

5`hY`9]W\ Y`]b`F U\ bgXcfZ. :`À``i b[`Ui g G]W\ Yf\ Y]hg[fØbXYb`VYgW\`c ggYb

9bhXYW_Yb`G]Y`X]Y`<]bhYf[fØbXY`XYf` :`À``i b[`XYg`&'`%`ſ\ſY
U`hYb`B Uhi fXYb_a U`g`B 8`)`*`]a` `A Ø[[Y`k YfXYf`K Y[`]b
F U\ bgXcfZ`''5i Z[fi bX`j`cb`J Yf_Y\fgg]W\ Yf\ Y]hg!`i`bX
; YZU\ſYbUVk Y\fa U» bU\ a Yb`a`i`gg`X]Y`ghUf_
j`cf[YgW\AX][hY`9]W\ Y`hfchn`]\fYg`\]ghcf]gW\ Yb`K`YfhYg`[YZÀ``h
k YfXYb`''9fZU\ſYb`G]Y`a`Y\ f`ØVYf`X]Y` ; fØbXY`i`bX`XYb`5V`Ui`Z
XYf`i`a`ZU b[fY]W\ Yb`5fVY]hYb`"

⇒a` `A Ø[[Y`k YfXYf`K Y[`]b`F U\ bgXcfZ`ghY\`h`Y]bY`VYY]bXfi`W_YbXY
9]W\ Yž`X]Y`b]W\ h`bi`f`a`]h`]\fYa` ` \c\Yb`K`i`W`g`j`cb`&`,` `A`YhYfbž
gcbXYfb`Ui`W\`a`]h`]\fYa` `5`hYf`j`cb`&` ` %`ſ\ſYb`VYY]bXfi`W_`h`''8`c`W
hfU[]gW\ Yfk`Y]gY`a`i`gg`X]YgYf`bU`hØf`]W\ Y`F`]YgYž`XYf`U`g
B Uhi fXYb_a U`B 8`)`*`_`Ugg]Z]n]Yfh`]ghž`[YZÀ``h`k`YfXYb`''8`Y
9bhgW\ Y]Xi`b[`XYg`6Yn]f_gUa` hYgž`X]YgY`U`hY`9]W\ Y`ni`Y`bhZYfbYbž
VYfi` \h`Ui`ZYfbgh`UZhYb` ; fØbXYb`XYf`J`Yf_Y\fgg]W\ Yf\ Y]hi`bX`XYf
; YZU\ſYbUVk Y\ f`''9]b`Zf]gW\ Yf`F`]ggž`h]YZ`]bg`GhUa` a`]bbYfY
Y]bXf]b[YbXž`\Uh`X]Y`GhUV`]h`h`h`XYg`6Ui`a`Yg`[YZÀ`\fXYh`Ni`U`Y`a
,`VYfZi`gg`]gh`X]Y`9]W\ Y`ghUf`_j`Yfd`]nhž`k`Ug`ni`g`h`h`]W\`ni`f
l`bg]W\ Yf\ Y]h`ØVYf`]\fY`GhUbXZYgh][`_Y]h`VY]hfÀ[`h`"

8]Y` :`À``UfVY]hYb` \UVYb`Ua` `8`c`bbYfghU[ž`XYb`&&''5i [i gh&\$&(ž
VY[`c`bbYbž`k`c`VY]`ni`b`À`W`gh`X]Y`?`f`cbY`XYg`6Ui`a`Yg`UV[YgYhnh
k`]fX`''8`YgY`A`U»`bU\`a`Y`]gh`Y]XYf`YfZcfXYf`]W\ ž`XU`X]Y` ; YZU\`fž`X]Y
j`ca`6Ui`a`Ui`g[Y\`hž`b]W\ h`][`bcf]Yfh`k`YfXYb`_U`bb`''9g`]gh`k`]W\ h][ž
gc`W\ Y`9bhgW\ Y]Xi`b[Yb`]a` `b`hYfYggY`XYf`ÒZYb`h]W\ Yb`G]W\ Yf\ Y]h
ni`hfYZZYbž`Ui`W\`k`Y`bb`g]Y`g`W\ a`Yfn`UZh`g]bX`''8`Yf`F`YghghUa` a`k`]fX
ni`Y]bYa`gd`hYfYb`NY]hdi`b`_h[YZÀ``hž`k`Ug`XUfUi`Z`\]bk`Y]ghž`XUgg
X]Y`5fVY]hYb`i`a`ZUggYbX`i`bX`gcf[ZÀ`h][`Xi`fW\ [YZØ\`fh`k`YfXYbž`i`a
Y[`]W\ Y`F`]g]_Yb`ni`a`]b]a`]YfYb`"

9I dYfhYba Y]bi b [Yb `VY`Y [Yb `Bchk YbX][_Y]h

I a `g]WYfni ghY`Ybž`XUgg`U`Y`A U» bU\ a Yb` [YfYW hZYfh][h`g]bXž
\Uh`XUg`GhfU» Yb!`i bX`; fØbZ`AW YbUa h`Y]bYb`YI hYfbYb`; i hUW hYf
\]bni [Ync [Yb``8]YgY: UW ZfUi ` \Uh`X]Y`; YZ`A`f`]W`_Y]h`XYf
G]hi Uh]cb`VYgh`Ah][h`i bX`X]Y`Bchk YbX][_Y]h`XYf: `A`i b [
i bhYfa Ui Yfh``8]Yg`ghY`h`g]WYfž`XUgg`X]Y`9bhgWY]Xi b [`Ui Z
cV`Y`_h]j Yb`6Yk Yfhi b [Yb`VUg]Yfh`i bX`b]W`h`U`Y]b`Ui g`]bhYfbYb
, VYf`Y [i b [Yb`XYg`6Yn]f`gUa hYg` [YhfcZYb`k i fXY``5i W`XUg
I a k Y`h`i bX`BUhi fgW`i mUa h`\Uh`\]bg]W`h]W`X]YgYf`H`Ya Uh]_
VYfUhYbX`ni f`GY]hY` [YghUbXYb`i bX`U`Y`5gdY`hY`XYf: `A`i b [
[fØbX`]W` [YdfØZh`

8]Y`5Vk `A [i b [`nk]gWYb`XYb`JcfhY]`Yb`Y]bYg` [Yk UW gYbYb
6Ui a Yg`i bX`XYb`F]g]_Ybž`X]Y`Yf`XUfghY`Yb`_Ubbž`]gh`ni k Y]`Yb
gY\`f`_ca`d`YI ``9]WYb`g]bX`b]W`h`bi f`Y]bY`5i [Ybk Y]XYž`gcbXYfb
gd]Y`Yb`Ui W`Y]bY`k]W`h][Y`F`c`Y`]a`^2`_cgmghYa ž`]bXYa`g]Y
@YVYbgfUi a`ZØf`j]Y`Y`5fhYb`V]YhYb`i bX`ni f`@ Zhe`i U`]h`A`h
VY]hfU [Yb``8cW`X]Y`G]WYf\`Y]h`XYf`6Øf [Yf`\Uh`cVYfghY`Df]cf]h`A`hž
i bX`]b`: `A`Yb`k]Y`X]YgYa`a`i gg`XU\Yf`XUg`f]W`h][Y`; `Y]W [Yk]W`h
[YZi bXYb`k YfXYb``

GW`i hna U» bU\ a Yb`i bX`ni _ØbZh][Y 9bhk]W`_`i b [Yb

8i fW`X]Y: `A`i b [`k]fX`Y]b`FUi a` [YgW`UZZYbž`XYf`a`Ò [`]WYfk Y]gY
ZØf`bYi Y`DZUbnyb`cXYf`gc [Uf`ZØf`bYi Y`I a k Y`hd`fc`Y`_hY` [Ybi hnh
k YfXYb`_Ubb``9g`ghY`h`ni f`8]g`_i gg]cbž`k Y`WY`5fhYb`Yj Ybhi Y`
bUW [YdZUbnh`k YfXYb`_ØbbhYbž`i a`b]W`h`bi f`XUg`bUhØf`]WY
; `Y]W [Yk]W`h`ni `VYk U`fYbž`gcbXYfb`Ui W`XUg`Ò`c`c []gWY
6Yk i gghgY]b`]b`XYf; Ya Y]bgW`UZh`ni`ZØfXYfb``A`]h`Y]bYa
VYk i gghYb`Jcf [Y\Yb`_ØbbhY`X]Y`I a [YVi b [`b]W`h`bi f`Yf\U`hYbž
gcbXYfb`Ui W`j YfVYggYfh`k YfXYb``

8]Y`9bhgWY]Xi b [`ni f: `A`i b [`X]YgYf`&`%`J\`fY`U`hYb`9]WY`k]fZh
Ui W`: fU [Yb`Ui Z`\]bg]W`h]W`Y]bYg`Ub [Ya YggYbYb`I a [Ub [g`a`]h
U`hYb`i bX`j Yf`YhmVUfYb`6`Ai a Yb`]b`i fVUbYb`F`Ai a Yb``C`Zh]gh`Yg

Y]bY'<YfUi gZcfXYfi b[žXYb'K i bgW\XYf'6Øf[Yf'bUW\XYa '9f\U'h
XYf'BUhi f'a]h'XYb'bcchk YbX][Yb'G]WXYf\Y]hgj cf_Y\fi b[Yb']b
9]b_Ub['ni 'Vf]b[Yb''8]YgY'G]hi Uh]cb'_ØbbhY'U'g'6Y]gd]Y'X]YbYbž
i a 'b]W\h'bi f'ØVYf'X]Y'i ba]hY'VUFYb'A U» bU\ a Ybž'gcbXYfb'Ui W
ØVYf'Ub[Zf]gh][Y'GhfUHY[]Yb'ZØf'XYb'6Ui a gW\i hn'i bX'X]Y'DZY[Y
j cb'BUhi fXYb_a Å'Yfb']b'ghÅXh]gW\Yb'; YV]YhYb'bUW\ ni XYb_Yb''

9g'a ØggYb'K Y[Y[YZ bXYb'k YfXYbž'i a 'XYb'K Yfh]j cb
BUhi fXYb_a Å'Yfb'ni 'j Yfa]hY' b'i bX'['Y]W\ nY]h]['Ui Z'X]Y
<YfUi gZcfXYfi b[Ybž'X]Y'g]Y'ja 'i fVUbYb'FUi a 'a]h]g]W\ 'Vf]b[Ybž
Ub[Ya YggYb'ni 'fYU[]YfYb''æ'Y]bYf'NY]hž]b'XYf'XYf'GW\i hn'XYf
I a k Y'h'ni bY\ a YbX']b'XYb': c_i g'fØW_hž]gh'Yg'k]W\h][ž'gc`W\Y
9bhgW\Y]Xi b[Yb'hfUbgdUfYb'h'ni '_ca a i b]n]YfYb'i bX
A Ø['W\ _Y]hYb'XYf'_ca dYbgUhc]gW\Yb'5i Zc fghi b['b'6YhfUW\h'ni
n]Y\Yb''

'8Yf'GhUbXcfh'X]YgYf'\]ghcf]gW\Yb'9]W\Y'ja 'A Ø[[Y'k YfXYf'K Y[
\Uh'b]W\h'bi f'Ø_c`c[]gW\Y'6YXYi hi b[ž'gcbXYfb'Ui W\ '_i 'hi fY''Yb
K Yfh''Gc`W\Y'U'hYb'6Åi a Y'g]bX'cZ'h'NY]hnYi [Yb'i bX'hfU[Yb'ni f
æYb]h]hÅ'hY]bYg'GhUXhhY]'g'VY]''æ : U''XYf'FU\bgXcfZYf'9]W\Y
\UbXY'h'Yg'g]W\ 'i a 'Y]bY'XYf''YhnhYb']\fYf'5fh']b'XYf'I a [YVi b[ž
X]Y'bYVYb']\fYf'Ø_c`c[]gW\Yb': i b_h]cb'Ui W\ 'Y]bY'J YfV]bXi b['ni f
; YgW\]W\hY'XYg'CfhYg'XUfghY''h''8]Y'@YVYbgXUi Yf'gc`W\Yf'6Åi a Y
_Ubb'a Y\ fYfY'æ\ f\i bXYfhY'VYhfU[Ybž'k Ug'X]Y'9bhgW\Y]Xi b['ni f
: Å''i b['i a gc'gW\k YfYf'a UW\h''

'8Yf'Ni ghUbX'XYf'9]W\Y'k Y]gh'Ui ZY]bY'J]Y'nU\''j cb
I a k Y'hZU_hcfYb'\]bž'X]Y'XYb'6Ui a 'b'XYb''YhnhYb'æ\ fYb'bY[Uh]j
VYY]bZi ggh'\UVYb'_ØbbhYb''Ni a '6Y]gd]Y''_ØbbYb
?'ja Uj YfÅbXYfi b[Ybž'GW\ÅX']b[Y'i bX'?fUb_\Y]hYb'ni f
GW\k ÅW\i b['i bX'ni a '5VghYfVYb'U'hYf'6Åi a Y'ZØ\ fYb"
ægVYgcbXYfY'D]'n]bZY_h]cbYbž'X]Y'\Åi Z['VY]'U'hYb'9]W\Yb
j cf_ca a Ybž'ghY''Yb'Y]bY'Yfbgh\UZhY'6YXfc\i b['XUf''8]Yg'_ØbbhY
Y]bY'ni bY\ a YbXY'<YfUi gZcfXYfi b['ZØf'I fVUb': cfYghfm'UbX
GhUXhd'Ubi b['XUfghY''Ybž']bgVYgcbXYfY'j]b'<]bV'jW'_Ui ZXYb'9f\U'h
gc`W\Yf'U'hYb'BUhi fXYb_a Å'Yf''

; Yd`UbhY'A U» bU\ a Yb' i bX'5`hYfbUh]j Yb

''8]Y': Å''UfVY]hYb'k YfXYb'b]W\h'bi f'Ui g'; fØbXYb'XYf
J Yf_Y\fgg]W\Yf\Y]h'Xi fW\ [YZØ\fhž'gcbXYfb'Ui W\ž'i a 'Y]bY
dchYbn]Y''Y'; YZÅ\fxi b['ZØf'X]Y'5bk c\byf'ni 'j Yfa Y]XYb"
; 'Y]W\NY]h]['k]fX'XUfØVYf'bUW\ [YXUW\hž'k]Y'X]Y': 'ÅW\Y'bUW\ 'XYf
: Å''i b['g]bbj c''[Ybi hnh'k YfXYb'_Ubb''9g'VYghY\h'X]Y
A Ø['j]W\ _Y]hž'XUgg'Ub'UbXYfYf'GhY''Y'bYi Y'6Åi a Y' [YdZUbnh
k YfXYbž'i a 'X]Y' [YZÅ''hY'9]W\Y'ni 'YfgYhnYb''8]YgY'6Ui a UbGUUh
_ØbbhY'Ui W\ 'Y]b'HY]'Y]bYg'i a Zub[fY]W\YfYb'6Y[fØbi b[gdfc'Y_hg
gY]bž'XUg'XUfUi ZUVn]Y'hž'X]Y'6]cX]j Yfg]hÅh]b'XYf'FY[]cb'ni
ZØfXYfb''''

''8]Y'æ d'Ya Ybh]Yfi b['j cb'bYi Yb'GW\i hna U»bU\ a Yb'ZØf
j YfV'Y]VYbXY'9]W\Yb'i bX'UbXYfY'U'hY'6Åi a Y'k]fX'YVYbZU''g
X]g_i h]Yfh''8i fW\ '[YY][bYhY'6Ui a dZY[Y'i bX'X]Y'GW\UZI b['j cb
[YgW\ØhnhYb': 'ÅW\Yb'_ØbbhYb'Å\ b']W\Y'DfcV'Ya Y']b'XYf'Ni _i bZh
a Ø['j]W\Yfk Y]gY'j Yfa]YXYb'k YfXYb''8]Y'Ni gUa a YbUfVY]h'a]h
XYa 'l a k Y'h'i bX'BUhi fgW\i hnUa h'k]fX']b'X]YgYa '?cbhYI h'U'g
VYgcbXYfg'k]W\h]['YfUW\hYhž'i a '[YY][bYhY'@Øgi b[Yb'ni 'Z]bXYb''''

2 _c`c []gW\ Y'5i gk]f_i b[Yb

''8]Y': Å''i b['X]YgYf'9]W\Y'_ØbbhY'_i fnZf]gh]['5i gk]f_i b[Yb'Ui Z
XUg`c_U'Y'^2 _cgmghYa '\UVYb''5'hY'6Åi a Y'V]YhYb'@VYb'gfa' a Y
ZØf'nU\`fY]W\Y'5fhYbž'XUfi bhYf'J Ø[Y'ž'ægY_hYb'i bX': 'YXYfa Åi gY"
8]Y'9bhZYfbi b['Y]bYg'gc`W\ '[fc»Yb'6Ui a Yg'j YfÅbXYfh'XUg
A]_fc_]a U'i bX'X]Y'J]Y'ZU'h'j cb'DZUbnYb'i bX'H]YfYb']b'XYf
l a [YVi b[''8Yg\U'V'_ØbbhY'Yg'bch'k YbX]['gY]bž'gdYn]Y''Y
A U»bU\ a Yb'ni a 'GW\i hn'XYf'5fhYbj]Y'ZU'h]b'X]YgYf'; Y[YbX']b
6YhfUW\h'ni 'n]Y\Yb''''

''Ni XYa 'gd]Y'Yb'gc`W\Y'U'hYb'6Åi a Y'Y]bY'YbhgW\Y]XYbXY'Fc''Y
]a 'K UggYf\Ui g\U'h'XYg'6cXYbg'i bX']b'XYf'@ ZhfY]b][i b["
@Ub[Zf]gh]['_Ubb'X]Y': Å''i b['ni 'Y]bYa 'J Yf'i gh'X]YgYf
Ø_c`c []gW\Yb'8]Ybgh'Y]ghi b[Yb'ZØ\fYb''8U\Yf'a ØggYb'gck c\`X]Y
Ø_c`c []gW\Yb'U'g'Ui W\ 'X]Y'gcn]U'Yb'5gdY_hY']b'X]Y
9bhgW\Y]Xi b[gZ]bXi b['Y]bZ]Y»Ybž'i a 'Y]b'Ui g[Yk c[YbYg
J Yf\Å'hb]g'nk]gW\Yb'G]W\Yf\Y]h'i bX'l a k Y'hgW\i hn'ni
[Yk Å\`f'Y]ghYb''''

8YhU]`g

6Ygi W\Yb`G]Y`i bg`Ui Z.`a Y]b!VYf`]b"bYh