

# Hfi a d [fY]Zh < Uff]g Ub. '9]b '5b[f]ZZ Ui Z =XYbh]hÀh i b X F YgdY\_h

± XYb `YhnhYb `HU[ Yb `\ Uhrg]W\ X]Y 'dc`]h]gW\ Y '5fYbU ']b `XYb `I G5
YfbYi h'a ]h'\]hn][ Yb '8 YVUhhYb 'Ui Z[ Y\Y]nh" '8 ]Y '5b[ f]ZZY 'XYg
Y\Ya U`][ Yb 'DfÀg]XYbhYb '8 cbU`X 'Hfi a d 'Ui Z'? Ua U`U' < Uff]g 'nY][ Yb
b]W\ h'bi f'X]Y 'GdUbbi b[ Yb ']bbYf\U`V 'XYf'dc`]h]gW\ Yb '@UbXgW\ UZhž
gcbXYfb 'k YfZYb 'Ui W\ 'Y]b '@]W\ h'Ui Z'X]Y ' < YfUi gZcfXYfi b[ Ybž'a ]h
XYbYb ': fUi Yb 'i bX 'Yh\b]gW\ Y 'A ]bXYf\Y]hYb ']a 'dc`]h]gW\ Yb 'F Ui a
\_cbZfcbh]Yfh'g]bX"

#### GdU`hi b[ 'i bX'FYU\_h]cbYb

8 Yf F Ydi V`]\_UbYf 8 cbU`X 'Hfi a d'gcf[ hY 'VY] 'Y]bYa '5i Zhf]hh']b
7 \] WU[ c 'ZØf '9a d Ofi b[ ž'U`g'Yf' < Uff]g 'Yh\b]gW\Y'=\XYbh]hÀh']bZfU[ Y
ghY``hY 'i bX 'VY\Ui dhYhYž'g]Y '\UVY '`Ub[ Y 'NY]h'a ]h']\fYf']bX]gW\Yb
5 VghUa a i b[ '[ Yk cfVYbž'VYj cf'g]Y'g]W\'d`Ohn`]W\'U`g' gW\k Ufn
XY\_`Uf]YfhY"'Gc`W\Y'Ÿi » Yfi b[ Yb'\_ObbYb'ni 'Y]bYf'j YfghÀf\_hYb
GdU`hi b[ ']bbYf\U`V'XYf'; YgY``gW\UZh'ZØ\fYb"' < Uff]g'gY`Vgh'k ]Yg
X]Y'5b[ f]ZZY'U`g' FYgdY\_h`cg][ \_Y]h 'ni fØW\_'i bX'VYhcbhYž'XUgg'XYf
Ua Yf]\_Ub]gW\Y'K À\`YfYhk Ug'6YggYfYg'j YfX]Ybh'\UVY"

# 9]b 5i Zhf]hh j c ``Yf K ]XYfgdfØWXY

 $\label{thm:conditional} Hfi a d'dcg]h]cb]YfhY'gY]bY'U[[fYgg]j Y'F\Yhcf]_'i ba ]hhY`VUf'j cf XYa '6Y[]bb'Y]bYf'YbhgW\Y]XYbXYb'Cb`]bY!5Vgh]a a i b['XYf'I G! 8Ya c_fUhYb'ni f'Bca ]b]Yfi b['j cb'<Uff]g''+ba ]hhYb'X]YgYf _f]h]gW\Yb'D\UgY'Ài »YfhY'Yf'k ØhYbXž'XUgg'<Uff]g'b]W\h$ 

Ui h\Ybh]gW\ gY]'i bX'VYnk Y]ZY`hY']\fY'→XYbh]hÀh"'Gc`W\Y'5i ggU[Ybg]bX'b]W\h'bi f'VY`Y]X][YbXž'gcbXYfb'\_ObbYb'Ui W\'U`g'JYfgi W\
[YXYi hYh'k YfXYbž'Y]bY'VYfY]hg'a Uf[]bU`]g]YfhY'K À\`Yf[fi ddYkY]hYf'ni 'Ybha i h][Yb"

# 8]Y 6YXYi hi b[ 'j cb '=XYbh]hÀh']b 'XYf'Dc`]h]\_

 $8 ]Y : 5 i gY] b Ub XY fgYhni b [ `VY fØ \ fh'Y] b `nY b hf U `Yg' H \ Ya U `] b `XY f Dc`]h]_. `X]Y :: fU[ Y `XY f `\ XY b h] hÀ h'' < Uff]g `]gh' b ]W h' b i f `X]Y `YfghY :: fUi ž X]Y `U`g' J ]nY d f Àg] XY b h]b `X]Y b hž gc b XY fb `Ui W `X]Y `YfghY `GW k UfnY i b X `5 a Y f]_Ub Y f]b `a ]h `Ug] Uh] g W Yb `K i fnY`b `] b `X]Y g Ya `5 a h'' H fi a dg `5 b [ f] ZZY `nY] [ Yb ž'k ]Y `\ ]ghc f] g W Y `J c fi fhY] `Y `k Y] hY f \] b Y] b Y b `F Ui a `]a `dc`]h] g W Yb `8 ]g_i fg `Y] b b Y \a Yb `i b X `k Ug `ZØ f `Ub [ Zf] g h] [ Y `? c b g Y e i Yb n Yb `g] Y `ZØ f `X] Y `K U\ f b Y \a i b [ `j c b A ] b X Y f \ Y] h Y b `\ UV Y b `_O`b b Y b ''$ 

#### FYU\_h]cbYb'Ui g'XYa 'K Y]» Yb'< Ui g

8]Y'GdfYWXYf]b'XYg'K Y]» Yb'< Ui gYgž'? Uf]bY'¾Ub!D]YffYž'X]Y
YVYbZU``g'Y]bY'gWXk UfnY': fUi ']ghž'Ài » YfhY'g]WX'Ya dÒfh'ØVYf
Hfi a dg'5i ggU[Yb'i bX'VYnY]WXbYhY'g]Y'U`g' VY`Y]X][YbX 'i bX
UVghc» YbX "'8]YgY'FYU\_h]cb'i bhYfghfY]WXh'X]Y'K ]WXh][\_Y]h'j cb
I bhYfghØhni b['ZØf': fUi Yb'i bX'Yh\b]gWXY'A]bXYf\Y]hYb']b'XYf
Dc`]h]\_"

# 5i gk ]f\_i b[ Yb Ui Z X]Y K À\`YfVUg]g

Dc`]h]gWXY'?ca a YbhUhcfYbžgY`Vgh'Ui g'XYa '@U[Yf'XYf FYdi V`]\_UbYfž'\_f]h]g]YfYb'Hfi a dg'J cf[Y\Yb'U`g'ghfUhY[]gWX i b\_`i ["'9]b'b]WXh'bUa Ybh`]WX'[YbUbbhYf'5V[YcfXbYhYf VYnY]WXbYhY'gY]bYb'5i Zhf]hh'U`g' Zi fWXhVUf "'8]Y': fU[Y'V`Y]Vhž ]bk]YZYfb'Hfi a dg'5b[f]ZZY'Ui Z'<Uff]g'b]WXh'bi f'gY]bY'Y][YbY dc`]h]gWXY'6Ug]g'VYY]bZi ggYb'\_ObbhYbž'gcbXYfb'Ui WX'X]Y'VfY]hYfY K À\`YfgWXUZhž']bgVYgcbXYfY']bbYf\U`V'XYf'UZfcUa Yf]\_Ub]gWXYb ; Ya Y]bgWXUZhž'X]Y'Yf'a Ò[`]WXYfk Y]gY'ZØf'gY]bYb'K U\`\_Ua dZ [Yk]bbYb'k c``hY'"

#### 9]b k ]WX h][ Yf A ca Ybh ZØf < Uff]g

B 5;

|8 Y hU |`c

6 Ygi WX Yb 'G]Y 'i bg 'Ui Z 'b!U[ "XY