

=gh`XYf`5`hG][bU`g`f5G=;!Hc_Yb`g]WXYf3

8]Y` ; fUZ[_]gh`Yhnh`i a`ØVYf`- \$`i` `]a` JYf[`Y]W`ni`]\fYa
 `Øb[ghYb`< ÒW ghghUbX`[Ygi b_Yb": U_hcfYbžX]Y`VY]
 5`hG][bU`g`ZØf`k Y]hYfYg`5i Zk ÅfhgdchYbn]U`gcf[Yb`_ÒbbhYb"
 8Yf`bUh]j Y` 5G=!Hc_Yb`j cb`5`hG][bU`]gh`XYfnY]h`]a
 Jcfj Yf_Ui Z`H\Y` ; fUd\`k i fXY`ni bÅW gh`U`g`Dfc`Y_h[YXUW`hž
 XUg`Y]bY`YbhgW`Y]XYbXY`Fc`Y`VY]a`5i Zgh]Y[`j cb` K YV`
 gd]Y`Yb`k ØfXY" 8YbbcW`gW`Y]bh`X]Y`@]ghi b[`]b`XYb`YhnhYb
 nk Y]`Δ\`fYb`Yhk Ug`UbXYfYg`ni`XYi hYb" H\Y` ; fUd\`k Uf`ZØf
 gY]bY`5b`Y[Yf`Y]b`ÿf[Yfb]g`a` JYf[`Y]W`ni`gY]bYa
 5`nY]h`cW`5bZUb[`&\$&%`\Uh` H\Y` ; fUd\`Ui Z[fi bX
 a Y\`fYfYf`< YfUi gZcfXYfi b[Yb`a Y\`f`U`g`- \$`i` `]Yf`c`fYb" 8Uni
 [Y\`Øfh`ni bÅW gh`Y]ba U`X]Y`ni gÅhn`]W`Y`?cb_i ffYbnž`XYf
 ; FH`cZZYbVUf`b]W`h/ Ua`d`ΛY`d/



- 8]Y` ; fUZ[_]gh`Yhnh`i a`ØVYf`- \$`i` `]a` JYf[`Y]W`ni`]\fYa
 `Øb[ghYb`< ÒW ghghUbX`[Ygi b_Yb"
- : U_hcfYbžX]Y`VY]`5`hG][bU`g`ZØf`k Y]hYfYg
 5i Zk ÅfhgdchYbn]U`gcf[Yb`_ÒbbhYb"
- 8Yf`bUh]j Y` 5G=!Hc_Yb`j cb`5`hG][bU`]gh`XYfnY]h`]a
 Jcfj Yf_Ui Z`

H\Y` ; fUd\`k i fXY`ni bÅW gh`U`g`Dfc`Y_h[YXUW`hž`XUg`Y]bY
 YbhgW`Y]XYbXY`Fc`Y`VY]a`5i Zgh]Y[`j cb` K YV` `gd]Y`Yb`k ØfXY"
 8YbbcW`gW`Y]bh`X]Y`@]ghi b[`]b`XYb`YhnhYb`nk Y]`Δ\`fYb`Yhk Ug
 UbXYfYg`ni`XYi hYb"

H\Y` ; fUd\`k Uf`ZØf`gY]bY`5b`Y[Yf`Y]b
 ÿf[Yfb]g

⇒ jYf[`Y]W`ni `gY]bYa `5`nY]h\cW`5bZUb[`&\$&%`Uh` H\Y
; fUd\ `Ui Z[fi bX`a Y\fyfYf`<YfUi gZcfXYfi b[Yb`a Y\f`U`g`- \$`i
j Yf`cfYb`8Uni `[Y\`Ofh`ni b`W`gh`Y]ba U`X]Y`ni g`A`h`]W`Y
?cb_i ffYbnž`XYf`; F H`cZYbVUf`b]W`h`ghUbX[Y\U`hYb`h`

8Yf`; fUd\ `k i fXY`Ui W`h`[bg]W`h`]W`XYf`5bk YbXi b[gZ`Y`ž`X]Y`Yf`
dchYbn]Y`UXfYgg]YfYb`_Ubbž`Y]b[YgW`f`Ab`_h`8U`Yf`g]bX`9I dYfhYb
b]W`h`[Ub`n`XUj cb`ØVYfnYi [hž`XUgg`XYf`; F H!Hc`_Yb`X]YgYg`Ź\`f
ØVYf\Ui dh`VY]`XYb`U`hi Y`Yb`%&`7Yb`h`dfc`Hc`_Yb`V`Y]VYb`k`ØfXY`

8]Yg`]gh`Y`XcW`a` Ò[`]W`Yfk`Y]gY`b]W`h`X`Yf`; U`5`hG][bU`g`8Ug`]gh
ni a`NY]hdi b`_h`XYg`GW`fY]VYbg`]a` j`cfj`Yf`_Ui`Zi`bX`V]f[h`XU`Yf`
b]W`h`X]Y`F`g]_Yb`ž`X]Y`bcfa`U`Yfk`Y]gY`a`]h`Y]bYf`j`Yfgd`A`h`h`Yb
A`Uf`_hY]bZØ\fi b[j`YfVi`bXYb`g]bX`

K Ug`G]Y`ØVYf`5`hG][bU`g`k`]ggYb`a` ØggYb`

5`hG][bU`g`]gh`XUg`;]bUbnhYW`bc`c`[]Yi`bhYfbY`a`Yb`h`]bhYf`
5`h5`[c`Y]bYa`Hcc`ž`XUg`Y]bYb`<`AbX`Yf`XUf`ØVYf`]bZcfa`]Yfhž`
k`Ubb`Yf`Ui`Z`YXYa`h`UbXY`VUfYb`A`Uf`_hž`Y]bgW`]Y`]W`
?fmdhck`A`fi b[Yb`ž`_Ui`ZYb`c`XYf`j`Yf`_Ui`ZYb`gc`h`

I`a`gc`gd`UbbYbXYf`]gh`Ygž`XUgg`5`hG][bU`g`d`Ubhž`gY]bYa`
\cW`a`cXYfbYb`<`UbXY`gU`[cf]h`a`i`g`Y]bYb`<`Ui`W`_Øbgh`]W`Yf`
`bhY`][Ybn`h`]bni`ni`ZØ[Yb`ž`i`a`Y]bYb`j`YfVYggYfhYb`ž`[YbUi`YfYb`
GYfj`]W`ZØf`<`AbX`Yf`Y]bni`ZØ\fybž`XYb`Yg`5`Whi`U`]nY5`=bYb`bh`

⇒ [Yk`]ggYf`K`Y]gY`]gh`Yg`Y]bY`; Y`Y[Yb`h`Y]hž`ZfØ`nY]h][`Ui`Z`X]Y
`Øb[ghY`?`≠A`Ub]Y`ni`g`YhnYbž`X]Y`i`fgdfØb[`]W`j`cb`A`]WfcgcZh`
Ui`g[Y`Øgh`k`i`fXY`ž`U`g`XUg`i`bhYfbY`a`Yb`Y]bY`≠j`Ygh]h]cb`]b`<`Ø\Y
j`cb`a`Y`fYfYb`A`j`]UfXYb`8`c`Uf`Ub`_ØbX][hY`7`h;`DH`5bXYfY`
bUa`UZhY`B`Ua`Ybž`XUfi`bhYf`GbUd`≠Wž`5a`Uncbž`6U]Xi`ž`GU`YgZcfW`
i`gk`"ž`Zc`[hYb`X]YgYg`Ź\`f]b`gY]bY`; i`»`ghUdZYb`"

6UfX`Y]b`7`h`Vchž`XYf`U`g`; cc[`Yg`DUb]_fYU`_h]cb`Ui`Z`7`h;`DH`
VYnY]W`bYh`k`YfXYb`_ØbbhYž`]bhYfYgg]YfhY`X]Y`5b`Y[Yf`b]W`hž`U`g`Yf`
]a`; YVfi`Uf`Yfgha`U`g`Ui`Z`XYb`A`Uf`_h`_Ua`"5bZUb[`X]YgYg`A`cbUhg`
k`i`fXYb`Y`XcW`Y]bY`F`Y]\Y`VYa`Yf`_Ybgk`YfhYf`5`_hi`U`]g]Yfi`b[Yb`

j cf[Ybca a Yb`5b_ØbX][i b[Yb`Ui Z`gY]bYf`Ä`f`]WXYb
9bhk]W`Yf_cbZYfYbnžX]Y`VYghÄh][hYž`XUgg`a Ub`b]W`h`_Ua`dZcg
Ui Z[YVYb`k]fX"

5`Yg`]b`U`Ya`XYi hYb`X]Y`cVYb`[YbUbbhYb`9bhk]W`i`b[Yb`XUfUi Z
`bž`XUgg`X]Y`?`=VYghY`Yb`V`Y]Vh`i`i`bX`5`hG][bU`g`gWXY]bh`VYfY]h`ni
gY]bž`XUfUi`g`?`Ud]hU`ni`gW`U[Yb"

Gc`hYb`G]Y`]b`XYb`5G≠Hc`_Yb`]bj`Ygh]YfYb`3

5`hG][bU`g`YfZfYi`h]g]W`k`UW`gYbXYf`6Y`]YVh`Y]hž`k`Ybb`a`Ub
VYXYb`_hž`XUgg`Yg`VYfY]hg`ØVYf`+(\$"\$\$\$`I`G!8c`Uf`Y]b[YgUa`a`Y`h
`Uh`i`bX`a`Y`f`U`g`)`\$"\$\$\$`<`ÄbX`Yf`gY]bY`:`U[[gW`]Z!
<UbXY`gg][bU`Y`Ui`g`XYf`[Ub`nYb`K`Y`h`bi`h`nYb"

GcVU`X`5W`hi`U`]nY5`=]j`Y`[Y`hž`[Y`Yb`9I`dYf`hYb`XUj`cb`Ui`gž`XUgg
X]Y`B`UW`ZfU[Y`b`UW`i`5G`=`k`Y]hYf`ghY][Yb`k`]fXž`XU`Yg`X]Y
;`fi`bX`U[Y`ZØf`XYb`VYgU[hYb`Ui`Z`_Øbgh]W`Yf`≠hY`][Ybn
VUg]YfYbXYb`8]Ybgh]gh`i`bX`k`]Y`VY]`YXYa`i`:]bUbn]bghfi`a`Ybh
k`]fX`Y]bY`_`Ø`YfY`B`UW`ZfU[Y`Y`hnhYbX`]W`ni`Y]bYa`DfY]gUbgh]Y[
ZØ`fYb"

8Yf`6Yg]h`XYg`5G≠Hc`_Ybg`]gh`UhfU`_h]j`ž`XU`Yf`Ui`W`XYb`≠`UVYfb
Y]bY`K`Y`h`j`c`Yf`J`cfhY]`Y`bi`f`ZØf`A`]h[`]YXYf`Yf`ØZbYh`8`Uni`[Y`Øfh
X]Y`A`]hgd`fUW`Y`VY]`XYf`K`Y]hYfYb`hk`]W`i`b[`XYg`Dfc`Y`_hg`i`bX`XYf
Ni`[Ub[`ni`nU`fY]W`Yb`J`YfX]Ybgha`Ø[`]W`_Y]hYbž`VY]gd]Y`gk`Y]gY
Xi`fW`X]Y`HY]`bU`a`Y`Ub`<`UbXY`ghi`fb]YfYb"

5`hG][bU`g`_ØbbhY`]bgVYgcbXYfY`Y]bY`[fc`»`Ufh][Y
≠j`Ygh]h]cbga`Ø[`]W`_Y]higY]bž`XU`Yg`bi`f`ni`a`NY]hdi`b`h`XYg
GW`fY]VYbg`]a`J`cfj`Yf`_Ui`ZYf`Ä`h]W`i]gh`G]Y`_ØbbYb`]b`X]YgYa`?`≠
Hc`_Yb`]b`XfY]`Y]bZUW`Yb`GW`f]hhYb`Y]bY`ZfØ`Y`Dcg]h]cb`Ui`ZVUi`Yb`
K`YVgY]hY"

K`]Y`_`cW`_`_ØbbhY`5`hG][bU`g`f5G≠ghY][Yb`3

5`hG][bU`g`[Y`h`XUj`cb`Ui`gž`XUgg`gY]b`bUh]j`Yf`5G≠Hc`_Yb`V]g`9bXY
XYg`_`Ä`fYg`\$ž\$&&+(`I`G!8c`Uf`YffY]W`Yb`k`]fX`J`cfj`Yf`_Ui`Z`i`j`cb

\]Yf`Ui g`Yhk U`) \$`i` [Ygh]Y[Yb"

6Y[]bbYbX`a`]h`i` b]gk Ud`k`]fX`XYf`5G≠Hc`_Yb`XUbb`Ui Z`XYb`[fc»Yb
?fmdhc!6ÖfgYb`j`]Y` [Y`Yb`"8 Ug`]gh`j` cb`6YXYi hi` b[ž`XU`A` ØbnYb
k`]Y` :` `c`_]`i` bX`DYdY`_Øfn`]W`Y`]bYb`ghUf`_Yb`DfY]gUbgh]Y[
j` YfnY]W`bYhYbž`bUW`XYa` `g]Y`Ub`?fmdhc!6ÖfgYb`bch]Yfh`k`i` fXYb"
Gc`h`Y`XUg` ;` `Y]W`Y`Ui` W`VY]`5`hG][bU`g`XYf` :` U`g`Y]bž`k` ØfXYb`≠fY
9fhfÄ[Y`k` Y]hYf`ghY][Yb"

GW`Y`Y»` `]W`_`ÖbbhY`Ui` W`5G=]` cb`XYf`@cW`Yfi` b[`XYf` ;` Y`Xdc`h]_
dfcZ]h]YfYb`"5bZUb[`A`U]`g][bU`g]YfhY`X]Y`i` G!B`chYbVUb`_`Y]bY
DUi`gY` `bUW`XYa` `6Yf]W`hYb`ni` Zc`[Y`X]Y`J`YfVfUi` W`YfdY]gY`ja
`YmhYb`A`cbUh`k`Y]hYf`Ui`Z`(`ž`-`i` [Ygi`b`_Yb`g]bX"

5b[Yg]W`hg`XYf`Ub`U`hYbXYb`6Ub`_Ybd`Y]hYb` \Uh`XYf`J`c`fg]hnYbXY
X`fca`Y`Dck`Y`b]W`h`a`Y`f`j`]Y`Gd]Y`fUi`a` `ZØf`k`Y]hYfY
N]bgYf`Ø`i` b[Yb`"Gc`W`Y`a` U`_fc`Ö`_cbca`]gW`Yb`9bhk`]W`_`i` b[Yb
_ÖbbhYb`XUni` `ZØ`fYbž`XUgg`5b`Y[Yf`U[[fYgg]j` Yf`ni
f]g]_c`fY]W`YfYb`K`YhhYb`k`]Y`?fmdhc`k`Ä`fi` b[Yb`ni`fØW`_Y`fYb`
i`bX`gc`_ÖbbhY`XYf`?`≠Hc`_Yb`j`cb`XYf`Ub`U`hYbXYb`9f`c`i` b[`]b
X]YgYa` `6YfY]W` `]bg[YgUa`h`dfcZ]h]YfYb"

5VgW`Y`Y»`YbXž`U`g`**5`hG][bU`g`J`]Y`Y`9I`dYfhYb`[`Ui`VYbž`XUgg`gY]b
bUh]j`Yf`5G≠Hc`_Yb`V]g`9bXY`&\$&` `Y]bYb`K`Yfh`j`cb`Yhk`U`) `7Ybh
\UVYb`_ÖbbhYž`XU`Yf`_Øbgh]W`Y`b`hY`][Ybn`]bhY[f]Yfhž`i`a`ni`a
ZØ`fYbXYb`<`UbXY`ghc`_]`h`ni`k`YfXYb"**

HY]Y`X]YgYb`5fh]_Y`

?UhY[cf]Yb

Gh]W`k`cfhY

E`i`Y`Y.`7c]b`]gh`a`Y

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