

## A ]`Ym`7mfi g`Ybh\Ø``h. `Gc`j YfVUf[ `g]Y ]\fYb`8fc[ Yb\_cbgi a °

A]`Ym`7mfi g`fYZY\_h]Yfh`ØVYf`]\fY`8fc[YbUV\Àb[][\_Y]h`i bX XYb`K Y[`ni f`BØW\hYfb\Y]h`]b`Y]bYa`U\_hi Y``Yb`DcXWUgh! =bhYfj]Yk"



 $5 g'X]Y'6iW_{U'hYf}b'bUW_{Y}bYa'hYifYb'H!G_{hij}cb'_&_b'@Ybbcb$ ZfU[ hYž'a i gghY'7mfi g'g]W\_{5i}gfYXYb'Y]bZU``Yb'`UggYb''A]h'Y]bYa

<Ui Wk 'j cb'9f`Y]Wk hYfi b[ 'fYZY\_h]YfhY 'g]Y 'ØVYf']\fY'J Yf[ Ub[ Yb\Y]h i bX'VYhcbhYž'k ]Y'[ `ØW\_`]Wk 'g]Y 'XUfØVYf'gY]ž'X]YgY \YfUi gZcfXYfbXY'NY]h'ØVYfghUbXYb'ni '\UVYb"'8]Y'?Øbgh`Yf]b ghcddhY '&\$%+ 'XYb'A Uf]\i UbU!?cbgi a 'i bX'ghY``hY'&\$&\$'bUWk Y]bYa 'F ØW\_ZU```k À\fYbX'XYf'7cfcbU!DUbXYa ]Y'Ui Wk'XUg'Hf]b\_Yb Y]b"'8]YgYf'F ØW\_ZU```k Ufž'k ]Y'g]Y']b'Y]bYa ' $\pm$ bhYfj ]Yk 'a ]h'NUbY @ck Y'Yf\_`ÀfhYž'bchk YbX][ ž'i a ']\fY'B ØWk hYfb\Y]h'k ]f\_`]Wk'ni gWk ÀhnYb"

## 8Yf'K Y[ 'ni f'J YfÀbXYfi b[

6Y] Y] bYa = bhYfj ]Yk = Ua = &%" A U] X]YgYg \* J\ fYg \* Ai \* YfhY : 7 mfi gž XUgg \* B ØW hYfb \ Y]h = k ]Y = a Y]b ; chh = ZØf \* g]Y = gY] " : 8 ]YgY = 9f\_Ybbhb]g nY][ hž k ]Y = nYbhfU \* XYf \* DfcnYgg \* XYg \* 5 i Z\ OfYbg \* ZØf \* j\ f \* @YVYb [ Yk cfXYb \* ]gh " : 8 ]Y = gW k ]Yf][ Yb \* D\ UgYb \* k A\ fYbX \* XYf \* DUbXYa ]Y k UfYb \* g]W Yf \* ]W \* b] W h \* j\ fY \* VYghYb \* A ca YbhYž \* YXcW \* hfi [ Yb \* g]Y ni \* ]\ fYa = < Y] \* i b [ gdfcnYgg \* VY] " = AfY \* dYfgOb \* ]W Y \* FY]gY \* ni f B ØW hYfb\Y]h \ Uh \* b] W h \* bi f \* ]\ f \* @YVYb \* j YfAbXYfhž \* gcbXYfb \* Ui W Y]bYb \* \_ fYUh]j Yb \* GW i V \* Ui g[ Y \* Ogh"

Gc k i fXY VY]gd]Y gk Y]gY XYf Gcb[ : `ck Yfg ž XYf &\$&'
j Yf OZZYbh`]W h k i fXY i bX j cb ]\fYf GW Y]Xi b[ j cb @]Ua
<Ya gk cfh\ ]bgd]f]Yfh ]ghž ni Y]bYa k ]W h][ Yb HY]`]\fYf < Y]`i b[ "
8 Yf H]hY`k i fXY j cb NUbY @ck Y a ]h; `cf]U; Umbcfg = K ]``
Gi fj ]j Y j Yf[ `]W Yb i bX [ Yk Ubb nk Y]; fUa a m 5k UfXg ]a
: YVfi Uf &\$&( "8 ]YgY 5i gnY]W bi b[ k Uf ZØf 7 mfi g Y]b
VYXYi hYbXYg; YZØ\`XYf 6YghÀh][ i b[ i bX Y]b k ]W h][ Yf A ca Ybh
]b ]\fYf bYi [ YZ bXYbYb BØW hYfb\Y]h" Hfchn UbZÀb[ `]W Yf
6YXYb\_Ybž Ui Z[ fi bX j cb 5b[ gh[ YZØ\`Yb X]Y; fUa a mg ni
VYgi W Ybž YbhgW ]YX g]Y g]W gW `]Y » `]W ž Ub XYf J Yf UbghU`hi b[
hY]`ni bY\a Yb"

## $8]Y^5igk]f_ib[Yb^*jcb^*Fi \a "ibX^8fc[Yb]$

K À\fYbX'7mfi g'ØVYf']\fY'9fZU\fi b[Yb'gdf]W\hž'nY][h'g]W\'Ui W\Y]b'[fÒ»YfYg'6]`X'XYf'<YfUi gZcfXYfi b[Ybž'a]h'XYbYb'dfca]bYbhYDYfgÒb`]W\\_Y]hYb'\_cbZfcbh]Yfh'g]bX"'Ghi X]Yb'VY`Y[Ybž'XUggDfca]bYbhYž']bgVYgcbXYfY'Aig]\_Yf'i bX'?Øbgh`Yfž'g][b]Z]\_Ubh

 $\label{thm:condition} $$ \dot O'YfYb F gg_Yb ZØfGi WhdfcV'Ya Y'i bX'dgmWk gWkY $$ gf_Ub_i b[Yb'Ui g[YgYhnh'g]bX''8Yf8fi W_žXYf'a ]h'Dfca ]bYbn Y]b'Yf[Y\hž'_Ubb'ni 'Ya ch]cbU'Yb'DfcV'Ya Yb'ZØ\fYbž'k À\fYbX a UbWkY'?fYUh]j Y'8fc[Yb'_cbgi a ]YfYbž'i a 'GhfYgg'UVni VUi Yb cXYf']\fY'@Y]ghi b['ni 'ghY][Yfb'''<]ghcf]gWkY'6Y]gd]Y'Y'i bX'U_hi Y'Y' 6Yf]WkhY'VY'Y[Yb'X]Y'; YZU\fYbžX]Y']a '@YVYb'XYfYb][Yb''Ui Yfbž X]Y']b'XYf'^2 ZZYbh`]Wk_Y]h'ghY\Yb''$ 

7 mfi g '5i ggU[ Yb 'Z]bXYb 'F YgcbUbn']b 'XYb '9fZU\fi b[ Yb'j ]Y 'Yf UbXYfYf Dfca ]bYbhYfž'XYfYb'; YgW ]W hYb 'c Zh'a ]h 'Gi W hi bX dgmW ]gW Yb '9f\_fUb\_i b[ Yb'j Yf\_bØdZh'g]bX" '8 Yf '8 fi W\_ž']a F Ua dYb`]W h'ni 'ghY\Ybž'i bX 'XYf Ni [ Ub[ 'ni 'Gi VghUbnYb'a UW Yb Yg'ZØf'j ]Y 'Y 'gW k ]Yf][ ž'[ Ygi bXY '@YVYbgk Y]gYb Ui ZfYW hni Yf\U`hYb" Ni 'XYb' < YfUi gZcfXYfi b[ Ybž'j cf'XYbYb'g]Y ghY\Ybž'[ Y\Ôfh'Ui W 'X]Y : fU[ Y 'bUW '[ YY][ bYhYb' < ]`ZgUb[ YVchYb" \div XYb' I G5']gh'X]Y '5\_nYdhUbn'ZØf'XUg'9]b[ YghÀbXb]g'j cb DfcV'Ya Yb'i bhYf'Dfca ]bYbhYb'\O\Yfž'k Ug']\bYb'a O[`]W Yfk Y]gY XYb'K Y[ 'ni 'I bhYfghØhni b[ 'i bX'; YbYgi b[ 'Yf`Y]W hYfh"

±bg[YgUa h'nY][h'X]Y'dYfgÒb`]WXY'; YgWX]WXhY'j cb'A]`Ym'7mfi gž'k]Yk]WXh]['Yg']ghž'ØVYf'8fc[Yb\_cbgi a 'i bX'Gi WXh'cZZYb'ni 'gdfYWXYb"G]Y']gh'ØVYfnYi [hž'XUgg']\fY'FY]gY'ni f'BØWXhYfb\Y]h'b]WXh'bi f'ZØfg]Y'gY`Vghž'gcbXYfb'Ui WX'ZØf'UbXYfY'j cb'6YXYi hi b['gY]b'\_Ubbži a 'Aih'ni f'JYfÀbXYfi b['ni 'ZÒfXYfb"

8YhU]`g	
J c f ZU``	8fc[Yb_f]a]bU`]hÀh
Cfh	< ]XXYb '< ]``gž'l G5
Ei Y``Yb	• k k k "[ U`U"XY
	• k k k "i ga U[ Un]bY"Wca
	<ul><li>kkk"UXX]Wh]cb"XY</li></ul>

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