

5i Za Yf_gUa Yf'NYi [Y'ghcddhj Yfgi W\hYb
: U\ffUXX]YVghU\`']b`K YgY`

⊕`K YgY`k i fXY`Y]b`(!`Å\ f][Yf`A Ubb`bUW\`Y]bYa
j Yfgi W\hYb` : U\ffUXX]YVghU\`ZYgh[Ybca a Yb"NYi [Yb
j Yf\]bXYfhYb`GW\`]a a YfYg"

⊕`XYf`GhUXh`K YgY`_Ua`Yg`Ua` : fY]hU[UVYbX`[Y[Yb`&&"\$`I \f`ni
Y]bYa` j Yfgi W\hYb` : U\ffUXX]YVghU\`žXYf`Xi fW\`XUg`gW\`bY`Y
<UbXY`b`Y]bYg`Ui Za Yf_gUa Yb`NYi [Yb`Ui Z[Y_`Åfh`k YfXYb
_cbbhY" `@Ui hi5b[UVYb`XYf`Dc`nY]`k i fXY`Y]b`(!`Å\ f][Yf
ZYgh[Ybca a YbžXYf`j YfXÅW\h][`Ub`Y]bYa` : U\ffUX`\Ubh]YfhY" `8]Y
G]hi Uh]cb`YfY][bYhY`g]W\`]b`Y]bYf`K c\`b[Y[YbXž`k c`XYf
6YcVUW\hYf`X]Y`j YfXÅW\h][Yb`5_h]j]hÅhYb`XYg`A UbbYg`VYa Yf_hY
i bX`gcZcfh`fYU[]YfhY"

8Yf`NYi [YžXYggYb`gW\`bY`Y`5i ZZUggi b[g[UVY`i bX
9bhgW\`cggYb`Y]h`Yb`hgW\`Y]XYbX`k UfYbž`ghY`hY`XYb`J YfXÅW\h][Yb
V]g`ni a`9]bhfYZZYb`XYf`Dc`nY]VYUa`hYb`ZYgh" `8]Yg`j YfXYi`h]W\`hž
k]Y`k]W\`h][`X]Y`K UW\`gUa`_Y]h`XYf`6Øf[Yf`VY]`XYf`6Y`_Åa`dZ`b[
j cb`?`f]a`]bU`]hÅh`]gh" `⊕`gc`W\`Yb`G]hi Uh]cbYb`_Ubb`XYf`dYfgØb`]W\`Y
9]bgUhm`cZha`Y\`f`VYk]f`_Yb`U`g`YXY`G]W\`Yf`Y]hga`U»bU\`a`Y"

HUhk Yf_nYi [Y`VY]`XYf` : YghbU\`a`Y
g]W\`Yf[YghY`h

8]Y`Dc`nY]VYUa`hYb`hfUZyb`_i fnY`NY]h`gdÅhYf`Ua``Cfh`XYg
; YgW\`Y\`Ybg`Y]b`i bX`Xi fW\`gi W\`hYb`X]Y`a`]h[YZØ\`fhYb
; Y[YbghÅbXY`XYg`HUhj YfXÅW\h][Yb" `8 UVY]`ZUbXYb`g]Y
j YfgW\`]YXYbY`K Yf_nYi [Yž`X]Y`hmd]gW\`Yfk`Y]gY`VY]
: U\ffUXX]YVghÅ\`Yb`j Yfk`YbXYh`k YfXYb" `8]YgY`9bhXYW`_i b[
i bhYfghØhnh`X]Y`H\`Ycf]Yž`XUgg`XYf`(!`Å\ f][Y`b]W\`h`bi`f`Ui`g`Y]bYa

d`0hn`j]W\Yb`a di`g`UbXY`hYž`gcbXYfb`a 0[`]W\Yfk Y]gY`VYfY]hg
`Ab[Yf`a `J]g]Yf`XYf`6Y\`0fXYb`k Uf"

8]Y` : YghbU\`a Y`XYg`J YfX`ÅW\h][Yb`]gh`Y]b`k]W\h][Yg`NY]W\Yb`Z0f
X]Y`G]W\Yf\`Y]h`i]b`XYf` ; Ya Y]bXY`K YgY`" : U\ffUXX]YVgh`Å\`Y`g]bX
Y]b`\`Ai Z][Yg`DfcV`Ya `]b`j]Y`Yb`Gh`ÅXhYbž`i bX`\`Ai Z][`0bbYb`Yg`X]Y
60f[Yf`a]h`]\`fYf`5i Za Yf_gUa Y]h`j Yf\`]bXYfb`"9g`k]fX`]a a Yf
k]YXYf`VYhc`bž`XUgg`X]Y`Ni gUa a YbUfVY]h`nk]gW\Yb`XYf`Dc`]nY]
i bX`XYf`6Yj 0`_Yfi b[`YbhgW\Y]XYbX`]gh`8]Y`Dc`]nY]`Yfa i h][h`X]Y
60f[Yfž`j YfX`ÅW\h][Y`5`_hj]h`ÅhYb`gcZcfh`ni `a Y`XYbž`i a `dchYbn]Y`Y
GhfUZh`ÅhYf`ni f`F YW\YbgW\UZh`ni `n]Y\`Yb"

K]W\h][`_Y]h`XYf`N]j]`Wci`fU[Y

8 Ug ; YgW\Y\`Yb`ghY`h`Y]bYb`Y]bXfi W_gj c`Yb`6Yk Y]g`Z0f`X]Y
6YXYi hi b[`j cb`N]j]`Wci`fU[Y`XUf`"8Yf`NYi [Y`\`UbXY`hY
YbhgW\`cggYb`i bX`f]g]_cVYfY]hž`k Ug`XUni `Z0\`fhYž`XUgg`XYf
J YfX`ÅW\h][Y`[YZUggh`k YfXYb`_ccb`hYž`VYj cf`Yf`gY]b`J cf\`UVYb
i a gYmYb`_ccb`hY`"Gc`W\Y`<UbX`i b[Yb`nY][Ybž`XUgg`X]Y
; Ya Y]bgW\UZh`b]W\h`hUhYb`cg`ni gY\`Yb`a i ggž`gcbXYfb`U_hj] `ni f
G]W\Yf\`Y]h`]\`fYg`I a ZY`XYg`VY]hfU[Yb`_Ubb"

8]Y`dc`]nY]`]W\Yb`A U» bU\`a Yb`]b`BchZ`Å`Yb`g]bX`k]W\h][ž`XcW\`cZh
]gh`Yg`XYf`df]j UhY`9]bgUhn`XYf`60f[Yfž`XYf`Y]bYb`YbhgW\Y]XYbXYb
I bhYfgW\]YX`Ui ga UW\h`"ϕ`Y]bYf`NY]hž`]b`XYf`XUg`J YfhfUi Yb`]b`X]Y
Y][YbYb`BUW\VUfb`cZh[Yf]b[`]ghž`Yfa i h][h`X]YgYf`J cfZU`XUni ž
Ui Za Yf_gUa `ni `gY]b`i bX`]a `BchZU`ni `Y`ZYb"

9g`V`Y]Vh`UVni k UfhYbž`k Y`W\Y`k Y]hYfYb`ϕ`Zcfa Uh]cbYb`0VYf`XYb
J YfX`ÅW\h][Yb`Ubg`@]W\h`_ca a Yb`k YfXYb`"8]YgY` : YghbU\`a Y
_0bbhY`a 0[`]W\Yfk Y]gY`Ui W\`ni f`?`Åfi b[`UbXYfYfž`bcW\
i b[Y`0ghYf` : U\ffUXX]YVgh`Å\`Y`]b`XYf`F Y[]cb`VY]hfU[Yb`"5i`g`G]W\h
XYf`Dc`]nY]`]gh`YXYf` : YghbU\`a Y`Y]b`GW\f]h`]b`X]Y`f]W\h][Y
F]W\h`i b[ž`i a `XUg`G]W\Yf\`Y]hg[YZ0\`XYf`60f[Yf`ni `gh`Åf`_Yb"

5VgW\`]Y» YbX`_Ubb`ZYgh[Y\`U`hYb`k YfXYbž`XUgg`XYf`J cfZU`]b
K YgY`b]W\h`bi f`Y]bY`\`Ufa `cgY`?f]a]bU`[YgW\]W\hY`]ghž`gcbXYfb
Ui W\`Y]b`k]W\h][Yf`F Ya]bXYfž`XUgg`YXYf`9]bnY`bY`X]Y`G]W\Yf\`Y]h

]b'gY]bYf'; Ya Y]bXY'VYY]bZi ggYb' _Ubb"'?`Y]bY`HUhYb`XYf
K UWgUa _Y]h'`ObbYb'ni` [fc»Yb`J Yf`AbXYfi b[Yb`ZØ\fyb`i bX
`YhnhYbX`]W`X]Y`@YVYbgei U`]h`h`U`Yf`6Øf[Yf`Yf\`Ø\Yb"

8 YhU]`g`ni a `J c fZU``

8 Yf`J c fZU``YfY][bYhY`g]W`]b`XYf`GhUXh`K YgY`ž`k c`Y]b
Ui Za Yf_gUa Yf`NYi [Y`[Y[Yb`&`"\$`\$`i` \f`Y]bYb`J YfX`ÅW`h][Yb
VYcVUW`hYhY`ž`XYf`UbgW`Y]bYbX`j Yfgi W`hY`ž`Y]b` : U\`ffUX`ni
ghY`\`Yb``8 Yf`NYi [Y`\`UbXY`hY`gW`bY``ž`]bXYa`Yf`XYb
HUh`YfX`ÅW`h][Yb`V]g`ni a`9]bhfY`ZYb`XYf`Dc`]nY]`ZYgh\]Y`h``8]Yg
nY][h`X]Y`6YXYi hi b[`XYf`N]j`]W`ci fU[Y`i bX`k`jY`Yb`hgW`Y]XYbX
Ui Za Yf_gUa Y`6Øf[Yf`ni f`J YfVfYW`Yb`gVY`_Åa`dZi b[`VY]hfU[Yb
_`ObbYb"

6Y]`XYf`8i fW`gi W`i b[`XYg`(!`Å\`f][Yb`A`UbbYg`ZUbXYb`X]Y
6YUa`hYb`a`Y`\`fYfY`; Y[Yb`gh`Åb`XYž`X]Y`U`g`HUhk`Yf`nYi [Y
]XYb`h]Z]n]Yf`h`k`i`fXYb`ž`k`Ug`Ui`Z]Y]bY`[Yd`Ub`hY`<`UbX`i`b[`]\]bk`Y]gh"
Gc`W`Y`K`Yf`nYi [Y`_`Obb`hYb`ni`a`6Y]gd]Y``gdYn]Y``Y
f`bYf[VUi`Łk`Yf`nYi [Y`c`XYf`Ui`W`Y]b`ZUW`Y`; Yf`Å`hY`k`jY
GW`fUi`VYb`gW`ØggY`i`a`ZUggYb`ž`X]Y`ZØf`XYb`8]YVghU`\`j`cb
: U\`ff`ÅXYfb`j`Yfk`Yb`XYh`k`Yf`XYb`_`ObbYb"

NU\`Yb`i`bX` : U_`hYb`ni`f` : U\`ffUXg]W`Yf`\`Y]h

8]Y` : U\`ffUX`_f]a`]bU`]h`Åh`]b`8Yi`hgW`\`UbX`i`ghY``h`Y]b`k`UW`gYb`XYg
DfcV`Ya`XUf``@Ui`h`XYf`Dc`]nY]`]W`Yb`?`f]a`]bU`ghUh]gh]_`k`i`fXYb`i]a
`U\`f`&`\$`&`&`fi`bX```\$`\$`\$`\$`\$` : U\`ffUX`X]YVgh`Å`\`Y`fY[]ghf]Yf`h`ž`k`Ug`Y]bYb
5bgh]Y[`]Y[Yb`ØVYf`XYa`J`c`f`U\`f`XUf`ghY``h``8]Y`a`Y]ghYb`X]YgYf
8]YVgh`Å`\`Y[YgW`Y`\`Yb`]b`gh`Å`Xh]gW`Yb`; YV]YhYb`ž`k`c`j`]Y`Y
: U\`ff`ÅXYf`i`b[Yg]W`Yf`h`UV[YghY``h`k`Yf`XYb``8Yf`5bgh]Y[`XYf
: U\`ffUX`X]YVgh`Å`\`Y`k`]fX`Ui`W`X`i`fW`Y]bY`Ni`bU`a`Y`j`cb
: U\`ff`ÅXYfb`]b`XYb`Gh`Å`XhYb`VY[Øbgh][hž`XU`]a`a`Yf`a`Y`\`A`YbgW`Yb
Ui`Zi`a`k`Y`h`ZFYi`bX`]W`Y`J`Yf`_Y`\`fga`]h`hY``i`a`ghY][Yb"

I`a`XYf`ghY][YbXYb`NU\``Ub` : U\`ffUX`X]YVgh`Å`\`Yb
Yb`h[Y[Ybni`k`]f`_Yb`ž`Ya`dZY`\`Yb`9i`dYf`hYb`ž` : U\`ff`ÅXYf`ghY`hg`a`]h
\`c`W`k`Yf`h][Yb`GW`\`ØggYfb`ni`g]W`Yfb`i`bX`ØZYb`h]W`Y`5VghY``d`Å`hnY

ni`bi`mYbž`X]Y`ØVYf`gdYn]Y`Y`G]WXYfi`b[`Yb`ZØf`:`U\`ff`ÅXYf`
j`YfZØ[`Yb`"5i`W`X]Y`F`Y[`]ghf]Yfi`b[`X`Yg`:`U\`ff`UXg`_`Ubb`X]Y`
F`ØW`_`ZØ\`fi`b[`[`Yghc`\`YbYf`F`ÅXYf`Yf`Y]W`hYfb`"

F`Y`U`_`h]cb`X`Y`f`6`Y`\`Ø`f`X`Y`b`i`b`X`
Df`Å`j`Y`b`h]cb`g`a`U`»`b`U`\`a`Y`b`

8]Y`Dc`nY]`b`K`Y`g`Y`\`U`h`V`Y`_`f`Å`Z`h][`hž`X`U`g`g`g]Y`V`Y]`J`Y`f`X`U`W`h`g`Z`Å`Y`b`
]a`a`Y`f`g`W`b`Y`\`U`b`X`Y`b`i`b`X`X]Y`6`Ø`f[`Y`f`Y`fa`i`h][`Y`b`ž`U`_`h]j`ni`
k`Y`f`X`Y`b`ž`k`Y`b`b`g]Y`j`Y`f`X`Å`W`h][`Y`G]h`U`h]cb`Y`b`V`Y`c`V`U`W`h`Y`b`"N]Y`gh`
Y`g`ž`X`i`f`W`5i`Z`_`Å`fi`b[`i`b`X`g`W`b`Y`Y`F`Y`U`_`h]cb`X`U`g`
G]W`Y`f`Y`h]g[`Y`Z`Ø`\`X`Y`f`6`Ø`f[`Y`f`ni`Y`f`\`Ø`Y`b`"5i`»`Y`f`X`Y`a`k`Y`f`X`Y`b`
f`Y[`Y`a`Å`»][`b`Z`c`fa`U`h]cb`g`j`Y`f`U`b`g`h`U`hi`b[`Y`b`i`b`X`K`c`f`_`g`\`c`d`g`
X`i`f`W[`Y`Z`Ø`\`f`h`ž`i`a`X`U`g`6`Y`k`i`g`g`h`g`Y]b`Z`Ø`f`G]W`Y`f`Y`h]g`a`U`»`b`U`\`a`Y`b`
ni`g`W`Å`f`Z`Y`b`i`b`X`H]d`d`g`ni`f`G]W`Y`fi`b[`j`cb`:`U\`ff`Å`X`Y`fb`ni`[`Y`V`Y`b`"

8`U`f`Ø`V`Y`f`\`b`U`i`g`[`]V`h`Y`g`]b`j`]Y`Y`b`G`h`Å`X`h`Y`b`D`f`c[`f`U`a`a`Y`ž`X]Y`X`U`f`U`i`Z`
U`V`n]Y`Y`b`ž`X`U`g`F`]g]_`c`j`cb`:`U\`ff`U`X`X]Y`V`g`h`Å`\`Y`b`ni`f`Y`X`i`n]Y`f`Y`b`"8]Y`g`Y`
f`Y]W`Y`b`j`cb`X`Y`f`6`Y`f`Y]h`g`h`Y`i`b[`j`cb`g]W`Y`f`Y`b`5`V`g`h`Y`\`U`b`U[`Y`b`V]g`
\`b`ni`f`Ni`g`U`a`a`Y`b`U`f`V`Y]h`a`]h`:`U\`ff`U`X`\`Å`b`X`Y`fb`ni`f`:`Ø`f`X`Y`fi`b[`
g]W`Y`f`Y`f`D`f`c`X`i`_`h`"8]Y`Dc`nY]`g`Y`h`h`U`i`W`U`i`Z`g`c`n]U`Y`A`Y`X]Y`b`ž`i`a`
d`f`Å`j`Y`b`h]j`Y`A`U`»`b`U`\`a`Y`b`V`Y`_`U`b`b`h`ni`a`U`W`Y`b`i`b`X`X]Y`
²`Z`Y`b`h]W`_`Y]h`Ø`V`Y`f`U`_`h`i`Y`Y`H`f`Y`b`X`g`]b`X`Y`f`?`f]a`]b`U`]h`Å`h`ni`
]b`Z`c`fa`]Y`f`Y`b`"5`_`h]cb`Y`b`k`]Y`A`Y`X`Y`d`U`h`Z`c`fa`Y`b`Z`Ø`f`[`Y`ghc`\`Y`b`Y`
:`U\`ff`Å`X`Y`f`\`U`V`Y`b`Y`V`Y`b`Z`U`g`U`b`6`Y`X`Y`i`h`i`b[`[`Y`k`c`b`b`Y`b`"

8`Y`h`U]`g`

6`Y`g`i`W`X`Y`b`G]Y`i`b`g`U`i`Z`X]Y`!`b`U`W`f]W`h`Y`b`"b`Y`h`