N][UfYhhYbX]YV`VYXfc\h'DYfgcbU`]b
K Y]XU` `Dc`]nY]`gi W\h`NYi [Yb

9]b`8]YVghU\`gj Yfgi W\`]b`K Y]XU`YbXYhY`a]h`6YXfc\i b[ `XYg
DYfgcbU`g"Dc`]nY]`gi W\h`NYi [Yb\]bk Y]gY"

; fY]n`fchgt

≠Y]bYa `Ui ZÅ``][ Yb`JcfZU``]a `; Yk YfVY[ YV]Yh` 5a `GW\UZVYf[Y
]b`K Y]XU`[UV`Yg`Ua `%"`5i [i gh'&\$&(`Y]bYb`8]YVghU\`gj Yfgi W\ž
XYf`Ui g`a Y\fYfYb`; f0bXYb`Z0f`5i ZFY[ i b[ `gcf[hY``9]b`V]g`Ub[
i bVY`UbbhYf`HÅhYf`j Yfgi W\hY`_i fn`j cf`@UXYbgW\`i ggž`N][UfYhhYb
Ui g`Y]bYa `9]b`\_Ui Zga Uf`_hni `Ybhk YbXYb``≠gc`W\`Y]bYf`@U[Y
_Ubb`a Ub`g]W\`Y]W\hj c fghY``Ybžk Y`W\Y`Yb[ghY`i bX
l bg]W\Yf\Y]hYb`VY]`XYb`5b[YghY``hYb`Ui Z_Ua Yb"

8]Y`G]hi Uh]cb`Yg_U]YfhY``Y]XYfž`U`g`XYf`HÅhYfž`bUW\XYa `Yf`j cb
XYb`A ]hUfVY]hYfb`Ui ZgY]b`; Y\`j Yf\U`hYb`Ub[YgdfcW\Yb`k i fXYž
a]h`VYXfc`\]W\Yb`; YghYb`fYU[]YfhY``8]YgYg`U[ [ fYgg]j Y`5i ZhfYhYb
XYa`ch]j ]Yfh`b]W\h`bi f`X]Y`6YhfcZYbYbž`gcbXYfb`\_Ubb`Ui W\`ni
Y]bYa`h]YZb`i bVY\U[Yb`]a` [YgUa`hYb`HYUa`Z0\fyb``5b[ YghY``hYf
]b`Y]bYa`; YgW\ÅZhni`gY]bž`gc``hY`b]W\h`a]h`XYf`; i fW\hj cf
` VYf[ f]ZYb`j YfVi bXYb`gY]b"

8]Y`F c``Y`XYf`Dc`]nY]`i bX`X]Y`Gi W\Y`bUW\
NYi [Yb

B UW\`XYa` JcfZU``\Uh`X]Y`; fY]nYf`Dc`]nY]`i a [ Y\YbX`X]Y
9fa]h`i b[ Yb`Y]b[Y`Y]hYh``8]YgY`n]Y`Yb`XUfUi Z`UVž`XYb`HÅhYf`ni
]XYb]Z]n]YfYb`i bX`ni f`F YW\YbgW\UZhni`n]Y\Yb``Dc`]nY]VYUa`hY
gW\ÅhnYb`<]bk Y]gY`Ui g`XYf`6Yj 0`\_Yfi b[ `gY\f`i bX`V]hYb
Xf]b[YbX`i a` i bhYfgh0hni b[``NYi [ Yb`XYg`JcfZU``g`k YfXYb

[YVYhYbž'g]W\i bhYf'XYf'HY'YZcbbi a a Yf'\$' * * % # * & % ! \$ ' ni
a Y'XYb'i bX'gca]h'ni f'5i Z_`Àfi b['VY]ni hfU[Yb""8]Y
6Yni [gbi a a Yf'XYf'9fa]h'ni b[Yb']gh'\$&%' \$ * % # & \$ & (ž'k Ug'ZØf'X]Y
Dc`nY]UfVY]h'k]W\h]['gh"

9g'nY][h'g]W\`i]Yfž'XUgg'XUg'G]W\Yf\Y]hg[YZØ\``]b'J Yf_Ui ZgfÀi a Yb
j cb'Y]bYa 'd'cg]h]j Yb'i bX'fYgdY_hj c``Yb'i a [Ub['nk]gW\Yb
A]hUfVY]hYfb'i bX'?'i bXYb'UV\`Àb[h"J cfZÀ``Y'k]Y'X]YgYf' [YZÀ\`fXYb
b]W\h'bi f'X]Y'G]W\Yf\Y]h'XYf'5b[YghY``hYbž'gcbXYfb'gW\UZZYb'Ui W\Y
Y]bY'Ub[YgdUbbhY'5ha cgd\`ÀfY'ZØf'? Ài ZYfž'X]Y'bi f']\fY'9]b_Ài ZY
Yf'YX][Yb'a ØW\hYb""8]Y'k U\fgW\Y]b`]W_Y]hž'XUgg'A YbgW\Yb'g]W\
k Yb][Yf'k c\`ZØ\`Ybž'k Ybb'g]Y'XYb'9]bXfi W_`j cb'i bg]W\Yf\Y]h
cXYf'Xfc\YbXYf'; Yk U'h'\UVYbž']gh'\cW"

8]Y'J Yfk i bXVUf_Y]h'j cb'9]bnY`\`ÀbX`Yfb

8]Y'j cf']Y[YbXY'G]hi Uh]cb'[]Vh'5b`Uggž'ØVYf'X]Y'U``hÀ[`]W\Yb
<YfUi gZcfXYfi b[Yb'bUW\ni XYb_Ybž'XYbYb'9]bnY`\`ÀbX`Yf'i bX
XYfYb'A]hUfVY]hYf'`b'NY]hYb'ghY][ YbXYf'?f]a ]bU`]hÀhgfUhYb
[Y[YbØVYfghY\Yb""6Yf]W\hYb'ni Zc`[ Y`\`Ài ZYb'g]W\`XYfUfh][Y
J cfZÀ``Yž'k Yg\U`V`Yg`YggYbh]Y``]ghž'[YY][bYhY'A U» bU\`a Yb'ni f
J YfVYggYfi b['XYf'G]W\Yf\Y]h'Ua '5fVY]hgd`Uhn'ni `Yf[fY]ZYb""5i W\
VmghUbXYfgž'X]Y'Ui » Yf'; YZU\`f'g]bXž'gc`hYb'XUfUi Z\]b[Yk]YgYb
k YfXYbž'k]Y'k]W\h]['Yg']ghž'gY`Vgh']b'gc`W\Yb'?cbZ]_hg]hi Uh]cbYb
k UW\gUa 'i bX'n]j]W\ci fU[]Yfh'ni '\UbXY'b"

8]Y'9]bghY``i b[Yb'XYg'Di V`\_]i a g'gd]Y`Yb`Y]bY`YbhgW\Y]XYbXY
F c``Y`VY]`XYf'GW\UZZi b[ 'Y]bYg'fYgdY\_hj c``Yb'i bX'g]W\YfYb
I a Z`Xg]a '9]bnY`\`UbXY""8]U`c['i bX'GYbg[V`]g]Yfi b['ZØf'XUg
J Yf\U`hYb'UbXYfYf'g]bX'[ fi bX`Y[YbX'ZØf'X]Y'J YfVYggYfi b['XYf
gcn]U`Yb'`hYfU_h]cb'i bX'XYf'U``[Ya Y]bYb'G]W\Yf\Y]hgghUbXUfXg"
9g']gh'k]W\h][ž'XUgg'i bhYfbY\`a Ybž'X]Y'j cb'gc`W\Yb'J cfZÀ``Yb
VYhfcZZYb'g]bXž'\fY'A]hUfVY]hYf'gW\i `Yb'i bX'Ui Z'X]Y
Bchk YbX][_Y]h'j cb'8YYg_U`Uh]cbghYW\b]\_Yb`\]bk Y]gYb"

GW\i ggYbX`]W\`j YfghÀf_h'X]YgYf'J cfZU``XYb'6YXUfZ'bUW\`cZZYbYb
; Ygd fÀW\Yb'ØVYf'G]W\Yf\Y]h]a '9]bnY`\`UbXY""8 Ug
9bhk]W_`i b[ gdchYbh]U`ZØf'U`Y'6YhY][]hYb']gh'[Y[YVYbž'i bX

[YfUXY]b`X]YgYb`gYbg]V`Yb`6YfY]WXYb`a` ØggYb`l` bhYfbY`a` Ybž
A]hUfVY]hYf`i` bX`X]Y` ; YgY`gW`UZh`U`g` ; UbnYg`ni` gUa` a` YbUfVY]hYb`"

<]bhYf[fi bX]bZcfa Uh]cbYb`ni

8]YVghU`gXY`_]_hYb`]a`'9]bnY`\UbXY`

8]YVghU`gXY`_]_hY`]a`'9]bnY`\UbXY`ghY`Yb`Y]b`Yf\YV`]WYg
DfcV`Ya`'ZØf`X]Y`K` ]fhgW`UZh`XUf`"GW`Åhni` b[Yb`ni` Zc`[ Y`j`Yf`]YfYb
9]bnY`\ÅbX`Yf`]b`8Yi` hgW`UbX`Å`f`]W`a` Y`fYfY`A`]]UfXYb`9i` fc
Xi`fW`@UXYbX]YVghU`\`"@Ui`h`Y]bYf`Ghi`X]Y`XYg`< UbXY`gj`YfVUbXg
8Yi`hgW`UbX`fk`89E`VY`]YZb`g]W`X]Y`j`Yf`i`ghY`Ui`Z[fi bX`j`cb
8]YVghÅ`\Yb`i`bX`?f]a`]bU`]hÅh`]a`'9]bnY`\UbXY`]]a`'Å`f`&\$&&`Ui`Z
fi bX`(`ž)`A`]]UfXYb`9i`fc`"8]YgY`NU`\Yb`j`YfXYi`h`]W`Ybž`XUgg
8]YVghU`\`b]W`h`bi`f`ZØf`X]Y`VYhfc`ZYbYb` ; YgW`ÅZhY`ž`gcbXYfb`Ui`W
ZØf`X]Y` ; YgUa`hk`]fhgW`UZh`[fUj`]YfYbXY`5i`gk`]f`\_i`b[Yb`\UVYb
_Ubb"

8]YgY`5fh`j`cb`?f]a`]bU`]hÅh`k`]fX`c`Zh`U`g` ; Y`Y`[ Yb`\Y]hgX]YVghU`\
VYnY]W`bYhž`XU`g]Y`\Åi`Z[ ]`j`cb`DYfgcbYb`VY[ Ub[ Yb`k`]fXž`X]Y`]b
Y]bYa`A`ca`Ybh`XYf`j`Yfgi`W`i`b[`\UbXY`b`"j`YfgW`Åf`Zh`k`]fX`X]Y
G]hi`Uh]cb`\Åi`Z[ ]`Xi`fW`XUg` ; YZØ`\`XYf`5bcbma`]hÅh`]b`[fØ»YfYb
 ; YgW`ÅZhgf`Åi`a`Yb`i`bX`Xi`fW`X]Y`HUhgUW`Yž`XUgg`K`UW`dYfgcbU`
i`bX`hYW`b]gW`Y`G]W`Yf\Y]hggmghYa`Y`b]W`h`]a`a`Yf`j`cf\UbXYb`cXYf
k`]f`_gUa`'g]bX"

F YU_h]cbYb`XYf`Dc`]nY`]Ui`Z

8]YVghU`g]Yfgi`W`Y

8]Y`Dc`]nY`]fYU[ ]Yfh`Ui`Z`X]YgY`j`cfZ`Å`Y`]b`XYf`FY[ Y`a`]h`Y]bYf
?ca`V]bUh]cb`Ui`g`Df`Åj`Ybh]cbga`U»bU`a`Yb`i`bX`GW`bY`]][_Y]h`]b
XYf`GhfUz`YfZc`[ i`b[" `đ`j`]Y`Yb`Gh`Å`hYbž`Y]bgW`Y`Y»`]W` ; fY]nž`k`]fX
j`Yfgh`Åf`\_h`a`]h`G]W`Yf\Y]hghYUa`g`i`bX` , VYfk`UW`i`b[g`\_Ua`YfUg
[YUfVY]hYhž`i`a`'8 ]YVghÅ`\Y`ni`j`Yf\]bXYfb`"5i`»YfXYa`k`YfXYb
\Åi`Z[ ]`j`Yf`_Y`fg`_cbhfc`Yb`]b`XYf`B`Å`Y`j`cb`9]b`_Ui`ZgnYbhfYb
Xi`fW`[YZØ`f`hž`i`a`j`YfX`ÅW`h][Y`DYfgcbYb`ni`]XYbh]Zn]YfYb"

⇒ a`'\_cb`_fYhYb` : U`]]b`K`Y]XU`\Uh`X]Y`Dc`]nY`]gcZcfh][ Y`9fa`]h`i`b[Yb

Ui Z[Ybca a Yb'i bX'ZcfXYfhX]Y'² ZYbh]W\ _Y]h'Ui Ž'fY`Yj UbhY
<]bk Y]gY'ni '[YVYb" '8]YgY'Ni gUa a YbUfVY]h'nk]gWYb`XYb
6Øf[Yfb'i bX'XYb'GhfUž YfZc`[ i b[ gVY\ ÒfXYb`]gh'YbhgW\ Y]XYbXž
i a`X]Y`HÀhYf'ni`ØVYfZØ\ fYb'i bX'ni`_ØbZh][Y', VYf[f]ZY'ni
j Yf\]bXYfb"

5 _hi Y`Y`Y`GhUh]gh]\_Yb`ni`'8]YVghÀ\`Yb`]a
< UbXY`

9]bY`i a ZfU[ Y`XYg'9< =F YhU]`' ðgh]hi hY`Ui g`XYa`' ð\ f`&\$&'`nY][hž
XUgg`Yhk U`(\$i`XYf`VYZfU[hYb`9]bnY`\ÀbX`Yf`Ub[UVYbž]b`XYb
`YhnhYb`nk Ò`Z`A`cbUhYb`Y]bYb`8]YVghU`\`Yf`YVh'ni`'\UVYb"Ni XYa
k i fXY`ZYgh[ YghY`hž`XUgg`N][UfYhYb'i bX`Y`Y`_hfc b]gW\ Y'; YfÀhY
VYgcbXYfg`\Ài Z[ `N]Y`j cb`8]YVYb`g]bX" '8]YgY`DfcXi`\_hY`g]bX`b]W\ h
bi f`Y]W\ h'ni`ghY`\Ybž`gcbXYfb`\UVYb`Ui W\`Y]bYb`\c\Yb
K]YXYfj Yf_Ui Zgk Yfhž`k Ug`g]Y`UhhfU`_hj`'ZØf`? f]a]bY`Y`a UW\ h"

Ni gÀhn`]W\`nY][h'XYf`ð\ fYgVYf]W\ h'XYf`Dc`nY]'ØVYf`? f]a]bU`]hÀh]a
9]bnY`\UbXY`ž`XUgg`X]Y`5i Z\_`Àfi b[gei`chY`VY]'8]YVghÀ\`Yb`VY]
fi bX`%\$i`'Y[h" '8]Yg`j YfXYi h]W\ h`X]Y`< YfUi`gZcfXYfi b[Yb`VY]'XYf
GhfUž YfZc`[ i b[ `i bX`X]Y`B`chk YbX][ \_Y]h`ZØf`j YfghÀf`_hY
A U» bU\ a Yb`ni f`DfÀj Ybh]cb`i bX`5i Z_`Àfi b["

8 YhU]`g

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