

9]b`gY`hYbYf` ; ][ Ubh.`Nk Y]h[ fÒ» hYf  
8 ]Ua Ubh`XYf`K Y`h`ja `6chgk UbU`YbhXYW\_h

9]b`Ui » Yf[ Yk Ò\b`]WXYf`&"( - &! ? UfUh!8 ]Ua Ubh`k i fXY`]b  
6chgk UbUg`? Ufck Y!A ]bY`YbhXYW\_hž`XYf`nk Y]h[ fÒ» hY  
k Y`hk Y]h` `Yhnh`k ]fX`ØVYf`gY]bYb`K Yfh`gdY`\_i `]Yfh`

9]b`VYa Yf\_Ybgk YfhYf` : i bX`\Uh`Øb[ gh`X]Y`5i Za Yf\_gUa \_Y]h`XYf  
K Y`h`Ui Z`g]W` [ Ync[ Yb.`b`Y]bYf`8 ]Ua Ubh`Yba ]bY`]a `6chgk UbU  
k i fXY`Y]b`Ui » Yf[ Yk Ò\b`]WXYf`F c`X]Ua Ubh`YbhXYW\_hž`XYf`a ]h  
gY]bYb`&"( - &! ? UfUh`U`g`XYf`nk Y]h[ fÒ» hY`XYf`K Y`h`[ ]`h`8 ]YgY  
VYa Yf\_Ybgk YfhY`9bhXYW\_i b[ ž`X]Y`Ua `8cbbYfghU[ `j`cb`XYf  
\_UbUX]gW`Yb`6Yf[ VUi [ YgY`gW`UZh`@ WfU`VY`Ubbh`[ Y[ YVYb  
k i fXYž`k ]fZh`Y]b`@]W`h`Ui Z`X]Y`\_c`bh]bi ]Yf`]W`Yb`9fZc`[ Y`XYg`@UbXYg  
]a `8 ]Ua Ubh`YbUVVUi "

8 Yf`[ Yk U`h][ Y`8 ]Ua Ubh`ž`XYf`]b`XYf`? Ufck Y!A ]bY`]a `BcfXcghYb  
j`cb`6chgk UbU`[ YZ`bXYb`k i fXYž`k ]Y[ h`i b[ YZ`A`f`Y]b`\U`VYg  
?]`c[ fUa a`i bX`]gh`\_Ui a` [ fÒ» Yf`U`g`Y]bY`a YbgW`]W`Y  
< UbXZ`A`W`Y" `@ WfU`VYgW`fY]Vh`XYb`GhY]b`U`g` Y]bYb`XYf`[ fÒ» hYb  
`Ya U`g`YbhXYW\_hYb`F c`X]Ua Ubh`Yb" `Y`b`]W`k ]Y`]b`XYb  
j`Yf[ Ub[ YbYb`[ fc» Yb` : i bXYb`k ]fX`X]YgYf`GhY]b`ni`Y]bYa  
k ]W`h][ Yb`H`Ya U`Z`Øf`X]Y`8 ]Ua Ubh`Yb]bXi`ghf]Y`i bX`\_ØbbhY  
a Ò[ `]W`Yfk Y]gY`Y]bYb`Yf`YV`]W`Yb`K Yfh`\UVYb"

8 ]Y`6YXYi hi b[ `XYg`9bhXYW\_i b[ gc fhg

6chgk UbU`\Uh`g]W`U`g`Z`Ø`f`YbXYf`< YfghY`Yf`j`cb`8 ]Ua Ubh`Yb`]b  
5Zf`\_U`YhUV`]Yfhž`i bX`X]Y`? Ufck Y!A ]bY`]gh`b]W`h`bi`f`Y]bY`E`i`Y`Y  
k Yfh`j`c`Yf`9XY`ghY]bYž`gcbXYfb`Ui W`Y]b`Gma`Vc`Z`Øf`XYb`9fZc`[ `]b  
XYf`6Yf[ VUi ]bXi`ghf]Y`XYg`@UbXYg`8 Yf`8 ]Ua Ubh`ž`XYf`bi`b`X]Y  
]bhYfbUh]cbU`Yb`GW`U[ nY]Yb`Xca ]b]Yfhž`]gh`bUW`XYa`Y`[ YbX`A`fYb

7i ``]bUb !8 ]Ua UbhYbžXYf%- \$) `]b`GØXUZF]\_U`YbhXYW\_h`k i fXY  
i bX`X]Y`VYY]bXfi W\_YbXY` ; fØ» Y`j cb`ØVYf" "%\$ \$`? UfUh`UhžXYf  
nk Y]h[ fØ» hY`VY\_UbbhY`F c`X]Ua Ubh`"8]YgYf` : i bX`\_ØbbhY`Ui W`X]Y  
5i gY]bUbXYfgYhni b[ `i a `X]Y`k Yfhj c``Yb`F Yggci fW`b`XYg`@UbXYg  
VYY]bZi ggYb"

K ]``]Ua `@Ja VžXYf`79C`j cb`@ WUfUž`Ài » YfhY`g]W`VY[ Y]ghYfh`ØVYf  
XYb` : i bX.` K ]f`g]bX`VY[ Y]ghYfhž`X]YgYb`Ui » Yf[ Yk`Ø`b`]W`Yb  
8]Ua UbhYb`[ YZ] bXYb`ni `UVYb" `CVk c`X]Y`[ YbUi Yb`8YhU]`g`ni f  
E i U`]h`h`i bX`XYa `K Yfh`XYg`8]Ua UbhYb`bcW`Ui gghY`Ybž  
VYf]W`hY`XUg` : ]bUbW]U`H]a Ygž`XUgg`XYf`GhY]b`a`Ø[ `]W`Yfk Y]gY  
a Y`f`U`g`(\$`A`])`cbYb`8c`Uf`k Yfh`gY]b`\_ØbbhY" `Gc`W`Y  
GW`Àni b[ Yb`g]bX`Y`XcW`c`Zh`a`h`J`c`fg]W`h`ni`[ Yb]Y» Ybž`XU`g]Y  
j cb`j YfgW`YXYbYb` : U`hc`fYb`UV`Àb[ ] [ `g]bXž`Y]bgW`Y]Y» `]W`XYf  
A Uf`hbUW`ZfU[ Y`i bX`XYf`]XYU`Y`J YfUfVY]hi b[ `XYg`GhY]bg"

9g`]gh`b]W`h`XUg`YfghY`A U`ž`XUgg`6`chgk UbU`a`]h`Y]bYf`gc`W`  
VYa Yf`\_Ybgk YfhYb`9bhXYW`i b[ `Ui Zk UfhYh" , VYf`X]Y`U`fY`U`h`XUg  
@UbX`]a a Yf`k ]YXYf`F c`X]Ua UbhYb`j cb`VYY]bXfi W\_YbXYf` ; fØ» Y  
`Yfj`cf[ YVfUW`hž`X]Y`b]W`h`bi`f`X]Y`6Yf[ VUi ]bXi`ghf]Y`VY`VYbž  
gcbXYfb`Ui W`X]Y`K ]fhgW`UZh`XYg`@UbXYg`]bg[ YgUa`h`Ub`\_i`fVY`b"  
8]Y`k`Yfhj`c``Yb` : i bXY`i`bhYfgh`Ø`hnYb`Ui W`X]Y`6Ya`Ø`i`b[ Yb`XYf  
FY[ ]Yfi b[ ž`XUg`@UbX`U`g`Y]b`UhhfU`\_h] Yg`N]Y`ZØf`#j Ygh]h]cbYb`]b  
XYb`6Yf[ VUi gY`\_hcf`ni`dcg]h]cb]YfYb"

8 Yf`k ]fhgW`UZh`]W`Y`9]bZ`i`gg`i`bX`X]Y`Ni`\_i`bZh  
XYg`8]Ua UbhYba Uf`\_hYg

8]Y`9bhXYW`i b[ `Y]bYg`gc`[ fc» Yb`8]Ua UbhYb`U`h`XUg`DchYbn]U`ž  
XYb`[ `cVU`Yb`8]Ua UbhYba Uf`\_h`ni`VYY]bZi ggYb" `5bU`mgH`b`g]bX  
[ YgdUbbhž`k`Y`W`Y`5i`gk ]f`\_i`b[ Yb`X]YgYf` : i bX`Ui`ZX]Y`5b[ YVchg!  
i bX`DfY]ghfYbXg`UVYb`\_ØbbhYž`]bgVYgcbXYfY`k`Ybb`a`Ub  
VYXYb`\_hž`XUgg` ; fc» X]Ua UbhYb`c`Zh`c`Y`DfY]gY`Yfn]Y`Yb`i`bX`U`g  
5b`U[ Ya`Ø[ `]W`\_Y]h`Ub[ YgY`Yb`k`YfXYb`\_ØbbhYb"

8]Ua UbhYb`g]bX`gY]h`Ub[ Ya`Y]b`Gma`Vc`ZØf`FY]W`hi`a`i`bX`@`I`i`gž  
i bX`]`fY`GY`hYb`Y]h`\_Ubb`g]Y`ni`Y]bYa`k`]W`h][ Yb`?`Ud]hU`ZØf  
9]bnY`dYfgcbYb`i`bX`I`bhYfbY`a`Yb`a`UW`Yb" `8]Y`6Ub`\_Yb`i`bX

⊕j YghcfYb`\_ÖbbhYb`j YfghÄf\_h`⊕hYfYggY`Ub`F c\X]Ua UbhYb`nY][ Ybž  
]bgVYgcbXYfY`ja`<]bV`]W`\_Ui Z`X]Y`a`Ö[ `]W`Y`? Ud]hU`fYbX]hY`Ui`g`XYf  
J YfUfVY]hi b[ `i`bX`XYa` `J Yf`\_Ui`Z`gc`W`Yf`gY`hYbYb`GhØW`\_Y`"

8 Yf` : i`bX`XYg`8]Ua UbhYb`\_ÖbbhY`ni XYa` `X]Y`5\_h]j ]hÄhYb`]a  
6YfY]W`XYf` : cfgW`i b[ `i`bX`9fgW`]Y»i b[ `bYi`Yf`HYW`bc`c[ ]Yb`ZØf  
XYb`6Yf[ VUi`\_Ub`\_i`fVY`b`"8]Y`Gi`W`Y`bUW`k`Y]hYfYb`[ fc»Yb  
 : i`bXYb`\_ÖbbhY`Xi`fW`]bbcj`Uh]j`Y`HYW`b]\_Yb`i`bX`5i`gfØghi`b[ Yb  
cdh]a ]Yfh`k`YfXYbž`k`Ug`XYb`6Yf[ VUi`\_]b`6chgk`UbU`i`bX`XUfØVYf  
\]bUi`g`bYi`Y`<cf]ncbhY`YfØZbYb`\_ÖbbhY`"

8]Y`[ `cVU`Y`5i`Za`Yf`\_gUa`\_Y]hž`X]Y`Ui`Z`X]YgYb`bYi`YghYb` : i`bX  
[ Yf]W`hYh]ghž`nY][ h`XUg`Zc`fhk`Ä`fYbXY`⊕hYfYggY`Ub`8]Ua UbhYbž  
gck`c`\`U`g`GW`a`i`W`\_ghØW`\_U`g`Ui`W`\_U`g`F`Yggci`fW`"8]Y`bÄW`ghY  
NY]h`k`]fX`nY][ Ybž`k`]Y`g]W`X]YgYf`VYa`Yf`\_Ybgk`YfhY` : i`bX  
Yb`hk`]W`\_Y`b`k`]fX`i`bX`k`Y`W`Y`k`Y]hYfYb` , VYffUgW`i`b[ Yb`6chgk`UbU  
]b`XYf`Ni`\_i`bZn`VYfY]h\Ä`h`"

6YgcbXYfY`6YUW`hi`b[ `U``XYa` `ghY`h`XYf`ghYh][ Y`K`i`bgW`XYf  
A`YbgW`Ybž`GW`ÖbYg`i`bX`GY`hYbYg`ni`VYg]hnYb`"⊕`NY]hYb`j`cb  
ghY][ YbXYb`DfY]gYb`]b`j`]Y`Yb`GY[ a`Yb`hYbž`ghY`h`X]Y  
K`YfhghY][ Yfi`b[ `j`cb`F`c`X]Ua UbhYb`Y]bY`gdUbbYbXY`C`dh]cb`XUf`  
gck`c`\`ZØf`GUa`a`Yf`U`g`Ui`W`ZØf`⊕j`YghcfYb`"

8 Yf`\_Øfn`]W`Yb`hXYW`\_hY`8]Ua Ubh`h`Uh`]b`hYfb`Uh]cb`U`Y  
5i`Za`Yf`\_gUa`\_Y]h`YffY[ hž`b]W`h`bi`f`Ui`Z[ fi`bX`gY]bYf` ; fØ»Yž  
gcbXYfb`Ui`W`k`Y[ Yb`XYf`VYXYi`hYbXYb`k`]fhgW`UZh]W`Yb`i`bX  
gcn]U`Yb`5i`gk`]f`\_i`b[ Ybž`X]Y`gY]bY`9b`hXYW`i`b[ `Ui`Z`XUg`6chgk`UbU  
i`bX`X]Y`8]Ua UbhYb]bXi`ghf]Y`\UVYb`\_ÖbbhY`"6chgk`UbU`\Uh]g]W`]b  
XYb`Y`h`hYb`⊕\fnY`b`hYb`U`g`Y]bYf`XYf`ZØ`fYbXYb`DfcXi`nYb`hYb  
j`cb`8]Ua UbhYb`Y`hUV`]Yfh`8]Y`8]Ua UbhYb]bXi`ghf]Y`]ghY]bY`XYf  
<Ui`dhghØhnYb`XYf`V`chgk`UbYg]gW`Yb`k`]fhgW`UZh`i`bX`hfÄ[ h  
Yf\YV`]W`ni`XYb`9l`dcfhYf`ÖgYb`i`bX`ni`a`6`⊕`XYg`@UbXYg`VY]"

8]Y`A`]bY`j`cb`?Ufck`Yž]b`XYf`XYf`8]Ua Ubh`[ YZ]bXYb`k`i`fXYž`gd]Y`h  
Y]bY`nYbhf`U`Y`F`c`Y`]b`XYf`Ghf`UhY[ ]Y`6chgk`UbUgž`i`a`gY]bY  
9]bbU`a`Yb`ni`X]j`Yfg]Z]n]YfYb`"8]Y`F`Y[ ]Yfi`b[ `h`Uh]b`XYf  
J`Yf[ Ub[ Yb`Y]h`⊕]h]Uh]j`Yb`Yf[ f]ZZYbž`i`a`X]Y`5V`Äb[ ][ \_Y]h]j`cb

8]Ua UbhYb`ni`fYXi`n]YfYbž`k`Å`fYbX`[`Y]W`nY]h[`X]Y`9fgW`Y»`i`b[  
bYi`Yf`HYW`bc`c[`]Yb`i`bX`X]Y`:`ÖfXYfi`b[`j`cb`æ]bh`J`Ybhi`fYg`]b`XYf`  
A`]bYb]bXi`ghf]Y`j`cfU`b[`Yhf]YVYb`k`i`fXYb`"8]Yg`\_ÖbbhY`X]Y`  
;`fi`bX`U[`Y`ZÖf`Y]bY`bUW`U`h[`Y`k`]fhgW`UZh]W`Y`9bhk`]W`\_i`b[  
`Y[`Ybž`X]Y`ØVYf`X]Y`@YVYbgXUi`Yf`XYf`8]Ua UbhYb`fYgYfj`Yb`  
`]bUi`g[`Y`h`"

## K`]fhgW`UZh]W`Y`6YXYi`hi`b[`ZÖf`6c`hgk`Ub`U`

8]Y`k`]fhgW`UZh]W`Y`6YXYi`hi`b[`j`cb`8]Ua UbhYb`ZÖf`6c`hgk`Ub`U`  
\_Ubb`\_Ui`a`ØVYfgW`Åhnh`k`YfXYb`"G]Y`a`UW`Yb`Y]bYb`k`YgYbh]W`Yb`  
HY]`XYf`bUh]cb`U`Yb`9]bb`U`a`Yb`Ui`g`i`bX`U`UVYb`X`Uni`VY][`YhfU[`Ybž`  
X`Ugg`6c`hgk`Ub`U`ni`Y]bYa`X`Yf`ghUV]`ghYb`i`bX`k`c`U`UVYb`X`ghYb`  
@ÅbXYf`]b`5Zf]\_U`[`Yk`cfXYb`]gh`"@Ui`h`XYf`K`Y`hV`Ub`\_`hfi`[`Yb`  
8]Ua UbhYb`nk`]gW`Yb`%-`-`,`i`bX`&\$%,`Yhk`U`&)`i`ni`a`6`Ð`VY]`i`bX`  
k`UfYb`Y]bY`<`Ui`dhei`Y`Y`ZÖf`GhUUhgUi`g[`UVYb`i`bX`  
9bhk`]W`\_i`b[`gdfc[`fUa`a`Y`"

A`]h`XYf`9bhXYW`\_i`b[`X`Yg`bYi`Yb`8]Ua UbhYb`k`]fX`Yfk`UfhYhž`X`Ugg`  
X]Yg`b]W`h`bi`f`\_i`fnZf]gh[`Y`9]b`\_ØbZhY`ZÖf`X]Y`@`WfU`8]Ua`cbX`  
7`cf`d`cfUh]cb`[`YbYf]Yfhž`gc`bXYfb`Ui`W`U`Ub[`Zf]gh[`Y`k`]fhgW`UZh]W`Y`  
J`cfhY]Y`ZÖf`X`Ug`@UbX`Vf]b[`Yb`\_ÖbbhY`ž`n`"6`"Xi`fW`X]fY`\_hY`i`bX`  
]bX]fY`\_hY`5`fVY]hg`d`Å`hnY`]b`XYf`A`]bYb]bXi`ghf]Y`i`bX`Ub[`fYbnYbXYb`  
GY`\_hc`fYb`"5`i`W`X]Y`A`Ö[`]W`\_Y]hž`X]YgYb`8]Ua UbhYb`Ui`Z`  
]bhYfbUh]cb`U`Yb`A`Åf`\_hYb`ni`j`Yf`\_Ui`ZYbž`\_ÖbbhY`X]Y`k`]fhgW`UZh]W`Y`  
G]hi`Uh]cb`]b`6c`hgk`Ub`U`k`Y]hYf`gh`Åf`\_Yb`"

## <`]ghc`f]gW`Y`DUfU`Y`Y`b`

8]Y`9bhXYW`\_i`b[`]fc»`Yf`8]Ua UbhYb`]gh`b]W`h`bYi`i`bX`U`h]b`XYf`  
J`Yf[`Ub[`Yb`Y]h`c`Zh`Å`b`]W`Y`F`YU`\_h]cbYb`Y`Yfj`cf[`Yfi`ZYb`"8`Yf`  
7`i`""bUb!8]Ua Ubhž`XYf`%-`\$)`]b`GØXUZf]\_U`Yb`hXYW`\_h`k`i`fXYž`]gh`Y]b`  
VYa`Yf`\_Ybgk`YfhYg`6Y]gd]Y`""9f`U`hY`""%\$\*`?`UfU`h`i`bX`k`i`fXY`]b`  
j`]Y`Y`VY`\_UbbhY`GhY]bY`[`YgW`]ZZYbž`X]Y`Y`i`hY`HY]`XYf`Vf]h]gW`Yb`  
?`fcb`↑`k`Y`Yb`g]bX`"8]Y`9bhXYW`\_i`b[`]XYg`7`i`""bUb!8]Ua UbhYb`  
ZÖ`fhY`ni`Y]bYa`]bhYfbUh]cb`U`Yb`5`i`ZgW`k`i`b[`]ZÖf`X]Y`  
8]Ua UbhYb]bXi`ghf]Y`i`bX`j`YfVYggYfhY`X]Y`k`]fhgW`UZh]W`Y`G]hi`Uh]cb`  
]b`GØXUZf]\_U`Yf`YV`]W`"

9]b`k Y]hYfYf`\[ghcf]gWk Yf`J Yf[ `Y]Wk `]gh`XYf`GhUf`cZ`G]YffU`@YcbYž  
Y]b`- \* , ž- `? UfUh`gWk k YfYf`8]Ua Ubhž`XYf`%- +&]b`G]YffU`@YcbY  
[ YZi bXYb`k i fXY`"C V k c`\"X]YgY`9bhXYW\_i b[ `YVYbZU`g  
k ]fhgWk UZh]Wk Y`J c fhY]`Y`VfUWk hYž`k Uf`g]Y`Ui Wk `j cb`dc`h]gWk Yb  
i bX`gcn]U`Yb`Hi fVi `YbnYb`[ YdfÄ[ hž`X]Y`ni f`bghUV]`]hÄh]b`XYf  
FY[ ]cb`Z0\fhYb`"a `I bhYfgWk]YX`XUni `Uhi`6chgk UbU`Y]bY  
ghUV]`YfY`dc`h]gWk Y`@U[ Yž`k Ug`X]Y`7\UbW`b`Ui Z`Y]bY`dcg]h]j Y  
k ]fhgWk UZh]Wk Y`9bhk ]W\_i b[ `Xi fWk`X]Y`U\_hi Y`Y`9bhXYW\_i b[  
Yf\0\h"

8]Y`DUfU`Y`Yb`nY][ Ybž`XUgg`k Ä`fYbX`X]Y`9bhXYW\_i b[ `j cb  
8]Ua UbhYb`cZhi`U`g`k ]fhgWk UZh]Wk Yf`fYi XYbhUn`VY[ ]bbhž`X]Y  
bUWk`U`h][ Yb`c`[ Yb`Z0f`X]Y`YgY`gWk UZhž`K ]fhgWk UZhi bX`Dc`h]\_  
a Y]ghj Uf]]YfYbž`UV\Äb[ ][ `j ca`Yk Y][ Yb`?cbhYI hi bX`XYb  
GhUV]`]hÄh`XYg`@UbXYg`8]Y`Yhn][ Y`G]hi Uh]cb`]b`6chgk UbU`V]YhYh  
XU`Yf`Y]bY`j ]Y`j YfgdfYWk YbXYfY`fi bX`U[ Y`Z0f`XUg`Ub[ Zf]gh][ Y  
K c`\"XYg`@UbXYg]a`J Yf[ `Y]Wk`ni`UbXYfYb`\"ghcf]gWk Yb  
?cbhYI hYb"

8YhU]`g

6Ygi Wk Yb`G]Y`i bg`Ui Z.`b!U[ "XY