

⇒bj Yghc fYb ž'X]Y']\ fY' < Ui gUi Z[ UVYb  
a UW\ Yb ž'k YfXYb'6]hWł]b' \_Ui ZYb

5bh\cbm'GWUfUa i WW]'; f0bXYf'XYf'⇒bj Ygha Ybh[ YgY`gW\UZh  
G\_m6f]X[ Y'7Ud]hU'' \Uh'a Y\ fZUW\ VYk ]YgYbž'XUgg'Yf'Y]b  
VY[ Y]ghYfhYf'6]hWł]b!6YZ0fk cfhYf'i bX'Y]b' < cX'Yf']gh'' ⇒  
Y]bYa' \_0fn`]W\Yb' ⇒hYfj ]Yk' Z0f'7B67'Yf\_`ÀfhY'Yf'YfbYi h'X]Y  
k ]W\h][ ghYb'J cfn0[ Y'XYg'Z0\ fYbXYb'X][ ]hU'Yb'5ggYhg'i bX  
k Ufi a' Yf'XUj cb'ja' K Yfhj cb'0VYf'%A ]`]UfXY'I G!8c``Uf  
VYg]hnh''J YfghY\Yb']gh'U``Yg'B UW\ ni' GWUfUa i WW]ž'bi f'@yi hYž  
X]Y'a ]h'6]hWł]b'b]W\h'j YfhfUi h'g]bXž'\_0bbhYb'Yg'\_f]h]g]YfYb"  
5i ZXYf'UbXYfYb'GY]hY'k YfXYb'DYfgcbYbž'X]Y']\ fY  
< Ui gUi Z[ UVYb' a UW\ Yb' i bX'X]Y'df]a ĀfY'? fmdhck Ā\fi b[  
j YfghY\Ybž'`YhnhYbX`]W\ ]b'g]Y']bj Ygh]YfYb''I a' gY]bY'K cfhY  
ni' VYk Y]gYbž'[ UV'Yf'Y]b'6Y]gd]Y''a ]h'XYa' A ]`]UfXĀf'F Um  
8U`]cž'XYf' / Ua d^Y``d/

5bh\cbm'GWUfUa i WW]'; f0bXYf'XYf'⇒bj Ygha Ybh[ YgY`gW\UZh  
G\_m6f]X[ Y'7Ud]hU'' \Uh'a Y\ fZUW\ VYk ]YgYbž'XUgg'Yf'Y]b  
VY[ Y]ghYfhYf'6]hWł]b!6YZ0fk cfhYf'i bX'Y]b' < cX'Yf']gh''

⇒Y]bYa' \_0fn`]W\Yb' ⇒hYfj ]Yk' Z0f'7B67'Yf\_`ÀfhY'Yf'YfbYi h'X]Y  
k ]W\h][ ghYb'J cfn0[ Y'XYg'Z0\ fYbXYb'X][ ]hU'Yb'5ggYhg'i bX'k Ufi a  
Yf'XUj cb'ja' K Yfhj cb'0VYf'%A ]`]UfXY'I G!8c``Uf'VYg]hnh''

## J YfghY\Yb']gh'U``Yg

**B UW\** ni' GWUfUa i WW]ž'bi f'@yi hYž'X]Y'a ]h'6]hWł]b'b]W\h'j YfhfUi h  
g]bXž'\_0bbhYb'Yg'\_f]h]g]YfYb''5i ZXYf'UbXYfYb'GY]hY'k YfXYb  
DYfgcbYbž'X]Y']\ fY' < Ui gUi Z[ UVYb' a UW\ Yb' i bX'X]Y'df]a ĀfY  
'? fmdhck Ā\fi b[ 'j YfghY\Ybž'`YhnhYbX`]W\ ]b'g]Y']bj Ygh]YfYb''I a  
gY]bY'K cfhY'ni' VYk Y]gYbž'[ UV'Yf'Y]b'6Y]gd]Y''a ]h'XYa' A ]`]UfXĀf'  
F Um'8U`]cž'XYf' ]b'XYf'J Yf[ Ub[ Yb\Y]h'gY]bY'6YXYb\_Yb'VYn0[ `]W\

XYg`J Yfa Ò[ Ybgbk Yfhg`UhhYž`UVYf`Yhnh`Y]b`<cX`Yf`]gh

GW\Ui Yb`G]Y`g]W\`F Um`8 U`c`Ubž`Y]bYb`6]hWc]b!G\_Ydh]\_Yfž`Yhnh`Y]b  
6]hWc]b!`b] Yghcf"

8Yf`7\YZj cb`G\_m6f]X[ Y`7Ud]hU`Yf`\_`ÀfhY`k Y]hYfž`XUgg`XYf`X][ ]hU`Y  
J Yfa Ò[ Ybgbk Yfh`b]W\h`bi`f`Y]bY`K`À\fi`b[ ž`gcbXYfb`Y]b  
A YW\Ub]ga`i`g`Z0f`X]Y` ; YgY`gW\UZh`gY]"`GY]b`VYXYi`hYbXghYf  
J`cfhY]"`]gh`X]Y`8`YnYbhfU`]g]Yfi`b[ `i`bX`?`bUdd`Y]hž`k`Ug`VYXYi`hYhž  
XUgg`\_Y]b` Dc`]h]\_Yf`cXYf`Dc`]h]\_`Yg`\_cffi`a`d]YfYb`cXYf`Yf[`ÀbnYb  
\_Ubb`"

Gc[ Uf`XYf`Df`Àg]XYb`h`XYf`Fi`gg]gW\Yb` : ÒXYfUh]cb` `K`UX]a` ]f`Di`h]b  
` [ `Ui`Vh`6]hWc]b`i`bX`X]Y`5`hWc]bg`\_`0bbYb`]`fY`F`c`Y`]a  
ni`\_0bZh][`Yb` : ]bUbngmghYa`gd]Y`Ybž`VYhcbhY`GWUfUa`i`W\]"

9]b][`Y`G\_Ydh]\_Yf`gY`Yb`X]Y`j`Yfgh`Àf`\_hYb`6H7!DfY]ggW\k`Ub`\_i`b[`Yb  
U`g`<`Ui`d`hb`UW\hY]"`Y`b`]W\`k`]Y`VY]`gY]bYb`j`cf`Yf][`Yb`5i`ggU[`Yb  
Yf]bbYfhY`GWUfUa`i`W\]"`Y`XcW`XUfUbž`XUgg`X]Y`5\_h]Yb`\_i`fgY`j`cb  
 : UWVcc\_ž` ; cc[ `Y`i`bX`5a`Uncb`]b`XYb`YfghYb`š`fYb`]`fYg  
6YghY`Yb`g`X]Y`[ `Y]W\Yb`DfcV`Ya`Y`UhhYb"i`bX`[`YbUi`k`]Y`X]YgY  
f]Yg][`Yb`i`bhYfbY`a`Yb`k`]fX`6H7` ]a`b`ÀW\ghYb`š`fnY`b`h`Y]bY  
[`fc`»`Y`Dcg]h]cb`]b`XYf`K`Y`hk`]fhgW\UZh`Y]bbY`a`Yb`"

`W\`k`0fXY`6]hWc]b`i`bX`X]YgY`UbXYfYb`?`fmdhck`À\fi`b[`Yb`XYfnY]h  
U`g`Zf0`Y`UXUdh]j`Y`HYW\bc`c[ ]Yb`\_UhY[`cf]g]YfYb"i`bX`ni`f0W`ni  
 : UWVcc\_ž` ; cc[ `Yž`5a`Uncb` `g]Y`U`Y`VY[`UbbYb`a`]h`Y]bYf`K`Y`Y  
cgn`]"`YfYbXYf`J`c`Uh]"`h`hž`VYj`cf`g]Y`g]W\`ghUV]"`g]YfhYb" ` `Yf`Z0[`hY  
`bni`"

5bh\cbmiGWfUa i Ww]"7B67

6]hWc]b`]gh`X][ ]hU`Yg'; c`X

8]Y`8YVUhhYž`cV`6]hWc]b`X]Y`5f[ i a YbhY`\Uhž; c`X`U`g`VYggYfYb  
K YfhUi ZYk U\fi b[ ga ]hhY`ni`\_cb\_i ff]YfYb`i bX`gc[ Uf`ni  
ØVYfhfYZZbž`\_fY]gh`gY]h`Y]b][ Yb`d\`fYb`ja`?fmdhc!FUi a`"K`À`fYbX  
Y]b][ Y`dfca`]bYbhY`DYfgØb`]W\_X]hYb`k`]Y`dJa`]Y`8]a`cb`i`bX`**DYhYf**  
**GW ]ZZ**ž`ghY\Yb`ZYgh`ZØf`XUg`9XY`a`YhU`ž`X]Y`A`Y]bi`b[`j`cb  
GWfUa i Ww][ Y\h`XYi`h`]W`U`i`gY]bUbXYf"

HfchnXYa`h`U`h`XYf`; fØbXYf`j`cb`G`\_m6f]X[ Y`7Ud]hU`gY]bYb`BUa`Yb  
b]W`h`b`YVYb`A`]W`UY`GUm`c`f`[ YgYhnhž`XYf`**a`Y]bhY`XUgg`6]hWc]b`)** \$  
a`U`VYggYf`]gh`U`g; c`X`"9fghYfY`[ `Ui`Vhž`XUgg`X]Y`VY]XYb

: ]bUbn]bghfi a YbhY`Ui Z`XYfgY`VYb`9VYbY``]Y[ Yb.

8 Ug`]gh`Z0f`a ]W`[ `Y]W`VYXYi hYbX`a ]h`X][ ]hU`Ya `; c`X``HmdYb`k ]Y  
A ]W`UY``GUmc`f`XYb`\_Ybž`Yg`]gh`VYggYf`U`g`XUg ` ÆW`V]b`XU`b]W`h`gc  
cdh]a ]gh]gW`" ÆW`V]b`\_Y]b`6]hW`b]b!9j Ub[ Y`]gh"

## 5 b`U[ YVYfUhi b[ `j`c b`GWUfUa i WU]

5V[ YgY`Yb`XUj`cbž`XUgg`Yf`X]Y`@Yi hY`Ui Z`cfXYfhYž`a Y`f`ØVYf`XYb  
?fmdhck`À`fi b[ gfUi`a`ni`YfZU`fYbž`[ UV`XYf`Hcd!A UbU[ Yf`Ui W`  
Y]b][ Y`H]ddg`Z0f`X]Y`Yb][ Ybž`X]Y`ni`a`YfghYb`A`U``b`6]hW`b]b  
]bj`Ygh]YfYb`a`ØW`hYb"

Æ`Y]bYa`gY]bYf`ZfØ`YfYb`5i`Zhf]hhY`U`h`Yf`[ YfU`hYb`X]Y  
² ZYb`h`]W`\_Y]hž`b]W`h`a`Y`f`U`g`)`i`i`]`f`Yf`[ YgUa`hYb`9fgdUfb]ggY  
ni`ni`k`Y]gYbž`XUa`]h`g]Y`j`ca`DfY]g`Ui`g[ YgY`hh`g]bXž`UVYf`b]W`h`gc  
gY`fž`XUgg`g]Y`Yf`YV`]W`g`W`UXYbž`k`Yb`b`XYf`DfY]g`Yf`YV`]W`  
\_cff][ ]Yfh`k`]fX"

...

8YhU]`g

6Ygi W`Yb`G]Y`i`bg`Ui`Z`\_fmdhc!bYk`g"Uh