

7fmdhc`7ca a i b]hmik Ufbh'6Ybi hnYf`j cf  
[ YZÀ`gW hYb`5fV]hfi a`5]fXfcdg

8]Y`5fV]hfi a`!7ca a i b]hm\Uh'6Ybi hnYf`j cf`j YfgW]YXYbYb  
[ YZÀ`gW hYb`@ ZhfcdZYb`[ Yk Ufbhž`X]Y`j cf[ YVYbž`j cb`XYf  
bYi`[ YghUfhYhYb`XYnYbhfU`g]YfhYb`5i hcbca Yb`Cf[ Ub]gUh]cb  
fB5CŁ`XYg`Dfc`Y`hg`ni`ghUa a Yb"6YhfØ[ Yf`VY[ UbbYbž  
[ YZÀ`gW hY`5fV]hfi a`!5]fXfcdg`i bX`D\]g\]b[ !K YVg]hYg`ni  
YfghY`Ybž`bUW`XYa`XUg`@UmYf!&!G\_U`Yfi b[ gdfchc`c``j cb  
9h\Yfyi a`Y`hnhY`K`cW`Y`XUg`85C`Ub[ Y`ØbX][ h`\UhhYž  
cVkc`\`Yg`X]Yg`j YfgdfUW`j YfhY`Yb`%&ž) +i`XYg  
; cj YfbUbW`!Hc`Ybg`5F6`Ub`VYfYW`h][ hY`7ca a i b]hm!  
A ]h[ `]YXYf`Ua`'&' "A Āfn'&\$&' "ϕ`XYf`9f`\_`Āfi b[ `gU[ hY`XUg  
Dfchc`c`ž`XUgg`Yg`Y]b`Di b`hYgmghYa`j Yfk YbXYhž`i a  
6Ybi hnYf`ni`VYgh]a a Yb`VYfYW`h][ hž`XYb`5]fXfcd`ni  
VYUbgdfi W`Yb`i bX`X]Y`5bnU\`XYf`Hc`Ybž`X]Y`YXYf  
VUg]YfYbX`Ui Z`gY]bYf`@Y]ghi b[ `i bX`gY]bYb`5\_h]j ]h`hYb`Ui Z  
XYf`D`Uhhžcfa`Yf`U`hYb`\_Ubb"; YZÀ`gW hY`5]fXfcdgž  
/ Ua d^Y``jd/



8]Y`5fV]hfi a`!7ca a i b]hm\Uh'6Ybi hnYf`j cf`j YfgW]YXYbYb

[ YZÀ`gW hYb`@ ZhfcdZYb`[ Yk Ufbhž`X]Y`j cf[ YVYbž`j cb`XYf`bYi  
[ YghUfhYhYb`XYnYbhfU`]g]YfhYb`5i hcbca Yb`Cf[ Ub]gUh]cb`fB 5CŁ  
XYg`Dfc`Y`hg`ni`ghUa`a`Yb`"

6YhfØ[ Yf`VY[ UbbYbž`[ YZÀ`gW hY`5fV]hfi`a`!5]fXfcdg`i`bX`D\]g\]b[`!  
K`YVg]hYg`ni`YfghY`Ybž`bUWXYa`XUg  
@UmYf!&!G\_U`]Yfi`b[`gdfchc`\_c``j`cb`9h\YfYi`a`Y`hnhY`K`cWXY`XUg  
85C`Ub[`Y\_ØbX][`h\UhhYž`cVkc`c`Yg`X]Yg`j`YfgdfUW`j`YfhY`Yb  
%&ž) +i`XYg`;`cj`YfbUbW!Hc\_Ybg`5F`6`Ub`VYfYW`h][`hY`7ca`a`i`b]hml  
A`h[`YXYf`Ua`&`"A`Àfn`&\$&`"

⊕`XYf`9f`\_`Àfi`b[`gU[`hY`XUg`Dfchc`\_c``ž`XUgg`Yg`Y]b`Di`b`\_hYgmghYa  
j`Yfk`YbXYhž`i`a`6Ybi`hnyf`ni`VYgh]a`a`Yb`VYfYW`h][`hž`XYb`5]fXfcd  
ni`VYUbgdfi`W`Yb`i`bX`X]Y`5bnU`XYf`Hc\_Ybž`X]Y`YXYf`VUg]YfYbX  
Ui`Z`gY]bYf`@Y]ghi`b[`i`bX`gY]bYb`5\_h]j`]h`hYb`Ui`Z`XYf`D`UhZc`fa  
Yf\U`hYb`\_Ubb`"

;`YZÀ`gW hY`5]fXfcdgž`X]Y`g]W`U`g`5F`6!Hc`\_Yb  
Ui`g[`YVYb`

8U`<i`bXYfhY`j`cb`[`YZÀ`gW hYb`5fV]hfi`a`!5]fXfcdg`i`bX  
6YhfØ[ YfY]Yb`]a`i`a`Ui`Z`g]bXž`k`UfbhYb`X]Y`7ca`a`i`b]hm`XYg  
Dfc`Y`hg`i`bX`Y]b][`Y`6`c`W`W`U]b]G]W`Yf\Y]hg]i`bhYfbY\`a`Yb  
6Ybi`hnyfž`X]Y`\_c`ghYb`cgYg`;`Y`X`j`YfX]YbYb`a`ÒW`hYbž`k`UW`gUa  
i`bX`j`cfg]W`h][`a`]h`gc`W`Yb`VYhfØ[ Yf]gW`Yb`K`YVg]hYg`ni`gY]bž`X]Y  
VY\Ui`dhYbž`5]fXfcdg`ni`hY]Yb`"

⊕`Y]bYa`Hk`]hYf!6Y]hfU[`j`ca`%-`"A`Àfnž`5fV]hfi`a`BYk`g`85C`  
**[`Yb`Ub`b`h`9g`]XYbh]Z]n]YfhY`ØVYf`&+`D\]g\]b[`!G]hYg`]a  
Ni`gUa`a`Yb\Ub[`a`]h`5fV]hfi`a`ž`gY]h`XUg`@UmYf!&!Dfchc`\_c``j`cb  
9h\YfYi`a`X]Y`5]fXfcd!J`YfhY]i`b[`Ub\_ØbX][`hY`@Ui`h`XYa`Hk`YYh  
gc``X]Y`NU\`bcW`j`cf`XYa`c`Z]n]Y`Yb`J`YfhY]i`b[`ghYfa`]b`Ua  
8cbbYfghU[`ghY][`Yb`"**

9VYbgc`XUg`?`fmdhc!G]W`Yf\Y]hg!GhUfhi`d`F`YXYZ]bY`**Yb`hX`Y`W`\_`h`Y**]bY  
[`YZÀ`gW hY`K`YVg]hYž`X]Y`g]W`U`g`5]fXfcd!K`YVg]hY`j`cb`5fV]hfi`a  
Ui`g[`]Vh`@Ui`h`XYb`j`cb`XYf`:`]fa`U`[`YhY]`hYb`G`W`f`Y`Y`b`g`c`h`g`V]h`hY`h`X]Y  
D\]g\]b[`!G]hY`X]Y`6Ybi`hnyf`i`a`5i`hcf]g]Yfi`b[`ZØf`XYb`Ni`[`f]ZZ`Ui`Z

]\fY'6f]YZhUgWkYbž'gcXUgg'X]Y'?f]a ]bY''Yb'X]Y'?cbhYb'XYf'C dZYf  
`YYfYb`\_ÖbbYb"

5i Wk'X]Y'6`cW\_WkU]b!G]WkYf\Y]hgZ]fa U'7Yfh]?`**X Y b h]Z]n]Y fh`Y]b**  
[ YZÄ`gWkhyf'Hk ]hhYf!5Wkci bh'bUa Ybg'4 UfV]hfi a S`Ui bWkž'XYf  
XYfnY]h'ZØf'Y]bYb'Hc\_Yb!5]fXfcd'k ]fVh"8 Ug'l bhYfbY\ a Yb'k UfbhY  
X]Y'6Ybi hnYf'XUbb'XUj cfž'g]Wk'j ca`'?cbhc'ZYfbni \U'hYb'i bX'b]Wk.h  
a ]h'XYa`5]fXfcd'ni`]bhYfU[ ]YfYb"

: fY]Yg'; Y`X

9]b'FYXX]h!6Ybi hnYf'bUa Ybg'7fmdhcA UI ]a U`]gh'\Uh'YVYbZU`g`U  
[ YdcghYh; Yk ]bXY'Ui Z'XYf'gcn]U`Yb'D`UhhZcfa`k Ufbhž'XUgg  
6YhfØ[ Yf'\cZZYbž'Ui g'XYf'?ca d`YI ]hÄ'hj cb'?fmdhc'? Ud]hU`ni  
gWk`U[ Ybž'i bX'6Ybi hnYf'g]Wk'ØVYf`\_cghYb`cgYg'; Y`X`ZFYi Yb` "

8Yf'FYXX]hcf'gU[ hYž'Yf'\UVY'Hk ]hhYf!DfcZ]'Y'[ YZÄ`bXYbž'X]Y  
VY\Ui dhYhYbž' 5fV]hfi a`ni`gY]bž'a ]h@]b\_g'ni`[ YZÄ`gWkhyb  
K YVg]hYgž'X]Y'6Ybi hnYf'Ui Zc fXYfhYbž'XYb'5]fXfcd'ni  
VYUbgdfi WkYb"

7fmdhcA UI ]a U`]gh'k UfbhY`UbXYfY'FYXX]hcfYbž']a a Yf'XYb  
DfcZ]'j Yf'Ui Z'Y]bYg'6Ybi hnYfg'i bX'Ui Wk`UbXYfY'Gi VfYXX]hg'ni  
ØVYfdfØZYbž'i a`YfUi gni Z]bXYbž'cV'g]Y`@]b\_g'ØVYf'X]Y'D`UhhZcfa  
gdUa a Yb"

5b[ Yg]Wk hg'XYf'Yfk UfhYhYb'Ni bU\ a Y'j cb'6Yhfi [ `i bX  
[ YZÄ`gWkhy a`5fV]hfi a`gc`hYb'?fmdhcVYbi hnYf'j cfg]Wk]h[ `gY]bž  
XUa ]h'g]Y`]\f'; Y`X'b]Wk h'Ub'6YhfØ[ Yf'k ]Y`UbXYfY'[ YZÄ`gWkhy  
?fmdhc!5]fXfcdg'j Yf'YfYbž'X]Y`]b'XYf'J Yf[ Ub[ Yb\Y]h'HUi gYbXY  
j cb'8c`Uf'j cb'C dZYfb'UV[ Ync[ Yb'\UVYb"

...

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