H0X`]W\Yf`I bZU``Ui Z`XYf`6' \$\$.
+%! Æ\ f][Yf`gh]fVh`VY]? c``]g]cb`]b
GW\fcVYb\Ui gYb

9]b`h0X`]W\Yf`I bZU``Ui Z`XYf`6' \$\$`VY]`GW\fcVYb\Ui gYb
ZcfXYfhY`XUg`@YVYb`Y]bYg`+%! Æ\ f][Yb`/nk Y]`k Y]hYfY
DYfgcbYb`k i fXYb`gW\k Yf`j Yf`Yhnh"

5a`GUa`ghU[bUW\ a`]hU[ `YfY][bYhY`g]W\`Y]b`hfU[]gW\Yf
JYf`_Y\fgi bZU``Ui Z`XYf`6' \$\$`Z`XYf`Y]bYb`+%! Æ\ f][Yb`A`Ubb`Ui`g
XYa`F`Ui`a`?Ø\`VUW\`XUg`@YVYb`_cghYhY""8Yf`J`cfZU``[YgW\U\`
[Y[Yb`%\*.&) `I` \fz`U`g`Y]b`) -! Æ\ f][ Yf`: U\`fYf`Ui`g`XYa` `?fY]g
: fY]g]b[`Ui`g`V]g`Ub[`i`b[Y`\_`ÀfhYf`I`fgUW\Y`Ui`Z`X]Y` ; Y[YbZU\`fVU\`b
[Yf]Yh""8]Y`6Y\`ÒfXYb`\`UVYb`XYb`I`bZU``\`Yf[ Ub[ `]b`XYb`6`]W_
[Ybca`a`Ybž`XU`Yg`ni`Y]bYa`Zc`[YbgW\k`YfYb`Ni`gUa`a`Ybghc»
_Ua`"

Æ`XYa`A`ca`Ybž`U`g`XYf`) -! Æ\ f][Y`X]Y`5VZU\`fh`GW\fcVYb\Ui`gYb!
GØX`dUgg]YfhY`i`bX`Yhk`U`&\$\$`A`YhYf`k`Y]hYfZ` \fz`_c``]X]YfhY`Yf
ZfcbhU`a`]h`XYa` : U\`fnYi` [`XYg`+%! Æ\ f][Yb""8]Y`K`i`W\h`XYg
5i`ZdfU``g`k`Uf`gc`ghUf`\_ž`XUgg`X]Y` : Yi`Yfk`Y\`f`XYb`VYhU[`hYb`: U\`fYf
bi`f`bcW\`hch`Ui`g`gY]bYa`K`U[Yb`VYf[ Yb`_c`b`bhY""Nk`Y]`k`Y]hYfY
Æ`gUggYbž`XYf`I`bZU``j`Yfi`fgUW\Yf`gc`k`]Y`gY]bY`[ `Y]W\U`hf][Y
6Y]ZU\`fYf]bž`Yf`]hYb`gW\k`YfY`J`Yf`Yhni`b[ Yb`i`bX`a`i`gghYb`a`]h
F`Yhhi`b[g\i`VgW\`fUi`VYfb`]b`Y]b`?`fUb`_Yb\`Ui`g`[ YZc[ Yb`k`YfXYb"

F`Yhhi`b[ga`U»`bU\`a`Yb`i`bX`?`cbgYei`YbnYb
ZØf`X]Y`6' \$\$

8]Y`: c`[Yb`XYg`i`bZU``g`k`UfYb`k`Y]hfY]W\YbX""9]b`k`Y]hYfYf
5i`hcZU\`fYfž`XYf`\]b`hYf`XYa` `?Ø\`VUW\`Yf`Z` \fz`\_c`b`bhY`b]W\h
fYW\hnhY]h][`VfYa`gYb`i`bX`Z` \f`YVYbZU``g]b`X]Y`I`bZU``ghY``Y"

;`ØW\_]WXYfk Y]gY`V`]YVYb`XYf`+(!>Å\ f][ Y`gck]Y`Y]bY`*`*!>Å\ f][Y
: fUi`Ui`g`6fUbX]g`k`Y]h[ Y\YbX`i`bj`YfgY\fh`i`bX`k`i`fXYb`YX][`]W
ni`f`Åfnh`]WXYb`5V_`Åfi`b[`]bg`?`fUb`Yb\`Ui`g`]b`GW`fcVYb\`Ui`gYb
[`YVfUW`h"

5i`Z[`fi`bX`XYf`GW`k`YfY`XYg`l`bZU``g`k`i`fXY`X]Y`6`\$\$`ZØf`Y]bY
8Ui`Yf`j`cb`Yhk`U`j`]Yf`Ghi`bXYb`]b`VY]XY`F`]W`hi`b[`Yb`i`[`YgdYffh`"8]Y
: fY]k`j``][`Y`:]`Yi`Yfk`Y\`f`j`cb`DYi`hYb\`Ui`gYb`gck`]Y`X]Y`:]`Yi`Yfk`Y\`f
j`cb`GW`fcVYb\`Ui`gYb`k`UfYb`j`cf`C`fh]a`9]bgUhnž`i`a`X]Y
l`bZU``ghY``Y`UVni`g]WXYfb`i`bX`X]Y`J`Yf`YhnhYb`ni`fYhhYb`"Ni`gÅhn`]W
k`i`fXYb`a`Y\`fYfY`F`Yhi`b[`gX]YbghZU\`fnYi`[`Y`i`bX`nk`Y]
F`Yhi`b[`g\`i`VgW`fUi`VYf`a`cV`]g]Yfhž`i`a`Y]bY`gW`bY``Y
a`YX]n]b]gWXY`J`Yfgcf[`i`b[`]g]WXYfni`ghY``Yb"

8]Y`Dc`nY]`\`Uh`bi`b`X]Y`5i`Z[`UVYž`XYb`[`YbUi`Yb`l`bZU``\`Yf[`Ub[
Xi`fW`Y]bYb`:]`i`hUW`hYf`ni`fY`\_`cbghfi`]YfYb`"N]Y``]gh`Ygž`@]W`hi`]bg
8i`b_Y``ni`Vf]b[`Ybž`k`Ufi`a`X`Yf`)`-!>Å\ f][`Y`Ui`Z`X]Y`ZU`gWXY
: U\`fVU\`b`[`Yf]Yhi`bX`cV`a`Ø[`]WXYfk`Y]gY`hYW`b]gWXY`cXYf
a`YbgW`]WXY`:]`U`\_`hc`fYb`ni`X]YgYa`j`Yf\`Åb[`b]gj`c``Yb`9fY][`b]g
ZØ\`fhYb"

J`Yf`_`Y`\`fgg]WXYf\`Y]h`]a`:`c`_`i`g

8Yf`hØX`]WXY`l`bZU``k`]fZh`YfbYi`h`:]`fU[`Yb`ni`f`J`Yf`\_`Y`\`fgg]WXYf\`Y]h
Ui`Z`XYf`6`\$\$`Ui`Z`Y]bYf`GhfU»`Yž`X]Y`fY[`Y`a`Å»][`j`cb`DYbX`Yfb`i`bX
F`Y]gYbXYb`[`Ybi`hnh`k`]fX`"9g`ghY``h]g]W`X]Y`:]`fU[`Yž`k`Y`WXY
A`U»`bU\`a`Yb`Yf[`f]ZYb`k`YfXYb`\_`ØbbYbž`i`a`gc`WXY`hfU[`]gWXYb
J`cfZÅ``Y`]b`Ni`\_`i`bZh`ni`j`Yf\`]bXYfb`"8]Y`C`g`c`Ygi`b[`]i`bX`G]WXYf\`Y]h
Ui`Z`XYb`GhfU»`Yb`g]bX`j`cb`Yb`hgWXY]XYbXYf`6YXYi`hi`b[`ž
]bgVYgcbXYfY`k`Ybb`Å`hYfY`J`Yf`\_`Y`\`fghY`]bY\`a`Yfž`k`]Y`XYf
j`Yfghc`fVYbY`+`%!>Å\ f][`Yž`VYhfc`ZYb`g]bX"

Gc`WXY`J`cfZÅ``Y`VYhcbYb`X]Y`B`chk`YbX][`_]hž`fY[`Y`a`Å»][
J`Yf`_`Y`\`fgg]WXYf\`Y]hg`\_`Ua`dU[`bYb`Xi`fW`ni`ZØ\`fYb`i`bX`ZØf`Y]bYb
j`YfUbhk`cfhi`b[`gj`c``Yb`l`a`[`Ub[`]a`GhfU»`Ybj`Yf`\_`Y`\`f`ni
gYbg]V`]g]YfYb`"8]Y`6Y\`ØfXYb`\_`ØbbhYb`d`fØZYbž`cV`Yg`gdYn]Y``Y
Dfc[`fUa`a`Y`ZØf`X]Y`G]WXYf\`Y]h`Å`hYfYf`:]`U\`fYf`[`]Vhž`i`a`XUg`F`]g]\_`c
j`cb`l`bZÅ``Yb`ni`a`]b]a`]YfYb"

8 Yf hfUi f][Y J cfZU`Ui Z'XYf'6' \$\$ ]gh'Y]bY'Y]bXf]b[ `]WXY'A U\bi b[ž
X]Y'; YZU\fyb`ja `GhfU»Ybj Yf_Y\`f'Yfbgh'ni `bY\`a Yb"8Y
5i Z_`Àfi b[ `ØVYf'g]WXYfY': U\fdFU_h]_Ybž'fY[Y`a `À»][Y
: U\fnYi [WXYW_g'i bX`X]Y`K U\fbY\`a i b[ `j cb`J Yf\_Y\`fgfY[Y`b`g]bX
GWf]hhYž`X]Y`Yb hgWXY]XYbX`XUni `VY]hfU[Yb`_ØbbYbž'ni _ØbZh][Y
HfU[ØX]Yb`ni `j Yfa Y]XYb"

<]bhYf[fi bX]bZcfa Uh]cbYb`ni f
J Yf_Y\`fgg]WXYf\`Y]h`]b`8Yi hgW\`UbX

⊕8Yi hgW\`UbX`[Y\`ØfYb`J Yf_Y\`fgi bZÀ`Y`ni `XYb`\`Ài Z][ghYb
l fgUWXYb`ZØf`J Yf`Yhni b[ Yb`i bX`HcXYgZÀ`Y`ja `GhfU»Ybj Yf_Y\`f"
@Ui h`XYa `GhUh]gh]gWXYb`6i bXYgUa h`k i fXYb`ja `ſ\`f`&\$&&ØVYf
&ž+`A`j`]cbYb`J Yf_Y\`fgi bZÀ`Y`fY[ ]ghf]Yfhž`k Ug`Y]bYb`5bgh]Y[`ja
J Yf[`Y]W`ni `XYb`J cf`U\`fyb`XUfghY`h`Hfchn`fY[Y`a `À»][Yf
G]WXYf\`Y]hg\_Ua`dU[bYb`i bX`ni bY\`a YbXYf`hYW`b]gWXYf
9bhk]W`i b[ Yb`]b`: U\fnYi [ Yb`V`Y]Vh`X]Y`NU\`XYf`gW`k YfYb
l bZÀ`Y`VYgcf[b]gYffY[YbX"9]b`VYgcbXYfYg`5i [Yba Yf`_]Y[h
\YfVY]`Ui ZXYa `À`hYfYb`: U\fyfbž`X]Y`]b`XYb`YhnhYb`ſ\`fYb`]b`XYf
ØZYbh]WXYb`8]g\_i`gg]cb`ghY\`Yb"

8]Y`J Yf\_Y\`fgg]WXYf\`Y]hg`U[Y`]b`8Yi hgW\`UbX`]gh`Xi fW
j YfgW]YXYbY': U_hcfYb`[ YdfÀ[ h`8Yf`ni bY\`a YbXY`J Yf\_Y\`fž`X]Y
5`hYfi b[ `XYf`6Yj Ø`_Yfi b[`i bX`\`Ài Z][ `k YW`gY`bXY
K]hhYfi b[gVYX]b[i b[Yb`VYY]bZi`ggYb`[ fUj ]YfYbX`X]Y
l bZU`nU\`Yb"⊕gVYgcbXYfY`Ui Z`@UbXghfU»Yb`k ]Y`XYf`6' \$\$ž`k c
X]Y`l bZU`fUhY`ØVYfXi fW`gW`b]h`]W\`cW`]ghž`k YfXYb`\`Ài Z][ `X]Y
; YZU\fyb`j cb`,`VYfa ØXi b[ ž`5V`Yb`_i b[`i bX
; YgW`k ]bX][ `_Y]hgØVYfgW`fY]hi b[ Yb`h`Ya Uh]g]Yfh"

GhUh]gh]gWXY`8 UhYb`ni `J Yf\_Y\`fgi bZÀ`Yb

8]Y`U\_hi Y`Yb`GhUh]gh]\_Yb`nY][Ybž`XUgg`À`hYfY': U\fyf`Y]bY
g][b]Z]_UbhY`@Ag]cb`ja `J Yf\_Y\`fgi bZU`[ YgWXY\`Yb`XUfghY`Yb"6Y]
DfØZ] b[Yb`XYf`J Yf_Y\`fgg]WXYf\`Y]h`nY][ h]g]W`ž`XUgg`VYgcbXYfg
: U\fyf`ØVYf`*) `ſ\`fYb`]b`\`Ø\`YfYb`f`g]_Yb`Ui`g[YgYhnh`g]bX"⊕a
ſ\`f`&\$&%`k UfYb`]b`8Yi hgW\`UbX`Yhk U`&) i `XYf`hØX`]W`j Yf`YhnhYb

J Yf_Y\ fghY]`bY\ a Yf\_ØVYf`*) :`š\ fY`U`h`'8]Yg``Àggh`XUfUi Z
gW\`jY» Ybž`XUgg`VY]`À`hYfYb` : U\ fYfb`XUg`l bZU`f]g]\_c`]b`XYb
`YhnhYb`š\ fYb`[ Ygh]Y[ Yb`]gh"

Ni gÀhn`]W\`cZYZbVUfYb`U\_hi Y`Y`8 UhYb`XYg`8Yi hgW`Yb
J Yf_Y\ fgg]W\`Yf\`Y]hgfUhYg`fB J F Łž`XUgg`Yhk U`' \$i` `U`Yf
J Yf_Y\ fgi bZÀ`Y`]b``ÀbX`]W\`Yb` : YV]YhYb`dUgg]YfYb`"8]Y`6' \$\$`]gh
Y]bY`j`]Y`VYZU\`fYbY`GhfU» Yž`X]Y`j`]Y`Y`gc`W\`Yf``ÀbX`]W\`Yb
HfUbg]hghf`Òa` Y`j`YfV]bXYh`i bX`_`ÒbbhY`a` ]h[ Yn]Y`hYb`A U» bU\`a` Yb
k]Y`J Yf\_Y\ fg\_c bhfc`Yb`i bX``ž`cfa` Uh]cbg_Ua` dU[ bYb`g]W\`YfYf
[YghU`hYh`k`YfXYb"

A U» bU\`a` Yb`ni`f`J YfVYggYfi b[ `XYf J Yf_Y\ fgg]W\`Yf\`Y]h

I a`X]Y`J Yf_Y\ fgg]W\`Yf\`Y]h`ni`Yf\`Ò\`Ybž`gYhnYb`X]Y`6Y\`ØfXYb`Ui Z
j YfgW\]YXYbY`GhfUHy[ ]Yb`"8 Uni`[ Y\`ØfYb`X]Y``ž`ghU`U]cb`j`cb
, VYfk UW`i b[ g\_Ua`YfUgž` ; YgW`k]bX][_Y]hga`Yggi b[ Yb`i bX
]bhYbg]j Y`5i Z\_`Àfi b[g_Ua`dU[ bYbž`i a`XUg`6Yk`i gghY]b`ZØf
J Yf_Y\ fgfY[Y`b`ni`gW\`ÀfZYb`"

8 UfØVYf`\]bUi`g`k`]fX`X]Y`6YXYi`hi b[ `XYg` : U\ fYbg`]b`Y]bYa
j Yf_Y\ fgg]W\`YfYb`Ni`ghUbX`i bX`X]Y`Bi`hni b[ `a`cXYfbYf
 : U\ fYfUgg]ghYbngmghYa`Y`ni bY\`a`YbX`\`Yfj`cf[ Y\`cVYb`"HYW\`b]_Yb
k]Y`B`chVfYa`g!`i bX`Gdi`f\`U`hYUgg]ghYb`hYb`_`ÒbbYb`\`Y`ZYbž`I bZÀ`Y
ni`j`Yfa`Y]XYb`cXYf`XYfYb`GW\`k`YfY`ni`j`Yff]b[ Yfb`"Dfc[fUa`a`Y
ni`a`g]W\`YfYb` : U\ fYb`]a`5`hYf`n]Y`Yb`XUfUi`Z`UVž`À`hYfYb` : U\ fYfb
gdYn]Z]gW\`Y` : À\][_Y]hYb`ni`j`Yfa`]hY`bž`i`a`]\`fY`G]W\`Yf\`Y]h]a
GhfU» Ybj`Yf\_Y\`f`ni`Yf\`Ò\`Yb"

5_hi`Y`Y`ž`h]Uh]j`Yb`]b`8Yi`hgW`\`UbX`n]Y`Yb`XUfUi`Z`UVž
J Yf_Y\ fgi bZÀ`Y`Xi`fW\`gc`W\`Y`A U» bU\`a`Yb`gmghYa`Uh]gW\`ni
fYXi`n]YfYb`i bX`U`b[Zf]gh][`X]Y`NU\`X`Yf`gW\`k`Yf`j`Yf`Y`hnhYb`i bX
[Yh`ÒhYhYb`DYfgcbYb`]a`GhfU» Ybj`Yf\_Y\`f`ni`a`]b]a`]YfYb"

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