

#### ; Ygi bX\Y]hggW\i hn`]b`6K.`>U\fYgVYf]W\h &\$&' `ni `@YVYbga ]hhY`b i bX`K UggYf

8 Yf \*J\fYgVYf]W\h'&\$&' `ni f'@YVYbga ]hhY`ØVYfk UW\i b[ ']b 6UXYb!K ØfhhYa VYf[ 'ZUggh'i a ZUggYbXY'?cbhfc``Ybž'HfYbXg i bX'9f[ YVb]ggY'ZØf'XYb'J YfVfUi W\YfgW\i hn'ni gUa a Yb"

8 Yf \*J\fYgVYf]W\h'&\$&' `ni f`@YVYbga ]hhY`ØVYfk UW\i b[`]b`6UXYb! K ØfhhYa VYf[``]YZYfh`k ]W\h][Y'9f\_Ybbhb]ggYž'X]Y`b]W\h'bi f`X]Y E i U`]hÀh'j cb`@YVYbga ]hhY`b`i bX`Hf]b\_k UggYf`VYhfYZZYbž'gcbXYfb Ui W\`Ui Z'[YgY``gW\UZh`]W\Y`HfYbXg`i bX`fY[i`Uhcf]gW\Y < YfUi gZcfXYfi b[Yb`\]bk Y]gYb"

### @YVYbga ]hhY`ØVYfk UWXib[ ' '9]b k ]WXh][Yf5gdY\_h'XYg'JYfVfUi WXYfgWXi hnYg

8]Y; Ygi bX\Y]hgVY\ÒfXYb'j cb'6UXYb!K ØfhhYa VYf[ 'ZØ\fYb 'À\f`]W\ i a ZUb[ fY]W\Y'? cbhfc``Yb'Xi fW\ži a 'X]Y'G]W\Yf\Y]h'j cb @YVYbga ]hhY`bž'Hf]b\_k UggYf'i bX'k Y]hYfYb'DfcXi \_hYb'ni [Yk À\f`Y]ghYb''=a '\J\f`&\$&' k i fXYb'ZUgh'%\$, "\$\$\$ ?cbhfc``VYgi W\Y']b'fi bX'\*, "\$\$\$'@YVYbga ]hhY`VYhf]YVYb Xi fW\[YZØ\fh''8UVY]'k i fXYb']b'%( 'DfcnYbh'XYf'\_cbhfc``]YfhYb 6Yhf]YVY'J YfghÒ» Y'[ Y[ Yb'J cfgW\f]ZhYb'ZYgh[ YghY``h''J cb'ZUgh (, "\$\$\$'DfcVYbž'X]Y'YVYbZU``g'i bhYfgi W\h'k i fXYbž'k UfYb'Yhk U'%\* DfcnYbh'VYUbghUbXYh''8cW\'bi f'Y]b'a ]b]a U`Yf'5bhY]`'j cb'\$Z' DfcnYbh'k i fXY'U`g'[ Ygi bX\Y]hggW\ÀX`]W\'Y]b[ Yghi Zh'

#### 8 Yf '9]b Z`i gg 'Ui Z'X Ug 'J Yf Vf Ui W Yf j Yf hf Ui Yb

A ]b]ghYf'DYhYf'<Ui \_'VYhcbh'X]Y'6YXYi hi b[ 'X]YgYf'?cbhfc``Yb'ZØf XUg'JYfhfUi Yb'XYf'JYfVfUi WXYf']b'X]Y'Ei U`]hÀh'XYf'Ub[ YVchYbYb DfcXi \_hY"' 8]Y'JYfVfUi WXYf]bbYb'i bX'JYfVfUi WXYf']a '@UbX

\_ObbYb`g]W\`XUfUi Z'j Yf`UggYbž`XUgg`X]Y`?cbhfc``Yb`[ih
Zib\_h]cb]YfYb ž`gc`<Ui\_"'8]Y`9f[YVb]ggY`nY][Ybž`XUgg`X]Y
6Ya Ø\ib[Yb`XYf`@YVYbga]hhY`ØVYfk UW\ib[::fØW\hY`hfU[Yb`ibX
X]Y`EiU`]h\h`XYg`VYfY]h[YghY``hYb`K UggYfg`]b`6UXYb!K ØfhhYa VYf[]bg[YgUa h`\cW\`V`Y]Vhz`k]Y`VY]bU\Y`+",\$\$`ibhYfgi W\hY
Hf]b\_k UggYfdfcVYb`VYgh\h][Yb"

### $8]Y' < ch!7 \setminus ]d!7 \setminus U``Yb[Y'''9]b$ U`Ufa]YfYbXYf'HfYbX

9]bYb'VYgcf[b]gYffY[YbXYb'HfYbX'ghY``hY'X]Y' < ch!7\]d!
7\U``Yb[Y 'XUfz'X]Y'b]W\h'bi f'Ui Z'j ]fU`Yb'9fZc`[']b'gcn]U`Yb
A YX]Yb'UVn]Y`hYz'gcbXYfb'Ui W\'Yf\YV`]W\Y'; Ygi bX\Y]hgf]g]\_Yb
V]f[h"'6Y]'X]YgYf'7\U``Yb[Y'YggYb'DYfgcbYb'YI hfYa 'gW\UfZY
Hcfh]``U!7\]dg'i bX'Z]`a Yb'g]W\'XUVY]"'8Yf'ØVYfa À»][Y'JYfnY\f
\_Ubb'ni 'Yfbgh\UZhYb'[Ygi bX\Y]h`]W\Yb'6YY]bhfÀW\h][i b[Yb
ZØ\fYb"'8]Y'VUXYb!k ØfhhYa VYf[]gW\Yb
@YVYbga ]hhY`ØVYfk UW\i b[gVY\OfXYb'k UfYb'[Ynk i b[Ybz'gcZcfh
ni '\UbXY`b'i bX'X]YgY'DfcXi \_hY'j ca 'A Uf\_h'ni 'bY\a Ybz'k Ug']b
FØW\_fi ZYb'i bX'JYf\_Ui Zgj YfVchYb'fYgi `h]YfhY'''8]Yg'nY][hz'k]Y
gW\bY``[YgY``gW\UZh`]W\Y'HfYbXg'Ui W\'bY[Uh]j Y'[Ygi bX\Y]h`]W\Y
5i gk]f\_i b[Yb'\UVYb'\_ObbYb"

#### ?f]h]gWXY'DfØZi b['jcb'HÀhck]Yfa]hhY`b

9]b'k Y]hYfYg'k ]WXh][ Yg'H\Ya U']b'X]YgYa '\\f'k Uf'X]Y
I bhYfgi WXi b['j cb'HÀhck ]Yfa ]hhY`bž'VYgcbXYfg'fY`Yj Ubh']b'Y]bYf
; YgY``gWX UZhž']b'XYf'HUhhccg']a a Yf'VY`]YVhYf'k YfXYb"'6Y]'Y]bYf
GcbXYfdfØZi b['a i gghYb'X]Y'6Y\ÒfXYb'ZYghghY``Ybž'XUgg'\*'
DfcnYbh'XYf'[ YhYghYhYb': UfVYb'A Àb[ Y``Ui Zk ]YgYb"'5i Z[ fi bX
X]YgYf'F]g]\_Yb']gh'Yg'k ]WXh][ ž'XYb'J YfVfUi WXYfb'gck c\`
HfUbgdUfYbn'U`g'Ui WX'G]WXYf\Y]h'ni 'V]YhYb"

# 2 \_c`c[]gWXY'@UbXk]fhgWXUZh'i bX'XYfYb , VYfk UWXi b[

8Yf'>U\fYgVYf]W\h'VYghÀh][h'Ui W\'XYb'dcg]h]j Yb'HfYbX'XYg

O\_c`c[]gWXYb`@UbXk]fhgWXUZhgUbgUhnYg`]b`6UXYb!K ØfhhYa VYf["

⇒a '≯J\f'&\$&' 'k i fXYb'fi bX') \*\$'^2 \_c!DfcXi \_hY'i bhYfgi WXhž'k cVY]

X]Y`6YUbghUbXi b[gei chY`\_cbghUbh'b]YXf][ 'V`]YV"'8]YgYg

J YfhfUi Yb`]b`6]c!@YVYbga ]hhY``]gh'YbhgWXY]XYbX`ZØf'X]Y': ÒfXYfi b[
O\_c`c[]gWXYf'5bVUi a Yh\cXYb'i bX'hfÀ[h'XUni 'VY]ž'X]Y'BUWXZfU[YbUWX\bUWX\U`h][Yb'DfcXi \_hYb'ni 'ghY][Yfb"

# ; fYbnk YfhY ZØf ? YfUa ]\_k UfYb ' < UbX`i b[gVYXUfZ'Yf\_Ubbh</pre>

9]b k Y]hYfYf \_f]h]gW Yf Di b\_h ]gh X]Y I bhYfgi W i b[ 'j cb ?YfUa ]\_k UfYb Ui Z'GW UXghc ZZY k ]Y 6 `Y] i b X 7 UXa ]i a "'C V k c \ `) \$ Dfc VYb 'XYb [ YgYhn `]W Yb 'J cf[ UVYb 'Ybhgd f UW Yb z`\ UVYb j YfU `hYhY ; fYbnk YfhY ']b 'XYf '; YgYhn[ YVi b[ 'ni 'Y]b Ya < Ub X `i b[ gVYXUf Z'[ YZØ\ fh" 8]Y < YfghY `Yf a ØggYb bi b J cf\_Y\fi b[ Yb 'hfYZZYb z i a 'X]Y 'G]W Yf\Y]h 'ZØf 'X]Y 'J YfVf Ui W Yf 'ni [ Yk  $\lambda f$  'Y]ghYb"

#### : Un]h. 'G]WX Yf\Y]hgghfUhY[]Yb 'ghÀf\_Yb 'XUg J YfhfUi Yb 'XYf'J YfVfUi WX Yf

#bg[YgUa hinY][hiXYfixU\fYgVYf]W\hi&\$&' žiXUggiX]Y
@YVYbga ]hhY`ØVYfk UW\i b[i]bi6UXYb!K ØfhhYa VYf[iU\_h]jiUfVY]hYhž
i a iX]YiG]W\Yf\Y]hiZØfiX]YiJYfVfUi W\Yfini [UfUbh]YfYbiA]b]ghYf
<Ui\_i\YVhi\YfjcfžiXUggiX]YiFØW\_fiZYiibXiJYf\_UiZgjYfVchYžik]Y
VY]iXYbiYI hfYa igW\UfZYbi7\]dgžikY]hYf\]biY]bYik]W\h][YiFc``Y
gd]Y`Ybžii a i[YgibX\Y]hg[YZÀ\fXYbXYiDfcXi\_hYinifijYfaY]XYb''
; `Y]W\nY]h][ik]fXiXYfi8fi W\_iUiZi<YfghY``YfiYf\O\hži]\fYiDfcXi\_hY
g]W\YfYfinii[YghU`hYb''8]YgYi5bgAhnYihfU[YbiXUniiVY]žiXUg
JYfVfUi W\YfjYfhfUiYbiniighAf\_YbiibXiY]bYijYfUbhk cfhib[gjc``Yž
[YgibXYi9fbA\fib[iniiZOfXYfb''</pre>

B 5: