

6YghYf`[ Y\Y]a Yf`GcbbYbi bhYf[ Ub[ g!  
5i gg]W\ hgd i b\_h`Ui Z? c\`HUCž`H\U)`UbX

K Ybb`G]Y`Ui ZXYf`Gi W\Y`bUW\`Y]bYa`Yd]gW\Ybž`c\_U`Yb`i bX  
[ Y\Y]a Yb`GcbbYbi bhYf[ Ub[ gd`Uhn`Ui Z?c\`HUC`g]bXž`\UVYb`G]Y`XYb`f]W\h][ Yb`Cfh`[ YZ`bXYb`"8U`Yg`g]W\`i a`Y]bY`\_`Y]bY`  
hfc d]gW\Y`ϕgY`"\UbXY`hž`[ ]Vh`Yg`j ]Y`Y`  
GcbbYbi bhYf[ Ub[ gd`ÀhnYž`Ub`XYbYb`G]Y`VYcVUW\hYb`  
\_ÒbbYbž`k ]Y`X]Y`GcbbY`\]bhYf`XYa`<cf]ncbhj YfgW\k ]bXYh`  
9]b][ Y`XYf`VY`]YVhYghYb`g]bX`GU]fYY`6UYW\`cXYf`æ\`b`Gi`k`Ub`  
@cc\_ci`h`"8]Y`K`U\`f\Y]h`]gh`YXcW\ž`XUgg`X]Y`a`Y]ghYb`  
fY[ i`ÀfYb`Gdchg`k`À\`fYbX`XYf`<cW\gU]gcb`n]Ya`]W\`j`c``  
k`YfXYb`\_ÒbbYb`"ϕ`X]YgYa` ; i ]XY`nY][ Y`]W\`X]f`YXcW\`XYb`  
VYghYbž`[ Y\Y]a` ghYb`5i`gg]W\`hgd i b\_h`ZØf`XYb`  
GcbbYbi bhYf[ Ub[ `Ui Z?c\`HUCž`j`cb`XYa`Xi`k`U\`fgW\Y]b`]W\`  
bcW\`b]Y`[ Y\`Òfh`\Ugh`"A`Y]bYf`A`Y]bi`b[ /`Ua`d^Y``d/`

K Ybb`G]Y`Ui ZXYf`Gi W\Y`bUW\`Y]bYa`Yd]gW\Ybž`c\_U`Yb`i bX  
[ Y\Y]a Yb`GcbbYbi bhYf[ Ub[ gd`Uhn`Ui Z?c\`HUC`g]bXž`\UVYb`G]Y`  
XYb`f]W\h][ Yb`Cfh`[ YZ`bXYb`"8U`Yg`g]W\`i a`Y]bY`\_`Y]bY`hfc d]gW\Y`  
ϕgY`"\UbXY`hž`[ ]Vh`Yg`j ]Y`Y`GcbbYbi bhYf[ Ub[ gd`ÀhnYž`Ub`XYbYb`  
G]Y`VYcVUW\hYb`\_ÒbbYbž`k ]Y`X]Y`GcbbY`\]bhYf`XYa`<cf]ncbh`  
j`YfgW\k ]bXYh`

9]b][ Y`XYf`VY`]YVhYghYb`g]bX`GU]fYY`6UYW\`cXYf`æ\`b`Gi`k`Ub`  
@cc\_ci`h`"8]Y`K`U\`f\Y]h`]gh`YXcW\ž`XUgg`X]Y`a`Y]ghYb`fY[ i`ÀfYb`  
Gdchg`k`À\`fYbX`XYf`<cW\gU]gcb`n]Ya`]W\`j`c``k`YfXYb`\_ÒbbYb`"ϕ`  
X]YgYa` ; i ]XY`nY][ Y`]W\`X]f`YXcW\`XYb`VYghYbž`[ Y\Y]a` ghYb`  
5i`gg]W\`hgd i b\_h`ZØf`XYb`GcbbYbi bhYf[ Ub[ `Ui Z?c\`HUCž`j`cb`XYa`  
Xi`k`U\`fgW\Y]b`]W\`bcW\`b]Y`[ Y\`Òfh`\Ugh`"

A`Y]bYf`A`Y]bi`b[ `bUW\`]gh`X]Yg`XYf`VYghY`[ Y\Y]a`Y`  
GcbbYbi bhYf[ Ub[ gcfh`Ui Z?c\`HUCž`Ugg`a`]W\`X]f`nY][ Ybž`k`Ufi`a`"

K ]Y`G]Y`Ui ZXYa`6]X`cVYb`gY\Yb`\_ÖbbYbž`UVYb`G]Y`Y]bYb  
dYfZY`\_hYb`6`]W`\_Ui Z?c`\`B`Ub[ `M` Ubž`k`Ybb`X]Y`G`cbb`Y`X]fY`\_h  
X`Ub`Y`V`Y`b`Ua`<c`f]ncb`h`i`b`hYf[ `Y`h`"8]Y`g`Y`f`C`f`h`]gh`Ui`W`\_g`Y`\`f`i` \][  
i`b`X`Y`f`Z`c`f`X`Y`f`h`Y]b`k`Y`b][ `c`\_`U`Y`g`?`b`c`k`!\`c`k`ž`i`a` `]b`ni`Y`f`f`Y]W`Y`b`ž  
U`g`c` `]gh`Y`f`d`Y`f`ZY`\_h`Z`f`Y]b`Y`b`Y`b`h`g`d`U`b`b`h`Y`b`5`i`g`g]W`h`g`d`i`b`\_`h`Ui`Z`X`Y`b  
G`c`b`b`Y`b`i`b`h`Y`f[ `Ub[ "

6i`W`Y`b.`?`ca`d`Y`h`h`Y`f`H`f`U`b`g`d`c`f`h`ž`i`a` `]c`b`6`Ub[ `\_c`\_`c`X`Y`f`D`\i`\_`Y`h  
b`U`W` `?`c`\`H`U`c`ni` `]Y`\_`Ub[ `Y`b"

`U`h1` `V`Y`g`h`Y`\_`U`\_`h`j`]h`h`h`Y`b`\_`Ui`Z`\_`c`\`h`U`c` `]g`c`b`b`Y`b`i`b`h`Y`f[ `Ub[ `]g`i`d`2

K`c`\_`Ui`Z`?`c`\`H`U`c`\_`Ø`V`Y`f`b`U`W`h`Y`b`  
I`b`h`Y`f`\_`i`b`Z`h`g`Z`Ø`\`f`Y`f`

9g`[ `]V`h`a`Y`\`f`Y`f`Y`A`Ø[ `]W`\_`Y]h`Y`b`Z`f`F`Y]g`Y`b`X`Y`ž`X]Y`\_`Ui`Z`X`Y`f`\_`g`Y`  
?`c`\`H`U`c`\_`Ø`V`Y`f`b`U`W`h`Y`b`a`Ø`W`h`Y`b`" `a` `5` `[ `Y`a` `Y]b`Y`b`V`Y]V`Y`b`X]Y  
a`Y]g`h`Y`b`A`Y`b`g`W`Y`b`[ `Y`f`b`Y`]b`X`Y`f`B`Å`\`Y`j`c`b`G`U]f`Y`Y`6`Y`U`W`ž`i`a` `]b  
X`Y`f`B`Å`\`Y`\_`U`Y`f`<][ ` \][ ` \`h`g`i`b`X`5`\_`h`j`]h`h`h`Y`b`ni` `]g`Y]b`"G]Y`\_`Ö`b`b`Y`b  
Y`X`c`W`\_`Ui`W`\_`]b`X`Y`f`B`Å`\`Y`j`c`b`A`U`Y`<`Y`U`X`c`X`Y`f`Y`h`k`U`g`k`Y]h`Y`f`X`Y`b  
6`Y`f[ ` \]b`Ui`Z`j`c`b`G`U]f`Y`Y`\_`Ui`g`\_`Ø`V`Y`f`b`U`W`h`Y`b"

I`a` `]b`Y`b`N`Y]h`V`Y]a` `]G`i`W`Y`b`]a` `]h`Y`f`b`Y`h`ni` `]Y`f`g`d`U`f`Y`b`ž`UV`Y`]W`  
i`b`h`Y`b`Y]b][ `Y`X`Y`f`V`Y`g`h`Y`b` `V`Y`f`b`U`W`h`i`b[ `]g`a`Ø[ `]W`\_`Y]h`Y`b`\_`Ui`Z`?`c`\  
H`U`c`\_`Ui`Z[ `Y`]g`h`Y`h"

<C`G`H`9`@`8`#`9?`H`B`9`6`9`B`8`9`A` `A`5`9`<`9`5`8`D`9`F` ` `F`\*`~`#`B`5`7`<`H`  
6`@`5`7`?`K`C`C`8`<`C`G`H`9`@`8`U`g`6`U`W`\_`K`c`c`X`<`c`g`h`Y` `]g`h`Y]b`Y`g`X`Y`f`  
V`Y`g`h`V`Y`k`Y`f`h`Y`h`Y`b`<`c`g`h`Y`g`\_`Ui`Z`?`c`\`H`U`c`i`b`X` `]Y[ `h`i`b`i`f` ` `Y`a` `]b`i`h`Y`b`  
j`c`a` `A`U`Y`<`Y`U`X`D]Y`f`Y`b`h`Z`Y`f`b`h`"8]Y`g`]g`h`X]Y`d`Y`f`ZY`\_`h`Y`I`b`h`Y`f`\_`i`b`Z`h`  
k`Y`b`b`G]Y`a` `]h`Y]b`Y`a` `]g`d`h`h`Y`f`Y`b`6`c`c`h`U`b`\_`c`a` `a`Y`b`c`X`Y`f`b`U`W`\_`Y]b`Y`a`  
n`Y`b`h`f`U`Y`b`<`c`g`h`Y` `]b`X`Y`f`B`Å`\`Y`X`Y`g`D]Y`f`g`g`i`W`Y`b"

69GH9G`<`C`G`H`9`@`: ` `F`6`5`7`?`D`5`7`?`9`F` `B`G`5`#`9`9` ` `F`I`B`H`9`F` ` `%`\$`#`  
B`5`7`<`H` `6`D`<`C`G`H`9`@`6`D`<`c`g`h`Y` `]V]Y`h`Y`h`C`d`h]c`b`Y`b`Z`f`[ `Y`a` `Y]b`g`U`a` `Y`  
I`b`h`Y`f`\_`Ø`b`Z`h`Y`ž`X]Y`\_`U`Y`Y]b`Y`?` `]a`U`U`b`\_`U[ `Y`Z`f`X]Y`\_`Y]Y`Y`f`Y`b`B`Å`W`h`Y`  
Ui`Z`?`c`\`H`U`c`V`Y]b`\`U`h`Y`b`"9g` `]Y[ `h`i`Ui`W`\_`]a` `<`Y`f`n`Y`b`j`c`b`G`U]f`Y`Y`i`b`X`  
]b`X`Y`f`B`Å`\`Y`X`Y`g`G`h`f`U`b`X`Y`g`ž`X`Y`g`G`a` `]Y`A`U`f`h`i`b`X`X`Y`f`?`b`Y]d`Y`b`h`c`i`f`

?c\`HUC"

HC D'; ŸGH9<5I G'5I : '?C <`H5C ' `B Æ J 5B 5'; ŸGH9<5I G8]YgYg  
; ÅghY\Ui g'\Uh'X]Y`VYghYb`6Yk Yfhi b[ Yb`Ui Z'?c\`HUC"'9g`Y[ h  
Ui W\ [ Ubni]b`XYf`BÅ\Y`XYg`D]Yfg`j cb`A UY`<YUX`i bX`a Y\fyfyf  
Yfgh`Ugg][ Yf`HUi W\gW\i`Yb"'9g`]gh`Ui W`Y]bY`k Y]hYfY  
Vi X[ YhZfYi bX`]W\Y`C dh]cb`ZØf`DUUfY`cXYf`Gc`c!6UW\_dUW\_Yf"

: Æ89B`G⇒'5@@9'69GH9B`I B H9F?I B: HGC DH€B 9B`Æ`'?C <`H5C

`U`h1` 8]Y`VYghYb`GhfÅbXY`Ui Z'?c\`HUC` 2

Gc`\_ca a h'a Ub`ni a`GYWfYh`Gi bgYh  
J ]Yk dc]bh`Ui Z'?c\`HUC`

I a`XYb`[ Y\Y]a Yb`5i gg]W\hgdi b\_h`ZØf`XYb`GcbbYbi bhYf[ Ub[ `Ui Z  
?c\`HUC`ni`YffY]W\Ybž'a ØggYb`G]Y`]b`F]W\hi b[ `8i g]h`6UbW\U  
FYgcfh`ZU\fyb"'8]YgYg`FYgcfh`Y[ h]a`BcfXcghYb`XYf`ÆgY`ž`X]fY\_h  
j cf'?c\`B Ub[ `M Ub"'8Yf`[ Y\Y]a Y`C fh`ZØf`XYb`GcbbYbi bhYf[ Ub[  
\Y]»h`B Ub[ `M Ub`HYffUW"

9g`gc`hY`b]W\h`Åb[ Yf`U`g`%\$`A ]bi hYb`XUi Yfbž`\Yf\Yf`ni`ZU\fybž  
k Ybb`G]Y`j cb`GU]fYY`6YUW`\_ca a Yb"'8]Y`Yb][ Ybž`X]Y`g]W\`]b`XYf  
BÅ\Y`j cb`7\U`@c`\_Ui Z`U`hYbž`\_ØbbYb`a`]h`Y]bYf`%)`V]g  
&\$!a`]bØh][ Yb`: U\fh`fYW\ bYb"

GcVU`X`G]Y`XUg`FYgcfh`YffY]W\h`\UVYbž'a ØggYb`G]Y`Æf`A cdYX`Ui Z  
XYa`DUF\_d`Uhm`cVYb`dUf`\_Yb"; Y\Yb`G]Y`]b`XUg`FYgcfh`\]bi bhYfž  
V]g`G]Y`Y]b`F YghUi fUb`h`a`]h`6`]W`\_Ui Z`XUg`K`UggYf`YffY]W\Yb"  
C V k c\`]W\`Yf`bcW`b]W\h`[ Y[ YggYb`\UVYž`]gh`Yg`g]W\Yf`Y]b  
Yd]gW\Yf`C fhž`i a`ni`5VYbX`ni`YggYb`cXYf`Y]b`dUUF`6]Yf`ni  
hf]b`\_Yb"'K`Ybb`G]Y`g]W\`k`]Y`]W\`[ YfbY`Ub`Y]b`a`]YgYg`6UW\_dUW\_Yf!  
6i X[ Yh`U`hYbž`[ Y\Yb`G]Y`Y]b`ZUW`i a`cXYf`Xi fW`XUg`FYghUi fUbž  
V]g`G]Y`Y]bY`HfYddY`YffY]W\Ybž`X]Y`ni a`K`UggYf`ZØ\fh"

<Yfn`]W\Yb`;`ØW\_k`i bgW\ž`G]Y`\UVYb`XYb`[ Y\Y]a Yb`C fh`ZØf`XYb  
GcbbYbi bhYf[ Ub[ `Ui Z'?c\`HUC`YffY]W\h`B Ub[ !M Ub!HYffUggY"

## 5i gg]W\ hgd i b\_h'B Ub[ 'M Ub 'HYffUggY

GcVU`X`G]Y`XYb`5i gg]W\ hgd i b\_h`YffY]W\ h`UVYbž`\_ÒbbYb`G]Y`g]W\ Ui ZXYf`HYffUggY`YbhgdUbbYb`cXYf`Ui ZXYb`Y`gYb`V]g`ni a`F UbX XYg`K`UggYfg`gdUn]YfYb`"K`À\fybX`XYf`XfY]`A`cbUhYž`X]Y`]W\`Ui Z`?c\`HUc`j`YfvfUW\hYž`VYgi`W\hYb`k`]f`bUW\`Y]bYa``HUi`W\hU[`\`Ài`Z][X]YgYb`GcbbYbi`bhYf[`Ub[`gcfh`"

G]Y`k`YfXYb`a`]h`Y]bYa``DUbcfUa`UV`]W`\_`Ui Z`?c\`B Ub[ `M Ub`i`bX XYb`GcbbYbi`bhYf[`Ub[`XYf`ϕgY`X]fY`\_h`XUbYVYb`VY`c`b`h`G]Y`\_ÒbbYb`Ui`W\`]b`F`]W\hi`b[`GU]fYY`V`]W`Ybž`k`À\fybX`G]Y`XUg`BUW\hYVYb`VYcVUW\hYbž`k`Ybb`X]Y`GcbbYbi`bhYf[`Àb[`Y`Ui`ZZUa`a`Yb`"

U`h1`8Yf`VYghY`[`Y\Y]a`Y`GcbbYbi`bhYf[`Ub[`gcfh`Ui Z`?c\`HUc`]gh`Y]bYg`XYf`VYghYb`8]b[`Yž`X]Y`a`Ub`Ui Z`?c\`HUc`hi`b`\_Ubb`2`

## 5bfY]gY`ni`f`ϕgY`B Ub[ 'M Ub`j`cb`XYf`B Ub[ M Ub`HYffUggY

HU[`gØVYf`\_ÒbbYb`G]Y`j`cb`X]YgYa``Cfh`Ui`g`Ui`W\`X]Y`ϕgY`B Ub[`M Ub`YffY]W\Yb`"C`V`k`c`\`X]Y`6c`chgZU`fYf`Ui`Z`FY]gYbXY`a`]h`\Ø\YfYa``6i`X[`Yh`Ui`g[`Yf]W\hYh]g]bXž`X]Y`a`Ò[`]W\Yfk`Y]gY`ja``<`chY`ØVYfbUW\hYbž`]gh`Yg`XYf`gW\bY`ghY`C`fhž`i`a``X]Y`X`c`d`d`Y`\_`Òd`Z][`Y`ϕgY`ni`YffY]W\Yb`"

@cb[`hU]!6cchY`j`Yf`\_Y\fyb`Ub`X]YgYa``C`fhž`i`a``Hci`f]ghYb`UVni`\c`Yb`"ϕW\`UVY`b]W\hij`Yfgi`W\hž`j`cb`X]YgYa``C`fh`Ui`g`b`UW\`?c\`B Ub[ `M Ub`ni`i`[`Y`Ub[`Ybž`UVYf`Y`b`UW\XYa`ž`k`]Y`VYgW\`À`Zh][`hig]Y`g]bXž`\_ÒbbYb`G]Y`a`Ò[`]W\Yfk`Y]gY`Y]bYb`8`fcd!C`Z]DfY]g`ZØf`X]Y`[`Y]W\Yb`?cghYb`k`]Y`Ua``GU]fYY`6YUW\`Ui`g\UbXY`b`"8]YgYf`gc`hY`b]W\h`a`Y`f`U`g`%)`\$`6U`h`d`f`c`6cch`VYhfU[`Yb`"

## 5`hYfbUh]j`Y.`Gi`bgYh`GI`Dg`Ua``GU]fYY`6YUW\

K`Ybb`G]Y`XYb`VYghYb`GcbbYbi`bhYf[`Ub[`gd`Uhm`j`ca``K`UggYf`Ui`g`gY\Yb`a`ÒW\hYbž`]gh`Yg`Ui`W\`a`Ò[`]W\ž`ØVYfU`Ui`Z`GU]fYY`Y]b`GI`D`ni`a`]YhYb`"K`Ybb`G]Y`g]W\`g]W\Yf`g]bXž`V]YhYh`XUg`DUXXY`b`ni`"

X]YgYf`GhY`Y]bY`bcW\`VYggYfY`5i`gg]W\h`Ui`Z`XYb

GcbbYbUi`Z[`Ub[`"

U`h1`GhUbX`i`d`DUXX`YVcUfX`Gi`bgYh`Gdch`Ui`Z`?c\`HUC`2

J`C`@@GHÿ`B`8`÷`9F`DC`GH.`%(`VYghY`8]b[`Yž`X]Y`a`Ub`Ui`Z`?c\`HUC`hi`b`\_`Ubb

:`Y[`Yb`G]Y`a`]h`Y]bYf`8`fc`\`bY`j`ca

5i`gg]W\`hgdi`b`\_`h`b`UW\`?`c\`B`Ub[`M`Ub

K`Ybb`G]Y`Y]bY`8`fc`\`bY`b`UW\`?`c\`HUC`a`]h[`YVfUW\`h`\`UVYbž`\_`ÒbbhYb`G]Y`j`Yfgi`W\`h`gY]bž`g]Y`ØVYf`?`c\`B`Ub[`M`Ub`ni`Z]Y[`Yb`" `A`Y]bYf`A`Y]bi`b[`b`UW\`]gh`XYf`VYghY`C`fhž`i`a`Yg`ni`Z]Y[`Ybž`j`cb`X]YgYa`[`Y\Y]a`Yb`5i`gg]W\`hgdi`b`\_`h`Ui`Z`XYb`GcbbYbi`bhYf[`Ub[`" `8]Yg`Y]Y[`h`XUfUbž`XUgg`Yg]a`5`[`Ya`Y]bYb`]a`a`Yf`fi`\`[`]gh`i`b`X`G]Y`VY]a`:`Y]Y[`Yb`b]W\`h`VY`Àgh[`h`k`Yf`XYb`"

A`]h`Y]bYf`9`bhZYfbi`b[`j`cb`Yhk`U`"\$`\$`A`YhYfb`j`cb`XYf`HYffUggY`]gh`?`c\`B`Ub[`M`Ub`dYf`8`fc`\`bY`Y]W\`h`ni`YffY]W\`Yb`"≠W\`\`UVY`XUg`6]`X`i`bhYb`j`cb`?`c\`B`Ub[`M`Ub`hU[`gØVYf`j`cb`[`YbUi`X]YgYf`GhY`Y`Ui`g`Ui`Z[`Ybca`a`Yb`"

U`h1`8]Y`VYghYb`8]b[`Yž`X]Y`a`Ub`Ui`Z`?c\`HUC`hi`b`\_`Ubb`2

A`9<`F`?`C<`H5C`6@C;`G

≠W\`\`c`ZYž`≠bYb`\`Uh`X]YgY`?`i`fnUb`Y]hi`b[`ni`a`VYghYb`GcbbYbi`bhYf[`Ub[`gd`Uhn`Ui`Z`?c\`HUC`[`YZU`Yb`"K`À`\fYbX`G]Y`\]Yf`]b`a`Y]bYa`6`c[`]g]bXž`gW\`Ui`Yb`G]Y`g]W\`i`bVYX]b[`h`Y]b][`Y`XYf`UbXYfYb`5fh]\_Y`Ubž`X]Y`]W\`ØVYf`X]YgY`YfghUi`b`]W\`Y`≠gY`]b`H\U]`UbX`j`Yf`ÒZYb`h]W\`h`\`UVY`"

U`h1`2

"

6Ygi W\Yb`G]Y`i bg`Ui Z.`Y]bY!fY]gY"XY