

B Yi Y 'B i hnh]YfghfUhY [ ]Y. 'A YW\_`YbVi f[ !  
J cfdca a Yfb 'k ]``'A ]`Wk VUi Yfb 'fYhhYb

⊕ 'A J 'g]b\_h'X]Y'NU\`'XYf'A ]`Wk VYhf]YVY'XfUa Uh]gWk "'A ]b]ghYf  
6UW\_\Ui g'd`Ubh'A U» bU\`a Yb'ni f'GhÅf\_i b[ 'XYf'H]Yf\U`hi b[  
i bX'6Øfc\_fUh]YUVVUi "

⊕ 'A YW\_`YbVi f[ !J cfdca a Yfb 'b]a a h'X]Y'NU\`'XYf  
A ]`Wk ]fhgWk UZhgVYhf]YVY'gY]h'»\`fYb`\_cbh]bi ]Yf`]Wk 'UV"'8 ]YgY  
9bhk ]W\_`i b[ '\Uh'k Y]hfY]Wk YbXY'5i gk ]f\_i b[ Yb'Ui Z'X]Y`c\_UY  
; Ya Y]bgWk UZh'i bX'X]Y '@YVYbga ]hhY'j Yfgcf[ i b[ "

B Uh]c b U`Yf`HfYbX`]a `F ØW\_[ Ub[ `XYf  
H]Yf\U`hi b[ gVYhf]YVY

8]Y'NU\`'XYf'A ]`Wk ]Y\`VYhf]YVY`]b'A YW\_`YbVi f[ !J cfdca a Yfb`]gh  
]b'XYb`'YhnhYb'nk Y]`»\`fnY\`bhYb'i a `a Y\`f`U`g`) \$\$'[ Ygi b\_Yb`  
XYfnY]h'g]bX`bi f`bcWk " %- `6Yhf]YVY`U\_hj "'8 ]YgYf`F ØW\_[ Ub[  
gd]Y[ Y`h'k ]XYfž'k Ug`]b'j ]Y`Yb`'ÅbX`]Wk Yb`; YV]YhYb`8Yi hgWk `UbXg  
[ YgWk ]Y\`h`9]b`5Vg]b\_Yb`XYf'H]Yf\U`hi b[ gnU\`Ybž'XUg`b]Wk h'bi f  
X]Y '@UbXk ]fhY`gY`Vghž`gcbXYfb`Ui Wk `X]Y`9fbÅ\`fi b[ gj Yfgcf[ i b[ ž  
X]Y`fY[ ]cbU`Y`K ]fhgWk UZh'i bX'X]Y`\_i `hi fY`Y`»XYbh]hÅh'XYf`F Y[ ]cb  
VYhf]Zh"

Ÿ b[ ghY `XYf`@UbXk ]fhY`i bX`XYf`Fi Z`bUWk  
J YfÅbXYfi b[ Yb

? `Ui g!8]YhYf`5i [ i gh]bž'Y]b'A ]`Wk VUi Yf`Ui g`?Ya b]h`VY]  
; fY]Zgk U`X`a ]h`\* \$\$`?Ø\`Ybž`VYgWk fY]Vh'X]Y`Gcf[ Yb`\]bg]Wk h`]Wk `XYf  
5V\`Åb[ ][\_Y]h'j cb`]a dcfh]YfhYb`@YVYbga ]hhY`b.`K ]f`\c`Yb`Yhnh  
gWk cb`; Ug'i bX`²`j cb`k cUbXYfg`K c`Yb`k ]f`Ui Wk `i bgYfY

@VYbga ]hY`bcW`i a`XYb`U`VYb`?cbh]bYbhZU\fyb3`8]YgY  
Y`b[ ghY`g]bX`k Y]h`j YfVfY]hYhZ`XU`XYf`9f\U`h`fY[ ]cbU`Yf`6Yhf]YVY  
Ui W`XUni`VY]hfA[ hZ`X]Y`I a`k Y`hVY`Ughi b[ `Xi fW`U`b[ Y  
HfUbgdcfhk Y[ Y`ni`fYXi`n]YfYb"

Dc`h]gW`Y`F`U`a`Y`b`V`Y`X]b[ i`b[ Y`b`U`g  
G`W`Ø`ggY`Z`U`\_`h`c`f`

@UbXk ]fhgW`UZhga ]b]ghYf`H]`6UW`\Ui`g`\YVh`X]Y`F`c`Y`XYf  
VØfc`\_fUh]gW`Y`b`<ØfXYb`\Yfj`cfZ`X]Y`XYb`F`ØW`[`Ub[ `XYf  
H]Yf\U`hi`b[ `j`cfUbhfY]VYb" `ϕ`XYf`J`Yfk`U`hi`b[ `k`ØfXY`a`Ub`g]W  
[ Y[ YbgY]h[ ]`ja`K`Y[ `ghY`Ybž`gU[ h`Yf`i`b`X`j`Yfk`Y]gh`Ui`Z`X]Y  
B`ch`k`Y`b`X][`\_Y]hZ`XYb`;`Y`b`Y`a`][`i`b[`gdfcnYgg`ZØf`GhU`VUi`hYb`ni  
ghfUZZYb" `8Yf`A`]b]ghYf`g]Y`h`Ui`W`dc`h]gW`Y`9b`hgW`Y]Xi`b[ Y`b`]b  
6Yf`]b`U`g`HY]`XYg`Dfc`V`Ya`gZ`XUg`X]Y`G`W`k`Y]nYf`?ØW`Y`g`W`Å`X][`h  
i`b`X`J`Yf`Å`b`XYfi`b[ Y`b`]b`XYf`@UbXk ]fhgW`UZh]bg`Ghc`W`Y`b`Vf]b[`h"

GhfUhY[ ]Y`b`ni`f`Gh`Å`f`\_`i`b[ `XYf`H]Yf`U`hi`b[

I`a`[`Y[ Y`b`X]Y`Gcf[ Y`b`i`b`X`<YfUi`gZcfXYfi`b[ Y`b`Ubni`\_`Åa`dZYbž  
d`Ub`h`XUg`@UbX`A`YW`\_`Y`b`Vi`f[ !J`cfdca`a`Yfbž`UV`XYa`\_`ca`a`Y`b`XY`b  
ϰ\`f`[`Yn]Y`hY`ϕj`Y`gh]h]cb`Y`b`]b`X]Y`H]Yf`U`hi`b[ `ni`h`Åh][`Y`b" `8]Y`g`]gh  
Y]b`G`W`f]hZ`i`a`X]Y`6YXYi`hi`b[ `XYf`?fY]g`Ui`Zk`]fhgW`UZh  
UbYf`\_`Y`b`b`Y`b`ž`X]Y`Ui`Z`Y]b`Yf`[`Y`gi`b`XY`b`H]Yf`U`hi`b[ `V`Ug]Yf`hZ`ni  
VY`hc`b`Y`b" `8]Y`I`b`hYf`gh`Ø`hni`b[ `i`a`ZUggh`Ui`»`Yf`XYa`X]Y`J`Yf`d`U`W`hi`b[  
`Ub`XY`g`Y][`Y`b`Yf`:`Å`W`Y`b`g`c`k`Y`<]Z`Y`VY]I`a`V`Ui`hY`b`j`cb  
VY`ghY`Y`b`XY`b`Gh`Å`Y`b`ž`k`Ug`ZØf`j`Y`Y`@UbXk ]fhY`Y]b`Y`[`fc`»`Y  
9f`Y]W`hYfi`b[ `XUf`ghY`h"

GUb]Yfi`b[ `Y`Y]b`Yf`6Yhf]YVY`U`g  
[`Y`a`Y]b`g`W`UZh`]W`Y`<`Yf`Ui`g`Z`c`f`X`Y`fi`b[

8]Y`G]hi`Uh]cb`ZØf`\_`Y]b`YfY`6Yhf]YVY`]gh`VY`gcb`XYfg  
VY`gcf[`b]gY`ffY[`Y`b`X" `GUV]bY`?`fØ[`Yfž`X]Y`;`Y`g`W`Å`Z`hg`ZØ\`fYf]b`XYf  
F]b`XYf`5`]]`Ub`n`]b`K`c`XY[`\_`ž`VYf]W`hY`hZ`XUgg`j`Y`Y`6Yhf]YVY`a`]h  
k`Y`b][`Yf`U`g`&\$\$\$`?Ø\`Y`b`\_`Ui`a`bc`W`ØVYf`YVYbgZÅ\][`g]b`X" `8Yf  
HfY`b`X`[`Y`h`h`]b`ni`[`fØ`»`YfY`b`<`Yf`XY`b`ž`X]Y`b]W`h`a`Y`f`Xi`f`W`

: Ua ]Yb'cf[ Ub]g]Yfh'k YfXYbž 'Yf\_`Àfh'g]Y'i bX'k Ufbhj cf'Y]bYf  
ni bY\ a YbX' ]bXi ghf]Y`Yb '@UbXk ]fhgW\ UZhž'VY]'XYf' ðj YghcfYb'X]Y  
?cbhfc`Y'ØVYfbY\ a Yb'\_ÖbbhYb"

; Ya Y]bgW\ UZh`]W\ Yg'6Yk i ggHgY]b'ghÀf\_Yb

8]Y'F ØW\_[ Àb[ Y']b'XYf'A ]'W\k ]fhgW\ UZh'i bX'X]Y  
<YfUi gZcfXYfi b[ Ybž'a ]h'XYbYb'X]Y '@UbXk ]fhY' \_cbZfcbh]Yfh'g]bXž  
YfZcfXYfb'Y]b'l a XYb\_Yb']b'XYf'; Ya Y]bgW\ UZh'"8i fW\`c\_U'Y  
l bhYfghØhni b[ 'i bX'X]Y'GhÀf\_i b[ 'XYf'fY[ ]cbU'Yb'DfcXi \_hY' \_ÖbbYb  
JYfVfUi W\Yf'i bX'DfcXi nYbhYb'ni gUa a YbUfVY]hYbž'i a 'X]Y  
6YXØfZb]ggY'bUW\ 'BUW\ \U'hj[ \_Y]hi bX'fY[ ]cbU'Yf' ðXYbh]hÀh'ni  
j YfY]bVUfYb"

8YhU]`g

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