

: 7'8 ØfYb'ØVYffc`h'GWÅ U`\_Y'I &' ]a  
DUf\_ghUX]cb'a ]h'(.%

8Yf'%": 7'8 ØfYb'[ Yk ]bbh'(.%[ Y[ Yb'GWÅ U`\_Y'\$( '≡]a  
DUf\_ghUX]cb'i bX'j YfVYggYfh'g]WÅ'Ui Z'D`Uhn'j ]Yf'b'XYf  
F Y[ ]cbU`][ U'K Ygh"

⇒a'U'hYb'DUf\_ghUX]cb'j cb'; Y'gYb\_]fWÅYb!6i Yf'ZUbX'Y]b  
gdUbbYbXYg': i » VU`gd]Y`ghUhh'VY]XYa'X]Y'I &' !A UbbgWÅ UZh'j cb  
GWÅ U`\_Y'\$( 'i bX'XYf'%": 7'8 ØfYb'Ui ZY]bUbXYfhfYZZYb""8Yf'%": 7  
8 ØfYb'\_cbbhY'g]WÅ'Ua'GUa ghU[ 'a ]h'Y]bYf']a dcb]YfYbXYb  
@Y]ghi b[ 'Xi fWÅ gYhnYb'i bX'[ Yk Ubb'XUg'Gd]Y`a ]h'(.%'8]Yg'k Uf  
Y]b'k ]WÅ h[ Yf'9fZc`[ 'ZØf'8 ØfYbž'XYf'X]Y'A UbbgWÅ UZh'Ui Z'XYb  
j ]YfhYb'HUVY`Ybd'Uhn'b'XYf'F Y[ ]cbU`][ U'K Ygh'\_UhUdi'h]YfhY"  
HfU]bYf'?f]ghcd\Yf': Yhn'k Uf'bUWÅ'XYa'Gd]Y`g]WÅ h]WÅ'ni Zf]YXYb  
i bX`cVhY'X]Y'i a g]WÅ h[ Y'i bX'k YhhVYk YfVgZÅ\][ Y'@]ghi b[ 'gY]bYf  
Gd]Y`Yf"

8 ØfYb'ghUfhYhY'YbYf[ ]gWÅ'ibX'gYhnhY'X]Y'GWÅ U`\_Yf'5Vk Y\ f'j cb  
5bZub[ 'Ub'i bhYf'8fi W`"9'gUa YX'F Ua U'ž'XYf'BYi ni [ Ub[ 'Ui ZXYf  
']b\_Yb'GY]hYž'k Uf'VYgcbXYfg'Ui ZÅ`][ 'ibX'gcf[ hY'ZØf'nU\ fY]WÅ Y  
[ YZÅ\ f`]WÅ Y'5\_h]cbYb"'⇒XYf'Xf]hhYb'A ]bi hY'\UhhY'Yf'VYfY]hg'Y]bY  
gWÅ ÒbY'J cf'U[ Y'ZØf'F UZUY`'; UfW]U[ Y[ YVYb'i bX'bi f'k Yb][ Y  
A ]bi hYb'gdÅhYf'a ]h'Y]bYa'Y][ YbYb'GWÅ i gg'Ui g'&) 'A YhYfb'ZØf  
5i ZfY[ i b[ '[ Ygcf[ h''9g'k Uf'c ZZYbg]WÅ h]WÅ ž'XUgg'8 ØfYb'b]WÅ h'bi f  
Ui Z'XYb'YfghYb'HfYZZYf`Ui YfhYž'gcbXYfb'X]Y'?cbhfc`Y'ØVYf'XUg  
Gd]Y`UbghfYVhY"

8 ØfYbg'[ YZÅ\ f`]WÅ Y'5b[ f]ZZY'ibX'XYf  
YbhgWÅ Y]XYbXY'9'Za YhYf

8]Y'YfghY'HcfWÅ UbWÅ'VYghÅh][ hY'XYb'8fi W`ž'XYb'8 ØfYb'Ui Z'XYb

; Y[ bYf'Ui gØVhY"9]b'i b[ 'ØW`]WXYf'F ØW\_dUgg'j cb'GWU`\_Y`ZØ\fhY  
XUni žXUgg'F Ua U^]b'X]Y'6fYgWXY'gdfUb[ Yb'\_cbbhYž'i bX'bUW  
Y]bYa ' : ci` ]a 'GhfUZfUi a 'k i fXY'Y]b'9`Za YhYf'ZØf'8ØfYb'j Yf\Àb[ h'  
? Ud]hÀb'5XUa 'A Uhi gWxm` ]Y» 'g]W' b]W'h'nk Y]a U`V]hhYb'i bX  
j Yfk UbXY`hY`XYb'9`Za YhYf'gci j YfÀb'ni f'%. \$! : Ø\fi b[ "

8cW'GWU`\_Y` [ UV'b]W'h'Ui Z'Bi f'% 'A ]bi hYb'bUW'8ØfYbg  
: Ø\fi b[ 'Yfn]Y`hY`Hf]ghUb`C ga Ub]'XYb'5i g[ 'Y]W' bUW'Y]bYa  
A ]gg[ YgW]W` ]b'XYf'8ØfYbYf'8YZYbg]j Y"8ØfYb'\UhhY` ]b'XYf  
YfghYb'<U`VnY]h'nU\`fY]WXY'k Y]hYfY'7\UbW'bž'XcW'X]Y': Ø\fi b[  
k i fXY'b]W'h'YfbYi h'Ui g[ YVUi h"8Yf'HfU]bYf'Yf\_`ÀfhY'bUW'XYa  
Gd]Y`. ' K ]f'\UhhYb'ja 'YfghYb'8i fW[ Ub[ 'YI hfYa 'j ]Y`Y  
%\$ \$dfcnYb]h[ Y`HcfWUbW'bž'\ÀhhYb'g]WXYf'W' & . \$`cXYf' . \$`ZØ\fYb  
\_ØbbYb" '8 Ug%. %ni f'<U`VnY]h'ghY`hY`g]W'gca ]h'U'g'Y]b'\_Y]bYf  
F ØW\_gW`U[ 'XUfž'XU'8ØfYb'XUg'Gd]Y`Xca ]b]YfhY"

⇒a 'nk Y]hYb'8i fW[ Ub[ 'X]Y'K YbXY

6Y]Y]bYa ' : fY]ghc» ' ]b'XYf') \$"A ]bi hY`\_Ua '8ØfYbg'Gd]Y`Yf'A ]ZhUfU^  
[ Ub'n'bU\`Ub'XUg'bÀW'ghY`Hcfž'YXcW' \_ØdZhY`Yf'\_bUdd'ØVYf'XUg  
N]Y`"HfU]bYf': Yhn'hÀh[ hY'gW'bY`K YW'gY`ž'i a 'Zf]gWYb'K ]bX' ]b  
X]Y'C ZYbg]j Y'ni 'Vf]b[ Yb"BUW'Y]bYf'dfÀn]gYb'9W\_Y'j cb'J ]bW'bh  
; Y]a Yf'Yfn]Y`hY`A ]ZhUfU^]b'XYf'\* +'A ]bi hY`XUg'&.%"8]Yg'k Uf'XYf  
K YbXYdi b\_h'XYg'Gd]Y`g"

⇒b'XYf', ' "A ]bi hY`Yf\Ø\hY'; Y]a Yf'a ]hY]bYa 'ZUbhUgh]gWYb  
GW'i gg'Ui g'&\$'A YhYfb'Ui Z' .%ž'k Ug'X]Y'8ØfYbYf': Ubg' ]b'ž VY`  
Ui gVfYWYb` ]Y» "8Yb'GW'`i ggdi b\_h'gYhnhYb'X]Y'8ØfYbYf'bcW' ]b  
XYf'BUW'gd]Y`nY]hž'U'g'6fcW`\_Y]bYb'9`Za YhYf'ni a '( .%  
j Yfk UbXY`hYž'bUW'XYa ' ; Y]a Yf'ja 'GhfUZfUi a '[ YZci`h'k cfXYb  
k Uf"9]b'VYY]bXfi W\_YbXYg'; YgUa hV]'Xž'VY]'XYa '8ØfYb'b]W'h'bi f  
Ui ZXYb'G]Y[ ž'gcbXYfb'Ui W'Ui Z'X]Y' ]bX]j ]Xi Y`Y'9bhk ]W`i b[ ' ]\fYf  
Gd]Y`Yf'gYhnhž'k ]Y`HfU]bYf': Yhn'VYhcbhY"

8]Y'8ØfYbYf'A UbbgWUZh'V`]W`h'bi b'cdh]a ]gh]gW'Ui Z'XUg'bÀW'ghY  
Gd]Y`[ Y[ Yb'XYb'GJ`F ØX]b[ \Ui gYb'Ua '\_ca a YbXYb'GUa ghU[ 'i bX  
\_Ubb'a ]h]j ]Y`GY`Vghj YfhfUi Yb'UbhfYhYh"8]Y'Ui ZghY[ YbXY': cfa  
i bX'X]Y'9bhk ]W`i b[ 'Y]bYf'ghUf\_Yb'HYUa XmbUa ]\_ghY`Yb'XYb

J YfY]b`Ui ZY]bYb`j ]Y`j YfgdfYWX YbXYb`K Y[ `]b`XYf`FY[ ]cbU``[ U  
XUf"

9fk Å\`bYb`gk Yfh`]ghž`XUgg`hf`chn`XYg`gdc`fh`]WX Yb`9fZc`[ Yg`X]YgY  
DUfh]Y`Ui WX`XYb` : c`\_i`g`Ui ZX]Y`đ [ YbXUi`gV`]Xi`b[ `Y[ h`HfU]bYf  
: Yhn`\cV`\Yfj`cfž`XUgg`Gd]Y`Yf`k ]Y`J`Yfcb`GhUhc`j W]i`bX`A`Uhh]  
K`YhgWX`\_U`VYfY]hg` : cfhgWX`f]hh`Y`]b`\fYf`9b`hk`]W`\_i`b[ `Yfn]Y`h`\UVYbž  
k`Y`WX`Y`b]WX`hi`bVYUWX`hY`h`V`Y]VYb`" `đ`NY]hYbž`]b`XYbYb`X]Y  
5i`gV`]Xi`b[ `↑`b[ Yf`HU`Yb`hY`]a`a`Yf`k`]WX`h[ Yf`k`]fXž`nY][`h`XYf`%": 7  
8ØfYbž`XUgg`g]WX`\UfhY`5fVY]hi`bX` ; YXi`X`Y`mh]WX`Ui`gnU`\Yb  
\_ÖbbYb"

8]Y`FY[ ]cbU``[ U`K`Yghž`]b`XYf`XYf`%": 7`8ØfYb`gd]Y`hž`]gh`Y]bY`XYf  
ZØbZj`]YfhYb`XYi`hgWX`Yb`@[ Yb`]a` : i`»`VU``"G]Y`YbhghUbX`U`g`HY`]`XYf  
FYZc`fa`XYg`XYi`hgWX`Yb`@[ Yb`gmghYa`gž`X]Y`&\$%&`]b`?`fUZh`hfUhi`bX  
Y\Ya`U`][`Y`CVYf`][`Yb`]b`XUg`FY[ ]cbU``[ U!GmghYa`\_]bhY[ ]f]YfhY`"8Yf  
K`YhhVYk`YfV`n]Y\`h`gck`c`\`5a`UhYi`f!`U`g`Ui`WX`BUWX`ki`WX`ghYUa`g  
Ub`i`bX`V]YhYh`↑`b[ Yb`HU`Yb`hYb`X]Y`A`Ö[`]WX`\_Y]hž`g]WX`Ui`Z`\Ö\YfYa  
B]j`YUi`ni`VYk`Y]gYb`"8]YgY`@[ U`]gh`ZØf`j`]Y`Y`Gd]Y`Yf`Y]bY`k`]WX`h[ Y  
Ghi`ZYž`i`a`g]WX`ZØf`\Ö\YfY`@[ Yb`ni`Ya`dZY`\Ybž`k`Ug`X]Y  
6YXYi`hi`b[ `gc`WX`Yf`Gd]Y`Y`k`]Y`[ Y[ Yb`GWX`U`\_Y`I`&`i`bhYfghfY]WX`h"

## 8]Y`9b`hk`]W`\_i`b[ `XYg`%": 7`8ØfYb

8Yf`%": 7`8ØfYb`\Uh`Y]bY`VYk`Y[ hY` ; YgWX]WX`hYž`X]Y`g]WX`ØVYf  
a`Y\`f`U`g`%\$`\$`đ\`fY`YfghfYW`\_h"; Y[ fØbXYh`%-`%\$ž`gd]Y`hY`XYf`J`YfY]b  
]b`j`YfgWX]YXYbYb`@[ Ybž`c`Zi`]b`XYf`FY[ ]cbU``[ U`i`bX`]b`XYf  
CVYf`][`U`"đ`XYb`Y`hnhYb`đ\`fYb`\Uh`g]WX`XYf`J`YfY]b`ghUf`\_`Ui`ZX]Y  
9b`hk`]W`\_i`b[ `j`cb`HU`Yb`hYb`\_`cbnYb`hf]Yfhž`k`Ug`g]WX`Ui`WX`]b`XYb  
9f[ YVb]ggYb`XYf`I`&`!`i`bX`5a`UhYi`fa`UbbgWX`UZhYb`k`]XYfgd]Y[ Y`h`  
8]Y`GhfUhY[ ]Yž`↑`b[ Y`Gd]Y`Yf`Ui`gni`V]XYb`i`bX`Ub`XUg`DfcZ]!B]j`YUi  
\YfUbni`ZØ`fYbž`k`]fX`j`cb`HfU]bYf`?`f]ghcd`Yf` : Yhn`\_`cbgYei`Ybh  
j`YfZc`[`h"

8Ug`5i`[ Yba`Yf`\_`Ui`ZX]Y`BUWX`ki`WX`gUfVY]h`nY][`h`g]WX`Ui`WX`]b`XYb  
J`YfY]bgghfi`\_`hi`fYb`"8Yf`%": 7`8ØfYb`]gh`VYa`Ø\`hž`Y]bY  
[ YgWX`Å`ZhgzØ`fYbXY`i`bX`bUWX`\U`h[ Y`6Ug]g`ZØf`X]Y`\_`ca`a`YbXY`NY]h  
ni`gWX`UZZYb`"8]Yg`VY]b`\U`hYhi`bhYf`UbXYfYa`?`ccdYfUh]cbYb`a`]h

GWxi `Yb`i bX`fY[ ]cbU`Yb`đ [ YbXWi Vg`gck ]Y`X]Y`9]bV]bXi b[ `j cb  
YfZU\ fYbYb`Gd]Y`Yfb`U`g`A Ybhc fYb`ZØf`X]Y`HU`YbhY"

## GhUh]gh]\_Yb`ni f`F Y[ ]cbU``][ U`K Ygh

⇒ XYf`GU]gcb`&\$&&#&\$&'` [ UV`Yg`]b`XYf`FY[ ]cbU``][ U`K Ygh  
a Y`fYfY`VYa Yf`\_Ybgk YfhY`GhUh]gh]\_Yb``Ni a`'6Y]gd]Y``j YfnY]Wk bYhY  
X]Y`@[ U`Y]bY`\c`Y`5bnU`\`Ub`Ni gWk Ui Yfbž`X]Y`Gd]Y`Y`VYgi Wk hYbž  
k cVY]`Y]b][ Y`6Y[ Y[ bi b[ Yb`Xi fWk gWk b]h`]Wk`a Y`f`U`g`%`\$\$\$  
Ni gWk Ui Yf`Ub`cW`hYb``8Yf`Gd]Y`VYhf]YV`]b`XYf`FY[ ]cbU``][ U`K Ygh  
\Uh]b`XYb`Y`hYb`Y`U\ fYb`Ui Wk`Ub`Dcdi`Uf]h`h`[ Yk cbbYbž`k Ug  
g]Wk`]b`XYf`:`ØfXYfi b[ `fY[ ]cbU`Yf`J YfY]bY`nY][ h``@Ui h`XYa  
8Yi hgWk Yb`:`i » VU``!6i bX`fB`:`6Ł`g]bX`j ]Y`Y`Gd]Y`Yfž`X]Y`]b`XYf  
FY[ ]cbU``][ U`U`\_hj`]g]bXž`HU`YbhYž`X]Y`a`Ò[ `]Wk Yfk Y]gY`]b`XYb  
DfcZ]ž`» VU``Ui ZghY][ Yb`\_`ØbbYb```a`'8i fWk gWk b]h`ghY`Yb`dfc  
GU]gcb`Yhk U``%( `Gd]Y`Yf`i bhYf`J YfhfU[ ž`a`]h`Y]bYf`\c`Yb  
:`i`\_hi Uh]cb`Xi fWk`↑ b[ Y`HU`YbhYž`X]Y`j YfY]bnY`h`XYb`Gdfi b[ `]b`X]Y  
\Ø\YfYb`@[ Yb`gWk UZZYb"

9]b`NY]Wk Yb`XYf`DfcZYgg]cbU`]h`h`h`nY][ h`g]Wk`]b`XYf`5bU`mgY`XYf  
@Y]ghi b[ Yb`XYf`HYUa`g``8]Y`ghUh]gh]gWk Y`5i`gk Yfhi b[ `XYg  
6U``VYg]hnYg`i bX`XYf`Hc fUVgWk`ØggY`]gh`Yb`hgWk Y]XYbX`ZØf`X]Y  
GhfUhY[ ]Y`i bX`HU`\_h]`\_XYf`HfU]bYf``8]YgY`GhUh]gh]\_Yb`k YfXYb  
fY[ Y`a`À»][ `YfZUgghi bX`\Y`ZYb`XYb`HfU]bYfbž`X]Y`Gh`f`\_Yb`i bX  
GWk k`ÀWk Yb`]Y`fYf`A UbbgWk UZhYb`VYggYf`ni`j YfghY`Yb`ž`k Ug`X]Y  
K YhhVYk YfvGZ`A][ `Y]h`]b`XYf`@[ U`Yf`\Ø`h"

8YhU]`g

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