

6F?!6YfY]hgWk UZh'K U`X_]fWk Yb.
9b[U[]YfhY`<Y`ZYf`ZØf`B chZÄ`Y`i bX
6]`Xi b[

8]Y`6F?!6YfY]hgWk UZh'K U`X_]fWk Yb`V`]W`h`Ui ZY]b`U`h]j Yg`>J\ f
&\$&'`ni fØW`ž`a`]h'` &)` [Y`Y]ghYhYb`<Y`ZYfghi bXYb`i bX
j`]Y`gY]h][Yb`9]bgÄhnYb"

8]Y`6F?!6YfY]hgWk UZh'K U`X_]fWk Yb` \Uh`]a` `>J\ f`&\$&'`Y]bY
VYa` Yf`_Ybgk` YfhY`6]`Ubn`[Ync`[Yb`" `&`XYf`bYi` Yb`FYhhi` b[gk` UWk`Yž
X]Y`a`]h`a` cXYfbYb`F`Äi` a` `]Wk`_Y]hYb`gck`]Y`GUb]hÄf!5b`U[Yb`i bX
Y]bYf` ; UfU[Y`Ui` g[YghUhhYh`]ghž`Y]ghYb`X]Y`A`]h[`]YXYf`k` Yfhj` c`Y
Y\ fYbUa` h`]Wk`Y`5fVY]h"8]Y`6YfY]hgWk UZh`VYghY`h`Ui` g`%&`U`h]j` Ybž
Ui` g[YV]`XYhYb`A`]h[`]YXYfbž`X]Y`VYfY]ghY`Ybž`i` a` `]b`B`chZÄ`Yb`i bX
VY]`J`YfUbg`hU`hi` b[Yb`ni` `Y`ZYb"

8]Y`A`]h[`]YXYf`XYf`6F?!6YfY]hgWk UZh`g]bX`b]Wk`h`bi` f`VY]`9]bgÄhnYb
[YZcfXYfhž`gcbXYfb`bY`a` Yb`Ui` Wk`Ub`nU`fY]Wk`Yb`5i`g]i` bX
: cfhV]`Xi` b[ga` U`>bU`a` Yb`hY]`"8]YgY`GWk`i`i` b[Yb`i bX
a` YX]n]b]gWk`Yb`9]bk`Y]gi` b[Yb`g]bX`bchk` YbX][ž`i` a` `X]Y`E`i` U`]hÄh
XYf`<]ZY`ni` [Yk`Ä`f`Y]ghYb`i bX`Ui` ZXYa` `bYi` YghYb`GhUbX`ni
V`Y]VYb`"9]b`k`Y]hYfYf`k`]Wk`h][Yf`5gdY`_h]`fYf`5fVY]h`g]bX`X]Y
fY[Y`a` Ä`][Yb` ; YfÄ`hY!`i` bX` : U`fnYi` [ØVYfdfØZ] b[Ybž`X]Y
g]Wk`YfghY`Ybž`XUgg`U`Yg`ZØf`XYb`9fbghZU`" [i`h]`c`fVYfY]hYh`]gh"

9\ fYbUa` h`]Wk`Yg`9b[U[Ya` Ybh`i bX
J`YfUbg`hU`hi` b[Yb`

9]b`VYXYi` hYbXYf`HY]`XYf`5i` Z[UVYb`XYf`6YfY]hgWk UZh`VYghY`h`]b
XYf`8i` fWk`ZØ`fi` b[`j`cb`GUb]hÄhgX]YbghYb`VY]`j`YfgWk`YXYbYb
J`YfUbg`hU`hi` b[Yb`" `&`>J\ f`&\$&'`k`i`fXYb`ZØf`gc`Wk`Y`9]bgÄhnY
]bg[YgUa` h` &)` <Y`ZYfghi` bXYb`YfVfUWk`h"8]Yg`nY][h`XUg

9b[U[Ya YbhXYf'A]h[`]YXYfž'X]Y'Ui W\`VY]'VYgcbXYfYb
9fY][b]ggYb'ni f'GhY`Y'g]bXž'i a [Ygi bX\Y]h]W\Y'G]W\Yf\Y]h'ni
[Yk Å\`f'Y]ghYb"J cb'Gdcfhj YfUbghU'hi b[Yb'V]g'\]b'ni `i`hi fY`Yb
9fY][b]ggYb'`]\fY'I bhYfghØhni b[`]gh'ghYhg[YZfU[h"

Ni gÅh`]W\`k]fX'X]Y'I bhYfghØhni b[g[fi ddY'F Yhhi b[gX]Ybghi]b
K U`X_]fW\Yb'U`Ufa]Yfhž'k Ybb'B chZÅ`Y'Ui ZhfYhYb"5i ZX]YgY'K Y]gY
]gh[Yk Å\`f'Y]ghYhž'XUgg'VY]'J Yf'Yhni b[Yb'cXYf'U_i hYb
; Ygi bX\Y]hgd f'cV`Ya Yb'gW\`bY`<]'ZY'[Y`Y]ghYh'k YfXYb'`_Ubb"æ
B chZU`ghY\Yb'g]Y'a]h'Y]bYa `F Yhhi b[gk U[Yb'VYfY]hž'i a
i a [Y\YbX'9fghj Yfgcf[i b[Yb'Xi fW\`ni ZØ\`fYb"8]YgY'gW\`bY`Y
F YU_h]cbgZÅ\][_Y]h]ghj cb'YbhgW\`Y]XYbXYf'6YXYi hi b[`]b'XYf
B chZU`a YX]n]b"

8]Y'6YfY]hgW\`UZh'K U`X_]fW\Yb'g]h'Ui W\`VY]'? UhUghfcd\Yb'`i bX
gc[YbUbbhYb'; fc» gW\`UXYbYfY][b]ggYb'`a `9]bgUhn"8]YgY'9]bgÅhny
YfZcfXYfb'`b]W\`h'bi f'gW\`bY`Y`<]'ZYž'gcbXYfb'Ui W\`Y]bY'gcf[ZÅ'h][Y
J cfVYfY]hi b[`i bX'`C f[Ub]gUh]cb"8]Y'9fZU\fi b[ž'X]Y'X]Y'A]h[`]YXYf
VY]'X]YgYb'9]bgÅhnyb'gUa a Yb'ž'Z]Y» h]b'X]Y`_ØbZh][Yb'`HfU]b]b[g
i bX'D`Ubi b[Yb'Y]bž'gcXUgg'g]Y'`a a Yf'X]fY_hYf'i bX'YZZ]n]YbhYf'Ui Z
gc`W\`Y'G]hi Uh]cbYb'fYU[]YfYb'`_ØbbYb"

6Y]hfU[`ni f'; Ya Y]bgW\`UZh

9]b'VYgcbXYfYf': c_i g`]Y[h]a `J\`f'&\$&'`Ui W\`Ui Z'XYf': ŐfXYfi b[
XYg'6'i hgdYbXYbg"5b']bg[YgUa h'gYW\`g'6'i hgdYbXYhYfa]bYb
\UVYb'X]Y'A]h[`]YXYf'XYf'6YfY]hgW\`UZh]b'K U`X_]fW\Yb
hY]'[Ybca a Yb'`i bX'XUVY]'%%\$`<Y`ZYfghi bXYb'[Y`Y]ghYh"8]YgY
6'i hgdYbXYb'g]bX'b]W\`h'bi f'k]W\`h][`ZØf'X]Y'a YX]n]b]gW\`Y
J Yfgcf[i b[`XYf'6Yj Ò`_Yfi b[ž'gcbXYfb'nY][Yb'Ui W\`XUg'gcn]U`Y
9b[U[Ya YbhXYf'6F?!6YfY]hgW\`UZh]b'XYf'F Y[]cb" `G]Y'`hfU[Yb'U_hj]
XUni `VY]ž'X]Y'; Ygi bX\Y]hgj Yfgcf[i b[`ni`i bhYfghØhnyb'`i bX
@Y]XYb'ni`']bXYfb"

8]Y'A]h[`]YXYf'XYf'6YfY]hgW\`UZh'K U`X_]fW\Yb'gYhnyb'g]W\`
`Y]XYbgW\`UZh]W\`ZØf'X]Y'A YbgW\`Yb'`b'`\fYf'I a [YVi b[`Y]b"æ fY
BUa Ybž'XUfi bhYf'6]bXYf'5bbUž'2 \`Yf'8ca]b]_i bX'X]Y
6YfY]hgW\`UZh'g'Y]hYf]b'F Y]gW\`6]Ub_Už'ghY\Yb'ZØf'Y]b'ghUf_Yg

HYUa žXUg'g]W\`_cbh]bi]Yf`]W\`ZcfhV]`XYhi bX`VYfY]h]ghž]a
9fbghZU``ni `Y`ZYb"8]Y`?fY]gVYfY]hgW\`UZh`Y]hi b[`XYg`6F?!
?fY]gj YfvUbXYg': fYmi b[!; fUZYbUi `VYXUb_h]g]W\`Ub`X]YgYf`GhY`Y
`Yfn`]W\`Z0f`X]Y`k Yfhj c``Y`Ž`Y`fYbUa h`]W\`Y`5fVY]h`XYf`6YfY]hgW\`UZh`
8]YgYg`9b[U[Ya Ybh]gh`b]W\`h`bi f`k]W\`h][`Z0f`X]Y`A]h[`]YXYf
gY`Vghž`gcbXYfb`U`h`Ui W\`Y]bYb`dcg]h]j Yb`9]bZi gg`Ui ZXUg
JYfhfUi Yb`XYf`6Yj 0`_Yfi b[`]b`X]Y`F`Yhi b[g!`i bX`<]`ZgX]YbghY"

8]Y`6YXYi hi b[`XYf`6F?!6YfY]hgW\`UZh

⇒ `?cbhYI h`XYf`k UW\`gYbXYb`5bZcfXYfi b[Yb`Ub`F`Yhi b[gX]YbghY
i bX`Y`fYbUa h`]W\`Y`<Y`ZYf`]gh`X]Y`6F?!6YfY]hgW\`UZh`K U`X_]fW\`Yb
Y]b`6Y]gd]Y`Z0f`XUg`i bYfa 0X`]W\`Y`9b[U[Ya Ybh]j cb`:`fY]k]``[Yb
]b`8Yi hgW\`UbX" ⇒ fY`DfĀgYbn`i bX`X]Y`[Yk cbbYbY`9fZU\fi b[`VY]
i bhYfgW\`YX`]W\`ghYb`9]bgĀmYb`a UW\`h]g]Y`ni `Y]bYf
i bj Yfn]W\`hVUfYb`l bhYfgh0hni b[`Z0f`X]Y`[YgUa hY`; Ya Y]bgW\`UZh`
8]Y`[Ya Y]bgUa Y`J`YfUbhk cfhi b[ž`X]Y`g]Y`Ui Z`g]W\`bY`a Ybž`gcf[h
XUZ0fž`XUgg]a `BchZU``gW\`bY`Y`<]`ZY`VYfY]hghY`h`i bX`X]Y`60f[Yf
g]W\`Ui Z]`fY`l bhYfgh0hni b[`j Yf`UggYb`_0bbYb"

8]Y`6F?!6YfY]hgW\`UZh`K U`X_]fW\`Yb`V]`XYh`Y]bYb`k]W\`h][Yb
6YghUbXhY]`XYg`XYi hgW\`Yb`?UhUghfcd`YbgW\`i hngmghYa g" ⇒
F`U`a Yb`]`fYf`5i Z[UVYb`0VYfbY`a Yb`X]Y`Y`fYbUa h`]W\`Yb
A]h[`]YXYf`Y]bY`J]Y`nU`\`j cb`nk]b[YbX`YfZcfXYf`]W\`Yb
A U» bU`a Ybž`X]Y`gck c`\`X]Y`DfĀj Ybh]cb`U`g`Ui W\`X]Y
BchZU``j Yfgcf[i b[`VYhfYZZYb"9]b`Yb`hgW\`Y]XYbXYf`5gdY`h]gh`XUVY]
X]Y`ei U`]Z]n]YfhY`5i gV]`Xi b[`XYf`A]h[`]YXYfž`X]Y`g]W\`YfghY`hž`XUgg
]a `9fbghZU``gW\`bY``i bX`_ca`dYhYbh`[Y`UbXY`h`k YfXYb`_Ubb"

⇒ `8Yi hgW\`UbX`]gh`XYf`?UhUghfcd`YbgW\`i hn`Ui Z] YfgW\`]YXYbY
9VYbYb`ghfi _hi f]Yfh"8]Y`6YfY]hgW\`UZhYb`XYg`6UmYf]gW\`Yb`F`chYb
?fYi nYg`f6F?ĸ`g]bX`]b`XYf`F`Y[Y`HY]`Y]bYg`i a ZUggYbXYb
GmghYa gž`XUg': Yi Yfk Y`fž`Dc`nY]`i bX`k Y]hYfY`<]`ZgX]YbghY
]bhY[f]Yfh" ⇒ `K U`X_]fW\`Yb`gcf[Yb`X]Y`U`_h]j Yb`A]h[`]YXYf`XUZ0fž
XUgg`gck c`\`X]Y`6Yj 0`_Yfi b[`U`g`Ui W\`X]Y`9]bgUhn_fĀZhY]`ja `: U`Y
Y]bYg`BchZU``g`cdh]a U`i bhYfgh0hnh`k YfXYb`_0bbYb"5`g
9`fYbUa h`]W\`Y`V]YhYb`g]Y`k Yfhj c``Y`<]`ZY`i bX`hfU[Yb`XUa]h`ni a
5``[Ya Y]bk c`\`VY]"

8]Y `F c ``Y `XYf`9\ fYbUa h`]Wk Yb `]a

? UhUghfcd \ YbgWk i hn

9\ fYbUa h`]Wk Y`? fÅZhY`g]bX`XUg`F ØW_ [fUh`XYf`a`Y]ghYb
F Yhi b [gX]YbghY`]b`8Yi hgWk`UbX" `@Ui h`XYa`GhUh]gh]gWk Yb
6i bXYgUa h`Yb [U []YfYb`g]Wk`fi bX" ` %A`j`]cbYb`A`YbgWk Yb`]b
Y]bYa`9\ fYbUa h`k Ug`Yhk U" - `DfcnYbh`XYf`6Yj`Ò`_Yfi b [
Yb hgd f]Wk h" `8]YgY` ; fi ddY`]gh`Yb hgWk Y]XYbX`Zøf`X]Y
5i ZfYWk hYf`U`hi b [`ÖZYbh`]Wk Yf`8]YbghY`ž`VYgcbXYfg`]b
? f]gYbnY]hYb" ` ðgVYgcbXYfY`k`À\ fYbX`XYf`7CJ`8!%-`!DUbXYa`]Y
nY][hY`g]Wk`ž`k`]Y`k`]Wk h][`X]Y`Y\ fYbUa h`]Wk Y`i`bhYfghøhni b [`Zøf`X]Y
 ; YgY`gWk UZh]gh"

8]Y`A`]h [`]YXYf`XYf`6F`?!6YfY]hgWk UZh`K`U`X_]fWk Yb`Y`]ghYb`b`]Wk h
bi`f`k`À\ fYbX`fY [i``ÅfYf`NY]hYb`]\ fYb`8]Ybgh`ž`gcbXYfb`g]bX`Ui`Wk
VY]`VYgcbXYfYb`9fY][b]ggYb`k`]Y`BUhi`f`_UhUghfcd\Yb`cXYf
 ; fc»i`bZ`Yb` [YZfU [h" ` ðfY`9]bgUhnVYfY]hgWk UZh`i`bX` :`YI`]V`]hÅh
\Y`ZYbž`]b`i`bYfk`UfhYhYb`i`bX`_f]h]gWk Yb`G]hi`Uh]cbYb`gcZc`fh][`Y
b`chk`YbX][`Y`<`]ZY`ni`Y`]ghYb" `5i`ZX]YgY`K`Y]gY`k`]fX`X]Y
I`bhYfghøhni b [`Xi`fWk`XYb`6F`?!?fY]gj`YfVUbX` :`fYmi`b [! ; fUZYbUi
i`bX`X]Y`?fY]gVYfY]hgWk UZh`g`Y]hi b [`bc`Wk`fY`Yj`Ub`hYf"

5 _hi Y``Y`NU\`Yb`i`bX`GhUh]gh]_Yb`ni`f`
6YfY]hgWk UZh

8]Y`Y\ fYbUa h`]Wk Yb`A`]h [`]YXYf`XYf`6F`?!6YfY]hgWk UZh`K`U`X_]fWk Yb
\UVYb`]a` ` ð\ f`&\$`'`VYfY]hg`a`Y\ fYfY`g][b]Z]_Ub`hY`9fZc`[`Y`]b
6Yni [`Ui`Z`\ fY`9]bgUhnU\`Yb`Yfn]Y`h" ` ðg [YgUa`h`k`i`fXYb`'`&)
<Y`ZYfghi`bXYb`VY]`GUb]hÅhgUVghY`i`b [Yb`i`bX`J`YfUbghU`hi`b [Yb
YfVfUWk h" `5i`»YfXYa`Y`]ghYhYb`X]Y`A`]h [`]YXYf`Ub`gYWk`g
6`i`hgdYbXYhYfa`]bYb`U`_hj` `]\ fYb`6Y]hfU [ž`]bXYa`g]Y`%`%`\$
<Y`ZYfghi`bXYb`ni`f`J`YfZø [i`b [`ghY`h`Yb" `8]YgY`NU\`Yb`fYZY`_h]YfYb
b]Wk h`bi`f`XUg`9b [U [Ya`Ybh`XYf`A`]h [`]YXYf`ž`gcbXYfb`Ui`Wk`X]Y
K`]Wk h][`_Y]h`j`cb`6`i`hgdYbXYb`]b`XYf` ; YgY`gWk UZh" `@Ui h`XYa
8Yi hgWk Yb`F`chYb`?fYi`n`]gh`6`i`hgdYbXY`Y]b`i`bj`Yfn]Wk hV`UfYf
6YghUbXhY]`XYf`a`YX]n]b]gWk Yb`J`Yfgcf [i`b [`i`bX`_Ubb
`YVYbgfYhhYbX`gY]b"

Ni gUa a Yb[YZUggh`Àggh'g]Wk`gU[Ybž'XUgg`X]Y`6F?!6YfY]hgWk UZh
K U`X_]fWk Yb`Xi fWk`j\`fYb`i bYfa ØX`]Wk Yb`9]bgUhn`i bX`X]Y
ei U`]hUhj` \`cWk k Yfh][Y`5i`gV]`Xi b[`]\`fYf`A]h[`]YXYf`Y]bYb
i bj Yfn]Wk hVUfYb`HY]`XYg`F Yhhi b[gX]YbghYg`]b`6UmYfb`XUfghY`h"
8]Y`5bYf`_Ybbi b[`i bX`XYf`8 Ub`ž`X]Y`X]Y`? fY]gVYfY]hgWk UZhg`Y]hi b[
Ub`X]Y`A]h[`]YXYf`Ui ggdfUWk ž`j YfXYi h`]Wk Yb`X]Y`6YXYi hi b[`X]YgYf
Y\`fYbUa h`]Wk Yb`HÀh][_Y]h`ZØf`X]Y`[YgUa hY`F Y[]cb"

8YhU]`g

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