

ÿ fnh]b `Zc fXYfh. GWk Ub [YfgW UZhguVVfØW Y `Ui g`XYa GhfUZ[YgYhnVi W `YbhZYfbYb`

9fZU\fyb`G]Y`ja `DcXWUgh/ ei ch/: fUi `8c_hcfz`ØVYfbY\`a Yb
G]Y`/ ei ch`a]h`8f`5`]W]U`6U]Yfz`k Ufi a
GWk Ub [YfgW UZhguVVfØW Y `Ui g`XYa `GhfUZ[YgYhnVi W
[Yghf]W Yb`k YfXYb`gc`hYb`8]Y`J c fg]hnYbXY`j cb`8cW`hcf`g`Zc f
7\`c]W` ; Yfa Ubm`Zc fXYfh`Y]bY`i a ZUggYbXY`5i gV]`Xi b[`ni
X]YgYa `H\Ya U`]b`XYf`A YX]n]b`i bX`VY`Yi W`hY`h`X]Y
6YXYi hi b[`U_hi Y`Yf`Ghi X]YbYf[YVb]ggY` < ØfYb`G]Y`X]Y
Y]bXf]b[`]W`Y`8]g_i gg]cb`ØVYf`X]Y`A m\Yb`fi bX`i a
5VhfY]Vi b[Ybž`X]Y`Bchk YbX][`Y]h[YgYhn`W`Yf`YbXYfi b[Yb
i bX`X]Y`J YfUbhk c fhi b[`XYf`6i bXYgfY[]Yfi b["



8]Y`6YXYi hi b[`XYf`6]`Xi b[`ØVYf
GWk Ub [YfgW UZhguVVfØW Y `]b`XYf
a YX]n]b]gW Yb`5i gV]`Xi b[

8]Y`8YVUhhY`ØVYf`GWk Ub[YfgWUZhguVVfØWY`]b`8Yi hgW`UbX`]gh
]b`j`c`Ya` ; Ub[Yž`i`bX`X]Y`Gh]a` a`Y`XYf`Y`fnhY`k`]fX`]a` a`Yf
XYi`h`]WXYf`"8f`"5`]W]U`6U]Yfž`Y]bY`Yb[U[]YfhY`Y`fnh]b`i`bX
J`c`fg]hnYbXY`j`cb`8`c`W`h`c`f`g`Z`c`f`7`\`c]W` ; Yfa` Ubmž`\Uh`]b`Y]bYa
U`_`hi`Y`Y`b`DcXWUgh`Y]bXf]b[`]W`V`Y`h`c`b`hž`XUgg`g]W`X`Y`[`Y`g`Y`hn`]W`Y
FY[Y`i`b[`]j`cb`GWk Ub[YfgWUZhguVVfØWY`b`Xf]b[YbX`À`bXYfb
a`i`gg`"8]YgY`H`Y`a`Uh]_`]gh`b]W`h`bi`f`j`cb`fYW`h`]W`Ya`ž`g`c`b`XYfb
Ui`W`j`cb[`Y`g`Y`g`W`U`Zh`]W`Ya`i`bX`[`Y`gi`bX`Y]h`]W`Ya`i`b`hYfYggY"

⇒a`F`U`a`Yb`XYg`DcXWUghg` : fUi`8`c`_`h`c`f`ž`ØVYfbY`a`Yb`G]Y`
X]g`_`i`h]YfhY`6U]Yf`a`]h`ž``]U`F`c`h`Y`f`V`ž`7`\`Y`Z`f`Y`X`U`_`h`i`f]b`XYf
5d`c`h`Y`_`Yb`i`a`g`W`Ui`ž`ØVYf`X]Y`h]Y`Z`j`Y`fk`i`fnY`h`Y`b`A`m`h`Y`b`i`bX`XYb
Xf]b[YbXYb`6YXUfZ`Ub`Y]bYf`i`a`ZUggYbXYb`a`YX]n]b]gWYb
5i`gV]Xi`b[`]ni`X]YgYa`k`]W`h][`Yb`H`Y`a`U`"9]b`nYbhfU`Yf`Di`b`_`h`k`Uf
X]Y` : YghghY`i`b[`ž`XUgg`GWk Ub[YfgWUZhguVVfØWY`]a`XYi`hgWYb
GhfUZ[YgYhnVi`W`Ui`Z`XYf`[`Y]WYb`9VYbY`k`]Y`A`c`f`X`i`bX`H`c`h`g`W`U`
j`YfUb`_`Y`fh`g]bX`"8]Yg`Y`h`b]W`h`bi`f`fYW`h`]W`Y`ž`g`c`b`XYfb`Ui`W`
dgmW`c`c`[]gWY`5i`gk`]f`_`i`b[Yb`Ui`Z` : fUi`Yb`ž`X]Y`g]W`]b`Y]bYf
gWk`]Yf][`Yb`G]hi`Uh]cb`Yb`hgWY]XYb`a`ØggYb"

8]Y`B`c`hk`YbX][`_`Y]h`Y]bYg`DUfUX][`a`Ybk`YW`gY`g`k`]fX`j`cb`Y]bYf`]a
5df`]`j`YfØZZYbh]W`hYb`Ghi`X]Y`XYg
6i`bXYg[Ygi`bX`Y]hga`]b]ghYf]i`a`g`i`bhYfa`Ui`Yfh`"8]YgY`Ghi`X]Y
Ya`dZ]Y`\`hž`GWk Ub[YfgWUZhguVVfØWY`]b`XYb`YfghYb`K`c`W`Yb`XYf
GWk Ub[YfgWUZh`ni`Y`[`U`]g]YfYb`i`bX`g]Y`Ui`g`XYa`GhfUZfYW`h
\`YfUi`gni`bY`a`Yb`"8f`"6U]Yf`V`Y`g`W`fY]V`h`X]Yg`U`g`_`U`fYb`5i`ZhFU[
Ub`X]Y`FY[]Yfi`b[`ž`g`c`Z`c`fh][`Y`A`U`»`b`U`a`Yb`ni`Yf[`fY]ZYb`"G]Y
Ài`»`Yfh`X]Y`G`c`f[`Y`ž`XUgg`X]Y`U`_`hi`Y`Y`FY[]Yfi`b[`]\`fY
J`YfUb`hk`c`f`hi`b[`]g`W`Y`i`h`i`bX`XUg`H`Y`a`U`j`cb`XYf`b`À`W`ghYb
d`c`h`Y`bn]Y`Y`b`FY[]Yfi`b[`]a`Ø[`]W`Y`fk`Y]gY`b]W`h`a`Y`f`Ui`Z[`Y[`f]ZYb
k`]fX"

6U]Yf`V`Y`f]W`h`Y`h`Ui`W`j`cb`]\`fYf`Y][`YbYb`9fZU`fi`b[`Yb`U`g
Ub[Y`Y`b`XY` ; mb`À`_`c`c`[]b`i`bX`V`Y`_`U[`h`X]Y`a`Ub[Y`b`XY`5i`gV]`Xi`b[
ni`GWk Ub[YfgWUZhguVVfØWY`b`]b`a`YX]n]b]gWYb
Ghi`X]Yb[`À`b[`Yb`"H`f`c`h`X`Y`f`\`c`\`Yb`5bnU`\`Ub`5VVfØWYb`]b
8Yi`hgW`UbX`ž`X]Y`]b`]\`fYf`<`Ài`Z[`_`Y]h`b`U`Y`ni`XYf
6`]bXXUfa`Yb`h`ZYfbi`b[`Yb`h`gd`fY`W`Yb`ž`[`UV`Y`g`]b`]\`fYa

gYWgÄ\ f][Yb`Ghi X]i a`_Y]b`Y]bn][Yg`GYa]bUf`ni`X]YgYa`H\Ya U"
8f"6U]Yf`ZcfXYfh`XU\Yfž`XUgg`X]YgYg`H\Ya U`ZÄW`YbXYW`_YbX`]b
`YXYf`a`YX]n]b]gW`Yb`5i`gV]`Xi`b[`VY\UbXY`h`k`]fX" 9g`]gh`k`]W`h][ž
XUgg`ni`_ØbZh][Y`ÿfnhY`Zi`bX]YfhY`?Yb`hb]ggY`\UVYbž`i`a`Y]bY
Y][YbYž]bZcfa`]YfhY`A`Y]bi`b[`ni`V]`XYb`ž`Yf`_`Äfh`g]Y"

9]b`k`Y]hYfYg`nYbhfU`Yg`H\Ya U`]b`6U]Yf`g`F`YXY`g]bX`X]Y`bcW`
]a`a`Yf`j`YfVfY]hYhYb`A`m\Yb`fi`bX`i`a`5VhfY]Vi`b[Yb"J`Y`Y`X]YgYf
A`m\Yb`ž`c`Z]j`cb` ; Y[bYfb`gc`W`Yf`9]b[f]ZY`dfcdU[]Yfhž`VYgU[Yb
VY]gd]Y`gk`Y]gYž`XUgg`G`W`k`Ub[YfgW`UZh`gUVVfØW`Y`\c`Y
[Ygi`bX`Y]h]W`Y`F`]g]_Yb`ZØf`X]Y` : fUi`Yb`VYf[Yb`i`bX`ni
I`bZfi`W`hVUf`_Y]h`ZØ`fYb`_ØbbYb"8f"6U]Yf`VYc`VUW`hYhž`XUgg
gc`W`Y`ZU`gW`Yb`bZcfa`Uh]cbYb`b]W`h`bi`f`]b`XYf`2`ZYb`h]W`_Y]hž
gcbXYfb`Ui`W`i`bhYf`ÿfnhYb`k`Y]h]YfVfY]hYh`g]bX" 9g`]gh
U`Ufa`]YfYbXž`k`]Y`k`Yb][`Ui`ZYj`]XYbnVUg]YfhY`bZcfa`Uh]cbYb
[YUW`hYh`k`]fX`ž`gU[h`g]Y`i`bX`j`Yfk`Y]gh`Ui`Z`_`UfY`]bhYfbUh]cbU`Y
9a`dZY`\`i`b[Ybž`X]Y`j`cb`XYf`K`Y`h[Ygi`bX`Y]hgc`f[Ub]gUh]cbž`K`<C`ž
\YfUi`g[Y[YVYb`k`i`fXYb"

8]Y`8]g`_i`gg]cb`ØVYf`G`W`k`Ub[YfgW`UZh`gUVVfØW`Y`\Uh`gca`]h`b]W`h
bi`f`fYW`h]W`Y`ž`gcbXYfb`Ui`W`h]YZYfY`gc`n]U`Y`i`bX`i`[Ygi`bX`Y]h]W`Y
8]a`Ybg]cbYb"8]Y` : cfXYfi`b[`bUW`Y]bYf`VYggYfYb`a`YX]n]b]gW`Yb
5i`gV]`Xi`b[`i`bX`X]Y`6Y`_Äa`dZi`b[`j`cb`A`m\Yb`g]bX`k`]W`h][Y
G`W`f]hYhž`i`a` : fUi`Yb`]b`gW`k`]Yf][Yb`@YVYb`gg]hi`Uh]cbYb`ni
i`bhYfghØ`hYb`i`bX`]\bYb`Ni`[Ub[`ni`g]W`YfYb`i`bX
j`YfU`b`hk`c`fhi`b[gj`c`Yb`a`YX]n]b]gW`Yb`8]YbghYb`ni`Yfa`Ø[`]W`Yb"

: Øf`k`Y]hYfY`bZcfa`Uh]cbYb`_ØbbYb`b`hYfYgg]YfhY`XYb`DcXWUgh
 : fUi`8c`_hc`fž`ØVYfbY`a`Yb`G]Y`°`Ub`\ØfYbž`XYf`Ui`Zj`YfgW`]YXYbYb
D`Uh`hZcfa`Yb`k`]Y`5dd`Y`DcXWUgh`i`bX`Gdch]Zmj`YfZØ[VUf`]gh"8]Y
[YhY]`hYb`9fZU`fi`b[Yb`j`cb` : fUi`Yb`]b`XYf`A`YX]n]b`gc`Yb
ni`_ØbZh][Yb` ; YbYfUh]cbYb`\Y`ZYbž`ghÄf`_YfY`i`bX`]bZcfa`]YfhY
9bhgW`Y]Xi`b[Yb`ni`hfY`ZYb"

6Ygi W\Yb`G]Y`i bg`Ui Z.`a Y]b!VYf`]b"bYh