

### K ØfX][ib[``Ub[^À\f][Yf'FUhgdc`]h]\_Yf. 9]b'Yach]cbU`Yf'5VgWX]YX']a'FUh\Uig

6Øf[Yfa Y]ghYf'?`U\a 'j YfUVgW\]YXYhY'j YfX]YbhY F Uhga ]h[`]YXYf']b'5`h\Yb[ghYhh'bUW\'ZØbZ'dfÀ[YbXYb'\*J\fYb XYf'Ni gUa a YbUfVY]h"

## 9]b 6`]W\_ ni fØW\_ 8]Y 6YXYi hi b[ `Ub[ ^A\f][ Yf 5a hgnY]hYb ]b 5`h\Yb[ ghYhh

 $\pm 0.5 \text{ h} \text{ Yb} [ ghY hh \text{ YffgW} h \text{ h} \text{ Y}] \text{ b} \text{ Y} \cdot 5 \text{ ha} \text{ cgd} \text{ h} \text{ f} \text{ Y} \cdot \text{ X} \text{ Yf} \cdot 8 \text{ Ub} \text{ _VUf} \text{ _Y} \text{ h} \text{ i} \text{ b} \text{ X} \text{ X} \text{ Yg} \cdot \text{ F} \text{ Ygd} \text{ Y} \text{ _hg} \text{ i} \text{ k} \text{ h} \text{ f} \text{ Y} \text{ b} \text{ X} \text{ `Ub} [ \text{ 'A} \text{ h} \text{ f}] [ \text{ Y} \cdot \text{ A} \text{ ]h} [ \text{ `]} \text{ Y} \text{ X} \text{ Y} \text{ f} \text{ `X} \text{ Yg} \text{ ; } \text{ Ya} \text{ Y}] \text{ b} \text{ X} \text{ Y} \text{ f} \text{ Ub} \text{ ghY} \text{ i} \text{ i} \text{ b} \text{ X} \text{ Y} \text{ f} \text{ Y} \text{ Y} \text{ g} \text{ i} \text{ Y} \text{ Y} \text{ Y} \text{ i} \text{ Y} \text{ Y} \text{ Y} \text{ I} \text{ Y} \text{ Y} \text{ I} \text{ Y} \text{ Y} \text{ I} \text{ Y} \text{ Y$ 

# JYfUVgWX]YXib[ ]a NY]WXYb XYf KYfhgWXÀhnib[

8]Y'9\fi b['XYf'g\XY]XYbXYb'FUhga]h[`]YXYf'k Uf'b]\Xh'bi f'Y]b
Zcfa U`Yg'F]hi U`ž'gcbXYfb'Y]b'<Ò\Ydi b\_h'XYg'8Ub\_Yg'i bX'XYf
5bYf\_Ybbi b["'6\Øf[Yfa Y]ghYf'?`U\a 'j YfXYi h`]\XhYž'k]Y'k]\Xh][
XUg'9b[U[Ya Ybh'XYf'FUhga]h[`]YXYf'Z\Øf'X]Y'; Ya Y]bXY']gh"'9f
VYhcbhY'X]Y'[fc>Y'[Y[YbgY]h][Y'K Yfhg\Xhni b[ž'X]Y'k\A\fYbX'XYf
`YhnhYb'@Y[]g`Uhi fdYf]cXY'[Yk U\XgYb']gh"'Gc`\XY
5bYf\_Ybbi b[gU\_hY'g]bX'b]\Xh'bi f'gma Vc`]g\X\ž'gcbXYfb'gh\f\_Yb
XUg'; Ya Y]bg\X\UZhg[YZ\X\`]bbYf\U`V'XYf'dc`]h]g\XYb'Ghfi\_hi f"

 $: \emptyset b Z' > U \setminus fY' : c fhgW \setminus f]hh. 9]b F \emptyset W_V \setminus W$ 

a @Ui ZY XYf j Yf[ Ub[ YbYb ZØbZ JJ\ fY k i fXY i bhYf XYf : Ø\ fi b[ XYg V]g\ Yf][ Yb ; fYa ]i a g j ]Y `YffY]W\ h"? `U\a `\cV \Yfj cfž XUgg nU\ `fY]W\ Y `Dfc Y\_hY `]b]h]]Yfh i bX `YfZc `[ fY]W\ i a [ YgYhnh k i fXYb ž X]Y `b]W\ h bi f `X]Y \*b Zf Ughfi \_hi f `XYf ; Ya Y]bXY j YfV YggYfb ž gcbXYfb `Ui W\ XUg `gcn]U `Y `A ]hY]bUbXYf ZÔfXYfb "`8]YgY `9fZc `[ Y `g]bX VYgcbXYfg `fY `Yj Ubhž XU `g]Y `X]Y `K ]W\ h][ \_Y]h j cb `\_cbh]bi ]Yf `]W\ Ya 9b[ U[ Ya Ybh i bX `Ni gUa a YbUfVY]h ]b `XYf `Dc `]h]\_ i bhYfghfY]W\ Yb"

## 8]Y 6YXYi hi b[ 'XYf'?ca a i bU`dc`]h]\_ 'ZØf'X]Y ; Ya Y]bgW UZh

 $8 ]Y'JYfUVgWX]YXib[Yb'ibhYfghfY]WXYb'Yb'ZYb'9]bZigg'XYf? ca a i bU'dc`]h]_'Ui Z'XUg'hÀ[`]WXY'@YVYb'XYf'6Øf[Yf''9b[U[YaYbh']b'XYf'?ca a i bU'dc`]h]_'VYXYi hYh'cZh'X]Y'X]fY_hY ; YghU'hi b['XYf'@YVYbgVYX]b[ib[Yb']b'XYf'Y][YbYb'; YaY]bXY''8]Y'gWXY]XYbXYb'A]h[`]YXYf'\UVYb'XifWX']\fY'5fVY]h'b]WXh'bi f Dfc Y_hY'[YZÒfXYfhž'gcbXYfb'Ui WX'U`g'\RYYb[YVYf'[Yk]f_h'ibXXYb'8]U`c['a]h'XYf'6Yj Ò`_Yfib['[Ygi WXh''Gc`WXY'6Y]hfÀ[Y'g]bXibj Yfn]WXhVUf'ZØf'X]Y'KY]hYfYbhk]W_ib['j'cb'5`h\Yb[ghYhh'ibXZØf'X]Y'GWXUZI'b['Y]bYf'`YVYbX][Yb'; YaY]bgWXUZh''$ 

#### 8 Y f '6 `] W\_ '] b 'X ] Y 'Ni \_i b Zh

A ]h'XYa 'K YWXgY`']b'XYf'6YgYhni b['XYg'; Ya Y]bXYfUhg'i bX'XYf C fhgWX UZhgfÀhY'ghY\Yb'bi b'bYi Y'< YfUi gZcfXYfi b[Yb'i bX 7\UbWb'ZØf'5`h\Yb[ghYhh'Ub"'9g']gh'j cb'[fc» Yf'6YXYi hi b[ž'XUgg X]Y'bYi Yb'A]h[`]YXYf'Ui Z'XYb': i bXUa YbhYb'XYf'J Yf[Ub[Yb\Y]h Ui ZVUi Yb'i bX'X]Y'K YfhY'XYf'Ni gUa a YbUfVY]h'gck]Y'XYf'U\_h]j Yb 6Øf[YfVYhY]`][i b['k Y]hYfhfU[Yb"'8]YgY', VYf[Àb[Yž'[YdfÀ[h'j cb K Y\a i h'i bX'<cZZbi b[ž'g]bX'YbhgWXY]XYbX'ZØf'XUg'ni \_ØbZh][Y K c\``XYf'; Ya Y]bXY"

±bg[YgUa hinY][hiX]Y``YhnhY`G]hni b[`XYg`U`hYb'; fYa ]i a g`X]Y`h]YZY
J YfVi bXYb\Y]hiXYf`A ]h[`]YXYf`i bhYfY]bUbXYf`i bX`a ]hiXYf
; Ya Y]bXY"'8]Y`K cfhY`XYg`6Øf[Yfa Y]ghYfg`\U``Yb`bUW\.` 9g
YbXYb`ZØbZ'YfY][b]gfY]W\Yž`VYgcbXYfY`₺\\fY "'9]b`\_`UfYg`NY]W\Yb
ZØf`X]Y`6YXYi hi b[`XYf`\_ca a i bU`Yb`A]hk ]f\_i b[`]b`5`h\Yb[ghYhhž

gck ]Y 'ZØf'X]Y 'J YfUbhk cfhi b[ ž'X]Y 'YXY '; YbYfUh]cb'j cb F Uhga ]h[ `]YXYfb'ni 'hfU[ Yb'\Uh"

B5;

8 Y hU]`q

6Ygi WXYb G]Y i bg Ui Z b!U[ "XY