

J Yfa Ò[Yb`Y]b[Ync[Yb. : fY]`Ugg]b[Yf
8 fc[Yb\ÀbX`Yf`ni `+`>U\ fYb`< UZh
j Yfi fhY]`h

9]b`' *!`À\ f][Yf`8 fc[Yb\ÀbX`Yf`k i fXY`]b`HfUi bghY]b`ni `+
>U\ fYb`i bX`" `A cbUhYb`< UZh]j Yfi fhY]`hž`bUWXYa `Yf`a]h
%\$\$\$[`?c_U]b`Ui ZY]bYa `: U\ffUX`Ui Z[Y[f]ZZYb`k i fXY"

8]Y`8 fc[YbdfcV`Ya Uh]_`\Uh`Ui W`]b`XYf`FY[]cb`7\]Ya [Ui `ni
Y]bYa `Y]bgW`bY]XYbXYb`: U``[YZ\fhž`XYf`X]Y`: c`[Yb`XYg
8 fc[Yb\UbXY`g`Ui Z`X]Y`; Ya Y]bgW`UZh`XYi h`]W`a UW`h`FY[]cbU`Yb
6Y\ÖfXYb`]gh`Yg[Y`i b[Ybž`Y]bYb`i a ZUb[fY]W`Yb`8 fc[Yb]b[`ni
nYfgW`U[Ybž`XYf`Y]bYb`Yf\YV`]W`Yb`9]bZi gg`Ui ZX]Y`c_U`Y
G]W`Yf\Y]h`\UhhY"

9]b`j Yf\ UZhYhYf`8 fc[Yb\ÀbX`Yf`i bX`gY]bY
A Yh\cXYb

⇒ `A]hhY`di b_h`XYf`9fa]hh`i b[Yb`ghUbX`Y]b`' *!`À\ f][Yf`A Ubb`Ui g
: fY]`Ugg]b[ž`XYf`g]W`k Y[Yb`XYg`< UbXY`g`a]h`VYh`Ai VYbXYb
A]hhY`bž`]bgVYgcbXYfY`?c_U]b`i bX`A Uf]`i UbUž] YfUbhk`cfhYb
a i gghY`"BUW`Y]bYa `a Y\ f`U`g`Y]b`À\ f][Yb`J YfZU\ fYb`Z]Y`Ua `&(" `&(\$&(`XUg`i fhY]`. `9f`k i fXY`ni `Y]bYf`< UZhghfUZY`j cb`+`>U\ fYb
i bX`" `A cbUhYb]j Yfi fhY]`h`Ni XYa `k i fXYb`ØVYf`%) \$"\$\$\$`9i fc
K YfhYfgUhn`Ub[YcfXbYh"

8]Y`k]W`h][Y`F`c``Y`j`cb`9fa]hh`i b[Yb`i bX
a`cXYfbYb`HYW`bc`c[]Yb

8]Y`i a ZUb[fY]W`Y`i bhYfgi W`i b[`k i fXY`Xi fW`Y]bY
J Yf_Y\fg_cbhfc``Y`ja `A`Àfn`&\$&%`Ui g[Y`Òghž`VY]`XYf`XYf

5b[Y_`U[hY`a]h`Y]bYa `Fi W_gUW_`Ui ZY]bYa `: U\ffUX`Yfk]gW`h
k i fXY"K A\fybX`gY]bYf`:`i W`h`]\bhYf`]Y»`Yf`X]Y`8fc[Ybž`]b`XYbYb
\Yfj cffU[YbXYf`K]f_ghcZZ[Y\U`h`j cb`ØVYf`- \$`i` `ZYgh[YghY`h
k i fXY"8Yf`9]bgUhn`j cb`\cW`a cXYfbYf`HYW`bc`c[]Yž`k]Y`X]Y
9bhgW`ØggY`i b[`XYf`j YfgW`ØggY`hYb`?ca a i b]_Uh]cbggcZhk UfY
G_m`977 žYbhd i ddhY`g]W`U`g`YbhgW`Y]XYbX"8Ua]h`_cbbhYb`X]Y
9fa]hhYf`k Yfhj c`Y`ϑZcfa Uh]cbYb`i bX`7\Uhj Yf`Ài ZY
YbhgW`ØggY`bž`X]Y`XYb`5b[Y_`U[hYb`X]fY`h`a]h`XYb
8fc[Yb[YgW`ÀZhYb`]b`J YfV]bXi b[`VfUW`hYb`"

; YgY`gW`UZh`]W`Y`5i gk]f_`i b[Yb`i bX
G]W`Yf`Y]hgVYXYb`_Yb

8Ug`l fhY`]i bX`X]Y`nYfgW`U[YbY`8fc[YbVUbXY`Vf]b[Yb`k]W`h][Y
: fU[Yb`ZØf`X]Y`; YgY`gW`UZh`Ui Z`8]Y`J YfVfY]hi b[`j cb`8fc[Yb
_Ubb`b]W`h`bi f`ni f`Ni bU`a Y`j cb`?f]a]bU`]h`h`ZØ\fybž`gcbXYfb
Ui W`XUg`@YVYb`j cb`i bVYhY`][hYb`6Øf[Yfb`[YZÀ\fXYb"8Yf`: U`
j YfXYi h]W`h`Ui W`X]Y`B`chk YbX][_Y]hj cb
Df`Aj Ybh]cbga U»bU`a Yb`i bX`Y]bYf`j Yfgh`Àf`hYb`5i Z`_Àfi b[`ØVYf
X]Y`F]g]_Yb`XYg`8fc[Yb`U`bXY`g"8U`Yf`]gh`XUg`l fhY`]`b]W`h`bi f`Y]b
fYW`h]W`Yf`G]Y[ž`gcbXYfb`Ui W`Y]b`G`W`f]h`h`b`F]W`hi b[`Y]bYf
g]W`YfYfYb`; Ya`Y]bgW`UZh`"

F YW`h`]W`Yf`? cbhYl h`i bX`ni _ØbZh][Y
A U»bU`a Yb

8U`XUg`l fhY`]`bcW`b]W`h`fYW`hg_f`ÀZh][`]gh`i bX`XYf`5b[Y_`U[hY
F Yj]g]cb`Y]b[Y`Y[h`\Uhž`V`Y]Vh`UVni k UfhYbž`k]Y`g]W`X`Yf`: U`
k Y]hYfYb`hk]W`_Y`b`k]fX"8]Y`fYW`h]W`Yb`5i gY]bUbXYfgYhmi b[Yb
_ØbbhYb`Y`XcW`k Y]hfY]W`YbXY`?cbgYei YbnYb`ZØf`XUg`k Y]hYfY
J cf[Y\Yb`VY]`8fc[Yb`_f]a]bU`]h`h`b`XYf`F`Y[]cb`\UVYb"8Ug
@UbX[Yf]W`h`HfUi bghY]b`\Uh`_`Uf[Ya`UW`hž`XUgg`X]Y`[YgUa`a`Y`hYb
6Yk Y]ga]hhY`Ui g`a cXYfbYb`HYW`bc`c[]Yb`]b`Ni`_i bZh`gh`Àf`_Yf`]b
[Yf]W`h]W`Yb`J YfZU`fYb`[Yk]W`hYh`k YfXYb`_ØbbhYb`"

8Yf`a YbgW``]W`Y`5gdY`_h]a`8fc[Yb`U`bXY`

<]bhYf`XYa : U``j YfV]f[h'g]Wk`YXcWk`Ui Wk`Y]bY`a YbgWk`]Wk`Y
HfU[ÒX]Y"8fc[YbUV\Àb[][_Y]hi bX`XYf`XUa]hj YfVi bXYbY
< UbXY`VYhfYZZYb`b]Wk`h`bi f`X]Y`X]fY_h`b`j c`j]YfhYbž`gcbXYfb`Ui Wk`
: Ua]`Yb`i bX`: fYi bXY"8]Y`Ya ch]cbU`Yb`6Y`Ughi b[Ybž`X]Y`a]h
gc`Wk`Yb`J Yfi fhY]i b[Yb`Y]b`Yf[Y`Ybž`nY][Yb`X]Y`Bchk YbX][_Y]h
ZØf`gcn]U`Y`I bhYfghØhni b[ggmgHYa Y`ZØf`6YhfcZZYbY`i bX`XYfYb
5b[Y`Øf][Y"

8]YgY`J cfZÀ`Y`i bhYfghfY]Wk`Yb`X]Y`ghÀbX][Y`< YfUi gZcfXYfi b[`ZØf`
X]Y`; YgY`gWk`UZh`g]Wk`a]h8fc[YbdfcV`Ya Yb
Ui gY]bUbXYfni gYhnYb`i bX`X]Y`; Ya Y]bgWk`UZh`ni `gWk`ØhnYb"iN]Y`
a i gg`Yg`gY]bž`[Ya Y]bgUa `@Øgi b[Yb`ni `Z]bXYbž`i a `gck c`X]Y
; Ygi bX`Y]h`XYf`6Øf[Yf`ni `ZØfXYfb`U`g`Ui Wk`X]Y`G]Wk`Yf`Y]h`]b`XYf`
FY[]cb`ni `[Yk`À`f`Y]ghYb"

8YhU]`g

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