

# F UgYfY]`Ua `A U]bi ZYf. `Dc`nY]`Yfa ]hhY`h bUWx `b`ÀWx h`]Wx Yb `@Àfa ghÒfi b[ Yb

⊕`<U» Zī fh'k i fXY`Y]b`&&!`À\ f][ Yf`JK `; c`Z: U\ fYf`k Y[ Yb  
Y]bYg`j YfVchYbYb `? fUZhZU\ fnYi [ fYbbYbg`Ub[ YnY][ h`Dc`nY]  
gi Wx h`NYi [ Yb"

⊕`XYf`B UWx hj cb `: fY]hU[ `Ui Z`GUa ghU[ `gcf[ hYb`Ui hY  
A chcf[ Yf`Ài gWx Y`Ua `Duf\_d`Uhm`Hf`Àb\_VYf[ `]b`<U» Zī fh`ZØf  
5i ZfY[ i b[ `i bX`Y]bY`gWx bY`Y`F YU\_h]cb`gY]hYbg`XYf`Dc`nY]"  
5bk c`bYf`i bX`DUggUbhYb`VYf]Wx hYhYb`j cb`Y]bYa `U[ [ fYgg]j Yb  
: U\ fgh]`ž`XYf`gWx bY`X]Y`5i Za Yf\_gUa \_Y]h`XYf`9]bgUhm\_f`ÀzhY`Ui Z  
g]Wx`nc[ "8Yf`Duf\_d`Uhmž`XYf`Ua `]Xm`]gWx Yb`A U]bi ZYf`Y[ hž`k i fXY  
ni `Y]bYa `GWx Ui d`Uhm`Y]bYg`j YfVchYbYb `? fUZhZU\ fnYi [ fYbbYbg"

8]Y`Dc`nY]]bgdY\_h]cb`<U» Zī fh`Yf\]Y`h`nU\`fY]Wx Y`5bfi ZY`ØVYf`X]Y  
ghÒfYbXYb `; Yf`Ài gWx Yž`X]Y`Ui ZY]b`]`Y[ U`Yg`F YbbYb`\]bXYi hYhYb"  
6Y]`XYb`gcZcfh`Y]b[ Y`Y]hYhYb`9fa ]hh`i b[ Yb`ghY`hY`g]Wx`YfUi gž  
XUgg`Y]b`&&!`À\ f][ Yf`: U\ fYf`Ui g`XYa `@UbX\_fY]g`GWx k Y]bZī fh`ja  
J]g]Yf`XYf`6YUa hYb`ghUbX`NYi [ Yb`VYf]Wx hYhYb`j cb`Y]bYa  
k Y]» Yb`JK `; c`Zž`XYf`]b`Y]bYf`5fh`i bX`K Y]gY`ØVYf`Y]bY`GhfYW\_Y  
j cb`Yhk U`(\$\$`A YhYfb`VYgWx`Yi b][ hYž`X]Y`j ]Y`Y`gWx cW\_]YfhY` `ØVYf  
, \$`\_a `#`gY]Yb`[ YgWx`Àmhk cfXYb"

## F YWx h`]Wx Y`? cbgYe i YbnYb`ZØf`XYb `: U\ fYf

: Øf`XYb`↑ b[ Yb`A Ubb`\Uh`X]YgYf`J cfZU`Yfbgh\UzhY`fYWx h`]Wx Y  
: c`[ Yb`"9f`g]Y\hig]Wx`bi b`Y]bYf`5bnY][ Y`k Y[ Yb`Y]bYg`j YfVchYbYb  
? fUZhZU\ fnYi [ fYbbYbg`[ Y[ Yb`ØVYfž`XUg]b`8Yi hgWx`UbX`U`g  
gWx k Yfk ]Y[ YbXYg`J Yf[ Y\Yb`[ ]h`8]Y`GhUUhgUbK U`hgWx UZh`c`fXbYhY  
ni XYa `Ubž`gY]bYb `: Ø\ fYfgWx Y]b`j cf`Ài Z][ `g]Wx Yfni ghY`Yb`"8]Yg`]gh  
Y]b`hmd]gWx Yf`GWx f]h`XYf`6Y\ÒfXYbž`i a`X]Y`J Yf\_Y\fgg]Wx Yf\Y]h`ni

[ Yk Å\`f`Y]ghYb`i bX`i b\_cbhfc``YfhY` : U\fa Ub`Oj Yf`Y]bni XÅa a Yb"

8 Ug`J YfVchj`cb`?fUZhZU\fnYi [ fYbbYb`]gh`b]W`h`bi f`Y]bY` : fU[ Y`XYf`  
; YgYhnYgXi fW`gYhni b[ ž`gcbXYfb`Ui W`Y`Y]bY`A U» bU\`a Y`ni a  
GW`i hn`XYf`5``[ Ya`Y]b\`Y]h" ð`Y[ U`Y`GhfU» YbfYbbYb`\_`ÖbbYb`b]W`h`  
bi f`ni`gW`k YfYb`i bZ`Å``Yb`Z`Ø\`fYbž`gcbXYfb` [ YZ`Å\`fXYb`Ui W`  
i bgW`i`X][ Y`DUggUbhYb``8 Ug` [ YVfcW`YbY` ; YgW`k ]bX][ \_Y]hg`]a ]h  
i bX`XUg`ni f`GW`Ui` [ YghY``hY`F ]g]\_c`]a` `GhfU» Ybj Yf`\_Y\`f`g]bX`\_`UfY  
NY]W`Yb`Z`Øf`i bj Yfb`ØbZh][ Yg`J Yf\`U`hYb`\ ]bhYf`XYa` `GhYi Yf"

8 ]Y`Dc`nY`\`Uh`X]Y`G]hi Uh]cb`Yfbgh`[ Ybca a Yb`i bX`9fa ]h`i b[ Yb  
Y]b[ Y`Y]hYhž`i a`k`Y]hYfY`8YhU]`g`ni`X]YgYa` `JcfZU``ni`YfZUggYb"  
8 ]Y`6YUa`hYb`fi ZYb`ni XYa`NYi [ Yb`Ui Zž`g]W`ni`a`Y`XYbž`ZU`g`g]Y  
XYb`JcfZU``VYcVUW`hYh`cXYf`g]W`Xi fW`XUg` : U\`fj Yf\`U`hYb`XYg  
JK` ; c`Z` : U\`fYfg`VYXfc`\h` [ YZ`Ø\`h`\UVYb`` ð`hYfYgg]YfhY`\_`ÖbbYb  
g]W`i`bhYf`XYf`HY`YZcbbi a a Yf`\$- ) &`%#` &+!\$`Ub`X]Y  
Dc`nY]]bgdY\_h]cb`<U» Z`f`h`k`YbXYb"

## 8 ]Y` [ YgY``gW`UZh`]W`Y`8 ]a`Ybg]cb

JcfZ`Å``Y`k ]Y`XYf`]b`<U» Z`f`h`k`YfZYb`Ui W`Y`Y]b`@]W`h`Ui Z`Y]b  
[ f`O» YfYg` [ YgY``gW`UZh`]W`Yg`DfcV`Ya` .`8 ]Y` : Ugn]bUh]cb`Z`Øf  
; YgW`k ]bX][ \_Y]hgfUi`gW`i`bX`i``Y[ U`Y`GhfU» YbfYbbYb`]gh`k`Y]h  
j YfVfY]hYh`A ]h`XYa` `5i Z`\_ca a Yb`gcn]U`Yf`A YX]Yb`k ]fX`XYf`8fUb[ ž  
gc`W`Y`f]g`UbhYb`5\_h]j ]h`Å`hYb`ni`Xc`\_i a Ybh]YfYb`i bX`ni`hY`]Ybž  
cZha`U`g`j Yfgh`Å`f`h`8Yf`K`i bgW`b`UW`5bYf`\_Ybbi b[ `i bX`XYa  
5XfYbU`]b\_]W`Z`Ø\`fh]a a Yf`k ]YXYf`XUni ž`XUgg`↑ b[ Y`A`YbgW`Yb  
]\`fY` ; fYbnYb`ØVYfgW`fY]hYb`i bX`XUVY`]b]W`h`bi f`g]W`gY`Vghž  
gcbXYfb`Ui W`UbXYfY`]b` ; YZU\`f`Vf]b[ Yb"

8 ]Y`6Y\`ÖfXYb`ghY\`Yb`j cf`XYf`<YfUi`gZcfXYfi`b[ ž`gc`W`Y  
5\_h]j ]h`Å`hYb`ni`i`bhYfV]bXYb`i bX`[ `Y]W`nY]h][`XUg`6Yk`i`gghY]b`Z`Øf  
X]Y` ; YZU\`fYb`XYg`F`UgYbg`]a` `GhfU» Ybj Yf`\_Y\`f`ni`gW`Å`fZYb``8Yf  
JcfZU``]b`<U» Z`f`h`i]gh`Y]b`k`Y]hYfYg`6Y]gd]Y`XUZ`Øfž`k ]Y`k ]W`h][`Y]b  
ZU]fYg`i`bX`j`YfUb`hk`cfhi`b[ gVYk`i`gghYg`J`Yf\`U`hYb`]a  
GhfU» Ybj Yf`\_Y\`f`]gh``9g`V`Y]Vh`ni` `c`ZYbž`XUgg`gc`W`Y`JcfZ`Å``Y`XUni  
VY]hfU[ Ybž`X]Y`8 ]g`\_i`gg]cb`ØVYf`G]W`Yf\`Y]h]a` `J`Yf`\_Y\`f`Ubni`fY[ Yb  
i bX`a`Ö[ `]W`Yfk`Y]gY`d`f`Å`j`Ybh]j`Y`A`U» bU\`a`Yb`ni`g`h`Å`f`\_Yb"

⇒ X]YgYf' < ]bg]W\h]gh'XUg'J YfVch'gc`W\Yf'F YbbYb'`b]W\h'bi f'Y]b  
; YgYhnYgVfi W\ž'gcbXYfb'Ui W\`Y]bY'; YZU\ f'ZØf'XUg'; Ya Y]bk c\`  
i bX'XUg'\Ufa c b]gW\Y`A ]hY]bUbXYf'`a `GhfU» Ybj Yf\_Y\ f" `8 ]Y  
FYZYI ]cb`ØVYf'X]Y`Y][ YbYb' < UbX`i b[ Yb`i bX'XYfYb` : c`[ Yb`gc`hY  
]b`XYf'\Yi h][ Yb`NY]h]a ` : c`\_i g`ghY\Ybž`i a `Y]bY`g]W\YfYfY`i bX  
j YfUbhk c fhi b[ gj c`YfY` : U\ f`\_i `hi f`ni `ZØfXYfb"

⇒ XYb`YhnhYb`⇒\fYb`\Uh'X]Y`Ni bU\ a Y`j cb`]`Y[ U`Yb`5i hcfYbbYbž  
]bgVYgcbXYfY`]b`gh`Xh]gW\Yb`i bX`ĀbX`]W\Yb` ; YV]YhYbž  
VYgcf[ b]gYffY[ YbXY`5i ga U» Y`Ub[ Ybca a Yb" `8 ]Y`Dc`nY]`\Uh]b  
j YfgW\]YXYbYb`Gh`XhYbž`XUfi bhYf`Ui W\` < U» Z` fhžj Yfgh`f`\_h  
A U» bU\ a Yb`Yf[ f]ZZYbž`i a `X]YgYb`[ YZ`A\ f`]W\Yb`HfYbXg  
Ybh[ Y[ Ybni k ]f\_Yb" `Gc`W\Y`F YbbYb`g]bX`b]W\h'bi f'Y]bY'; YZU\ f'ZØf  
X]Y`HY]`bY\ a Yfž'gcbXYfb'Ui W\`ZØf`i bVYhY]`][ hY`DUggUbhYb`i bX  
UbXYfY`J Yf\_Y\ fghY]`bY\ a Yf"

8 ]Y`? Zn! F UgYfY]`ZØ\ fh`\ Āi Z][ `ni `gW\k YfYb`i bZ`Ā`Ybž`]b`XYbYb`b]W\h  
bi f'X]Y` : U\ fYfž'gcbXYfb'Ui W\`8 f]hY`]b`A ]hY]XYbgW\UZh[ Ync[ Yb  
k YfXYb" `@Ui hY]bYf`Ghi X]Y`XYg`8Yi hgW\Yb  
J Yf\_Y\ fgg]W\Yf\Y]hgfUhYg`fB J F`Ě`UggYb`g]W\`X]Y` : c`[ Yb`j cb  
]`Y[ U`Yb`5i hcfYbbYb`gW\k Yf`]b`NU\`Yb`ZUggYbž`XcW\`Yg[ ]Vh`Y]bY  
\_`UfY`HYbXYbn`ni `ghY][ YbXYb`i bZU`nU\`Yb`]b`Ni gUa a Yb\Ub[ `a ]h  
fØW\_g]W\hg`cgYb` : U\ fa Ub`Øj Yfb" `8 ]YgY`8 UhYb`j YfXYi h]W\Ybž`k ]Y  
k ]W\h][ `Yg]ghž`XUgg`X]Y`Dc`nY]`i bX`X]Y`? ca a i bYb  
ni gUa a YbUfVY]hYbž`i a `YbhgdFYW\YbXY`DfĀj Ybh]cbga U» bU\ a Yb  
ni `Ybhk ]W\_Y`b"

; YgYhn`]W\Y`F U\ a YbVYX]b[ i b[ Yb

⇒ `8Yi hgW\`UbX`k ]fX'XUg': U\ fYb`i bhYf`K Yh\_Ua dZYX]b[ i b[ Yb  
Xi fW\`XUg`GhfU» Ybj Yf\_Y\ fg[ YgYhn`fGhJ ; Ěi bX`X]Y  
GhfU» Ybj Yf\_Y\ fg! C fXbi b[ `fGhJ C Ě`[ YfY[ Y`h" `z" `%) X`Gh` 6`VYgU[ hž  
XUgg`Ui hcf]g]YfhY`F YbbYb`bi f`a ]hY]bYf`gdYn]Y`Yb` ; YbY\ a ][ i b[  
ghUhhz]bXYb`XØfZYb" `6Y]`]`Y[ U`Yb`F YbbYb`Xfc\Yb`XYb`HĀhYfb`\c\Y  
; Y`XghfUZYb`gck ]Y` : fY]\Y]hgghfUZYb`V]g`ni `nk Y]`⇒\fYb" `Ni XYa  
\_ØbbYb`X]Y` : U\ fnYi [ Y`VYgW\`U[ bU\ a h`k YfXYb"

⇒ XYb`YhnhYb`⇒\fYb`\UVYb`j YfgW\]YXYbY`6i bXYg`ĀbXYf

ni gÅm`j]W`fY[ ]cbU`Y`FY[ Y`i b[ Yb`Y]b[ YZØ\fhž`i a`ghfYb[ Yf`[ Y[ Yb  
]`Y[ U`Y`5i hcfYbbYb`j cfn[ [ Y\Yb"6Y]gd]Y`gk Y]gY`\_Ubb`]a` : U`Y  
Y]bYg`k ]YXYf\c`hYb`J Yfghc» Yg`Ui W`XYf: Ø\fyfgWY]b`Ybhnc[ Yb  
k YfXYb"8]YgY`A U» bU\`a Yb`n]Y`Yb`XUfUi Z`UVž`X]Y`i bZU`[ YZU\`f`ni  
gYb`\_Yb`i bX`X]Y`G]WYf\Y]h`]a` GhfU» Ybj Yf`\_Y\`f`ni` Yf\Ø\Yb"

## 9ffY]WY`XUg`N]Y`X`Yf`J Yf`\_Y`f`gg]WYf\Y]h

8]Y`Dc`nY]\`Uhj YfghÅf`\_h`XUa` ]h`VY[ cbbYbž`Ui Z  
J Yf`\_Y`f`gg]WYf\Y]hg`\_Ua` dU[ bYb`ni` gYhnYbž`X]Y`XUg`6Yk`i gghgY]b  
ZØf`X]Y` ; YZU\`fYb`j cb` ; YgWk` ]bX][`\_Y]hgØVYfhfYhi b[ Yb`i bX  
]`Y[ U`Yb`5i hcfYbbYb`gWÅfZYb`gc`Yb"6c`WY`? Ua` dU[ bYb`ZØfXYfb  
b]W`h`bi`f`XUg`J YfUbhk`cfhi b[ gVYk`i gghgY]b`i bhYf`f` b[ Yb` : U\`fYfbž  
gcbXYfb`gc`Yb`Ui W`Y]bY`\_i`hi fj YfÅbXYfbXY`K` ]f`\_i b[ `Yfn]Y`Ybž  
X]Y`XUg`F` ]g]\_c`j cb`?c`]g]cbYb`fYXi`n]Yfh"

8UfØVYf\`]bUi g]gh`X]Y`Ni gUa` a`YbUfVY]h`a` ]h`gcn]U`Yb`A`YX]Yb`j cb  
6YXYi hi b[ ži`a` `f` b[ Y` : U\`fYf`ØVYf`X]Y`F` ]g]\_Yb`i bX`?cbgYe`i YbnYb  
]`Y[ U`Yf`5i hcfYbbYb`Ui Zni`\_`ÅfYb"8i fW`[ Yn]Y`hY  
⊖Zcfa`Uh]cbgUb[ YVchY`i bX`GW`i`i b[ gdfc[ fUa` a`Y`\_Ubb`Y]bY  
dcg]hj] Y`J Yf\U`hYbgÅbXYfi b[ ` [ YZØfXYfh`k`YfXYb"

8]Y`5i Za` Yf`\_gUa` \_Y]h`XYf`2` ZZYbh`]W`\_Y]h`Ui Z`X]Y`Xi b`\_Yb`GY]hYb  
X]YgYf`FYbbYb`gc`X`Uni`VY]hfU[ Ybž`Y]bY`g]WYfY  
J Yf`\_Y`f`gi a` [ YVi b[ `ZØf`U`Y`6YhY`][`hYb`ni` gW`UZZYb"6A`Y\`f  
⊖Zcfa`Uh]cbYb`i bX`i` bhYfghØhni b[ `V]YhYb`C`f[ Ub]gUh]cbYb`k` ]Y`XYf  
8Yi hgWY`J Yf`\_Y`f`gg]WYf\Y]hgfUhž`X]Y`g]W`ZØf`i`bgYfY  
G]WYf\Y]h`Ui Z`XYb`GhfU» Yb`Y]bgYhnYb"

8YhU]`g

6Ygi`WYb`G]Y`i`bg`Ui`Z.`X]Y`!`bUW`f]W`hYb`"bYh