

# K Ufi a 'X]Y`L Vcl !J Yfg]cb`j cb`6`UW\_ A mh\ .`K i \_cb[ `Ui Z'g]Wk`k UfhYb``Àggh

K i \_cb[ !: Ubg'a ØggYb`Ui ZXYf`L Vcl`k UfhYb.`HYW`b]gW`Y  
DfcV`Ya`Y`j YfnØ[ Yfb`X]Y`J YfØZYbh]W`i b[ `XYg`VY[ Y`fhYb  
5Wh]cb!FD;`g"

8 Ug`5Wh]cb!Fc`Ybgd]Y`6`UW`A mh\ .`K i \_cb[ `U`h`gY]h`gY]bYf  
J YfØZYbh]W`i b[ `Ua`&\$`"5i [ i gh&\$&( ž`ZØf`i fcfY`[ Ygcf[ h`8]Y  
Gd]Y`YfnU`Yb`YI d`cX]YfhYb`ZØfa`]W`ž`a`]h`ØVYf`&ž( `A`j`)]cbYb  
Bi`hYfb`Ui`ZGHYUa`i`bX`a`Y`f`U`g`%\$`A`j`)]cbYb`j`Yf`\_`Ui`ZhYb  
9]b`Y]hYb`]b`bi`f`XfY]`HU[ Yb`"8]YgY`VYY]bXfi`W`YbXYb`NU`Yb  
nYi [ Yb`j`cb`XYf`c`Yb`BUW`ZfU[ Y`i`bX`XYa`[ fc»Yb`ϕ`hYfYggY`]b  
XYf`;`Ua`]b[ !7ca`a`i`b]hm`"9g[ ]Vh`YXcW`Y]bYb`K`Yfa`i`hghfcdZYb.  
L Vcl !Gd]Y`Yf`\_`cbbhYb`XUg`Gd]Y`V]g`Ub[ `b]W`h]b`]`fYa`Gcfh]a`Ybh  
Z]bXYb"

ϕ`G`Ybn`Ybž`7`]bUž`U`h`X]Y`9bhk`]W`i`b[ `j`cb`6`UW`A mh\  
K i \_cb[ `j`]Y`5i`Za`Yf`\_`gUa`\_Y]h`YffY[ hž]cf`U`Ya`k`Y]`Yg`V]g`Yhnh  
bi`f`ZØf`D7`i`bX`DG) `Yf`A`h]W`]gh`"8]Yg`U`h`ni`9bh`h`A`i`gW`i`b[ `i`bX  
:`fi`ghfU]cb`i`bhYf`XYb`Gd]Y`Yfb`[ YZØ`fhž`X]Y`Ui`ZXYf`L Vcl`gd]Y`Yb  
i`bX`Ui`ZXUg`Gd]Y`[ Yk`UfhYh`UVYb`"ϕ`XYf`FY[ Y`k`]fX`j`cb`[ fc»Yb  
H]hY`b`Yfk`UfhYhž`XUgg`g]Y`Ui`Za`Y`f`YfYb`D`U`h`Zcfa`Yb`[ `Y]W`nY]h[  
j`YfØZYbh]W`h`k`YfXYbž`XcW`]b`X]YgYa`i`U`U`U`h`g]W`X]Y`G]h`U]cb  
UbXYfg`Ybhk`]W`Y`h"

## HYW`b]gW`Y`<`YfUi`gZcfXYfi`b[`Yb`Ui`Z`XYf` L Vcl

8 Yf`;`fi`bX`ZØf`X]Y`J`YfnØ[ Yfi`b[ `XYf`L Vcl !J Yfg]cb`g]bX`hYW`b]gW`Y  
DfcV`Ya`Y`"@Ui`hXYa`gdUb]gW`Yb`@YU`\_Yf`YL`hUg`%g`[ ]Vh`Yg  
GW`k`]Yf[ ]\_Y]hYb`a`]h`Y]bYa`gc[ YbUbbhYb`A`Ya`cfmi`@YU`"8]Yg

VYnY]W\ bYh'Y]bYb': Y\`Yfz'VY]`XYa`XUg'Gd]Y`a`Y\`5fVY]hggdY]W\Yf  
j`YfVfUi`W\hž`U`g`Yg'gc`hYž`k`Ug`ni`5VghØfnYb`i`bX`DYfZc`fa`UbW!  
DfcV`Ya`Yb`Ui`Z`XYf`L`Vcl`!`?`cbgc`Y`ZØ\`fYb`\_`Ubb``Gc`W\Y`6i`[`g`g]bX  
b]W\h`bi`f`Àf[`Yf`]W\ž`gcbXYfb`\_`ÖbbYb`XUg`[`YgUa`hY`Gd]Y`Yf`YVb]g  
ghUf`\_`VYY]bhf`À`W\h][`Yb`"

9]b`k`Y]hYfYf`k`]W\h][`Yf`5gdY`\_`h]ghž`XUgg`Gd]Y`Yž`X]Y`Ui`Z`XYf`L`Vcl  
j`YfÖZYb`h]W\h`k`YfXYb`gc`Ybž`Y]bYb`ghfYb[`Yb  
NYfh]Z]n]Yfi`b[`gdfcnYgg`Xi`fW\`Ui`Z`b`a`ØggYb``<`]YfVY]`ØVYfdfØZh  
A`]WfcgcZž`cV`XUg`Gd]Y`X]Y`hYW\`b]gW\Yb`E`i`U`]h`À`hgghUbXUfXg`YfZØ`h  
i`bX`ghUV]`Ui`Z`L`6cl`!`?`cbgc`Yb`Z`b`\_`h]cb]Yfh``8`U`6`UW`\_`A`m\`.  
K`i`\_`cb[`X]YgYb`5bZcfXYfi`b[`Yb`ni`a`\_`U`\_`hi`Y`Yb`NY]hdi`b`\_`h`b]W\h  
[`YfYW\`h`k`YfXYb`\_`c`b`b`hYž`V`Y]Vh`XYf`H]hY`X`Yb`L`Vcl`!`Gd]Y`Yf`b  
j`cfYfgh]Yfk`Y\`fh``9`bhk`]W`\_`Yf`;`Ua`Y`G]W]YbW\`U`h`Y`XcW\`  
Ub[`Y`\_`ØbX][`hž`a`]h`<`cW\Xfi`W`\_`Ub`XYf`@Øgi`b[`X`Yf`DfcV`Ya`Y`ni  
UfVY]hYb`"

## 6Ya Ø\i b[ Yb`i a` : fY][ UVY`i bX Ni`\_`i bZhgUi`gg]W\hYb

8]Y`A`UW\Yf`XYg`Gd]Y`g`g]bX`ni`j`Yfg]W\h]W\ž`XUgg`g]Y`X]Y  
<`YfUi`gZcfXYfi`b[`Yb`a`Y]ghYfb`\_`ÖbbYb``G]Y`j`Yfg]W\Yfbž`XUgg`XUg  
Gd]Y`d`fU`\_`h]gW\`Z`Yfh][`]gh`i`bX`bi`f`Ui`Z`X]Y`;`YbY\`a`][`i`b[`j`cb  
A`]WfcgcZž`k`UfhYhž`i`a`\_`Ui`Z`XYf`L`Vcl`gd]Y`VUf`ni`k`YfXYb``GcVU`X  
XUg`Gd]Y`X]Y`b`chk`YbX][`Yb`HYghg`VYghY\`hž`k`]fX`a`Ub  
gW\`bY`gha`Ö[`]W\`Y]b`F`Y`YUgYXUhi`a`\_`VY`\_`Ubbh[`YVYb``8`Ua`]h  
V`Y]VYb`X]Y`L`Vcl`!`Gd]Y`Yf`Ui`Z`XYf`@Ui`Yf`i`bX`j`YfZc`[`Yb`[`YgdUbbh  
X]Y`9`bhk`]W`\_`i`b[`Yb`fi`bX`i`a`\_`6`UW`\_`A`m\`.`K`i`\_`cb[`"

⇒`X`Yf`Nk`]gW\YbnY]h[`]Vh`Yg`ZØf`U`Yž`X]Y`VYfY]hg]b`XYf`K`Y`h]j`cb  
K`i`\_`cb[`]i`bhYfk`Y[`g`g]bXž`;`Y`Y[`Yb\`Y]hž`g]W\`a`]h`X`Yb`VYghYb  
: `À\][`\_`Y]hYb`X`Yg`7`\UfU`\_`hYfg`\_`Ui`gY]bUbXYfni`gYhnYb``8]Y`J`cfZfYi`XY  
Ui`Z`XUg`Gd]Y`V`Y]Vh`\`cW\ž`i`bX`X]Y`<`c`Zbi`b[`ž`XUgg`Ui`W\`L`Vcl`!  
Gd]Y`Yf`VU`X]b`X`Yb`;`Ybi`gg`X`Yg`5`W]cb!`F`D;`g`\_`ca`a`Ybž`V`Y]Vh  
VYghY\`Yb`"

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