

GdY_hU_i `ÄfY`J YfZc`[i b[g^U[X.
&\$!>Ä\ f][Yf`a]h`GmfYfb`]b`K U`X_]fW\ Yb
ZYgh[Ybca a Yb

⇒ a : fØ\ \ YfVghj YfnY]W\ bYh`X]Y`F Y[]cb`K U`X_]fW\ Yb`Y]b
5bgh]Y[`VY]a `GW\ `Yi gYfUi Z_ca a Ybž]bgVYgcbXYfY`j cb
gmf]gW\ Yb`A][fUbhYb"

⇒ XYf`F Y[]cb`K U`X_]fW\ Yb` \Uh`X]Y`Dc`]nY]`Y]bYb`gdY_hU_i `ÄfYb
J cfZU``Yf`YVh`9]b`&\$!>Ä\ f][Yf`Fi a ÄbY`k i fXY`ZYgh[Ybca a Ybž
bUW\ XYa `Yf`a]h`Y]bYa : U\ fnYi [`Y`Z`GmfYfbž`XUfi bhYf`nk Y]?]bXYf
]a `5`hYf`j cb`*`i bX`-`>Ä\ fYbž] cf`Y]bYf`Dc`]nY]_cbhfc``Y`[YZc\Yb
k Uf``6Y]`XYf`J YfZc`[i b[`YffY]W\ hY`XUg: `i W\ hZU\ fnYi [
; YgW\ k]bX][_Y]hYb`j cb`V]g`ni`%*\$`_a #`i bX`fUghY`Xi fW\
VYk c\bhY; YV]YhYž`VYj cf`XYf: U\ fYf`gW\ `]Y»`]W\ `Ub`Y]bYa
K U`XfUbX`ghc`ddhY``8]YgYf`J cfZU``]gh`HY]`Y]bYg`k]YXYf
ni bY\ a YbXYb`GW\ `Yi gYfUi Z_ca a Ybž`XUg`9l dYfhYb`ZØf`XYb
< YfVgh`Yfk UfhYb"

8]Y`6i bXYgdc`]nY]!⇒gdY_h]cb`]b`DUggUi`ghY\h]b`Yb[Ya`?cbhU_h
a]h`XYb; YgW\ Y\ b]ggYb`j cf`Cfh``8Ub]Y``;]V]gž`XYf`GdfYW\ Yf`XYf
6i bXYgdc`]nY]ž`Yf_`ÄfhYž`XUgg`X]Y`9fZU\ fi b[`XYf`YhnhYb`>Ä\ fY
nY][Yž`XUgg]b`XYb`A cbUhYb`GYdhYa VYf`i bX`C`_hcVYf`Y]b`5bgh]Y[
XYf`GW\ `Yi gYfU_h]j]hÄhYb`ni `VYcVUW\ hYb`gY]" ⇒ XYf
UV[YgW\ `cggYbYb`Gca a Yf!`i bX: fØ\ `U\ fgdYf]cXY`k Uf`X]Y`NU\`
XYf`5i Z[f]ZY`]b`XYf`F Y[]cb`fY`Uh]j`i [Yf]b[ž`k Ug`XUg`d`Øh`]W\ Y
5i ZV`Ø\ Yb`XYg`GW\ `Yi gYfh\Ya Ug`i a gc`VYa Yf_Yb`gk YfhYf`a UW\ h"

Ni gUa a Yb\ Ub[`nk]gW\ Yb`GU]gcb`i bX
GW\ `Yi gYfU_h]j]hÄhYb

C V`Yg`XYfnY]h`hUhgÄW\`]W\ `a Y\ f`?cbhfc``Yb`[]Vh`cXYf`bi`f`Y]bY

<Äi Zī b[j cb J cfZÄ`YbžV`Y]V`i b_`Uf";]V]g`j Yfg]WXYfhY`Ui Z
5bZfU[YžXUgg`XYfnY]h`b]W`h`a` Y`f`Dc`nY]_cbhfc`Yb`Xi`fW [YZØ\fh
k YfXYbžXcW`X]Y`GhUh]gh]_Yb`XYf`j Yf[Ub[YbYb`ſ\ſY`VY`Y[Yb
Y]bYb`HfYbX.`; Y[Yb`9bXY`XYg`Gca`a`Yfg`i`bX`ni`6Y[]bb`XYg
<YfVghYg`ghY][Yb`X]Y`NU\`Yb`XYf`5i`Z[f]ZZY"8]Yg`Äggh`j`Yfa`i`hYbž
XUgg`j`Y`Y`A`][fUbhYb`j`Yfgi`WXYbžbcW`j`cf`XYb`Zfcgh][Yb
K`]bhYfa`cbUhYb`ſ\ſY`FY]gY`bUW`9i`fcdU`ni`VY[]bbYb"

æ`j`Yf[Ub[YbYb`ſ\ſ`k`i`fXYb`VY]`XYb`5i`Z[f]ZZYb`]b`K`U`X_]fWXYb
j`Y`Y`HØf`_Yb`ZYgh[YghY`h"8]YgY`; fi`ddY`k`Uf`cZi`U`g`:`i`W`h`j`cf
XYa`a`Ugg]j`Yb`9fXVYVYb`]a`ſ\ſ`&\$&'`i`bX`XYb`XUa`]h
j`YfVi`bXYbYb`k`]fhgW`UZh]WXYb`GW`k`]Yf][_Y]hYb`Ui`Z`XYf`Gi`W`Y
bUW`Y]bYa`VYggYfYb`@YVYb`i`bYf`Ui`Vh`Y]b[YfY]gh"5_hi`Y`gh
YXcW`Y]bY`9f\Ø\i`b[`XYf`5bnU\`gmf]gWYf`A`][fUbhYb`ni
VYcVUW`hYbžX]Y`j`cf`XYa`Ub\U`hYbXYb`?cbZ]_h]b`ſ\ſYf`<Y]a`Uh
Z]Y`Yb"8]Y`8f]b[`]W`_Y]hž`g]W`]b`G]W`Yf\Y]h`ni`Vf]b[Ybž`_ØbbhY
XUni`ZØ\YbžXUgg]a`a`Yf`a`Y`f`:`ØW`h]b[Y`j`Yfgi`WXYbžX]YgY
[YZÄ\ſ]WXYb`FY]gYb`ni`i`bhYfbY`a`YbžVYj`cf`X]Y`_U`hYb`A`cbUhY
XYb` , VYf[Ub[`YfgW`k`YfYb"

I`a`X]Y`XfY]ghYb`GW`Y`i`gi`b[Yb`ni`j`Yf\]bXYfb`i`bX`X]Y`G]WXYf\Y]h
ni`[Yk`Ä\ſY]ghYbž\UVYb`X]Y`XYi`hgWXYb`6Y\ØfXYb`Y]b`5i`[Y`Ui`Z
X]Y`ghY][YbXYb`NU\`Yb`i`bX`j`YfUb`UggYb`fY[Y`a`Ä»][Y`?cbhfc`Ybž
ZU`g`b`Øh]["5`YfX]b[g`V`Y]Vh`X]Y`:`fU[Yž`k`]Y`j`]Y`Y`A`YbgWXYb`g]W
hfc`h`XYf`F]g]_Yb`]b`X]YgYg`Xf]hY`5VYbhYi`Yf`XYf`:`i`W`h`VY[YVYb
k`YfXYb"i`bUV\Äb[][j`cb`XYb`Yf\Ø\hYb`5i`Z[f]ZZYb`i`bX`XYb
:`Äb[Yfb`]gh`X]Y`ſ\ſ`X`bUW`XYb`GW`Y`i`gYfb`XYf`GW`ØggY`ni`f
6Y_Äa`dZī`b[`X]YgYf`]`Y[U`Yb`9]bYf]gYVYk`Y[i`b[Yb"

8]Y`I`a`ghÄbXY`XYf`:`YghbU\`a`Y`XYg`Fi`a`ÄbYb`i`bX`X]Y`J`Yf\UZh`i`b[
a`Y`fYfYf`UbXYfYf`A`][fUbhYb`nY][Yb`X]Y`<YfUi`gZcfXYfi`b[Ybž`j`cf
XYbYb`X]Y`Dc`nY]`ghY\hž`k`Ä\ſYbX`g]Y`j`Yfgi`W`hž`X]Y`; fYbnYb`ni
g]WXYfb"K`]Y`Yg`gW`Y]b`hž`]gh`X]YgYf`J`cfZU`bi`f`X]Y`Gd]hY`XYg
9]gVYf[g`]b`Y]bYf`NY]hž`]b`XYf`XUg`GW`Y`i`gYfk`YgYb`]b`8Yi`hgW`UbX
YfbYi`h`Ub`6YXYi`hi`b[`[Yk`]bb`h";]V]g`:`YghghY`i`b[žXUgg`Y]b
5bgh]Y[`XYf`GW`Y`i`gYfU`_hj`]hÄhYb`ni`X]YgYf`ſ\ſYgnY]h`b]W`h
i`bØV`W`]ghž`k`]fZh`:`fU[Yb`ØVYf`X]Y`ni`_ØbZh][Yb
<YfUi`gZcfXYfi`b[Yb`Ui`Z`a`]h`XYbYb`X]Y`6i`bXYgdc`nY]

_c bZfc bh]Y fh'k YfXYb' _ÒbbhY"

8YhU]`g

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