

K Ug`]gh`J Yf\U`hYbgÅbXYfi b[ `i bX`]b  
k Y`WXYf`6Yn]Y\i b[ `ghY`h`g]Y`ni a  
HfU]b]b[ 3

A YbgWXYb`g]bX`]b`XYf`@U[ Y`i bX`j YfhfUi h`a ]h  
J YfÅbXYfi b[ Yb`"K Ybb`k ]f`XUg`@YVYb`Yf`YVYbž`k UW`gYb`i bX  
j YfÅbXYfb`k ]f`i bg`/ Ua d`/ , &%%`/b]W`h`bi f`d`mg]gW`ž  
gcbXYfb`Ui W`a YbhU`ž`Ya ch]cbU`ž`gcn]U`ž`]bhY`Y`\_hi Y`i bX  
gd]f]hi Y`i`5i ZXYb`YfghYb`6`]W`\_YfgWXY]bYb`X]Y`?cbnYdhY`XYf  
J YfÅbXYfi b[ `i bX`J Yf\U`hYbgÅbXYfi b[ `g]a dY`ž`k Y`  
A YbgWXYb`UbdUggi b[ gZÅ\][ `g]bX`i bX`J YfÅbXYfi b[ Yb`\_Y]bY  
GY`hYb`Y]h`g]bXž`Ui W`k Ybb`k ]f`i bg`XYggYb`b]W`h`VYk i ggh  
g]bX`"K Ybb`k ]f`YXcW`Y]bY`a ]\_fcg\_cd]gWXYfY`6YhfUW`hi b[  
j cfbY`a Ybž`]gh`X]Y`Y`bXYfi b[ `XYg`; Ygi bX`Y]hgj Yf\U`hYbg  
hUhgÅW`]W`Y]bY`\_ca d`Yi Y`i bX`ZcfhgW`fY]hYbXY`9fZU`fi b[ ž  
X]Y`j cb`Y]bYf`F`Y]\Y`j cb`: U`hcfYb`VYY]bZi ggh`k ]fX`  
J Yf\U`hYbgÅbXYfi b[ Yb`g]bX`Ui Z[ fi bX`]`fYf`BUhi f`j cb`BUhi f  
Ui g`Y]bY`<YfUi gZcfXYfi b[ ž`XU`g]W` `@YVYbggh]Y`Ui g  
/ Ua d`^Y`d/



A YbgWXYb`g]bX`]b`XYf`@U[ Y`i bX`j YfhfUi h`a ]hJ YfÅbXYfi b[ Yb`  
K Ybb`k ]f`XUg`@YVYb`Yf`YVYbž`k UW`gYb`i bX`j YfÅbXYfb`k ]f`i bg`  
b]W`h`bi f`d`mg]gW`ž`gcbXYfb`Ui W`a YbhU`ž`Ya ch]cbU`ž`gcn]U`ž`

]b hY`Y\_hi Y`i bX`gd]f]hi Y`"5i ZXYb`YfghYb`6`]W\_`YfgWXY]bYb`X]Y  
?cbnYdhY`XYf`J YfÅbXYfi b[ `i bX`J Yf\U`hYbgÅbXYfi b[ `g]a dY`žk Y]  
A YbgWXYb`UbdUggi b[ gZÅ\][ `g]bX`i bX`J YfÅbXYfi b[ Yb`\_Y]bY  
GY`hYb\Y]h`g]bXžUi W`k Ybb`k ]f`i bg`XYggYb`b]W`h`VYk i ggh`g]bX"

K Ybb`k ]f`YXcW`Y]bY`a ]\_fcg\_cd]gWXYfY`6YhfUW`hi b[  
j cfbY\`a Ybž`]gh`X]Y`ÿbXYfi b[ `XYg`; Ygi bX\Y]hgj Yf\U`hYbg  
hUhgÅW`]W`Y]bY`\_ca d`YI Y`i bX`ZcfhgW`fY]hYbXY`9fZU\fi b[ ž`X]Y  
j cb`Y]bYf`F Y]\Y j cb`: U\_hcfYb`VYY]bZi ggh`k ]fX"  
J Yf\U`hYbgÅbXYfi b[ Yb`g]bX`Ui Z[ fi bX`]\fYf`BUhi f`j cb`BUhi f`Ui g  
Y]bY`<YfUi gZcfXYfi b[ ž`XU`g]W` @YVYbggh]`Y`Ui g`j YfgWXY]YXYbYb  
; fØbXYb`ØVYf`j ]Y`Y`J\`fY`\]bk Y[ `Ybhk ]W\_`Y`b`i bX`g]W`A YbgWXYb  
gc`j Yf\U`hYbžk ]Y`g]Y`Yg`hi bžk Y`]`f`J Yf\U`hYb`ZØf`g]Y  
Zi b\_]cb]Yfhi f579ž&\$%- Ł"9g`]gh`Y]bZUW`b]W`h`Y]bZUW`ž`Y]b  
J Yf\U`hYb`cXYf`Y]bY`F Y]\Y j cb`J Yf\U`hYbgk Y]gYb`c`bY`Y]b  
9`Ya Ybh`XYg`?Ua dZYg`ni `ÅbXYfbž`XU`i bgYf`J Yf\U`hYb`j cb  
: fYi bXYbž: Ua ]`Yž`5fVY]hž`GhfYggž`GW`UŽ`I a k Y`hž  
@YVYbgYfZU\fi b[ Yb`i bX`U`[ Ya Y]bYf`; Ygi bX\Y]h`VYY]bZi ggh  
k ]fX"

K Ug`J Yf\U`hYbgÅbXYfi b[ `b]W`h`]gh

J Yf\U`hYbgÅbXYfi b[ Yb`g]bX`n]Y`[ Yf]W`hYh`DfcnYggž`\_Y]b  
Y]bn][ Ufh][ Yg`9fY][ b]g""5i g`X]YgYa `; fi bX`k YfXYb  
J YfÅbXYfi b[ Yb`ja `; Ygi bX\Y]hgj Yf\U`hYb`gY`hYb`c`bY  
5bg hfYb[ i b[ `YffY]W`h`cXYf`Ui ZfYW`hYf\U`hYb`"9]bY`g]bbj c`Y`i bX  
bUW`\U`h][ Y`J Yf\U`hYbgÅbXYfi b[ `YfZc`[ h`ghi ZYbk Y]gY`"K ]Y`Ub[ Y  
X]YgYf`DfcnYgg`XUi Yfhž`]gh`ZØf`YXY`DYfgcb`Y]bn][ `Yg`[ ]Vh  
\_Y]b`YbX`]W`Yg`cXYf`Zcf gW`i b[ gVUg]YfhYg` : Å`][ \_Y]hgXUhi a `ZØf  
ÿbXYfi b[ Yb`": YfbYf`]gh`X]Y`J Yf\U`hYbgÅbXYfi b[ `b]W`h`]bYUf`"8]Yg  
VYXYi hYhž`XUgg`Yg`bcfa U`ž`ØV`]W`i bX`gc[ Uf`Yfk UfhYh`]ghž`XUgg  
g]W`Y]bY`DYfgcb`nk ]gWXYb`j YfgWXY]YXYbYb`GhUX]Yb`\]b`i bX`Yf  
VYk Y[ h`I bX`cV k c\`: Y\`Yf`HY]`XYg`DfcnYggYg`g]bXž`gc`hYb`g]Y  
b]W`h`U`g`; fØbXY`Ub[ YgY\Yb`k YfXYbž`XUg`YbX[ Ø`h][ Y`N]Y`  
Ui Zni [ YVYb`i bX`Ui Zni [ YVYb`cXYf`BY\`a Yb`G]Y`Y]bY` ÆW`\UVY  
j YfgU[ h`!A YbhU`]hÅ`h`Ub"

J Yf\U`hYbgÅbXYfi b[ `i bX`X]Y`: ]hbYgg!

J YfV]bXi b[ ' .

Ð': cfa 'ni ' \_ca a Yb'i bX' ]b': cfa 'ni 'V`Y]VYbž'k ]Y`Y]bY  
J Yf\U`hYbgÅbXYfi b[ ž' ]gh`Y]b`n]Y`[ Yf]W\hYhYf`DfcnYgg"K ]Y  
: ]hbYggn]Y`Y`YffY]W\h'k YfXYbž`Åb[ h'j ca 'hÅ[ ` ]W\Yb`J Yf\U`hYb'i bX  
XYb`9bhgW\Y]Xi b[ Yb`Y]bYf`DYfgcb`UV""8 ]YgY`9bhgW\Y]Xi b[ Yb  
i bhYfghØhYb`cXYf`VYY]bhfÅW\h][ Yb`X]Y': ]hbYggfY]gY"

Ni a `6Y]gd]Y``\Uh`Y]bY`DYfgcb`XUg`N]Y`ž`YXYb`HU[ ` ' \$`A ]bi hYb  
`Ub[ ` \_ÖfdYf`]W\`U\_hj] `ni `gY]b""9g[ ]Vh`VYgh]a a hY  
J Yf\U`hYbgk Y]gYb`i bX`9bhgW\Y]Xi b[ Ybž`X]Y`X]YgYg`N]Y`  
i bhYfghØhYb""I bhYfghØhYbXY`J Yf\U`hYbgk Y]gYb`i bX  
9bhgW\Y]Xi b[ Yb`\_ÖbbYb`XUf]b`VYghY`Ybž`Ui gfY]W\YbX  
GW\`UZei U`]hÅh`ni `Yf\U`hYbž`Ui gfY]W\YbX`\mXfUh]g]Yfh`ni `V`Y]VYbž  
bÅ\fghcZZfY]W\Y`@YVYbga ]hhY``ni `YggYb`i bX`X]Y`bchk YbX][ Y  
NY]hgdUbbY`ZØf`XUg`HfU]b]b[ `j cfni gY`Yb""K Ybb`g]W\`X]YgY`DYfgcb  
XU[ Y[ Yb`ZØf`Y]bYb`a ]b]a U`Yb`GW\`UZi bX`k Yb][ Yf`bU`f\UZhY  
@YVYbga ]hhY``fDca a Ygž`?Y\_gYž`Zf]hh]YfhY`@YVYbga ]hhY``i gk "Ł  
YbhgW\Y]XYhž`ZØ\`h'g]Y`g]W\`k U`fgW\Y]b`]W\`b]W\h`YbYf[ Yh]g]Yfh`i bX  
a ch]j ]Yfh[ Ybi [ ž'i a `U\_hj] `ni `gY]b""9bhgW\Y]Xi b[ Yb`k ]Y`X]YgY  
VYY]bhfÅW\h][ Yb`XUg`; YgUa`h`n]Y`""ÐZc`[ YXYggYb`k ØfXY`X]YgY  
DYfgcb`k U`fgW\Y]b`]W\`: fi ghfUh]cb`i bX`9bhÅi gW\i b[ `YfZU`fYb"  
8 Ug`Y`bXYfb`j cb`J Yf\U`hYbgk Y]gYb`i bX`XUg`HfYZZYb`XYf[ Ygi bXYb  
K U\`ni f`Y]bZUW\Yb`K U\``]gh`XYf`GW\`ØggY`ž'i a `]b': cfa 'ni  
\_ca a Yb`fi bX`ni `V`Y]VYbŁ"

GW\ f]hhYž`X]Y`G]Y`i bhYfbY\ a Yb`\_ÖbbYbž`i a  
dcg]h]j Y`J YfÅbXYfi b[ Yb`j cfni bY\ a Yb

8Yb\_Yb`G]Y`XUfUbž`XUgg`gck c`\`J YfÅbXYfi b[ `U`g`Ui W\  
: cfa [ YVi b[ `n]Y`[ Yf]W\hYhY`DfcnYggY`g]bX"

⇒Ybh]Zn]YfYb`G]Y`ni bÅW\gh`Y]b``Ub[ Zf]gh][ Yg`cXYf`DfcXi \_h`n]Y``fk Ug  
G]Y`]b`\*!%&`A cbUhYb`YffY]W\Yb`a ÖW\hYbŁ`i bX`nk Y]`cXYf`XfY]  
\_i fnZf]gh][ Y`cXYf`DfcnYggn]Y`Y`fYhk Ugž`XUg`gcZcfh`YffY]W\VUf`]gh  
i bX`G]Y`ni a ``Ub[ Zf]gh][ Yb`N]Y``ZØ\`fhŁ"?i fnZf]gh][ Y`DfcnYggn]Y`Y  
gc``hYb`a ]h`XYa `J Yf\U`hYb`i bX`XYb`9bhgW\Y]Xi b[ Yb

ni gUa a Yb\Åb[ Ybž'X]Y`G]Y`hfYZZYb`k YfXYb"K Ybb`G]Y`X]Y  
[ Yk ØbgW\hY`K U\`hfYZZYb`cXYf`Y]b`[ Yk ØbgW\hYg`J Yf\U`hYb  
Ui gZØ\fYbž`k ]fX`XUg`N]Y``]a`J Yf[ `Y]W\`ni f`N]Y`YffY]W\i b[ `Ui Z`XYf  
; fi bX`U[ Y`Y]bYg`9f[ YVb]ggYg`fX\` ; Yk ]W\hgj Yf`i gh`YffY]W\h"  
6YhfUW\hYb`G]Y`X]YgYg`6Y]gd]Y`.

@Ub[ nY]hn]Y`. ÆW`k YfXY`a Y]b`YfghYg`) !\_a !FYbbYb`gY]h`gYW\g  
A cbUhYb`ZU\fYb"

? i fnZf]gh][ Y`N]Y`Y`8]Y`i bhYfghØhni b[ `XYf`9ffY]W\i b[ `XYg  
`Ub[ Zf]gh][ Yb`N]Y`g`\_Ubb` : c`[ YbXYg`i a ZUggYb.

% " 5V`bÅW\ghYf`K cW\Y`k YfXY`]W\`X]YbghU[ gž`XcbbYfghU[ g  
i bX`gUa ghU[ g`&\$`A ]bi hYb`Ui ZYb`i bX`a Y]bY`8Ui Yf`YXY  
K cW\Y`i a`%\$i`Yf\Ø\Yb"  
&" ÆW`k YfXY`hÀ[ `]W\`XfY]`Dcfh]cbYb`CVgh`i bX` ; Ya ØgY`YggYb"  
' " 5V`K cW\Y```k YfXY`]W\`a cbhU[ g`i bX`a ]h`k cW\g`YXY  
K cW\Y`Y]b`?fUZh`fU]b]b[ `a ]h`GW\k Yfdi b`h`Ui Z  
; Ubn\_ØfdYfØVi b[ Yb`Xi fW\ZØ\fYb"

ÆfY`Ub[ Zf]gh][ Yb`i bX`\_i fnZf]gh][ Yb`N]Y`Y`i bhYfgW\Y]XYb`g]W\`j cb  
X]YgYa`6Y]gd]Y``8Yf`k ]W\h][ ghY`Di b`hž`Ub`XYb`G]Y`g]W\`Yf]bbYfb  
gc``hYbž`]gh`X]Y` : YghY[ i b[ `j cb`GA 5F H!N]Y`Yb`f`gdYn]Z]gW\ž  
a YggVUfž`YffY]W\VUfž`fY`Yj Ubh`i bX`nY]h[ YVi bXYb`Łž`X]Y`g]W\`Ui Z  
ŸbXYfi b[ Yb`\_cbnYbhf]YfYb`J Yf\U`hYb`gk Y]gYb`Y\Yf`U`g`Y]b  
DfcXi`\_h`cXYf`9f[ YVb]g`K Ybb` ; Yk ]W\hgj Yf`i gh`Y]b`K i bgW\`]gh  
i bX`ZØf`j ]Y`Y`XYf` : U``]ghž`ZØ\fYb`J Yf\U`hYbgÅbXYfi b[ Yb`i bX  
[ YgØbXYfY`9b`hgW\Y]Xi b[ Yb`bUhØf`]W\`ni`j YfVYggYfhYb  
; Ygi bX\Y]hga Yhf`\_Yb`k ]Y` ; Yk ]W\h`i bX  
?ØfdYfni gUa a YbgYhni b[ "

Nk Y]hYbg`dfchc`\_c``YfYb`G]Y`ÆfY` : cfhgW\f]hhY`i bX  
J Yf\U`hYbgYb`hgW\Y]Xi b[ Yb``8]Yg`a U[ `Yb`ha`i h][ YbX`YfgW\Y]bYbž  
UVYf`∞i fbU`]b[ `]gh`Y]bY`YZZY`\_h]j Y`A Ø[ `]W\`\_Y]h`ni f  
GY`VghØVYfk UW\i b[ ž`XU`Yg`ÆbYb`Y]bY`\_cbg]ghYbhY` ; Y`Y[ Yb\Y]h

V]YhYhž'ØVYf'Zc`[ YbXY'Di b\_hY'bUW\ ni XYb\_Yb'i bX'X]YgY  
Ubni gdfYWYb.

- K Ybb'XUg'k ÒWYbh'jWY'N]Y'YffY]WYh'k i fXY
- <]bXYfb]ggYž'Ui Z'X]Y'G]Y' [ Yghc»Yb'g]bX
- K ]Y'G]Y'X]YgY'6Uff]YfYb'ØVYfk i bXYb'\UVYb
- K Y`WY'J Yf\U'hYbgk Y]gYb'cXYf'9bhgWY]Xi b[ Ybž'X]Y'G]Y  
[ YhfcZZYb'\UVYbž'\UVYb'Àf'k ÒWYbh'jWY'g'N]Y'  
i bhYfghØhnh'fbXYf'VYY]bhfÀWYh][ hŁ3
- GWYf]hhYž'X]Y'G]Y'j b'XYf'Zc`[ YbXYb'K cWY'i bhYfbY\ a Yb  
k YfXYbž'i a 'ÀfY'6Ya Ø\i b[ Yb'k Y]hYf'ni 'i bhYfghØhYb

8f]hhYbg'd'UbYb'G]Y'G]hi Uh]cbYb'a ]h'\c\Ya 'F]g]\_c'"G]hi Uh]cbYb  
a ]h'\c\Ya 'F]g]\_c'g]bX': À`Y'cXYf'9fY][ b]ggYž']b'XYbYb'G]Y  
j Yfgi WYh'g]bXž'9bhgWY]Xi b[ Yb'ni 'hfYZZYbž'X]Y'a Ò[ `]WYfk Y]gY  
b]WYh'XUg'i bhYfghØhYbž'k Ug'G]Y'YffY]WYb'a ÒWYhYb'"Ni a '6Y]gd]Y'  
; YVÀW\_]a 'DUi gYbfUi a ž'K Y]\bUWYhgZY]Yfb'i bX'J YfUbghU'hi b[ Ybž  
VY]'XYbYb'\_U'cf]YbfY]WY'GdY]gYb'i bX'; YhfÀb\_Y'gYfj ]Yfh'k YfXYbž  
FY]gYb'i gk "'9fghY`Yb'G]Y'Y]bYb'D'Ubž'i a 'j b'X]YgYb'NY]hYb'Ui Z  
XYa 'f]WYh][ Yb'K Y[ 'ni 'V'Y]VYbž'i bX'Yfa ]hhY'b'G]Y'GhfUHY[ ]Ybž'a ]h  
XYbYb'G]Y'g]WY'gY'Vgh'\Y'ZYb'\_ÒbbYb"

ÀXYbh]Z]n]YfYb'G]Y'U'g'BÀWYghYg'DYfgcbYb']b'ÀfYa 'BYh'k Yf\_ž'X]Y  
gc n]U'Y'i bhYfghØhni b[ ž'ni gÀhn']WY'A ch]j Uh]cb'i bX'Ghfi \_hi f'ZØf  
ÀfYb'J YfÀbXYfi b[ gdfcnYgg'V]YhYb'\_ÒbbYb"'6]hhYb'G]Y'Y]bYb  
9\YdUfhbYfž': fYi bXž'B UWYVUfbž'? c`Y[ Yb'cXYf'UbXYfY  
GY'Vgh\]'ZY[ fi ddYb'i a '<]'ZYž'a ]h'XYbYb'G]Y'ØVYf'ÀfY  
J YfÀbXYfi b[ gfY]gY'i bX': ]hbYggn]Y'Y'gdfYWYb'\_ÒbbYb"'8]Yg'\]'Zh  
ÀbYbž'FYWYb'gWYUZh'UVni `Y[ Ybž'i bX'V]YhYh'ÀbYb'Y]bYb  
FYgcbUb nVcXYbž'Ui Z'XYa 'G]Y'9fZc`[ Y'i bX'Ghc'dYfghY]bY  
Ui ghUi gWYb'\_ÒbbYb"

6Y\U'hYb'G]Y'gWY`]Y»`]WY'ÀfY'B U\fi b[ gUi ZbU\ a Y'fb]WYh  
i bVYX]b[ h'?U'cf]Yb'ZØf'?U'cf]Ybž'gcbXYfb '@VYbga ]hhY`#  
'@VYbga ]hhY`ei U']hÀhž'X]Y': 'Øgg][ \_Y]hgni Z \fž'XYb'GhfYgg'i bX'X]Y  
GWY'UZe i U']hÀh'ja '5i [ Y'"C\bY'HfUW\_]b[ 'g]bX'k ]f'b]WYh']b'XYf'@U[ Yž  
J Yf\U'hYbga i ghYf'ni 'jXYbh]Z]n]YfYbž'X]Y'Xi fWY'Ài »YfY  
GhfYggZU\_hcfYb'cXYf': U\_hcfYb'VYY]bZi ggh'k YfXYb'\_ÒbbYb"'K ]f

bY][ Yb`XUni ž`k Yb][ Yf`VYk i gghY`9bhgWXY]Xi b[ Yb`ni`hfYZZYbž  
k Ybb`k ]f`i bg`b]W`h`ni f`F YWXYbgW`UZh`n]Y`Yb``9fZc fgWXYb`G]Y  
j YfgW`]YXYbY`5ddgž`X]Y`ΔbYb`VY]`X]YgYa`DfcnYgg`Y`ZYb  
\_ÖbbhYb"

I a`]b`i: cfa`ni`\_ca`a Ybž`a ØggYb`G]Y`[ Ygi bXY`9bhgWXY]Xi b[ Yb  
hfYZZYbž`i a`X]Y`5bgfhYb[ i b[ Yb`ni`i bhYfghØhnYbž`X]Y`ni f  
9ffY]W`i b[ `Y]bYg`i: ]hbYggg]Y`g`YfZcfXYf`]W`g]bX``I a`[ Ygi bXYž  
VYk i gghY`9bhgWXY]Xi b[ Yb`ni`hfYZZYbž`]gh`Yg`k ]W`h][ ž`g]W`Ui Z  
J Yf`U`hYbgk Y]gYb`Y]bni`UggYbž`X]Y`XUg`HfYZZYb`XYf  
j YfbØbZh][ ghYb`i bX`i bhYfghØhnYbXghYb`9bhgWXY]Xi b[ Yb  
Yf`Y]W`hYfb``: Øf`j ]Y`Y`VYXYi hYh`X]Ygž`g]bbj c``Y`ŸbXYfi b[ Yb  
j cfni bY`a Ybž`i a`bYi Y`i: Yk c`b`Y]hYb`ni`Yb`hk ]W`Y`b``8Yf  
DfcnYgg`]gh`YfUi gZcfXYfbXž`UVYf`J Yf`U`hYbg`AbXYfi b[ Yb`g]bX`XYf  
K Y[ `ni`Y]bYa`[ Ygi bXYb`@YVYb``

## F Yggci fW`b

- 5a Yf]WU`b`7ci bW`i`cb`9I YfW]gY`f&\$%- Ł``8Yf`@Y]hZUXYb`ZØf  
: UW`\_f`ÄZhY`ni`i: Ygi bX`Y]hg!`i bX`K Y``bYgg!7cUW`]b[ ``

...

⇒gd]f]Yfh]j cb`579

8YhU]`g

6Ygi WXYb`G]Y`i bg`Ui Z.`a`Y]b!Z]hbYgg`bYh