

## 6 UmYfb `ghUfhYh`U`g`Y hnhYg`6i bXYg`UbX`]b X]Y`Gca a YfZYf]Yb`&\$&'

; Ubn`8Yi hgW`UbX`U`h`ZØf`\_i fnY`NY]h: Yf]Yb`ž`k`À`fYbX  
6UmYfb`U`g`Y hnhYg`6i bXYg`UbX`dUi`g]Yfh`GW`i`ghUfh`]b  
H\Øf]b[ Yb`]gh`Ua`%'`5i`[`i`gh"

## 8 ]Y`5i`gk`]f`\_i`b[`Yb`XYf`[`fc»`Yb`:`Yf]Yb`Ui`Z X]Y`GW`Ø`Yf`i`bX`XUg`6`]Xi`b[`ggmghYa

8 ]Y`[`fc»`Yb`:`Yf]Yb`g]bX`ZØf`GW`Ø`Yf]bbYb`i`bX`GW`Ø`Yf`]b`[`Ubn  
8Yi`hgW`UbX`Y]b`k`]`\_ca`a`YbYg`9fY][`b]gž`XUg`bi`b`Ui`W`]b`6UmYfb  
VY[`]bbh`5V`Yi`hY`A`]hU[`]gh`XUg`GW`i`YVYb`]b`U`Yb  
6i`bXYg`ÀbXYfb`ZØf`Y]bY`\_i`fnY`NY]h`i`bhYfvfc`W`Yb`i`bX`nU`fY]W`Y  
:`Ua`]Y]b`bi`hnYb`X]YgY`:`Y`Y[`Yb`Y]hž`i`a`ni`fY]gYb`cXYf`Y]bZUW`ni  
Yb`hgdUbbYb`"8 ]Y`F`ØW`\_Y`f`]b`XUg`GW`i`YVYb`YfZc`[`h`YXcW`b]W`h  
ZØf`U`Y`[`Y]W`nY]h][`ž`k`Ug`nY][`hž`k`]Y`i`bhYfgW`]YX`]W`XUg`XYi`hgW`Y  
6`]Xi`b[`ggmghYa`cf[`Ub]g]Yfh`]gh"

## 6 YXYi`hi`b[`XYf`i`bhYfgW`]YX`]W`Yb :`Yf]YbnY]hYb

⊕`8Yi`hgW`UbX`[`]Vh`Yg`hfUX]h]cbY`Y]bY`J]Y`nU`U`b  
:`Yf]Yb`ghUfhYfa`]bYb`ž`X]Y`j`cb`XYb`6i`bXYg`ÀbXYfb`ZYgh[`Y`Y[`h  
k`YfXYb`"⊕`X]YgYa`>\`f`[`]Vh`Yg`]bg[`YgUa`h]g]YVYb`]YfgW`]YXYbY  
NY]hf`Ài`a`Yž`Ub`XYbYb`X]Y`GW`i`Yb`gW`]Y»`Yb`"8 ]Yg`\_Ubb`gck`c`\`  
J`cfhY]`Y`U`g`Ui`W`<`YfUi`gZc`fXYfi`b[`Yb`a`]h]g]W`Vf]b[`Yb`"K`À`fYbX  
Y]b][`Y`9`hYfb`X]Y`:`YI`]V`]h`h`gW`À`hnYb`ž`k`Ug`FY]gYb`ni  
i`bhYfgW`]YX`]W`Yb`NY]hYb`VYhf]Z`hž`\_`Ø`bbYb`UbXYfY`:`Ua`]Yb  
GW`k`]Yf][`\_Y]hYb`\UVYbž`[`YY][`bYhY`I`f`Ui`VgUb[`YVchY`ni`]Z]bXYbž  
XU`X]YgY`\`Ài`Z][`Ub`X]Y`:`Yf]YbnY]hYb`XYf`Yk`Y][`Yb`6i`bXYg`ÀbXYf

[ YVi bXYb'g]bX"

## 9]b'6`]W\_`Ui Z`XUg`GW`i`^U`f`&\$&( #&)

6YgcbXYfg]bhYfYggUbh]gh'XYf'YfghY`GW`i`hU[ `bUW`XYb`[ fc»Yb  
: Yf]Yb" `ϕ`H\Øf]b[ Yb`k`fX`Ua`%"`5i`[ i`gh`&\$&( `XUg`bYi`Y`GW`i`^U`f`  
&\$&( #&) `Yf`ÖZZbYhž`[ YZc`[ hij`cb`6UmYfbž`k`c`XYf`i`bhYff]W`h`Ua`%"`  
GYdhYa`VYf`k`]YXYf`VY[ ]bbh"8]YgY`i`bhYfgW`]YX`]W`Yb`GhUfhY]hYb`  
\_ÖbbYb`Ui`W`XYb`i`bhYff]W`hg]b`U`h`VYY]bZi`ggYb`i`bX`gW`]Y»Yb`  
Y]bY`5bdUggi`b[ `XYf`@Y`f`d`AbY`Y]bž`XU`@Y`f`\_f`ÄZhY`]\fY`  
i`bhYff]W`hgY]b`Y]hYb`Ub`X]Y`: Yf]Yb`UbdUggYb`a`ØggYb"

## ⇒a`]bhYfbUh]cbU`Yb`J`Yf[ `Y]W`

⇒a`: Y[ YbgUhn`ni`8Yi`hgW`UbX`^UVYb`B`UW`VUf`AbXYf`k`Y`  
: fUb`\_fY]W`Y]bYb`Y]b`Y]h]W`Yb`: Yf]YbhYfa`]b" `ϕ`X]YgYa`Gca`a`Yf`  
\UhhYb`Xcfh`U`Y`GW`Ø`Yf`j`cb`\*`" `đ`]`V]g`%"`GYdhYa`VYf`: Yf]Yb"8]Yg`  
nY][`hž`k`]Y`X]ZYfYbn]Yfh`X]Y`5bg`ÄhnY`]b`XYb`j`YfgW`]YXYbYb`  
@AbXYfb`g]bX"9]b`Y]b`Y]h]W`Yf`: Yf]YbhYfa`]b`\_ÖbbhY`X]Y`D`Ubi`b[`  
ZØf`: Ua`]`Yb`j`YfY]bZUW`Ybž`YXcW`Ui`W`X]Y`6]`Xi`b[`gUb[`YVchY`  
cXYf`X]Y`: fY]nY]h[`YghU`hi`b[ `]b`XYb`: Yf]Yb`VYY]bZi`ggYb"

## : Un]h.`9]bY`]bhYfYggUbhY`: Yf]Ybghfi`\_hi`f`

8]Y`[ fc»Yb`: Yf]Yb`]b`8Yi`hgW`UbX`g]bX`Y]bY`NY]h`XYf`9f`c`i`b[`  
i`bX`XYf`D`Ubi`b[`ž`X]Y`YXcW`Ui`W`X]Y`8]j`Yfg]h`Äh`XYg`  
6]`Xi`b[`ggmghYa`g`k`]XYfgd]Y[`Y`h`"K`Ä`fYbX`GW`i`Yb`ZØf`Y]b][`Y`NY]h`  
gW`]Y»Ybž`gd]Y`h`X]Y`C`f[`Ub]gUh]cb`XYf`: Yf]Yb`Y]bY`k`YgYbh]W`Y`  
F`c`Y`ja`@YVYb`XYf`GW`Ø`Yf]bbYb`i`bX`GW`Ø`Yf`i`bX`]`fYf`: Ua`]`Yb`  
C`V`ZØf`i`f`Ui`V`c`XYf`9f`c`i`b[`ž`X]Y`J]Y`ZU`h`Ub`: Yf]YbnY]hYb`V]YhYh`  
gck`c`^`J`cfhY]Y`U`g`Ui`W`<`YfUi`gZcfXYfi`b[`Yb`i`bX`fY[`hini`f`  
8]g`\_i`gg]cb`ØVYf`X]Y`VYghYb`5bg`ÄhnY`ja`6]`Xi`b[`ggmghYa`Ub"

· · B 5;

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