UhghUUh`K mc a ]b[ `Yf\_`ÅfhY`g]Yž  
XUgg`A ]bYf`VYfY]hg`U`g`k ]fhgWUZh`]W\Y`5`hYfbUh]j Y`ni a`5V`UggYb  
j cb`A Yh\UbUVZÅ`Yb`Ui g`2`!`i bX`; Ugei Y`Yb`Y]b[ YgYhnh`k ØfXYbž  
i a`ni`j Yf\]bXYfbž`XUgg`XUg`A Yh\Ub[ Ug`]b`X]Y`5ha`cgd\ÅfY  
UV[ YZUW`Y`h`k YfXY`

6]hWc]b`\_Ubb`hUhgÅW\]W\`ZØf`X]Y`GhUV`]g]Yfi b[ `Y]bYg`BYhnYg`j cb  
J cfhY`]`gY]b ž`ZØ[ hY`g]Y`\]bni ž`k Y]`Yg`5bghfYb[ i b[ Yb`[ YVYb  
\_Ubbž`6]hWc]b`UVni VUi Yb` `Ø`bYf[ mQ8Yf`9bYf[ ]Yj YfVfUi W\`]gh  
[ Yf]b[ ž`i bX`XUbb`k ]fX`XYf`5VVUi`fYXi n]Yfhž`k Ybb`XYf  
9bYf[ ]Yj YfVfUi W\` \cW\`]gh`

# A ]bYf' ? Ub b 'ØVYfU``'UVVUi Yb

6]hWc]b!A ]bYf'i bhYfbU\ a Yb'ja 'ž`]'&\$&&'À\b`]WXY  
GhUVV`]g]Yfi b[ gVYa Ø\i b[ Yb'a ]h'XYa 'HYI Ug'; f]Xž'k cVY]'X]Y  
A ]bYf']\fYb'6Yhf]YV'dUi g]YfhYb'Ub[ YZcfXYfh'j cb'XYb  
FY[ i`]'Yfi b[ gVY\ØfXYbž'i a '9bYf[ ]Y'ZØf'<Ui g\U'hY'ni 'gdUfYb"

5``YfX]b[ g'Yfk Å[ h'XUg'FYdfÅgYbhUbhYb\Ui g'j cb'HYI Ug'XYfnY]h  
Y]bYb'J c f gW`U[ ž'X]Y'5bnU\`XYf'A ]bYf'ni 'VY[ fYbnYbž'X]Y'Ua  
8Ya UbX!FYgdcbgY!Dfc[ fUa a 'hY]'bY\ a Yb'\_ØbbYb' 'XUg'A ]bYf  
ZØf'X]Y'NY]hž'X]Y'g]Y'cZZ]bY'j YfVf]b[ Ybž'Z]bUbn]Y``YbhgW`ÅX][ h''

⇒ j ]YfhYb'E i UfhU`&\$&&'UhhY'X]Y[ 'cVU'Y'6]hWc]b!A ]b]b[ !  
⇒Xi ghf]Y''Ui hi a ZFU[ YYf[ YVb]ggYb'j cb'6]hWc]b'Y]bYb'[ fØbYb  
9bYf[ ]Ya ]l'j cb'), ž- i 'A ]b]b[ 'FUh"

Gc``hYb'X]Y'6Ya Ø\i b[ Yb'Ui Z'6i bXYg! i bX'@UbXYgYVYbY  
'YhnhYbX`]W`YfZc`[ fY]W`gY]bž'XYb'A ]b]b[ ']'b'5a Yf]\_U  
Y]bni XÅa a Ybž'a UW'h'g]W`@ a a ]g'ja a Yf'bcW`\_Y]bY'Gcf[ Yb'i a  
XUg[ 'cVU'Y', VYf'YVYb'XYf'6fUbW`Y"

A ]bYf'\_ØbbYb'ØVYfU``'UVVUi Yb ž'gU[ hY'g]Y'i bX'j Yfk ]Yg'Ui Z'XUg  
\_cghYb[ Øbgh][ Y'I bhYfbY\ a Yb'a ]h'G]hn`]b  
B c f k Y[ Yb'K UggYf\_fUZh!6Yf[ VUi VYhf]YVY"" , VYfU``'Ui Z'XYf'K Y'h  
[ ]Vh'Yg'A Ø[ `]W`\_Y]hYb'ZØf'XUg'6]hWc]b!A ]b]b[ ']'b'ž f]gX]\_h]cbYbž'X]Y  
: fYi bXY' i bX': Y]bXY'g]bX"

...

8YhU]`g

6Ygi W`Yb'G]Y'i bg'Ui Z.'\_fmdhc!bYk g"Uh