

5 VgW]YX`a]h`K Y\ a i h. `< U]_Y
: `Y]gW a Ubb`ØVYf[]Vh`XYb
? fY]ggYb]cfYbfUh

8 Yf`? fY]ggYb]cfYbfUh`I W_Yfa Uf_`k Å\`h`< YfVYfh`< Y]bYa Ubb
U`g`bYi Yb`J cfg]hnYbXYb" `< U]_Y : `Y]gW a Ubb`Y[h`bUW`ØVYf
gYW`g`ϰ\`fYb`XUg`5a h`b]YXYf"

A]h`Y]bYa `K YW`gY`Ub`XYf`Gd]hnY`XYg`? fY]ggYb]cfYbfUhYg
I W_Yfa Uf_`k]fX`Y]b`bYi Yf`? i fg`Y]b[YgW`U[Ybž`XYf`gck c\`X]Y
J Yf[Ub[Yb\`Y]h`U`g`Ui W`X]Y`ni _ØbZh[Yb`< YfUi gZcfXYfi b[Yb`ZØf
GYb]cfYb`]b`XYf`F Y[]cb`]b`XYb`J c fXYf[fi bX`ghY`h" `< U]_Y
: `Y]gW a Ubbž`X]Y`gY]h`&\$%, `XYb`J cfg]hn`]bbY\UhhYž`n]Y\`hg]W`bUW
ØVYf`gYW`g`ϰ\`fYb`j cb`]fYa`DcghYb`ni fØW`"8]YgYf`K YW`gY`
_ca a h`b]W`h`bi f`Ui g`XYa`K i bgW`bUW`a Y\`f`NY]h`ZØf`]fY
: Ua`]Yž`gcbXYfb`Ui W`Ui g`XYf`9f_Ybbhb]gž`XUgg`Zf]gW`Y`⇒XYb
i bX`bYi Y`DYfgdY_h]j Yb`bchk YbX[]g]bXž`i a`X]Y`5b`Y[Yb`XYf
Å`hYfYb`; YbYfUh]cb`VYgha Ò[`]W`ni`j YfhfYhYb"

< U]_Y : `Y]gW a Ubbž`X]Y`XYb`? fY]ggYb]cfYbfUh]a`ϰ\`f`&\$)\$
[Y[fØbXYh\`Uhž`nY][hY`g]W`gck c\`Ya`ch]cbU`U`g`Ui W`ghc`n`Ui Z
]\`fY`NY]h]a`5a`h"ϰ\`fYb`K cfhYb`_Ubb`a Ub`X]Y`J]Y`ZU`h`XYf
9fZU`fi b[Yb`i bX`< YfUi gZcfXYfi b[Yb`YfU\`bYbž`X]Y`g]Y`[YdfÅ[h
\`UVYb.`9g`k UfYb`gW`ØbY`ϰ\`fYž]b`XYf`k]f[Ya`Y]bgUa`j]Y`
[YgW`UZZh\`UVYbž`UVYf`Y`hnhgc``a Y\`f`NY]h`U`g`V]g\`Yf`ZØf
[Ya`Y]bgUa`Y`I bhYfbY\`a`i b[Yb`a`]h`a`Y]bYf`: Ua`]Y`gY]b" `⇒f
9b[U[Ya`Ybh`k`i`fXY`j`cb`nU\`fY]W`Yb`K`Y[VY[`Y]hYfbž`XUfi`bhYf
Ui`W`@UbXfÅh]b`? Uf]bU`8`Öf`_ž]b`\`ÖW`ghYb`HÖbYb`[Yk`ØfX][hž`X]Y
]\`fY`9a`dUh\]Y`i`bX`8i`fW`gYhni`b[gghÅf_Y`cVhY"

B Yi Yf`J c fg]hnYbXYf`i bX`< YfUi gZcfXYfi b[Yb

<YfVYfh<Y]bYa Ubbž'XYf'Y]bgh]a a]['ni a 'bYi Yb'J cfg]hnYbXYb
[Yk À\`h'k i fXYž'ghY\`h'bi b'j cf'XYf'5i Z[UVYž'X]Y'k]W\h][Yb
H\Ya Yb'XYf'GYb]cfYbj YfhfYhi b['k Y]hYfni ZØ\ fYb'i bX
k Y]hYfni Yb'hk]W_Y`b"9f'ghUa a h'Ui g'i W_Yf`UbX'i bX`Vf]b[h'Zf]gW\Y
≠XYb']b'X]Y'Dcg]h]cbž'X]Y'XYb'?fY]ggYb]cfYbfUh']b'Ni _i bZi'dfÀ[Yb
gc`Yb"8]Y'j]YfhY`À`f`]W\Yb'G]hni b[Ybž']b'XYbYb'Yf'i bX'X]Y
UbXYfYb'A]h[`]YXYf'X]Y`c_U`Y'GYb]cfYbdc`]h]_U_h]j '[YghU`hYbž
g]bX'Y]b'nYbhfU`Yg'9`Ya Ybh'gY]bYf'bYi Yb'J YfUbhk cfhi b["'8UVY]
]gh'X]Y'Cf[Ub]gUh]cb'j cb'<Y]a UhZU\fhYb'i bX'X]Y'J YfhY]'i b['j cb
: ÒfXYfa]hhY`b'Ub'X]Y'Òfh']W\Yb'GYb]cfYbj YfY]bY'j cb
YbhgW\Y]XYbXYf'6YXYi hi b["

8]Y'YfghY'G]hni b['gY]h'<Y]bYa Ubbg'K U\`ZUbX'Ua 'i&%"5i [i gh
ghUhhž'i bX'X]Y'@UbXfÀh]b'k Uf'Y]b[YZfU[hYf'; Ygd fÀW\gdUfhbYf"
8UVY]'k i fXYb'H\Ya Yb'Ub[Ygd fC W\Ybž'X]Y'ZØf'X]Y'GYb]cfYb']b'XYf
I W_Yfa Uf_`Xf]b[YbX'j cb'6Y`Ub['g]bX"BYVYb'XYa
6fY]hVUbXUi gVUi 'i bX'XYf'Bchk YbX][_Y]h]j cb
GhfU» YbVUi a U» bU\ a Yb' [UV`Yg'Ui W\`Y]bYb' _`UfYb'5i Zfi ZbUW\
a Y\`f'j Yf_Y\fgVYfi \][YbXYb'A U» bU\ a Yb']b'XYb'; Ya Y]bXYb"8]Y
8]g_i gg]cb'nYi [hY'j cb'Y]bYf'U_h]j Yb'i bX'Yb[U[]YfhYb
GYb]cfYbj YfhfYhi b[ž'X]Y'X]Y'Gh]a a Y'XYf'Y`hYfYb']b'XYf'F Y []cb
ghÀf_h"

8]Y'6YXYi hi b['XYf'GYb]cfYbUfVY]h

8]Y'5fVY]h'XYg'?fY]ggYb]cfYbfUhYg']gh'ZØf'X]Y'; YgY`gW\UZh]j cb
[fc» Yf'6YXYi hi b["'G]Y'hfÀ[h'XUni `VY]ž'Y]bY'6fØW_Y`nk]gW\Yb'XYf
À`hYfYb'; YbYfUh]cb'i bX'XYb'J YfUbhk cfhi b[ghfÀ[Yfb'XYf
; Ya Y]bXY'ni `VUi Yb"8i fW\`X]Y'fY[Y'a À»][Yb'HfYZZYb'i bX'XYb
5i ghUi gW`j cb'≠Zcfa Uh]cbYb'k]fX'g]W\Yf[YghY`hž'XUgg'X]Y
5b`Y[Yb'XYf'GYb]cfYb'; Y\Òf'Z]bXYb'i bX']b'dc`]h]gW\Y
9bhgW\Y]Xi b[Yb'Y]bZ]Y» Yb"

: Øf'X]Y'A]h[`]YXYf'XYg'?fY]ggYb]cfYbfUhYg']gh'Yg'k]W\h][ž'g]W\
_cbh]bi]Yf`]W\`ØVYf'X]Y'6YXØfZb]ggY'i bX'Gcf[Yb'XYf'GYb]cfYb
Ui gni hUi gW\Yb"Bi f'gc`_ÒbbYb'g]Y'YZZY_h]j Y'Dfc[fUa a Y'i bX
≠]h]Uh]j Yb'Yb'hk]W_Y`bž'X]Y'XYb'@YVYbgghUbXUfX'i bX'X]Y
@YVYbgei U]hÀh'XYf'À`hYfYb'6Øf[Yf']b'XYf'I W_Yfa Uf_`ZØfXYfb"

8]Y`Ni _i bZh`XYg`? fY]ggYb]cfYbfUhYg`k]fX`b]W`h`bi f`j`cb`< YfVYfh
<Y]bYa Ubbg` : Ø\fi b[`UV\`Ab[Ybž`gcbXYfb`Ui W`j`cb`XYf
_c`Y`_hj] Yb`9bYf[]Y`i`bX`XYa` `9b[U[Ya Ybh`U`Yf`A]h[`]YXYfž`X]Y
g]W`X`ZØf`X]Y`6Y`Ub[Y`]\fYf` ; YbYfUh]cb`ghUf`_`a U`W`Yb`"8Yf`K`Y`W`gY`
]b`XYf`@Y]hi b[`]gh`U`gc`b]W`h`bi f`Y]b`9][YbgW`U`Zh`gk`Y`W`gY`/`Yg`]gh
Ui W`Y]bY`7\UbW`ž`bYi`Y`K`Y[Y`ni`VYgW`fY]hYb`i`bX`X]Y
@YVYbgei U`]h`h`XYf`GYb]cfYb`k`Y]hYf`ni`j`YfVYggYfb`"

9]b`5i`gV`]W`_`Ui`Z`X]Y`_`ca`a`YbXYb
< YfUi`gZc`fXYfi`b[Yb

A]h`XYf`bYi`Yb`@Y]hi b[`_ØbbhY`XYf`? fY]ggYb]cfYbfUh`Ub`6YXYi`hi`b[
[Yk`]bbYbž`k`Å`fYbX`X]Y` ; YgY`gW`U`Zh`]a`a`Yf`A`hYf`k`]fX`i`bX`X]Y
Gh]a`a`Yb`XYf`GYb]cfYb`]b`dc`]h]gW`Yb`8]g`_i`gg]cbYb`b]W`h`a`Y`f
][bcf]Yfh`k`YfXYb`_ØbbYb`"8Ug`9b[U[Ya Ybh`ZØf`GYb]cfYb`]gh`b]W`h
bi`f`Y]b`c`_U`dc`]h]gW`Yg`H`Y`a`U`ž`gcbXYfb`Ui`W`Y]b
[YgY`gW`U`Zh`]W`Yf`5i`ZhU[ž`XYf`U`Y` ; YbYfUh]cbYb`VYhf`]Zh`"8]Y
9fZU`fi`b[Yb`i`bX`XYf`5gdY`h`XYg`[Ya`Y]bgUa`Yb`A`]hY]bUbXYf`gž`X]Y
<U`_Y` : `Y]gW`a`Ubb`a`]h[YVfUW`h`\Už`k`YfXYb`k`Y]hYf`\]b`]a
A]hY`di`b`_h`ghY`Yb`i`bX`\YfUi`gZc`fXYfbXYž`UVYf`Ui`W`gdUbbYbXY
NY]hYb`Ub`ghc`»`Yb`"

8Yf`9]bZ`i`gg`j`cb`GYb]cfYb[fYa]Yb`Ui`Z`X]Y
`c`_U`Y` ; Ya`Y]bgW`U`Zh

8Yf`? fY]ggYb]cfYbfUh]gd]Y`h`Y]bY`Yb`hgW`Y]XYbXY`F`c`Y`]b`XYf
 ; YghU`hi`b[`XYf`@YVYbgei U`]h`h`j`cb`GYb]cf]bbYb`i`bX`GYb]cfYb`]b
XYf`i`W`_Yfa`Uf`_`"8i`fW`fY[Y`a`Å`»][Y`HfY`ZYb`i`bX`XYb`5i`ghUi`gW`
j`cb`≠Zcfa`Uh]cbYb`gck`]Y`X]Y`C`f[Ub]gUh]cb`j`cb` : fY]nY]hU`_hj]]h`h`Yb
k`]fX`XYb`6YXØfZb]ggYb`A`hYfYf`6Øf[Yf`F`Y`W`bi`b[`[YhfU[Yb`"8]Y
≠hY[fUh]cb`j`cb`GYb]cf]bbYb`i`bX`GYb]cfYb`]b`X]Y
9bhgW`Y]Xi`b[gdfcnYggY`Ui`Z`_ca`a`i`bU`Yf`9VYbY`]gh`b]W`h`bi`f
k`]W`h][`ZØf`\fY`GY`Vghj`YfhfYhi`b[ž`gcbXYfb`ZØfXYfh`Ui`W`XYb
gcn]U`Yb`Ni`gUa`a`Yb`U`h`]b`XYf` ; Ya`Y]bXY`"

8]Y`A`Ø[`]W`_Y]hž` : ØfXYfa`]hY`ZØf`c`_U`Y`GYb]cfYbj`YfY]bY`ni
j`YfhY`]Ybž`ghY`h`g]W`Yfž`XUgg`Dfc`Y`_hYž`X]Y`XYf`A`hYfYb

6Yj Ò`_Yfi b[`ni [i hY_ca a Ybž`Z]bUbn]Y``i bhYfghØhnh`k YfXYb
_ÒbbYb``8]Yg`_Ubb`ni f`J YfVYggYfi b[`j cb` ÆZfUghfi _hi fž`gc n]U`Yb
5b[YVchYb`i bX` : fY]nY]hU_hj]]hÀhYb`ZØ\ fYbž`X]Y`gdYn]Y``Ui Z`X]Y
6YXØfZb]ggY`j cb`GYb]cfYb`ni [YgW\ b]hhYb`g]bX"

6YXYi hi b[`j cb` Òf`h`]W\ Yb` Æ]h]Uh]j Yb

NU\ `fY]W\ Y``c`_U`Y` Æ]h]Uh]j Ybž`X]Y`Xi fW\ `XYb`? fY]ggYb]cfYbfUh
Ub[Yghc» Yb`k YfXYbž` \ UVYb`XYb`Nk YW_ž`XUg`K c\ `VY]Z]bXYb
À`hYfYf`A YbgW\ Yb`ni `ZØfXYfb``8Uni `[Y\ ÒfYb`VY]gd]Y`gk Y]gY
: U\ fha Ò[`]W\ _Y]hYb`ni `?i`hi fj YfUbghU`hi b[Yb`cXYf`X]Y
8i fW\ ZØ\ fi b[`j cb` ÆZcfa Uh]cbgj YfUbghU`hi b[Ybž`X]Y`XUg
6Yk i gghgY]b`ZØf`U`hYfg[YfYW\ hY`8]YbghY]ghi b[Yb`gW\ ÀfZYb"

9]b` \Yfj cffU[YbXYg`6Y]gd]Y``]gh`X]Y`6YXYi hi b[`j cb
<Y]a UhZU\ fhYbž`X]Y`b]W\ h`bi f`XYf`9f\ c`i b[`X]YbYbž`gcbXYfb`Ui W\
Y]bY`D`UhhZcfa `ZØf`gc n]U`Yb`?cbhU_h`V]YhYb``Gc`W\ Y`5_hj]]hÀhYb
\Y`ZYbž` Ægc`Uh]cb`ni `j Yfa Y]XYb`i bX`ZØfXYfb`XUg
; Ya Y]bgW\ UZhg[YZØ\`"

5_hi Y``Y`< YfUi gZcfXYfi b[Yb`ZØf`GYb]cfYb`]b
XYf`I W_Yfa Uf_

Æ`XYb`YhnhYb` Æ\ fYb`gU\ Yb`g]W\ `GYb]cf]bbYb`i bX`GYb]cfYb`]b`XYf
I W_Yfa Uf_`a]h`Y]bYf`J]Y`nU\`j cb`< YfUi gZcfXYfi b[Yb
cbZfcbh]Yfhž`X]Y`Xi fW\ `X]Y`XYa c[fUZ]gW\ Y`9bhk]W`i b[`i bX
dc`]h]gW\ Y`9bhgW\ Y]Xi b[Yb`j YfghÀf`h`k i fXYb``9]bY`XYf
XfÀb[YbXghYb` : fU[Yb`]gh`XYf`6fY]hVUbXUi gVUi ž`XYf`]bgVYgcbXYfY
]b`ÀbX`]W\ Yb` ; YV]YhYb`cZi`bcW\ `i bni fY]W\ YbX`]gh``GW\ bY``Yg
ÆhYfbYh`]gh`b]W\ h`bi f`ZØf`X]Y`@YVYbgei U`]hÀh`k]W\ h][ž`gcbXYfb
Ui W\ `ZØf`X]Y`HY`]bU\ a Y`Ua `a cXYfbYb`@YVYbž`k c`X][]hU`Y
HYW\ bc`c[]Yb`ni bY\ a YbX`Xca]b]YfYb"

Dc`]h]gW\ Y`5b`]Y[Yb`i bX`6YXØfZb]ggY`XYf`GYb]cfYb

8]Y` ; Ygd fÀW\ gfi bXYbž`X]Y`VY`]XYb`G]hni b[Yb`XYg
? fY]ggYb]cfYbfUhYg`ghUhhZ]bXYbž`g]bX`YbhgW\ Y]XYbXž`i a `dc`]h]gW\ Y

5b`Y[Yb`X]fY_h`Ubni gdfYWX`Yb" `8]Y`H\Ya Yb`J Yf_Y\fgg]WX`Yf\Y]h
i bX`ϕZfUghfi _hi fUi gVUi `g]bX`\Ài Z][Y`GWk Yfdi b_hY"
GYb]c]fg]WX`Yf\Y]h`Ui Z`XYb`GhfU» Yb`gck]Y`X]Y`B`chk YbX][_Y]h
VYfi \][YbXYf`A U» bU\`a Yb`g]bX`nYbhfU`Y`5b`Y[Yb`ži a`X]Y
A`cV]`]h`À`hi bX`G]WX`Yf\Y]h`j`cb`À`hYfYb`A YbgWX`Yb`ni` [Yk`À`f`Y]ghYb"
8Ug`9b[U[Ya YbhXYf`@UbXf`À]b`i bX`UbXYfYf
9bhgWX`Y]Xi b[ghf`À[Yf`]gh`i bYf`Àgg`]WX`ži a`X]YgY`5b`Y[Yb`]b`X]Y
dc`]h]gWX`Y`8]g_i`gg]cb`Y]bni Vf]b[Yb`i bX`@Ogi b[Yb`ni`Z]bXYb"

9]b`k`Y]hYfYf`k`]WX`h][Yf`5gdY_h`]gh`X]Y`dgmWX`]gWX`Y` ; Ygi bX\Y]h`XYf
À`hYfYb`6Yj`Ò`_Yfi b[" `ϕ`Y]bYf`NY]hž`]b`XYf`gc]n]U`Y`ϕc`Uh]cb`i bX
5`hYfgXYdfYgg]cbYb`c`Zi`H\Ya U`g]bX`ž`]gh`Yg`k`]WX`h][ž`XUgg`c`_U`Y
6Y\`ÔfXYb`i bX`ϕ]h]Uh]j`Yb`ni`gUa`a`YbUfVY]hYb`ži a`Dfc[fUa`a`Y`ni`f
l`bhYfgh`Ø`hni b[`À`hYfYf`A YbgWX`Yb`ni`]b]h]YfYb"

8]Y`Ub\U`hYbXY`DUbXYa`]Y`\Uh`ni`XYa`X]Y` : fU[YghY`i b[Yb`fi bX
i a`X]Y`DZY[Y`i bX`X]Y`l`bhYfgh`Ø`hni b[`j`cb`GYb]c]f]bbYb`i bX
GYb]c]fYb`j`Yfgh`À`f`h" <]Yf`g]bX`gck`c`\`]bbcj`Uh]j`Yb`@Ogi b[Yb`U`g
Ui`WX`XYf`Ni` [Ub[`ni`b`chk`YbX][Yb`8]YbghY]ghi b[Yb`[YZfU[hž`i a
XYb`VYhfc`ZYbYb`DYfgcbYb`Y]b`k`ØfXYj`c`Yg`@VYb`ni
Yfa`Ò[`]WX`Yb"

8]Y`5fVY]h`XYg`?`fY]ggYb]c]fYb]fUhYg`i bX`XUg`9b[U[Ya Ybh`gY]bYf
A`h[`]YXYf`g]bX`XU\Yf`j`cb`nYbhfU`Yf`6YXYi`hi b[ži a`XYb
< YfUi`gZcfXYfi b[Yb`XYf`À`hYfYb` ; YbYfUh]cb`]b`XYf`l`W`Yfa`Uf`_
bUWX`U`h][`ni`VY[Y[bYb" : Øf`k`Y]hYfZØ`fYbXY`ϕZcfa`Uh]cbYb`_Ubb
X]Y`K`YVgY]hY`XYf`l`W`Yfa`Uf`_`_cbgi`h]Yfh`k`YfXYb"

8YhU]`g

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