

I G!8 c`Uf`i bhYf`8 fi W_.`MYb`hUi a Y`hž 6]hWc]b`nY][h`GhUV]`]hÀh

8Yf`I G!8 c`Uf`j Yf`]Yfh`Ub`K Yfh`[Y[YbØVYf`XYa`MYbž
k À\fybX`6]hWc]b`ghUV]`V`Y]Vhž`VYY]bZi ggh`Xi fWk`gWk UWXY
I G!`a a cV]`]YbXUHyb"

⇒XYf`U`hi Y`Yb`:]bUbnk Y`h`[Y\Øfh`XYf`8 c`Uf`ni`XYb`J`Yf`]YfYfbž
k À\fybX`XYf`MYb`Ub`K Yfh`j`Yf`]Yfh`"8]YgY`XmbUa`]gWk Yb
6Yk Y[i b[Yb`g]bX`XUg`9f[YVb]g`j`cb`gWk UWXYb
⇒a a cV]`]Yba Uf`hXUHyb`Ui`g`XYb`I G5ž`X]Y`XUni`ZØ\fybž`XUgg
⇒j Yghc`fYb`VY[fY]ZYbž`XUgg`Y]bY`a Ø[`]Wk`Y`N]bggYb`_i b[`Xi fWk`X]Y
: YXYfU`F`YgYfj`Y`Ub[Yg]Wk`hg`XYf`A Uf`_h`U[Y`k U\fgWk`Y]b`]Wk`k`]fX"

8]Y`GdUbbi b[Yb`Ui ZXYb`A Àf`_hYb`g]bX`c`ZYbg]Wk`h]Wk`"8Yf`8 c`Uf`
nY][hY`[Y[YbØVYf`XYa`MYb`Y]bY`5Vk Yfh`i b[ž`k Ug`Ui ZY]bYb
gWk`k`]bXYbXYb`; `Ui VYb`Ub`X]Y`GhÀf`_Y`XYf`I G!K`]fhgWk`UZh`\]bk`Y]gh"
8]YgYg`I b[`Y]Wk`[Yk`]Wk`h]gh`VYgcb`XYfg`]bhYfYggUb`hž`XU`5b`Y[Yf
VY[]bbYbž`X]Y`a Ø[`]Wk`Yb`A U»bU`a Yb`XYf`:`YX`j`cfk`Y[ni`bY`a`Yb"
K À\fybX`Y]b][Y`j`cb`Y]bYf`N]bggYb`_i b[`d`fc`Z]h]YfYb`_ØbbhYbž`V]f[h
X]Yg`[`Y]Wk`nY]h][`Ui`Wk`X]Y`; YZU`fž`XUgg`g]Wk`X]Y`k`]fhgWk`UZh]Wk`Yb
6YX]b[i b[Yb`k`Y]hYf`j`YfgWk`Y`Wk`hYfb"

5b`Y[Yf`i bX`N]bggdY`_i`U]cbYb

8]Y`I G!`a a cV]`]YbXUHybž`X]Y`_Øfn`]Wk`j`YfØZYb`h]Wk`h`k`i`fXYbž
nY][Yb`gWk`UWXY`J`Yf`_Ui`ZgnU`Ybž`k`Ug`X]Y`6YXYb`_Yb`VYnØ[`]Wk`
Y]bYf`ghU[b]YfYbXYb`K`]fhgWk`UZh`j`Yfgh`Àf`_h`5b`U`mghYb`i`bX`5b`Y[Yf
ghY`Yb`g]Wk`Y`hnh`X]Y`:`fU[Yž`k`]Y`X]Y`:`YXYfU`F`YgYfj`Y`Ui`Z`X]YgY
i`bYfk`UfhYhYb`9b`hk`]W`_i`b[Yb`fYU[]YfYb`k`]fX`"N]bggYb`_i`b[Yb
_ØbbhYb`h`YcfYh]gWk`Y]b[YgYhnh`k`YfXYbž`i`a`X]Y`K`]fhgWk`UZh
Ubni`_i`fVY`b`"8Yb`bcWk`V`Y]Vh`UVni`k`UfhYbž`cV`X]YgY`GhfUHy[]Y

hUhgÅW`jW`Y]bhf]hh"

⇒ J Yf[`Y]W`XUni ` _Åa dZiXYf`M`b`YVYbZU`g.`; fØbXY`XUZØf`g]bX
i bhYf`UbXYfYa `X]Y`[`cVU`Yb`I bg]W`Yf\Y]hYbž`X]Y`XUg`J YfhfUi Yb
XYf`]bhYfbUh]cbU`Yb`5b`Y[Yf`i bhYf[fUVYb" C V k c\`XYf`8c`Uf
GWk ÅW`Yb`nY][hž`gc f[h`X]YgY`G]hi Uh]cb`b]W`hi bVYX]b[h`ZØf`Y]bYb
ghUV]`Yb`F ØW`U`h`ZØf`XYb`M`b"

8]Y`6Yk Y[i b[Yb`Ui Z`XYa `? fmdhck Å\fi b[ga Uf`_h]g]bX`YVYbZU`g
VYa Yf`_Ybgk Yfh"6]hWc]b`gW`Y]bh]g]W`]ba]hYb`X]YgYf
I bg]W`Yf\Y]hYb`ni `ghUV]`]g]YfYb"J]Y`Y`5b`Y[Yf`bi hnYb`X][]hU`Y
K Å\fi b[Yb`U`g`5Vg]W`Yfi b[` [Y[Yb`X]Y`GWk Ub`_i b[Yb
hfUX]h]cbY`Yf`A Åf`_hY"8]YgY`9bhk]W`_i b[`_ØbbhY`Y]bYf`XYf`; fØbXY
gY]bž`k Ufi a `6]hWc]b`b]W`hi]b`XYa `A U» Y`ZÅ`hž`k]Y`Yg`VY]`UbXYfYb
5b`U[Y`_UggYb`XYf` : U`"]gh"

8]Y`6YXYi hi b[`XYg`U`_hi Y`Yb`A Uf`_hYg

8Yf`Ni ghUbX`XYg`? fmdhca Uf`_hYg`]gh`Yb[`j YfVi bXYb`a]h`XYb
6Yk Y[i b[Yb`XYf`hfUX]h]cbY`Yb`K Å\fi b[Yb" `ϕ`NY]hYb
Ø`cbca]gW`Yf`I bg]W`Yf\Y]h]gi W`Yb`j]Y`Y`ϕj YghcfYb`g]W`YfY
< ÅZb"6]hWc]bž`U`g`YfghY`i bX`VY`_UbbhYghY`? fmdhck Å\fi b[ž`\Uh
g]W`]b`XYb`YhnhYb`ϕ\`fYb`Y]bYb`gc`]XYb`Fi ZU`g
K YfhUi ZVYk U\fi b[ga]hY`YfUfVY]hYh"8Yf`GhUhi g`j cb`6]hWc]b
_ØbbhY]b`XYb`_ca a YbXYb`K cW`Yb`i bX`A cbUhYb`k Y]hYf
k UW`gYbž`]bgVYgcbXYfY`k Ybb`X]Y`I bg]W`Yf\Y]hYb`Ui Z`XYb
hfUX]h]cbY`Yb` :]bUbna Åf`_hYb`Ub`U`hYb"

Ni gUa a YbZUggYbX`]gh`ZYghni ghY`Ybž`XUgg`X]Y` :]bUbna Åf`_hY`j cf
Y]bYf`_f]h]gW`Yb`D\UgY`ghY`Yb"K Å\fybX`XYf`8c`Uf`i bX`XYf`M`b
gW`k ÅW`Ybž`[]VhYg`5bnY]W`Yb`XUZØfž`XUgg`ϕj YghcfYb`g]W`
ni gY`YbXg`]b`XYb`6YfY]W`XYf`? fmdhck Å\fi b[Yb`VYk Y[Yb"8]Y
bÅW`ghYb`GW`f]hY`XYf` : YXYfU`F YgYfj Y`k YfXYb`YbhgW`Y]XYbX
XUZØf`gY]bž`k]Y`g]W`X]YgY`9bhk]W`_i b[Yb`k Y]hYf`YbhZU`hYb"8]Y
5b`Y[Yf`ghY`Yb`j cf`Y]bYa `ghfUhY[]gW`Yb`8]Ya a U.`Gc`Yb`g]Y`g]W`
Ui Z`hfUX]h]cbY`YfY`K YfhY`ghØhnYb`cXYf`]b`XUg`bcW`j c`Uh]Yž`UVYf
dchYbn]Y`"c`bYbXY`HYffU]b`XYf`? fmdhck Å\fi b[Yb`Y]bhUi W`Yb3

A Uf_hVYk Yfhi b ['i bX'5b`U[YghfUhY []Yb

ǂX]YgYb`VYk Y[hYb`NY]hYb`]ghYg`ZØf'5b`Y[Yf'i bYf`Àgg`]Wk`ž`]\fY
GhfUhY []Yb`ni`ØVYfXYb_Yb"8]Y`?ca V]bUh]cb`j cb`gWk`ÀWYfYb
hfUX]h]cbY`Yb`K`À\fi b[Yb`i bX`XYf`GhUV`]h`h`j cb`6]hWc]b`nY][hž
XUgg`Y]bY`8]j Yfg]Z]h]Yfi b[`XYf'5b`U[Yb`a`Ò[`]WYfk Y]gY`XYf
GW`ØggY`ni`a`9fZc`[`]b`Y]bYa`i`bg]WYfYb`A Uf_hi`a`ZY`X`gY]b
ØbbhY"5b`Y[Yf`gc`hYb`X]Y`9bhk]W`i b[Yb`Ui`Za`Yf_gUa
VYcVUW`hYb`i bX`ZYI]VY`V`Y]VYbž`i`a`Ui`Z`X]Y`9fY][b]ggY`gW`bY`
fYU[]YfYb`ni`_ØbbYb"

5_hi Y`Y`9bhk]W_`i b[Yb`]a`K`À\fi b[ga Uf_h

8]Y`Øb[ghYb`6Yk Y[i b[Yb`Ui`ZXYa`K`À\fi b[ga Uf_h[YVYb
5i`ZgW`i`gg`ØVYf`X]Y`k`]fhgW`UZh]W`Yb`F`U`a`YbVYX]b[i b[Ybž`X]Y
gck`c`X`Yb`i`G!8c`Uf`U`g`Ui`W`X`Yb`UdUb]gW`Yb`M`b
VYY]bZi`ggYb"8Yf`F`ØW_[Ub[`XYg`8c`Ufg`[Y[YbØVYf`XYa`M`b
k`]fX`a`U» [YV`]W`Xi`fW`X]Y`j`Yf`ØZYbh]W`hYb`i`G!`a`a`cV`]YbXUhYb
Ui`g[Y`Øghž`X]Y`gW`k`ÀWYf`Ui`gZ]Y`Yb`U`g`Yfk`UfhYh"8Yf
`a`a`cV`]Yba`Uf_h[]`h`U`g`k`]W`h[Yf`ǂX]_Uhc`f`ZØf`X]Y`;`Ygi`bX`Y]h
XYf`;`YgUa`hk`]fhgW`UZh`i`bX`XYf`F`ØW_[Ub[`]_Ub`b`Ui`Z`ghY][YbXY
<mdch`Y`_Ybn]bgYbž`g]b`_YbXY`J`YfVfUi`W`YfUi`g[UVYb`i`bX`UbXYfY
k`]fhgW`UZh]W`Y`<YfUi`gZc`fXYfi b[Yb`]\]bXYi`hYb"

8]YgY`9bhk]W_`i b[Yb`U`UVYb`GdY_i`Uh]cbYb`ØVYf`ni`_ØbZh][Y
N]bggYb_i b[Yb`Xi`fW`X]Y`i`G!B`chYbVUb_`:`YXYFU`F`YgYfj`Y`fi`YXŁ
Ub[Y`Y]nh"K`Yb`b`X]Y`:`YX`VYgW`]Y»`hž`X]Y`N]bgYb`ni`gYb`_Ybž
_ØbbhY`X]Yg`XYb`8c`Uf`k`Y]hYf`gW`k`ÀWYb`ž`k`À`fYbX`XYf`M`b
a`Ò[`]WYfk Y]gY`Ub`5i`Zh]YV`[Yk`]bbhž`XU`ǂj`YghcfYb`bUW
ghUV]`YfYb`5b`U[Yb`gi`W`Yb"ǂa`]hYb`X]YgYf`J`Yf`ÀbXYfi b[Yb`nY][h
6]hWc]b`Y]bY`VYa`Yf`_Ybgk`YfhY`GhUV`]h`h`k`Ug`a`Ò[`]WYfk Y]gY`XUg
ǂhYfYggY`XYf`ǂj`YghcfYb`Ub`U`hYfbUh]j`Yb`5b`U[Yb`g][bU`]g]Yfh"

9]b`6`]W_`Ui`Z`X]Y`ǂZ`Uh]cb`gfUhYb

8]Y`ǂZUh]cbgfUhYb`]b`XYb`i`G5`i`bX`UdUb`g]bX`Yb`hgW`Y]XYbX`ZØf
X]Y`U_hi`Y`Yb`K`À\fi b[gVYk Y[i b[Yb"8]Y`i`G!`ǂZUh]cbgfUhY`]gh]b

XYb`YmhYb`A cbUhYb`fY`Uhj` \cW` [YV`]YVYbž`hfch`XYf
A U» bU\ a Yb`XYf` : YX`ni f`N]bgUb\YVi b["9]b` \c` \Yg
≠ZUh]cbgi a ZY`X`ZØ\fh`cZh`XUni ž`XUgg`NYbhfU`VUb`_Yb`[Ynk`i b[Yb
g]bXž`X]Y`N]bgYb`ni`Yf\Ø`Ybž`i a`XYb`DfY]gUi Zhf]YV`ni
VY`_Åa`dZb`" ≠`dUb` \]b[Y[Yb`_Åa`dZh`X]Y`6Ub`_`cZ`dUb`a`]h
gY\`f`b]YXf][Yb`≠ZUh]cbgfUhYb`i bX`g]Y\`hg]W`gY]h`d\`fYb`Y]bYf
XYZUh]cb`ÅfYb`HYbXYbn`[Y[Yb`ØVYf`"8]YgY`i bhYfgW`]YX`]W`Yb
k]fhgW`UZh]W`Yb`6YX]b[i b[Yb`hfU[Yb`ni`XYb`GW`k Ub`_i b[Yb
nk]gW`Yb`XYa`8c`Uf`i bX`XYa`M`b`VY]"

Ni`g`Åh`]W`_Ubb`X]Y`5b`Y[YfdgmW`c`c[]Y`b]W`h`i bhYfgW`Åhnh
k YfXYb`"8]Y`l`bg]W`Yf\`Y]h]b`6Yni` [`Ui`Z`X]Y`5i`gk`]f`_i b[Yb`XYf
[Y`Xdc`h]gW`Yb`9bhgW`Y]Xi b[Yb`XYf` : YX`\`Uh`j]Y`Y`≠j`Yghc`fYb
j`YfUb`Uggž`g]W`XYZYbg]j`Yf`ni`d`cg]h]cb]YfYb`"8]Y`A`Ø[`]W`_Y]h]j`cb
N]bggYb`_i b[Yb`\`Uh`VY]`Y]b][Yb`5b`Y[Yfb`X]Y`J`c`fgh`Y``i b[`j`cb
Y]bYa`k`Y]W`YfYb`8c`Uf`i bX`d`chYbn]Y`Yb`?`Ui`Z[Y`Y[Yb`\`Y]hYb`ZØf
XYb`M`b`[Yk`YW`_h"

A Uf`_hfYU`_h]cbYb`i bX`5b`Y[Yfj`Yf\`U`hYb

8]Y`FYU`_h]cbYb`XYf`A`Åf`_hY`Ui`Z`k]fhgW`UZh]W`Y`≠X`_Uhc`fYb`i bX
dc`h]gW`Y`9bhgW`Y]Xi b[Yb`g]bX`c`Zh`gW`bY``i bX`i bVYfYW`Yb`VUf`
K`Å\`fYbX`XYf`8c`Uf`gW`k`ÅW`Yf`k]fX`ž`VYc`VUW`hYb
5b`U[Y`YI`dYfhYb`a`]h`≠hYfYggYž`k]Y`g]W`X]Y`A`Åf`_hY`UbdUggYb`
5b[Yg]W`hg`XYf`<`YfUi`gZc`fXYfi b[Yb`ž`j`c`f`XYbYb`XYf
=a`a`cV`]Yba`Uf`_h]b`XYb`l`G5`ghY`h`ž`i bX`XYf`l`bg]W`Yf\`Y]hYb`ØVYf
X]Y`_ØbZh][Y` ;`Y`Xdc`h]_ž`bY][Yb`j`]Y`Y`5b`Y[Yf`XUni`ž`X]j`Yfg]Z]n]Yfh
ni`]bj`Ygh]YfYb`ni`a`6Y]gd]Y``]b`F`c`\`ghc`ZY`c`XYf
?`fmd`hck`Å\`fi b[Yb`k`]Y`6]hW`c]b"

5`_hi`Y``Y`l`a`ZfU[Yb`nY][Yb`ž`XUgg`Y]b`k`UW`gYbXYf`5bhY]`XYf
5b`Y[Yf`Ub`XYf`GhUV]`h`Åh`j`cb`6]hW`c]bg`U`g
K`YfhUi`ZVYk`U\`fi b[ga`]hY``]bhYfYgg]Yfh`]ghž`]bgVYgc`bXYfY`]b
NY]hYb`k`]fhgW`UZh]W`Yf`l`bg]W`Yf\`Y]h"8]YgY`HYbXYbn`_ØbbhY`XUni
ZØ\`fYbž`XUgg`6]hW`c]b`k`Y]hYf\`]b`U`g`5`hYfbUh]j`Y`]b`XUg`Dc`fhZc`]c`XYf
≠j`Yghc`fYb`Ui`Z[Ybca`a`Yb`k`]fX`ž`k`Å\`fYbX`hfUX]h]cbY``Y
K`Å\`fi b[Yb`k`]Y`XYf`8c`Uf`j`c`f`<`YfUi`gZc`fXYfi b[Yb`ghY`Yb`"

8]YgY`XmbUa]gWXYb`J YfÅbXYfi b[Yb`]a `K Å\fi b[ga Uf_hi bX`XUg
Ub\U`hYbXY` ðhYfYggY`Ub`? fmdhck Å\fi b[Yb`i bhYfghfY]WXYb`X]Y
?ca d`YI]hÅh`XYf`\Yi h][Yb`:]bUbñ`UbXgWUZh`i bX`YfZcfXYfb`j cb
XYb`5b`Y[Yfb`Y]bY`gcf[ZÅ`h][Y`5bU`mgY`XYf`k]fhgWUZh`]WXYb`i bX
dc`]h]gWXYb`9bhk]W`i b[Yb`"

8YhU]`g

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