



# HUMS1006

DfYgYbhUjcb`UbX`7 ca a i b]WJh]cb`G\_]`g

HYfa `H\fYY`##`&\$&\$



GWXcc`cZHAY`5ftg`UbX`A YXJU`#`I BGK `5ftg`UbX`GcWJU`GWYbWg

7 ci fgY`Cj Yfj ]Yk

GhJZZ`7 cbhJW`8 YHJ`g

7 cbj Ybcfg

B Ua Y	9a Uj`	5j Uj`UVj]m	@cWjhcb	D\cbY
6fmc b]`HfYn]gY	V`hfYn]gY4 i bgk "YXi "Ui		F cVYfh K YVgHf`%%+	Z`*%&`-' , ) ( ) %

GWcc`7 cbhJW`bZcfa Uh]cb

GWcc`cZHY`5 frg`UbX`A YX]U

F cca`" %&ž@Yj Y`" žF cVYfhK YVgHf`6i ]X]b[ `fj %(`

D\cbY.`f\$&Ł`-' , ) `( , ) \*

9a Uj]: [gUa 4 i bgk "YXi "Ui](#)

K YVg]H: [k.k.k "Ufng"i bgk "YXi "Ui #gUa](#)

H\Y`GWcc`cZHY`5 frg`UbX`A YX]U`k ci `X`]\_Y`hc`F YgdYWZ`m5W\_bck`YX[ Y`hY`HfUX]h]cbU`7 i ghcX]Ubgž`hY`6YXY[ U`fP`Ybg]b[ hcb`WJa di gŁž; UX][ U`f7 ]mUbX`5fh`8Yg][ b`7 Ua di gYgŁ`UbX`hY`B [ i bbUk U`dYcd`Y`f5i gHfU]Ub`8YZYbVW: cfW`5WUXYa m]b`7 UbVYffUŁ`cZHY`UbXg`k \YFY`YUWX`WJa di g`cZI`BGK`]g`cWJHfX"

7 ci fgY'8YHJ`g

7 fYX]hDc]bHg`\*`

Gi a a UfmicZ\hY`7 ci fgY

: ]bX'mci f'j c]W'UbX'gdYU\_k ]h'W'ebZXYbW'"HY""U'g'hc'fm'z'd]hW'U'W'ebW'df'z'Yb[ U[ Y'Ub'Ui X]YbW'UbX'g\UfY ]XYUg""'h'h]g'W'ci fgY'z'mci 'k ]""YUfb'\ck 'hc'a U\_Y'mci f'a Uf\_]b'h'Y'k c'f'X'"Mci 'k ]""XYj Y'cd'g\_]`g`]b dfYgYbHjcb'UbX'W'ca a i b]W]h'cb'i gYX'Vm]bZi Ybh]U""YUXYfgz'W'ca dY""]b[ 'g'hc'fm'Y""Yfg'UbX'Y'ZYW]j Y dfYgYbH'fg'"Mci 'k ]""gh' X'mig'hc'fm'Y""]b[ 'Vm'YUX]b[ 'U'W'c'fg'z'a c'h]j U]h'cbU'gdYYW'X'Yg'V'md'ck Y'f'Z` W'ca a i b]W]h'c'fg'z'UbX'di V]W'gdYU\_]b[ 'b'd'f'c'Z'Y'g'g]c'bU' d'f'U'W]W'"D'f'U'W]W]'k c'f\_g\c'd'g'k ]""]b'f'c'X'i W' 'mci 'hc h'Y'W'b]ei Y'g'c'Z'U'i X]Y'b'W' 'Uk U'f'Y'b'Y'g'g'z'd\m'g]W' d'f'Y'g'Y'b'W' 'UbX'j c'W'U' d'f'c'Y'W]c'b""'6'm'Z'c'ck ]b[ 'Y'i U'a d'Y'g'UbX f'Y\Y'U'f'g]b[ 'b'W'U'g'g'z'mci 'k ]""XYj Y'cd'h'Y'W'ebZXYbW' 'hc' d'f'Y'g'Y'b'h'mci f' ]XYUg ]b'Ub'Ui h'Y'b'h]W]j c]W'UbX W'ca a i b]W]h' 'mci f'a Y'g'g'U[ Y'k ]h' W'U'f]m'UbX'W'ebj ]W]c'b"

7 ci fgY`@YUfb]b[ `Ci hW'ca Yg

% XYgW]VY'UbX'Y'j U'i U'Y'\ck 'd'f'Y'g'Y'b'h'fg'W'ca a i b]W]h' ]b'U'f'U'b[ Y'c'Z[ Y'b'f'Y'g'UbX'W'eb'h'i hg &" UbU'm'Y'UbX'U'd'd'm'f'Y'g'Y'b'h'U]h'c'b'h'Y'W'b]ei Y'g' ]b'j c'W'U' d'f'c'Y'W]c'b'z'd\m'g]W' d'f'Y'g'Y'b'W'z'U'i X]Y'b'W' 'Uk U'f'Y'b'Y'g'g'z'UbX'W'Y'U'f'W'ca a i b]W]h'c'b ' " d'U'bz'f'Y\Y'U'f'g'Y'UbX'X'Y'j Y'f'U'b'Y'b[ U[ ]b[ 'd'f'Y'g'Y'b'h'U]h'c'b'z'c'f'U'b'Ui X]Y'b'W' (" f'Y'g'd'c'b'X'W'eb'g'h'i W]j Y'm'hc' d'f'Y'g'Y'b'h'U]h'c'b'g[ ]j Y'b'V'm'c'h'Y'f'g

HYUW'X]b[ `G'h'f'U'Y[ ]Y'g`

H\Y'Y'W'h' f'Y'g'gi f'j Y'm'h'Y[ Y'b'f'Y'g'UbX'W'eb'h'i hg'c'Z'c'f'U'W'ca a i b]W]h'c'b'z'di V]W'gdYU\_]b[ 'UbX'W'Y'U'h]j Y dfYgYbHjcb' ]b'd'f'c'Z'Y'g'g]c'bU' d'f'U'W]W' 'UbX'g'c'W]U""Z'Y""H\Y'm'U'g'c'U'X'X'f'Y'g'g'\_'Y'm'W'eb'W'd'h'g'z' ]g'gi Y'g'UbX U'd'd'f'c'U'W'X'Y'g' ]b' W'Y'U'h]b[ 'Y'Z'Y'W]j Y' d'f'Y'g'Y'b'h'U]h'c'b'g'"'h'h]g'h'U'W'X'Y'f'Y'X'g'h'f'U'Y[ m'z'Y'U'f'b]b[ 'k ]""V'Y'Y'i U'a d'Y'i X'f]j Y'b'z'd'f'c]j ]X]b[ 'U'a c'X'Y'z'c'f'\ck 'gh' X'Y'b'g'W'U'b'X'Y'j Y'cd'd'f'Y'g'Y'b'h'U]h'c'b'g\_]`g'V'm'g'h' X'm]b[ [ ]f'Y'U'h d'f'Y'g'Y'b'h'U]h'c'b'g[ ]j Y'b'V'm]bZi Ybh]U""YUXYfgz'h'U'Y'b'h'X'd'Y'f'z'f'a Y'fgz'UbX'W'ca dY""]b[ 'g'hc'fm'Y""Yfg"

H\Y'h' h'c'f]U'g'd'f'c]j ]X'Y'Ub' ]b'h'f'U'W]j Y'Y'U'f'b]b[ 'Y'b]j ]f'c'ba Y'b'h'z'c'f'gh' X'Y'b'g'hc' X'Y'j Y'cd'd'f'Y'g'Y'b'h'U]h'c'b'g\_]`g' h'f'ci [ \ d'f'U'W]W'Y'i Y'f'W]g'Y'g'UbX' ]a a Y'X]U'h'Z'Y'X'V'U'W'"D'f'U'W]W'U'W]j ]h]Y'g'h'U[ [ \h]b'U'k c'f\_g\c'd! a c'X'Y' ]b'f'c'X'i W' 'gh' X'Y'b'g'hc' h'Y'W'b]ei Y'g'c'Z'U'i X]Y'b'W' 'Uk U'f'Y'b'Y'g'g'z'd\m'g]W' d'f'Y'g'Y'b'W' 'UbX'j c'W'U' d'f'c'Y'W]c'b" '6'm'Z'c'ck ]b[ 'Y'i U'a d'Y'g'UbX'f'Y\Y'U'f'g]b[ 'b'W'U'g'g'z'gh' X'Y'b'g'k ]""XYj Y'cd'h'Y'W'ebZXYbW' 'hc' d'f'Y'g'Y'b'h'Y'f'c'k b g'hc'f]Y'g' ]b'Ub'Ui h'Y'b'h]W]j c]W'UbX'W'ca a i b]W]h'Y'a Y'g'g'U[ Y'g'k ]h' W'U'f]m'UbX'W'ebj ]W]c'b""H\ ]g'U' d'f'U'W]W'! V'U'g'X'g'h'f'U'Y[ m'z'c'f'Y'U'f'b]b[ !V'm'X'c]b[ "H\Y'h' h'c'f]U'g'U'g'c'd'f'c]j ]X'Y'h'Y'W'eb'h'i h'z'c'f'h'Y'Z'f'g'h'U'g'g'g'a Y'b'h'U'g\_ 'h!W'U'g'g'UbX'c'b' ]b'Y'i Y'f'W]g'Y'g'z'&'l ""'a ]b'i h' d'f'Y'g'Y'b'h'U]h'c'b'g'z'c'b'Y'f'Y'W'c'f'X'Y'X'f'U'i X]c'c'f'j ]X'Y'c'z'c'b'Y""j Y" G'h' X'Y'b'g'f'Y!d'Y'f'z'f'a 'U[ ]f'Y'U'h'g'd'Y'Y'W' f'Y'W'c'f'X'Y'X'V'm'U'b'U'W'c'f'z'c' ]h]W]U'b'c'f'Y'U'X'Y'f' 'h'U'g'Y'W'eb'X'h'U'g'z'gh' X'Y'b'g ]a d'f'c]j Y'h'Y'd'Y'f'z'f'a UbW'c'Z'U'V'U'X' d'f'Y'g'Y'b'h'U]h'c'b""'6'c'h' h'U'g\_ d'f'c]j ]X'Y'c'd'd'c'f'h' b]h]Y'g'hc' X'Y'g'W]VY'\ck d'f'Y'g'Y'b'h'fg'W'ca a i b]W]h' 'UbX'Y'a V'c'X'm'h'Y'W'b]ei Y'g"

H\Y'c'b' ]b'Y'W'eb'h'Y'h]g'z'c'f'd'Y'f'g'c'bU' ]g'Y'X'z'g'Y'Z'X]f'Y'W'X'Y'U'f'b]b[ "G'h' X'Y'b'g'U'f'Y'c'Z'Y'f'Y'X'U'a Y'bi 'c'Z'c'b' ]b'Y W'eb'h'Y'h'z'f'ca 'k \ ]W' h'Y'm'W'X'c'c'g'Y'U'd'Y'f'g'c'bU' ]g'Y'X'g'Y'ei Y'b'W'f'Y'Y'j U'b'h'c'h'Y'f'c'k b'd'f'c'Z'Y'g'g]c'bU' W'eb'h'i h'U'X ]b'X]j ]X'i U'Y'U'f'b]b[ 'b'Y'X'g'"G'h' X'Y'b'g'k ]""W'ca d'Y'h'U'g'Y'h'bi a V'Y'f'c'Z'a c'X'i 'Y'g'Z'f'ca 'h'Y'a Y'bi ""H\Y'a Y'bi 'k ]' ]b'W'i X'Y'W'eb'h'Y'h'U'X'Y'U'f'b]b[ 'U'W]j ]h]Y'g' ]b'h'f'Y'g'h'f'Y'U'a g' f'f'z'd'f'Y'g'Y'b'h'U]h'c'b[ ]Y'b'f'Y'g'f'X'U'a U]h]W'a c'bc'c' [ i Y'g'z [ ]f'Y'U'h'g'd'Y'Y'W'X'Y'g'z'g'hc'fm'Y""]b[ z'g'h'U'X'i d'W'ca Y'X'm'z'c' ]h]W' 'g'd'Y'Y'W'X'Y'g'z'Y'Y'j U'hc'f'd]h'W'X'Y'g'z'Y'm'b'c'h' d'f'Y'g'Y'b'h'U]h'c'b'g'z'Vi g]b'Y'g'g'd'f'Y'g'Y'b'h'U]h'c'b'g'z'W'f'Y'a c'b]U'g'd'Y'Y'W'X'Y'g'UbX'g'c'c'b'f'f'f'z'U'g'd'Y'W]g'c'Z'd'f'Y'g'Y'b'h'U]h'c'b h'Y'W'b]ei Y'f'c'f'U'f'Y'h'c'f]W]z' c'W'U' d'f'c'Y'W]c'b'z'U'W]b[ 'h'Y'W'b]ei Y'z'U'i X]Y'b'W' 'U'X'X'f'Y'g'g'z'g'd'YU\_]b[ 'hc'W'U'a Y'f'U'z ]g'h'Y'b]b[ 'UbX'U'g\_]b[ 'ei Y'g'h]c'b'g'z'a d'f'c]j ]g'U]h'c'b'UbX'g'c'c'b'f'U'X'f'l 'Y'i U'a d'Y'g'c'Z'd'f'Y'g'Y'b'h'U]h'c'b'g'z'V'c'h

YZYWj Y'UbX'fVUXf'fY'Yj Ubh'hc'h'Y'dfcZ'gg]cbU'W'cbhY'lg'UbX'X]gW'd]bY'cZ'h'Y'gh'XYbhg'"H\Y'cb']bY  
'YUfb]b[ 'ZYXg']bh'hc'h'Y'gY'W'cbX'UggYgga Ybh'Ug\_ 'Ub'UbU'm]W'fYdcf'hc'b'U'W'UgY'gh'Xmž%ž) \$\$'k'cfXg"  
Gh'XYbhg'k'f]h'U'fYdcf'h'UbU'm]b[ 'W'cbhY'f'YbfY'UbX'h'W'Xb]ei Yg']b'U'dfYgYbh'U]cb'W'cgYb'Z'ca'U'g]ghcZ  
'j'Y'UbX'fY'W'cfYX'Y'Ua'd'Yg'"H\Y'fYdcf'h'dfcj ]XYg'Ub'cddcf'h' b]m'Z'cf'gh'XYbhg'hc'Yj'U'i'U'h'\ck'dfYgYbh'f'fg  
W'ca a i b]W]h'Y'UbX'hc'UbU'm'Y'h'Y]f'h'W'Xb]ei Y"

H\Y'Z]bU'UggYgga Ybh'Ug\_]g'U'gh'XYbh'YX'YUfb]b[ 'gh'U'h[ m'9UW'gh'XYbhdfYdUfYg'Ub'cf][ ]bU'  
dfYgYbh'U]cb]b'U'gdYW]Z]W[ YbfY'Z'XfUk ]b[ 'cb'W'cbh'Ybh'h'U]g'fY'Yj Ubh'hc'h'Ya "'H\YmXY'j'Yf'h'Y

# 5ggYgga Ybh

## 5ggYgga YbhHUg\_g`

5ggYgga YbhHUg_	K Y][ \h	8i Y'8UH	Gh XYbh@YUfb]b[ Ci hWta Yg'5ggYggYX
DfYgYbhU]cb`	( \$i	Bch5dd`]WUV`Y	&Z ž{
!WUgg`UbX`C b`]bY 9I YfW]gYg`	&\$i	Bch5dd`]WUV`Y	%ž&
5bU`nt]WU`F Ydcfh	( \$i	Bch5dd`]WUV`Y	%ž&

## 5ggYgga Ybh8YHJ]`g

5ggYgga Ybh%`DfYgYbhU]cb

GHUfhXUH. `Bch5dd`]WUV`Y

@Yb[ h. `\*`a ]bi h`f`f`\$`k`c`f`X`Yei ]j U`Yb`f`d`f`Y`g`Y`b`h`U`]`c`b`

8YHJ]`g.

\*`a ]bi h`f`f`\$`k`c`f`X`Yei ]j U`Yb`f`d`f`Y`g`Y`b`h`U`]`c`b`ž`Y`h`Y`f`]j Y`c`f`Y`W`f`X`Y`X`f`(\$i`Ł`Xi`Y`k`YY`g`,`UbX`-`Q`F`i`V`f`W`  
]b`X`]W`h`b`[ ``Y`j`Y`c`Z`d`Y`f`Z`c`fa`Ub`W`U`[`U`]`b`g`h`Y`U`X`U`g`g`Y`g`g`a`Y`b`h`W`]h`f`U`ž`k`f`]h`Y`b`Z`c`fa`U`h`j`Y`Z`Y`X`V`U`W`ž`Ub`X`  
d`Y`f`W`b`h`U`[`Y`[`f`U`X`Y`"

5XX]h]cbU`XYHJ]`g.

5ggYgga Ybh" ]g`d`f`Y`g`Y`b`h`X`]b`Y`]h`Y`f`h`Y`Y`W`h`f`Y`c`f`h`Y`h`h`c`f`U`"]b`k`YY`g`-`Ub`X`%`\$`c`Z`h`Y`W`c`i`f`g`Y`"G`h`X`Y`b`g`  
k`]"`V`Y`]b`j`]h`X`h`c`W`X`c`c`g`Y`k`Y`h`Y`f`h`c`d`f`Y`g`Y`b`h`]b`h`Y`Y`W`h`f`Y`c`f`h`h`c`f`U`"M`c`i`a`U`m`W`X`c`c`g`Y`h`c`d`f`Y`g`Y`b`h`  
5ggYgga Ybh" ]j`Y`]b`!`W`U`g`g`c`f`d`f`Y`!`f`Y`W`f`X`Y`X`c`b`j`]X`Y`c`"M`c`i`a`i`g`h`d`f`Y`g`Y`b`h`5ggYgga Ybh" ]j`Y`]b`!`W`U`g`g`]Z`m`c`i`  
d`f`Y`g`Y`b`h`X`5ggYgga Ybh%`&`d`f`Y`!`f`Y`W`f`X`Y`X`c`b`j`]X`Y`c`"G`Y`Y`U`X`X`]h`c`b`U`b`c`h`Y`g`c`b`A`c`c`X`Y`f`Y`[`U`f`X`]b`[`h`]g`  
U`g`g`Y`g`g`a`Y`b`h`"

Gi Va ]gg]cb`b`c`h`Y`g`D`f`Y`g`Y`b`h`X`]b`W`U`g`g`X`i`f`b`[`k`YY`g`-`Ub`X`%`\$`f`%`c`f`&\$`B`c`j`Y`a`V`Y`f`Ł

Hi`fb`]h`b`g`Y`h`]b`[`.`H`h`]g`]g`b`c`h`U`H`i`fb`]h`b`U`g`g`[`b`a`Y`b`h`

5ggYgga Ybh&.`!`W`U`g`g`Ub`X`C`b`]b`Y`9`I`Y`f`W`]g`Y`g`

GHUfhXUH. `

@Yb[ h. `&`!`&`!`a ]bi h`f`]b`!`W`U`g`g`d`f`Y`g`Y`b`h`U`]`c`b`g`

8YHJ]`g.

&`!`&`!`a ]bi h`f`]b`!`W`U`g`g`d`f`Y`g`Y`b`h`U`]`c`b`g`Z`U`W`]h`U`h`X`V`m`i`c`b`]b`Y`a`c`X`i`Y`g`f`&\$i`h`c`h`U`Ł`Xi`Y`k`YY`g`" /`)`Q`  
:`Y`Y`X`V`U`W`\_`F`i`V`f`W`]b`X`]W`h`b`[ ``Y`j`Y`c`Z`d`Y`f`Z`c`fa`Ub`W`U`[`U`]`b`g`h`Y`U`X`U`g`g`Y`g`g`a`Y`b`h`W`]h`f`U`ž`k`f`]h`Y`b`Z`c`fa`U`h`j`Y`  
Z`Y`X`V`U`W`ž`Ub`X`d`Y`f`W`b`h`U`[`Y`[`f`U`X`Y`"

5XX]h]cbU`XYHJ]g.

@Yb[ h. '&dfYgYbhU]cbgZVYfk YYb '&UbX'' 'a ]bi H'g'YUWk '8YHJ]g. '&l'' 'a ]bi H' 'dfYgYbhU]cbg''C bY fYVefXYX'fUi X]c'cfj ]XYcLz'cbY''j Y''F i Vf]W]bX]W]h]b[ ''Yj Y''cZdYfZcfa UbW'U[ U]bghYUWk 'UggYgga Ybh W]Hf]Uz'k f]H'Yb'Zcfa Uhj Y'ZYXVUW\_z'UbX'dYfW'bHJ[ Y [ fUXY''5XX]h]cbU`XYHJ]g. '5ggYgga Ybh%%]g dfYgYbhX' ]b'hi hcf]U'g ]b'k YY\_' 'cZhY'Wci fgY. : f]XUmC WcVYf'&''5''gh XYbhg'dfYgYbhH ]g''j Y ]b!WUgg" @ch' ]b'&\$&\$z'fij Y''a UmVY''j Y'cb' ]bYQ'5ggYgga Ybh%'&dfYgYbhX' ]b'hi hcf]U'g ]b'k YY\_' 'cZhY'Wci fgY. : f]XUmC WcVYf%'\*''Mci 'a UmVX'ccgY'hc'dfYgYbhH ]g''j Y ]b!WUgg'cf'dfY!fYVefXYX'cb'j ]XYc''D'YUgY'gYY Z fh'Yf' ]bZcfa Uh]cb'cb'A ccX'Y'fY[ UfX]b[ 'h'YgY'UggYgga YbhH]g\_g"

5ggYgga Ybh' . '5bU'mh]W'F Ydcfh

GHUfhXUH'.

@Yb[ h. '' 'l') \$\$'k cfX'UbU'mh]W'fYdcfhg

8YHJ]g.

' 'l') \$\$'k cfX'UbU'mh]W'fYdcfhg'f(\$i E-'i d'cUXYX'j ]U'Hi fb]h]b"Xi Y'k YY\_g'( z'+z'%'\$QF i Vf]W]bX]W]h]b[ ''Yj Y' cZdYfZcfa UbW'U[ U]bghYUWk 'UggYgga YbhW]Hf]Uz'k f]H'Yb'Zcfa Uhj Y'ZYXVUW\_z'UbX'dYfW'bHJ[ Y [ fUXY"

5XX]h]cbU`XYHJ]g.

@Yb[ h. '' 'l') \$\$'k cfXg'8YHJ]g. '7 UgY'ghi Xm' 'b!XYdH'UbU'mg]g''%) \$\$'k cfXg'hcfU'' F i Vf]W]bX]W]h]b[ ''Yj Y' cZdYfZcfa UbW'U[ U]bghYUWk 'UggYgga YbhW]Hf]Uz'k f]H'Yb'Zcfa Uhj Y'ZYXVUW\_z'UbX'dYfW'bHJ[ Y [ fUXY'' 5XX]h]cbU`XYHJ]g. '5ggYgga Ybh&''%Xi Y'K YXbYgXUm+'C WcVYf') . \$\$da ''5ggYgga Ybh&''&Xi Y'K YXbYgXUm &,'C WcVYf') . \$\$da ''5ggYgga Ybh&'' 'Xi Y'Gi bXUm&) 'Bcj Ya VYf') . \$\$da "

5 hYbXUbW`F Yei ]fYa Ybhg

Gh XYbhg`UFY`ghfcb[ `mYbWci fU[ YX`hc`UhhYbX`U`WUggYg`UbX`fYj ]Yk ``YWhi fY`fYWcfX]b[ g"

7 ci fgY`GWXYXi `Y

[J\]Yk`WUgg`hja`YhUV`Y`](#)

H]a`YhUV`Y`

8UhY	HmdY	7cbhYbh
K YY_`%`%(`GYdhYa VYf! %`GYdhYa VYf	Hcd]W	@]ghYb]b[ ž9b[ U[ ]b[ ž7 cbbYW]b[
K YY_`&.`&%GYdhYa VYf! &)`GYdhYa VYf	Hcd]W	GdYU_]b[ #]c]W]b[ `%`CfU`]m
K YY_`.`&.`GYdhYa VYf! &`C`W`c`VYf	Hcd]W	GdYU_]b[ #]c]W]b[ `&.`DfcgcXmUbX`F`Y`hcf]W
K YY_`(`.)`C`W`c`VYf!`- C`W`c`VYf	Hcd]W	6Y\Uj ]b[ #9a VcXm]b[ `%`; Ygh fYg
K YY_`)`. `%&C`W`c`VYf!`%* C`W`c`VYf	Hcd]W	6Y\Uj ]b[ #9a VcXm]b[ `&.`Dfcl Ya ]Wg
K YY_`*`.`%`C`W`c`VYf!`&` C`W`c`VYf	Hcd]W	6fYU_`K YY_`bc`WUggYg
K YY_`+`.`&`C`W`c`VYf!`\$ C`W`c`VYf	Hcd]W	Ghcfm]b[ #5ZYW]b[
K YY_`,`&`Bcj Ya VYf!`* Bcj Ya VYf	Hcd]W	A YX]U]b[ #Dfc`YW]b[
K YY_`-`.`-`Bcj Ya VYf! %`Bcj Ya VYf	Hcd]W	

F Ygci fWg

DfYgWfjVYX`F Ygci fWg`

BchiUj UjUVY

F YWca a YbXYX`F Ygci fWg

BchiUj UjUVY



Gi Va ]gg]cb 'cZ5ggYgga YbhiHUg\_g

Hi fb]h]b 'Gi Va ]gg]cb

# 5 WUXYa ]W< cbYgmiUbX'D`U[ ]Uf]ga

D`U[ ]Uf]ga ]g'i]b[ 'hY'k cfXg'cf]XYUg'cZcH.Yfg'UbX'dfYgYbh]b[ 'hYa 'Ug'mci f'ck b" #WUb'fU\_Y'a Ubm  
Z'ca gZ'Zca 'XY'VYfUHY'WX.YU]b[ 'hc'UW]XYbhU'mWcdm]b[ 'Zca 'U'gci fW'k ]h'ci hUW\_bck 'YX[ Ya Ybh'

I BGK '[ fci dg'd`U[ ]Uf]ga ]bhc'hY'Z`ck ]b[ 'WU] [ cf]Yg.

7 cdm]b[ .i]g]b[ 'hY'gUa Y'cf'j Yfmg]a ]Uf'k cfXg'hc'hY'cf][ ]bU'hYi hcf]XYU'k ]h'ci hUW\_bck 'YX[ ]b[ 'hY'  
gci fW'cf'i]g]b[ 'ei chU]cb'a Uf\_g" 'H\]g'U'gc'Udd'Y]g'hc ]a U[ YgZ'UfhUbX'XYg][ b'dfc YWgZ'Ug'k Y''Ug  
dfYgYbhU]cbg'k \YfY'gca YcbY'dfYgYbhg'Ubch.Yf'g]XYUg'cf'k cfXg'k ]h'ci hWYX]h'

#Uddfcdf]UHY'dUfUd\UfUg]b[ .7\Ub[ ]b[ 'U'Zk'k cfXg'UbX'd\UfUg'k \]Y'a cghmfYU]b]b[ 'hY'cf][ ]bU'  
ghf' W'fY'UbX#f'dfc[ fYgg]cb'cZ]XYUg'cZcH.Y'cf][ ]bU'z'UbX']bZ'ca U]cb'k ]h'ci hUW\_bck 'YX[ Ya Ybh'H\]g'U'gc  
Udd'Y]g]b'dfYgYbhU]cbg'k \YfY'gca YcbY'dUfUd\UfUg'g'Ubch.Yf'g]XYUg'cf'k cfXg'k ]h'ci hWYX]h'UbX'hc  
d]YW]b[ 'hc[ Y'hYf'ei chYg'UbX'dUfUd\UfUg'g]bhc'U'bYk'k \c'Yz'k ]h'ci hUddfcdf]UHY'fYZYfYbW]b[ "

7 c`i]g]cb.k cf\_]b[ 'k ]h'c'hYfg'Vi hdUgg]b[ 'cZcH.Y'k cf\_'Ug'U'dYfgcb'g']bX]j ]Xi U'k cf\_"7 c`i]g]cb'U'gc  
]bWi XYg'dfcj ]X]b[ 'mci f'k cf\_'hc'Ubch.Yf'g]h'XYbhVYZ'fY'hY'Xi Y'XU]f'Z'cf'Z'f'hY'di fdcgY'cZcH.Ya  
d`U[ ]Uf]g]b[ 'UhUbmi]a Yz'dUm]b[ 'Ubch.Yf'dYfgcb'hc'dYfZ'ca 'Ub'UWXYa ]W]Ug\_z'gh'U']b[ 'cf'UW'e]f]b[  
Ubch.Yf'dYfgcb'g'UWXYa ]Wk cf\_'UbX'Wcdm]b[ ]h'cZ'Z]f]b[ 'hc'W'e'a d'YH'Ubch.Yf'dYfgcb'g'k cf\_'cf'gYY\_]b[  
dUma YbhZ'f'W'e'a d'Y]b[ 'UWXYa ]Wk cf\_"

#Uddfcdf]UHY'W]U]cb.7 ]h]b[ 'gci fW'g'k \]W\Uj Y'bhVYYb'fYUXz'k ]h'ci hUW\_bck 'YX[ ]b[ 'hY''gYW'ebXUfm'  
gci fW'Z'ca 'k \]W'\_bck 'YX[ Y'cZcH.Ya '\Ug'VYYb'c'fU]bYX"

8 i d']W]cb'f'fY'Z'd`U[ ]Uf]ga 'E'gi Va ]h]b[ 'mci f'ck b'k cf\_z]b'k \c'Y'cf]b'dUf'z'k \YfY'j'h\Ug'dfYj ]ci g'm  
VYYb'dfYdUfYX'cf'gi Va ]hYX'Z'f'Ubch.Yf'UggYgga Ybhcf'W'e]fgY'Uhi BGK 'cf'Ubch.Yf'i b]j Yfg]h'

7 cffYW'fYZYfYbW]b[ 'dfUW]W]g.

- DUfUd\UfUg]b[ žgi a a Uf]g]b[ žYggUmk f]h]b[ 'UbX'h]a Y'a UbU[ Ya Ybh
- 5ddfcdf]UHY'i gY'cZUbX'U]f]Vi h]cb'Z'f'U'fU]b[ Y'cZa U]f]U'g]bWi X]b[ 'hYi hz]a U[ YgZ'Z'ca i 'UY'UbX  
W'ebW'dtg"

#X]j ]Xi U'Ugg]ghU]bW' ]g'Uj U]UV'Y'cb'fYei YghZ'ca 'H\Y'@YUfb]b[ '7YbhY'f'f'hd.#k k k "Wi bgk "YXi "Ui #"  
Gh XYbhg'UfY'U'gc'fYa ]bXYX'hUhW]fYz' ]h]a Y'a UbU[ Ya Ybh]g'Ub ]a dcfU]bhdUf]hcZgh XmiUbX'cbY'cZcH.Y  
]XYbh]ZYX'W]i gYg'cZd`U[ ]Uf]ga ]g'dccf'h]a Y'a UbU[ Ya Ybh'Gh XYbhg'g'lc'i 'X'U'ck'gi Z]W]Ybh]h]a Y'Z'f  
fYgYUfW'Z'XfU]Z]b[ 'UbX'dfcdYf'fYZYfYbW]b[ 'cZgci fW'g]b'dfYdUf]b[ 'U''UggYgga Ybh]h]a g"

I BGK '@]VfUfmU'gc'\Ug'hY'9@G9'hc'Uj U]UV'Y'hc'Ugg]ghmci 'k ]h'mci f'gh XmiUhi BGK "'9@G9']g  
XYg][ bYX'hc ]bhcXi W'bYk'gh XYbhg'hc'gh X]b[ 'Uhi BGK 'Vi h]hW]b'U'gc'VY'U'[ fYUhfYZYg\Yf'Xi f]b[ 'mci f

- i bXYfgHUbX'mci f'f][ \hg'UbX'fYgdcbg]V] ]hYg'Ug'U'gh XYbhUhl BGK
- VY'Uk UfY'cZd'U[ ]Uf]ga ž'Wcdmf][ \hž' BGK 'Gh XYbh7cXY'cZ7cbXi WñUbX'5WwdfUV'Y'I gY'cZ I BGK '⇒H'F Ygci fW'g'Dc`]Wñ

## 5 WUXYa ]W=Zcfa Uh]cb

: cf`YggYbh]U`ghi XYbh]bZcfa Uh]cb`fY`Uh]b[ `tc.

- fYei Ygth]Zc`f`Yl H`bg]cb/
  - `Uh`gi Va ]gg]cbg`[ i ]XY`]bYg/
  - fYj ]Yk `cZa Uf\_g/
- o