

GYb]cf`Ybh[ Y\h`Hf]W\_VYhfØ[ Yfb.  
; Y`XØVYf[ UVY`XUb\_`a ]gghfUi ]gWYa  
: fYi bX`j Yf\ ]bXYfh

GYb]cfYbVYhfi [ `j YfY]hY`h`Dc`nY]`8i ]gVi f[ `k Ufbhj`cf  
ZU`gWYb`Dc`nY]VYUa`hYb`i bX`GWcW\_Ubfi ZYb" `6`Y]VYb`G]Y  
k UWgUa`°

8i ]gVi f[ ` `ϕ`Y]bYa`U`Ufa`]YfYbXYb`J`cfZU``Ua` `: fY]hU[ a`]hhU[ ž  
XYa` `&` "'5i [ i ghž`k i fXY`Y]b` , , !`Å\ f][ Yf`A`Ubb`C`dZYf`Y]bYg  
dYfZ]XYb`6Yhfi [ gj`Yfgi`W`gž`XYf`U`g` `GWcW\_Ubfi`Z`VY\_Ubbh`]gh" `9]b  
5bfi`ZYf`[ UV`g]W`U`g`X]Y`GWk`]Y[ YfhcW`hYf`XYg`GYb]cfg`Ui`g`i`bX  
Yf\_`ÀfhY`]\a`ž`XUgg`gY]b`Gh]YZgc`b`k`Y[ Yb`Y]bYg`gWk`Yfk`]Y[ YbXYb  
J`Yf\_Y`fgi`bZU``g`]a` `; YZ`Ab[ b]g`g]hnY" `I`a` `]\b`ZfY]ni`UggYbž`gY]`Y]bY  
\c`Y`?`Ui`h]cb`bch`k`YbX][`"

6Y]`X]YgYf`5fhj`cb`6Yhfi [ `k`]fX`c`Zi`Ya`ch]cbU`Yf`8fi`W`\_`Ui`g[ YØVh"  
8]YgY`6YhfØ[ Yf`g]bX`[ YgW`i`h`XUf]bž`X]Y`Ni` \ØfYf`]b`Y]bYb`Ni`ghUbX  
XYf`5b[ gh`i`bX`J`Yfk`]ffi`b[ `ni` `j`YfgYhnYbž`k`Ug`Yg`XYb`C`dZYfb  
YfgW`k`Yf`hž`X]Y`@Ø[ Yb`ni` `Yf`\_`YbbYb" `ϕ`X]YgYa` `: U``ØVYfbU`a` `Y]b  
k`Y]hYfYf`5bfi`ZYfž`XYf`g]W`U`g`Dc`n]gh`Ui`g[ UVž`X]Y`F`c``Y`XYg  
j`Yfa`Y]b`h]W`Yb`F`Y`hYfgž`k`c`Xi`f`W`X`Ug`J`Y`fhf`Ui`Yb`XYg`À`hYfYb  
<`Yffb`k`Y]hYf`[ YZYgh][`h`k`i`fXY"

### 8 Yf`[ Ub[ `ni`f`6Ub\_

6Yi`bfi` \][`hj`cb`XYf`G]hi`Uh]cb`i`bX`]b`XYf`Gcf[ Y`i`a` `gY]bYb  
Gh]YZgc`b`Zc`[ hY`XYf`F`Yb`hbYf`XYb`5bk`Y]gi`b[ Yb`XYg`ZU`gWYb  
Dc`n]ghYb`i`bX`a`UW`hY`g]W`\_`Ui`Z`XYb`K`Y[ `ni`f`6Ub\_" `8`cfh`hfUZ`Yf  
Ui`ZY]bYb`+,`!`Å\`f][ Yb`6Y`\_`UbbhYb" `8`Yf`:`fYi`bX`nY][`hY`g]W  
g`\_`Ydh]gW`i`bX` \]b`hYfZ`FU[ hY`X]Y` `; YgW`]W`hY`XYg`GYb]cfg" `BYi` [ ]Yf][  
[ Yk`cfXYbž`j`Yfgh`Å`bX][`hY`X]YgYf`X]Y`YW`hY`Dc`nY]"

ϕ·XYf': c`[ Y`bU`a Yb`X]Y`6YUa hYb`XYb`J cfZU`Ui Zi bX`Y]hYhYb  
X]Y`9fa ]hhi b[ Yb`Y]bžk cVY]`XUg`ni gh`AbX][ Y  
?f]a ]bU`\_ca a ]ggUf]Uh' &`X]Y`9fa ]hhi b[ Yb`ØVYfbca a Yb`U`h"9g  
nY][ h]g]W`Y]ba U`a Y`fž`k ]Y`k ]W`h][ `g]bX`gc`W`Y`Nk ]gW`YbZ`Yž  
i a `X]Y`2 ZYb`h]W`\_Y]h`ni `]bZcfa ]YfYb`i bX`ni `gYbg]V`]g]YfYb"

## Dc`]nY]k Ufbi b[ `i bX`Df`Aj Yb]cb

8]Y`Dc`]nY]`8i ]gVi f[ `[ ]Vh`Y]bY`\_`UfY`K Ufbi b[ `Ui g.`8]Y  
; YgW`]W`hYbž`X]Y`GYb]cfYb`VY]`gc`W`Yb`5bfi ZYb`df`AgYb]Yfh  
k YfXYbž]g]bX`[ i h`Xi fW`XUW`h"6YhfØ[ Yf`bi hYb`XUg  
dgmW`c`c[ ]gW`Y`<UbXk Yf`\_nYi [ `Ui gž`i a `J YfhfUi Yb`ni `[ Yk ]bbYb  
i bX`XYb`CdZYfb`i fW`h`ni `a UW`Yb"9W`hY`Dc`]n]ghYb`k YfXYb  
b]Ya U`g`6Uf[ Y`X`UbZcfXYfb ž`gc`Y]b`Dc`]nY]gdfYW`Yf"6Y]`J YfXUW`h  
Ui Z6Yhfi [ `gc`h`Y`a Ub`]a a Yf`a ]gghfUi ]gW`gY]b`i bX`X]Y`Y][ YbY  
: Ua `]Y`cXYf`X]Y`Dc`]nY]`ØVYf`X]Y`VY`\_Ubb`hYb`Bi a a Yfb  
\_cb`hU`\_h]YfYb"8Ug`Y]bZUW`Y`5i ZY[ Yb`XYg`HY`YZcbg`\_Ubb`cZi`Y]bY  
dchYbn]Y`[ YZ`A`f`]W`Y`G]hi Uh]cb`Yb`hgW`A`fZYb"

K Ybb`G]Y`cXYf`Ya UbXž`XYb`G]Y`\_YbbYbž`5bnY]W`Yb`Y]bYg  
gc`W`Yb`6Yhfi [ g`VYa Yf`\_Ybž`]gh`gW`bY`Yg`<UbXY`b`[ YZfU[ h`Dc`]nY]  
i bX`H`hYf`UfVY]hYb`i bhYf`<cW`Xfi W`\_i bX`Yg`]gh`Yb`hgW`Y]XYbXž  
XUgg`dchYbn]Y`Y`CdZYf`b]W`h]gc`]Yfh]g]bXž`gcbXYfb`Y]bYb`X]fY`\_hYb  
8fU`h`ni f`FYU`]h`h`UVYb"9g`]gh`Ui W`k ]W`h][ ž`ØVYf`X]YgY  
Jcf[ Y`Ybgk Y]gYb`Ui Zni `A`fYbž`i a `UbXYfY`ni `k UfbYb`i bX`gc`XUg  
F]g]\_c`ni `j Yfa ]bXYfbž`]b`X]Y` : U`Y`ni `hUddYb"

ϕZcfa Uh]j Yg`ni f`6Y`\_Aa dZi b[ `gc`W`Yf`A Uf`\_Yh]b[ a Yh`cXYb`i bX  
k Y]hYfYb`6Yhfi [ gUfhYb`Z]bXYb`ϕhYfYgg]YfhY`Ui Z`XYb`cZ]n]Y`Yb  
GY]hYb`XYf`Dc`]nY]"9g`k ]fX`[ YfU`hYbž]g]W`fY[ Y`a `A»][ `ØVYf`U`hi Y`Y  
HfYbXg`i bX`A Yh`cXYb`ni `]bZcfa ]YfYbž`i a `ghYhg`[ Yk UddbYh`ni  
gY]b"

## 6Yk i gghgY]b`ZØf`X]Y` ; YZU`fYb`ghY][ Yfb

8]YgYf`JcfZU`nY][ hž`k ]Y`Yb`hgW`Y]XYbX`Yg`]ghž`]bgVYgcbXYfY`]b`XYf  
NY]h`XYg`hYW`bc`c[ ]gW`Yb`K UbXY`gž`Ui Za Yf`\_gUa `i bX  
a ]gghfUi ]gW`ni `gY]b"8]Y`5V[ fYbni b[ `j cb`FYU`]h`h`i bX`6Yhfi [

k ]fX`Xi fW`Ya ch]cbU`Y`A Ub]di `Uh]cb`YfgWk Yfhž`XU\Yf`gc`hY`  
`YXYf`6Øf[ Yfž`]bgVYgcbXYfY`À`hYfY`A YbgWYbž`g]W`ØVYf`  
dchYbn]Y`Y`6Yhfi [ ga UgWYb`]bZcfa ]YfYb`i bX`[ Y[ YVYbYbZU`g`F Uh  
VY]`XYb`5b[ Y\Øf][ Yb`gi`WYb`"8]Y`5i Z`Àfi b[ `ØVYf`gc`WY`  
6Yhfi [ gj Yfgi`WY`]ghi bYf`Àgg`]Wž`i a`X]Y`G]WYf\Y]h`b`XYf`  
; Ya Y]bgWUZh`ini`VYk U\fyb`i bX`GWk`ÀWYfY`j`cf`dchYbn]Y`Yb`  
; YZU\fyb`ni`gW`ØhYb`"

; YgY`gW UZh`]WY`5i gk ]f`\_i b[ Yb`j`cb`  
6Yhfi [ ga UgWYb`

8]Y`Ni bU`a`Y`j`cb`6Yhfi [ gZ`Ybž`]bgVYgcbXYfY`GW`cW`Ubfi`ZYbž`  
\Uh`b]W`h`bi`f`X]fY`\_hY`Z]bUbn]Y`Y`?`cbgYei`YbnYb`ZØf`X]Y`C`d`ZYfž`  
gcbXYfb`Ui`W`k`Y]hfY]WYbXY`[ YgY`gW UZh`]WY`5i gk ]f`\_i b[ Yb`  
GYb]cfYb`g]bX`\`Ài`Z][`N]Y`gc`WYf`6YhfØ[ YfY]Ybž`k`Ug`XUg`  
J`YfhfUi`Yb`XYf`À`hYfYb`;`YbYfUh]cb`]b`HY`Y`Zc`b`\_`ca`a`i`b]\_Uh]cbYb`  
i`bX`8]YbghY`XYf`6Y\`ØfXYb`Yf\YV`]W`VYY]bhf`ÀW`h][`Yb`\_`Ubb`"  
Gc`WY`5b[ f]ZY`Ui`Z`X]Y`dgmW]gWY`;`Ygi`bX\Y]h`XYf`6Yhfc`ZYbYb`  
g]bX`j`Yf\YYfYbX`/j`]Y`Y`ZØ\`Yb`g]W`X`]\`Zcg`i`bX`j`cb`5b[ Y\Øf][ Yb`  
]gc`]Yfh`"

8]Y`Ya`ch]cbU`Y`6Y`Ughi`b[ ž`X]Y`Ui`g`gc`WYb`6Yhfi [ ggnYbUf]Yb`  
fYgi`h]Yfhž`\_Ubb`ni`Y]bYa`Yf\`Ø`hYb`GhfYggb]j`YUi`ZØ\fybž`k`Ug`  
`Ub[ Zf]gh][`X]Y`d`mg]gWY`i`bX`dgmW]gWY`;`Ygi`bX\Y]h`  
VYY]bhf`ÀW`h][`Yb`\_`Ubb`"9]bY`Ghi`X]Y`XYg`6i`bXYg`\_f]a`]bU`Ua`hg`  
f6?`5Ě`nY][`hž`XUgg`X]Y`8i`b`\_`Y`n]ZYf`VY]`gc`WYb`6Yhfi [ gZ`Yb`gY\`f`  
\`cW`]ghž`XU`j`]Y`Y`C`d`ZYf`g]W`gW`Àa`Ybž`ni`f`Dc`]nY]`ni`[ Y\Yb`cXYf`  
]\fy`9fZU\fi`b[ Yb`ni`hY]`Yb`"8`Ug`ZØfXYfh`Y]bY`?`i`hi`f`XYg`  
GW`k`Y][`Ybg`i`bX`XYf`i`bg]WYf\Y]h`"

5`\_`hi`Y`Y`GhUh]gh]\_Yb`ni`6Yhfi [ gZ`Yb`]b`  
8`Yi`hgW`UbX`

@Ui`h`XYa`i`6i`bXYg`\_f]a`]bU`Ua`h`f6?`5Ě`g]bX`6Yhfi [ gXY`]hYž`  
Y]bgW`Y]Y`]W`GW`cW`Ubfi`ZYž`]b`XYb`Y`h`hYb`X\fyb`g][`b]Z`\_`Ubh`  
Ub[ Ygh]Y[ Yb`"Ě`XYf`Dc`]nY]`]WYb`?`f]a`]bU`ghUh]gh]\_`&`\$`&`k`i`fXYb`  
ØVYf`%`\$`\$`\$`\$`6Yhfi [ gZ`Y`YfZUgghž`k`cVY]`X]Y`H`hYf`c`Zh[ `i`h`

cf[ Ub]g]YfhY`B Yhmk Yf\_Y`V]`XYb"

8]Y`8 UhYb`nY][ Ybž`XUgg`GYb]cfYb`VYgcbXYfg`VYhfc ZYb`g]bX.`

- 8]Y`C dZYf[ fi ddY`XYf`ØVYf`\*) !>À\ f][ Yb`ghY``h`ØVYf`) \$i U``Yf`6Yhfi [ gcdZYf`XUf"
- : Ugh(` \$i` `XYf`6YZfU[ hYb`[ UVYb`Ubž`VYfY]hg`Y]ba U``Y]bYb 6Yhfi [ gj Yfgi W\`Yf`YVh`ni` \`UVYb"
- 8Yf`Z]bUb n]Y``Y`GW\ UXYb`ZØf`X]Y`6Yhfc ZYbYb`VYk Y[ h]g]W\ \`Ài Z][ `]a` ZØbZ`V]g`gYW\gghY``][ Yb`6YfY]W\ "

8]YgY`NU\`Yb`j YfXYi h]W\Ybž`k ]Y`Xf]b[ YbX`5i Z\_`Àfi b[ `i bX DfÀj Ybh]cb`bchk YbX][ `g]bXž`i a` dchYbn]Y``Y`C dZYf`j cf`XYb fUZ]b]YfhYb`A Yh\cXYb`j cb`6YhfØ[ Yfb`ni` gW\ØmYb"

## DfÀj Ybh]cbga U» bU\ a Yb`i bX`5i Z\_`Àfi b[

8]Y`Dc`nY]`i bX`j YfgW\]YXYbY`C f[ Ub]gUh]cbYb`\UVYb`i a ZUggYbXY ðZcfa Uh]cbg\_Ua`dU[ bYb`]bg`@YVYb`[ Yfi ZYbž`i a`A YbgW\Yb`ØVYf X]Y`; YZU\ fYb`j cb`GW\cW\_Ubfi ZYb`Ui Zni`\_`ÀfYb"8]YgY`?Ua`dU[ bYb VY]b\U`hYb`K cf\_g\cdgž`ðZcfa Uh]cbgj YfUbghU`hi b[ Yb`i bX`X]Y JYfhY]`i b[ `j cb`:`mYfbž`X]Y`GYb]cfYb`ØVYf`g]W\YfY JYf\U`hYbgk Y]gYb`]a`l a [ Ub[ `a ]h`HY`YZcbUbfi ZYb`]bZcfa ]YfYb"'

5i W\`]b`gcn]U`Yb`A YX]Yb`k ]fX`j Yfgi W\hž`n]Y`[ Yf]W\hYhY ðZcfa Uh]cbYb`VYfY]hni ghY``Yb"8]Y`Dc`nY]`fÀhž`VY]`J YfXUW\h`Ui Z Y]bYb`6Yhfi [ gj Yfgi W\`gcZcfh`X]Y`Dc`nY]`i bhYf`XYf`Bi a a Yf`%%\$ ni`\_`cbhU`h]YfYb`i bX`\_Y]bY`dYfgØb`]W\Yb`8 UhYb`cXYf`Z]bUb n]Y``Yb ðZcfa Uh]cbYb`dfY]gni [ YVYb"'

Ni gÀh`]W\`UVYb`nU\`fY]W\Y`; Ya Y]bXYb`VYgcbXYfY 6YfUhi b[ g[ YgdfÀW\Y`ZØf`À`hYfY`A YbgW\Yb`cf[ Ub]g]Yfhž`i a` ]\bYb XYb`l a [ Ub[ `a ]h`gc`W\Yb`6YXfc\i b[ Yb`bÀ\Yf`ni`Vf]b[ Yb`i bX ]\fY`X][ ]hU`Y`?ca`dYhYbn`ni`ghÀf`\_Yb"

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