

GWk YfYf'J Yf_Y\fgi bZU``Ui Z'XYf'6- . Jc``gdYffi b[]b'FYa U[Yb

GWk YfYf'J Yf_Y\fgi bZU``Ui Z'XYf'6-]b'FYa U[Yb.
Jc``gdYffi b['bUW'?'c``]g]cb'nk]gWYb'A chcffUX'i bX'D?K "
JYf'YhnhY'i bX'6Y\]bXYfi b[Yb"

5a 'A cbhU[ž'XYa '%- "5i [i gh'&\$&(ž_Ua 'Yg]b'FYa U[Yb'ni 'Y]bYa
gWk YfYb'J Yf_Y\fgi bZU``ž'XYf'Yf\YV`]WY'5i gk]f_i b[Yb'Ui Z'XYb
GhfU»Ybj Yf_Y\f'\UhhY"; Y[Yb'%%(\$'l \f'_c``]X]YfhY'Y]b
%- !Å\f][Yf'A chcffUXZU\Yf'Ui Z'XYf'6i bXYgghfU»Y'-]b'F]W]hi b[
6cbb'a]h'Y]bYa 'D?K ž'XYf'j cb'Y]bYa ',) !Å\f][Yb': U\Yf'f'[Y'Yb_h
k i fXYž'XYf'j cb'XYf'8fi gi gghfU»Y'Ui Z'X]Y'6- 'UVV]Y[Yb'k c``hY"
8]YgYf'J cfZU``ZØ\fhY'ni 'Y]bYf'j]YfhY`ghØbX][Yb'Jc``gdYffi b['XYf
GhfU»Y"

8Yf'Ni gUa a Ybghc»'nk]gWYb'XYa 'A chcffUX'i bX'XYa 'JK'; c'Z
k Uf'gc'\YZh][ž'XUgg'VY]XY': U\Yf'f'gWk Yf'j Yf'Yhnh'k i fXYb"BUW
XYa 'l bZU``a i gghYb'g]Y'Åfnh]W'VY\UbXY'h'i bX']b'i a 'Y[YbXY
?fUb_Yb\Äi gYf'[YVfUW'h'k YfXYb""8]Y'[YbUi Y'l fgUWY'XYg
l bZU``g'i bX'X]Y'l a ghÅbXYž'X]Y'ni 'X]YgYa 'l b['ØW_ZØ\fhYbž'g]bX
bcW'; Y[YbghUbX'dc`]nY`]WYf'9fa]h'i b[Yb"

FYhhi b[ga U» bU\ a Yb'i bX'J Yf_Y\fgghØfi b[

l a 'X]Y'GWk Yfj Yf'YhnhYb'gc'gWk bY``k]Y'a Ø['W'ni 'j Yfgcf[Ybž
k UfYb'byVYb'XYf'Dc`]nY']Ui W'X]Y': fY]k]``[Y': Yi Yfk Y\ f
FYa U[Yb'i bX'XYf'FYhhi b[gX]Ybgh]a '9]bgUhnž'Y]bgW'Y]Y»`]W
Y]bYg'FYhhi b[g\i VgWfUi VYfg""8]Y'FYhhi b[g_fÅZhY'UfVY]hYhYb
i bhYf'<cW'Xfi W_ž'i a 'X]Y'J Yf'YhnhYb'ni 'ghUV`]g]YfYb'i bX'X]Y
l bZU``ghY``Y'UVni g]WYfb"

8 i fW`X]Y`i a ZUb[fY]W`Yb`F`Yhhi b[g!`i bX`6Yf[i b[gUfVY]hYb`k Uf
X]Y`6-`k A`fYbX`XYf`YfZcfXYf`]W`Yb`A U» bU`a Yb`Z0f`Yhk U`j]Yf
Ghi bXYb`_ca d`Yhhi[YgdYffh"8]Yg`Z0\fhY`ni`Yf`YV`]W`Yb
J Yf_Y`f`gVY`]bXYfi b[Yb`]b`XYf`F`Y[]cbž`XU`i a`Y]hi b[Yb
Y]b[Yf]W`hYh`k YfXYb`a i gghYb"5i hcZU`fYfž`X]Y`]b`XYf`B`A`Y
i bhYfk Y[g`k UfYbž`a i gghYb"; YXi`X`Ui ZVf]b[Yb`i bX`U`hYfbUh]j Y
F ci hYb`Z]bXYbž`i a`X]Y`6`cW`UXY`ni`i a ZU`fYb"

F YU_h]cbYb`i bX`U_hi Y`Y`9b hk]W`i b[Yb

8]Y`Dc`nY`Uhi]b`XYf`i c`[Y`9fa]hhi b[Yb`Y]b[Y`Y]hYhž`i a`XYb
[YbUi Yb`<Yf[Ub[`XYg`i bZU`g`ni`_`A`fYb"8 UVY]`k i fXY`Ui W`Y]b
; i hUW`hYf`]bni [Ync[Ybž`i a`hYW`b]gW`Y`5bU`mgYb`Ub`XYb
: U`fnYi [Yb`j c`fni bY`a Yb"Gc`W`Y`G`W`f]hY`g]bX`0V`]W`ž`i a`VY]
gW`k YfYfYb`i bZ`Y`b`X]Y`i fgUW`Yb`[f0bX`]W`ni`j YfghY`Yb`i bX
[Y[YVYbYbZU`g`A U» bU`a Yb`ni f`J YfVYggYfi b[`XYf
J Yf_Y`f`gg]W`Yf`Y]h`ni`Yf[fY]ZYb"

6Y]`XYa`i bZU`Y`b`ghU`bX`U`b`VY]XYb`i: U`fnYi [Yb`k]fhgW`U`Zi]W`Yf
HchU`gW`UXYbž`k Ug`X]Y`Z]bUbni]Y`Y`6Y`Ughi b[`Z0f`X]Y`6Y`hY`][hYb
Yf`0`Yb`X0f`Z`h"8]Y`; YbUi Yf`bZcfa Uh]cbYb`ni f`G`W`UXYb`g`0`Y
g]bX`XYfnY]h`bcW`b]W`h`VY`_Ub`b`hž`_0`b`hYb`UVYf`]b`XYb`b`A`W`ghYb
HU[Yb`j Yf0ZYb]h]W`h`k YfXYbž`k Ybb`X]Y`9fa]hhi b[Yb
ZcfhgW`fY]hYb"8]Y`Ui g`X]YgYa`J c`fZU`f`Ygi`h]YfYbXYb`9f`_Yb`hb]ggY
g]bX`Ui W`j`cb`b`hYfYggY`Z0f`X]Y`J Yf_Y`f`gdc`]h`_`i bX
G]W`Yf`Y]hgghfUhY[]Yb`XYf`F`Y[]cb"

I bZ`Y`k]Y`X]YgYf`j YfXYi h]W`Yb`X]Y`; YZU`fYb`]a`G`hfU» Ybj Yf_Y`f`
i bX`X]Y`]a`a`Yf`k]YXYf_Y`f`YbXYb`<YfUi gZcfXYfi b[Ybž`X]Y`gck c`
: U`fnYi [Z0`fYf`U`g`Ui W`X]Y`J Yf_Y`f`gdc`]h`_`VYk`A`h][Yb`a`0ggYb"
b`gVYgcbXYfY`↑ b[Y`i: U`fYf`gc`hYb`g]W`X`Yf`F`]g]_Ybž`X]Y`a`]h`XYa
A`chc`ffUXZU`fYb`j YfVi bXYb`g]bXž`VYk i ggh`gY]b`i bX
Yb`hgd`fYW`YbXY`J`c`fg]W`hga U» bU`a Yb`hfY`ZYb"

J Yf_Y`f`gg]W`Yf`Y]h`]a`i: c`_i`g

8 Ug`; YgW`Y`Yb`]b`F`Ya U[Yb`ghY`h`Y]bYb`Yfb`ghYb`F`Ya]bXYf`XUfž
XUgg`J Yf_Y`f`gg]W`Yf`Y]h`c`VYfghY`Df]c]f]h`A`h`U`h"8]Y`6Y`0`fXYb`g]bX

Ub[Y\U`hYbž`X]Y ; Y[YVYb\Y]hYb`j cf`C fh`ni `UbU`mg]YfYb`i bX
[Y[YVYbYbZU`g`J YfÅbXYfi b[Yb`j cfni bY\`a Ybž`i a `X]Y
; Ygi bX\`Y]h`XYf`J Yf`_Y\`fghY`bY\`a Yf`ni `gW\ØhnYb`"? ØbZh][
_ØbbhYb`VY]gd]Y`gk Y]gY`J Yf`_Y\`fggW\`]XYf`cXYf`bYi Y`F Y[Y`i b[Yb
Ub`X]YgYf`VYgcbXYfg[YZÅ\`f`]WYb`5VV]Y[YghY`Y`]bghU`]Yfh
k YfXYbž`i a `k Y]hYfY`Nk]gWYbZÅ`Y`ni `j Yfa Y]XYb"

8]Y`j YfUbhk cfh`]WYb`GhY`Yb`a ØggYb`g]WY`Yhnh`X]Y` : fU[Y`ghY`Ybž`
k]Y`gc`WY`i bZÅ`Y`]b`Ni`_i bZh`j Yf\`]bXYfh`k YfXYb`_ØbbYb`"8i fW
5i Z`_Åfi b[gUfVY]hž`g]WYfYfY`GhfU» YbZØ\`fi b[Yb`cXYf`[Yn]Y`hY
?Ua`dU[bYb`Ub`GW`i`Yb`i bX`]b`XYf`^2 ZZb`h]WY`_Y]h`_ØbbhY
`Ub[Zf]gh][`XUg`6Yk`i ggghY]b`ZØf`J Yf`_Y\`fgg]WYf\`Y]h[YgW\ÅfZhi bX
X]Y`NU\`XYf`i bZÅ`Y`[YgYb`_h`k YfXYb"

< Åi Z][Y`i fgUWYb`ZØf`J Yf`_Y\`fgi bZÅ`Y`

8]Y`i bZÅ`Y`Ui Z`XYb`GhfU» Ybž`k]Y`XYf`]b`FYa`U[Ybž`\UVYb`cZh
Å\`b`]WY`i fgUWYb`"9]bY`XYf`<Ui`dhi`fgUWYb`]gh`XUg`A`]ggUWYhYb
j`cb`J Yf`_Y\`fgfY[Y`bž`]bgVYgcbXYfY`VY]a`5VV]Y[Ybž`k]Y`]a
U`hi Y`Yb` : U`ž`k`c`XYf`J`K` ;`c`Z` : U\`fYf`j`cb`XYf`8fi`gi`ggfU» Y`Ui`Z
X]Y`6-`UVV]Y[Yb`k`c`hY`"5i`WY`5V`Yb`_i b[ž`ØVYf\`Ø`hY
; YgW`k]bX][`_Y]hi bX`XUg` : U\`fYb`i bhYf`XYa`9]bZi`gg`j`cb`5`_c\`c`
cXYf`8fc[Yb`g]bX` : U`hc`fYbž`X]Y`cZh`a`]h`gW`k YfYb
J Yf`_Y\`fgi bZÅ`Yb`]b`J YfV]bXi b[`i [YVfUW`h`k YfXYb`"@Ui`h`Y]bYf
GhU]gh]_`XYg`GhU]gh]gWYb`6i bXYgUa`hYg`Ui`g`XYa``\$&&&`k`Uf
Y`XYg`Xf]hhY`j`Yfi b[`ØW`hY` : U\`fnYi [`]b`i bZÅ`Y`j`Yfk]W`_Y`hž`X]Y
Xi`fW`ZY`\`Yf\`UZhYg`5VV]Y[Yb`ni`ghUbXY`_Ua`Yb"

9]b`k Y]hYfYf`_f]h]gWYf`5gdY`_h`]gh`XUg`J Yf\`U`hYb`j`cb
A`chc`ffUXZU\`fYfb`"J]Y`Y` : U\`fYf`i bhYfgW\ÅhnYb`X]Y`F]g]_Yb`i bX
ZU\`fYb`]b[YZÅ\`f`]WYb`G]hi`Uh]cbYb`cZh`ni`gW`bY`"8Yf`5857`k`Y]gh
XUfUi`Z`\]bž`XUgg`A`chc`ffUXi bZÅ`Y`]b`XYf`FY[Y`gW`k YfYfY
J Yf`Yhni b[Yb`bUW`g]WY`n]Y\`Ybž`]bgVYgcbXYfY`Ui`Z[fi bX`XYf
[Yf]b[YfYb`GW`i`hna`U» bU\`a`Yb`ZØf` : U\`fYf`i bX`6Y]ZU\`fYf`"8Yf
9]bgUm`j`cb`GW`i`hn`_Y]Xi b[`_ØbbhY`]b`gc`WYb` : Å`Yb
YbhgWY]XYbX`gY]b"

J Yf`_Y\`fgfYWYh`]WY`Y`F`U\`a`YbVYX]b[i b[Yb

i bX`XYfYb`6YXYi hi b[

⇒ : U`Y`Y]bYg`J Yf_Y\fgi bZU`g`k]Y`X]YgYa`]gh`Yg`k]W`h][ž`X]Y
j Yf_Y\fgfYW`h]W`Yb`F U`a` YbVYX]b[i b[Yb`ni`j` YfghY`Yb`" `⊕
8 Yi hgW`UbX`fY[Y`h`X]Y`GhfU» Ybj Yf_Y\fg! C fXbi b[`fGhJ C Ł`XUg
J Yf`U`hYb`]a` `GhfU» Ybj Yf_Y`f`"G]Y`Y[h] YfgW`]YXYbY`F Y[Y`i b[Yb
ZYghž`X]Y`XUg`5VV]Y[Ybž` , VYf`c`Yb`i bX`UbXYfY`A U» bU`a` Yb
VYhfYZYb`"6Y]`XYf`9fa`]hhi b[`XYf`GW`i`XZfU[Y`a` ØggYb`6Y`ÖfXYb
i bX`J Yfg]W`Yfi b[Yb`[YbUi`d`fØZYbž`cV`U`Y`6YhY`]] [hYb`X]Y
J Yf_Y`fgfY[Y`b`VYUW`hYh`UVYb`"

8 UfØVYf`]\bUi`g`VY]b`U`hYh`XUg`XYi hgW`Y`J Yf_Y`fgfYW`h`Ui`W`
F Y[Y`i b[Yb`ni`f`<UZh`i b[`i bX`GW`UXYbgYfgUhn`"8 Yf` ; YgW`ÅX][hY
_Ubb`5bgdfØW`Y`VY]`XYf`J Yfg]W`Yfi b[`XYg`J Yfi fgUW`Yfg[Y`hYbX
a`UW`Ybž`i a`X]Y`?cghYb`ZØf`a`YX]n]b]gW`Y`6Y`UbX`i b[Ybž`
: U`fnYi [fYdUfUhi`fYb`i bX`UbXYfY`GW`ÅXYb`ni`XYW`Yb`"⊕` : Å`Yb
j`cb`gW`k`YfYb`J Yf`Yhni`b[Ybž`k`]Y`]\Yf`VYgW`f]YVYbž`_ØbbYb`X]Y
Z]bUbn]Y`Yb`5i`gk`]f`_i b[Yb`bUW`\U`h][`gY]bž`gck`c`\\ZØf`X]Y
I bZU`cdZYf`U`g`Ui`W`ZØf`X]Y`J Yfi fgUW`Yf`"

GhUh]gh]_Yb`ni`J Yf_Y`fgi bZÅ`Yb`]b
8 Yi hgW`UbX`

@Ui`h`XYa`8 Yi hgW`Yb`J Yf_Y`fgg]W`Yf`Y]hgfUh`fB`J`F`Ł`k`i`fXYb`]a
`J`f`&`\$`&`'`]b`8 Yi hgW`UbX`]bg[YgUa`h`Yhk`U`&ž`*`A`]`]cbYb
J Yf_Y`fgi bZÅ`Y`fY[]ghf]Yfh`"8 UVY]`g]bX`X]Y`a`Y]ghYb`I bZÅ`Y`fH) i`Ł`
`Y]W`hY`I bZÅ`Y`c`bY`DYfgcbYbgW`ÅXYbž`k`Å`fYbX`X]Y`NU`\\XYf
gW`k`YfYb`I bZÅ`Y`a`]h`J Yf`YhnhYb`cXYf`HchYb`]a` `J`f`&`\$`&`'`VY]
Yhk`U`&`%`\$`\$`\$`U[`"

6YgcbXYfYg`5i [Yba`Yf`_gc`hY`Ui`ZX]Y`5`hYfg[fi`ddY`XYf`ØVYf
*) !`Å`f][Yb`[Y`Y[h`k`YfXYbž`X]Y`]a` `J`f`&`\$`&`&
ØVYfXi`fW`gW`b]hh]W`\`Åi`Z][`]b`J Yf_Y`fgi bZÅ`Y`j`Yfk`]W`Y`h`k`UfYb`
8]YgY` ; fi`ddY`]gh`VYgcbXYfg`UbZÅ`][`ZØf`gW`k`Yfk`]Y[YbXY` : c`[Yb
Y]bYg`I bZU`gž`XU`g]Y`\`Åi`Z][`k`Yb][Yf`A`cV`]h`Å`h`i`bX`gW`bY`YfY
_ÖfdYf`]W`Y`F`YU`_h]cbYb`]a` `5`hYf`UVYb`"8]YgY`GhUh]gh]_Yb
i`bhYfghfY]W`Yb`X]Y`B`chk`YbX][`_Y]hž`gck`c`\\J Yf_Y`fgYfn]Y`i b[`U`g

Ui W`G]WYf\Y]hga U»bU\`a Yb`ZØf`À`hYfY`J Yf_Y`fghY]`bY\`a Yf`ni
ZØfXYfb"

: Øf`k Y]hYfY`ϑZcfa Uh]cbYb`ni `J Yf_Y`fgg]WYf\Y]hgghUh]gh]_Yb`]b
8Yi hgW`UbX`_Ubb`XYf`8Yi hgW`Y`J Yf_Y`fgg]WYf\Y]hgfUh`\`]Yf`
VYgi W`h`k YfXYb"

8YhU]`g

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