

9]bn][ Ufh][ Y ? i bghUi gghY`i b[ .  
F YZYI ]cb`XYf`Gh]`Y`j cb`J mhUi hUg`Dc \_U  
]b`A ]hhY`

6Ygi WYb`G]Y`X]Y`9]bnY`Ui gghY`i b[ . F YZYI ]cb`XYf`Gh]`Y`  
j cb`J mhUi hUg`Dc \_U]b`XYf`6Yfc`]bU; U`Yf]Y`ja`F Uh\Ui g  
A ]hhY`"J Yfb]ggU[ Y`Ua` "%&"GYdhYa VYf`&\$&( `i a` %- `I \f"  
9bhXYW\_Yb`G]Y`VYnUi VYfbXY; Ya`A`XY`i bX`hUi WYb`G]Y`]b  
Y]bY`K`Y`h`XYf`Gh]`Y`i bX`F YZYI ]cb`Y]b"

⊕`XYf`6Yfc`]bU; U`Yf]Y`ja`F Uh\Ui g`A ]hhY`Yfk UfhYh`?i bgh]YV\UVYf  
UV`XYa` "%&"GYdhYa VYf`Y]bY`[ Ubn`VYgcbXYfY`9]bnY`Ui gghY`i b[ "  
I bhYf`XYa`H]hY` F YZYI ]cb`XYf`Gh]`Y`df`AgYbh]Yfh`XYf`]hUi ]gWXY  
?Øbgh`Yf`J mhUi hUg`Dc \_U`Y]bY`ZUgn]b]YfYbXY`5i gk U`gY]bYf  
K Yf\_Y`"8]Y`5i gghY`i b[ `k ]fX`j ca`@]hUi ]gWXYb`?Øbgh`Yfj YfVUbX  
i bX`XYf`?i fUhc]b; UVf]Y`ó`?i ]n]bU]hó`c]f[ Ub]g]Yfh"

8]Y`J Yfb]ggU[ Y`Z]bXYh`Ua` "%&"GYdhYa VYf`&\$&( `i a` %- `I \f`ghUhh  
i bX`k ]fX`a`i g[\_U]gW`j cb`j] Yf`7UW`fYg`VY[ `Y]hYh`XYf`a`]h  
; ]hUffY`i bX; YgUb[ `ZØf`Y]bY`VYgcbXYfY`5ha`cgd`A`fY`gc]f[ Yb`k ]fX`  
8]Y`5i gghY`i b[ . F YZYI ]cb`XYf`Gh]`Y`]gh]j ca` "%&"GYdhYa VYf`V]g  
ni a` %-`"Bcj Ya VYf`&\$&( `ni`gY`Yb`"8Yf`5i gghY`i b[ gc]f]gh`X]Y  
6Yfc`]bU; U`Yf]Y`ja`F Uh\Ui g`A ]hhY`ž`%`C; `fMUff]YfY`ZfY]Łž?Uf`!A Uf!`!  
5`YY`" %ž`%\$%+, `6Yf`]b"

J mhUi hUg`Dc \_U`VYgW`fY]Vh`gY]bY`K`Yf\_Y`U`g`Gd]Y[ Y`i b[ Yb`XYf`  
Gh]`Y`ž`X]Y`XYb`6YhfUW`hYf`]b`Y]bYb`\_fYUh]j Yb`F`Ui a`ZØ`fYb`"8i fW  
: UfVYb`ž`DYfgdY`\_h]j Yb`i bX`Gma`Vc`Y`gW`UZ`h`Yf`Y]bY`5ha`cgd`A`fY`  
XYf`: fY]\Y]hi bX`Yfa`Ò[ `]W`h`Yg`XYa`Di`V`\_i a`ž]b`Y]bY`K`Y`h`XYf`  
⊕hYfd`fYhUh]cb`i bX`⊕bYf`]W`\_Y]h`Y]bni hUi WXYb"

8]Y`?i bgh\]ghc]f\_]Yf]b`5i ghó`U`A ]\_i W`mhó`!A UhY\_]Ybó`c`Vh`X]Y  
K Yf\_Y`XYg`?Øbgh`Yfg`i bX`VYgW`fY]Vh`gY]U`g`A`ØW`gh`gi [ [ Ygh] `i bX

Ya ch]cbU`VYfØ\fybX"8]Y`A U`YfY]Yb`j cb`Dc \_U`UXYb`XUni`Y]bž  
g]W`ZfY]`Xi fW`X]Y`@UbXgW UZhYb`ni`VYk Y[ Yb`i bX`X]Y`h]YZ  
5ha cgd\ÁfY`XYf`Gd]Y[ Y`i b[ Ybž`@]W`hYf`i bX`GW UhhYb`ni`Yf`YVYb"

8]Y`6Yfc`]bU`; U`Yf]Y`ja`F Uh\Ui g`A ]hhYž`i bhYf`XYf`@Y]hi b[ `j cb  
8]UbU`5W`hn][ ž`V]YhYh`a ]h`X]YgYf`5i gghY``i b[ `Y]bY`Y]bn][ Ufh][ Y  
; Y`Y[ Yb`Y]hž`X]Y`K Yf`\_Y`Y]bYg`hU`Yb]YfhYb`?Øbgh`Yfg`ni  
YbhXYW`Yb`i bX`]b`X]Y`K Y`h`XYf`FYZYI ]cb`i bX`Gh]`Y`Y]bni hUi W`Yb"

: Øf`k Y]hYfY` ðZcfa Uh]cbYb`VYgi W`Yb`G]Y`X]Y`K YVg]hY`XYg  
6Yn]f\_gUa hg`A ]hhY`cXYf`gW`fY]VYb`G]Y`Y]bY`9!A U]`Ub`dfYggY4 VU!  
a ]hhY"VYf`]b"XY": fYi Yb`G]Y`g]W`Ui ZY]bY`]bgd]f]YfYbXY`FY]gY`]b  
X]Y`K Y`h`XYf`?i bgh`a ]h`J mhUi hUg`Dc \_U`]b`XYf`6Yfc`]bU`; U`Yf]Y`

E i Y`Y.`k k k "VYf`]b"XY

8YhU]`g

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