



# MDIA3004

: Yghj U`g`UbX`9l \]V]h]cbg

GYa YghYf`Hk c`#`&\$%



GWcc`cZH`Y`5ftg`UbX`A`YXJU`#`I`BGK`..5ftg`UbX`GcWJU`GWYbWg

# 7 ci fgY`Cj Yfj JYk

'GHUZZ'7 cbhUW`i8YHJ`g`

'7 cbj Ybcfg`

B Ua Y	9a Uj`	5j Uj`UVj`]m	@cWUjcb	D\cbY
5`mggU`F c`h`k`Y`	U`f`c`h`k`Y`4 i bkg "YXi "Ui	6mYa Uj` Uddc]b`a`Y`bh H\i fgXUm	'`%`q` `K`Y`V`g`h`f` 6i ]X]b[	-`'`,`),`*`,`\$`,`+`

'Hi hcfg`

B Ua Y	9a Uj`	5j Uj`UVj`]m	@cWUjcb	D\cbY
? ja `G\Uk	_ja VYfYm`g\Uk 4 i bkg "YXi "Ui	8i f]b[ `gYgg]cb`Vm Ya Uj` Uddc]b`a`Y`bh H\i fgXUm	GW`cc`c`Z`5`f`g` / `A`Y`X]U`z`@`Y`j`Y` `K`Y`V`g`h`f` 6i ]X]b[	

GW`cc`c`7`cbhUW`i`b`Z`c`f`a`U`h`j`c`b`

F`c`c`a` ` ` %`&`z`Y`j`Y`" `F`c`V`Y`f`h`K`Y`V`g`h`f`6i ]X]b[

D\cbY.`f`\$`&`l`-`,`),`(`,`)\*`

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

K`Y`V`g`h`f`H`:\`h`m`g`#`g`U`a`"U`f`g`"i`b`g`k`"Y`X`i`"U`i`

H\Y`G`W`c`c`c`Z`H`Y`5`f`g`U`b`X`A`Y`X]U`k`c`i`X`"Y`h`c`F`Y`g`d`Y`W`z`"m`5`W`b`c`k`Y`X`[`Y`h`Y`H`f`U`X]h`j`c`b`U`7`i`g`h`c`X]U`b`g`z`  
h`Y`6`Y`X`Y`[`U`"f`P`Y`b`g]b[`h`c`b`W`a`d`i`g`l`z`;"`U`X`[`U`"f`f`]m`U`b`X`5`f`h`/`8`Y`g`[`b`7`U`a`d`i`g`Y`g`U`b`X`h`Y`B`[`i`b`b`U`k`U`  
d`Y`c`d`Y`f`b`i`g`h`f`U]U`b`8`Y`Z`r`b`W`":`c`f`W`5`W`U`X`Y`a`m]b`7`U`b`V`Y`f`f`U`E`c`Z`h`Y`"U`b`X`g`k`Y`f`Y`U`W`X`W`a`d`i`g`c`Z`I`B`G`K`]g`  
`c`W`U`h`Y`X`"

## 5`h`h`b`X`U`b`W`F`Y`e`i`]`f`Y`a`Y`b`h`g`

5`g`h`i`X`Y`b`h`j`g`Y`I`d`Y`W`X`h`c`U`h`h`b`X`U`"W`U`g`g`W`c`b`h`U`W`h`c`i`f`g`Z`c`f`U`Z`U`W`!`h`c`!`Z`U`W`f`l`&`E`c`f`V`Y`b`X`Y`X`W`c`i`f`g`Y`U`b`X`  
W`c`a`d`Y`h`U`"U`W`U`j`]h`Y`g`Z`c`f`U`V`Y`b`X`Y`X`c`f`Z`"m`c`b`]b`Y`W`c`i`f`g`Y`"

5`g`h`i`X`Y`b`h`k` \`c`U`f`f`j`Y`g`a`c`f`Y`h`U`b`%`a`]b`i`h`Y`g`"U`h`Y`a`U`m`V`Y`d`Y`b`U`]g`Y`X`Z`c`f`b`c`b`!`U`h`h`b`X`U`b`W`"Z`g`i`W`X`U`d`Y`b`U`h`m`  
]g`]a`d`c`g`Y`X`z`h`Y`g`h`i`X`Y`b`h`a`i`g`h`V`Y`]b`Z`c`f`a`Y`X`j`Y`f`V`U`"m`U`h`h`Y`Y`b`X`c`Z`W`U`g`g`U`b`X`U`X`j`]g`Y`X`]b`k`f`h`b[`k`]h`]b`&`(  
\`c`i`f`g`"

Z`U`g`h`i`X`Y`b`h`Y`I`d`Y`f`]Y`b`W`g`]`b`Y`g`g`z`a`]g`U`X`j`Y`b`h`f`Y`c`f`c`h`Y`f`c`W`W`f`f`Y`b`W`h`U`h`a`U`\_`Y`g`U`V`g`Y`b`W`Z`c`a`U`  
W`U`g`g`#`U`W`j`]m`i`b`U`j`c`]X`U`V`Y`z`c`f`Y`I`d`Y`W`g`h`c`V`Y`U`V`g`Y`b`h`Z`c`a`U`Z`c`f`h`W`c`a`]b[`W`U`g`g`#`U`W`j`]m`z`h`Y`m`g`l`c`i`X`g`Y`Y`\_`  
d`Y`f`a`]g`g`]c`b`Z`c`a`h`Y`7`c`i`f`g`Y`5`i`h`c`f`]m`z`U`b`X`k`Y`f`Y`U`d`]W`U`V`Y`z`h`Y`j`f`Y`e`i`Y`g`h`g`l`c`i`X`V`Y`U`W`W`c`a`d`U`b`]Y`X`V`m`U`b`  
c`f`[`]b`U`c`f`W`f`h`j`Y`X`W`c`d`m`c`Z`U`a`Y`X`]W`"W`f`h`j`Z`W`U`h`c`f`c`h`Y`f`Z`c`a`c`Z`U`d`d`f`c`d`f`U`h`Y`j`]X`Y`b`W`"

5`7`c`i`f`g`Y`5`i`h`c`f`]m`a`U`m`Y`I`W`g`Y`U`g`h`i`X`Y`b`h`Z`c`a`W`U`g`g`Y`g`c`f`U`W`j`]h`Y`g`Z`c`f`i`d`h`c`b`Y`a`c`b`h`"<`c`k`Y`j`Y`f`z`h`Y`m`  
a`U`m`U`g`g`[`b`U`X`X]h`c`b`U`U`b`X`#`f`U`h`f`b`U`h`j`Y`h`U`g`\_`h`c`Y`b`g`i`f`Y`W`c`a`d`]U`b`W`"5`7`c`i`f`g`Y`5`i`h`c`f`]m`W`c`b`g`]X`Y`f`b[`h`Y`  
[`f`U`b`h`b[`c`Z`U`V`g`Y`b`W`a`i`g`h`V`Y`g`U`h`g`Z`Y`X`U`g`h`i`X`Y`b`h`k`]`"g`h`"V`Y`U`V`Y`h`c`a`Y`Y`h`h`Y`W`c`i`f`g`Y`g`"Y`U`f`b]b[`c`i`h`W`c`a`Y`g`

UbX#cf]ci a Y'cZ`YUfb]b[ "5'ghi XYbhgYY\_]b[ 'Uddfcj U'hc`VY`UVgYbhZcf'a cfY`hUb'cbY'a cbh'a i ghUdd`m  
]b'k f]h]b[ 'hc`hY`8YUb`UbX'dfcj ]XY`U``cf][ ]bU`cf`Wf]Z]YX'gi ddcf]b[ 'XcW`a Yb]U]cb"

: cf'a cfY`]bZ'fa U]cb`UVci h`hY`U]hY`bXUbW`'dfc`hW`g`]b`hY': UW`hmcZ5f]g`UbX`GcW]U`  
GWYbW]g. [\hfdg.##k k "Uf\]g"i bgk "YXi "Ui #W ffYbh\]gh XYbhg#UW\]XYa \]W\]bZ'fa U\]cb#dfc`hW`gl \[ i \]XY`\]bYg#](#)

## 5W]XYa ]W]bZ'fa U]cb`

: cf`YggYbh]U`'ghi XYbh]bZ'fa U]cb`fY`U]b[ 'hc.`fYei Yg]g`Zcf`YI h]bg]cb/fYj ]Yk`cZa Uf\_g/cVW dU]cbU`YU`h  
UbX`gUZ]m`YI Ua ]bU]cb`dfc`W]Xi fYg/gdYW]U`W`bg]XYfU]cb`]b`hY`Yj Ybhcz]`bYgg`cf'a ]gUXj Ybh fY/  
ghi XYbhYei ]mUbX`X]gUV`]m`UbX`chYf`YggYbh]U`UW]XYa ]W]bZ'fa U]cb`z  
gYY`[\hfdg.##k k "Uf\]g"i bgk "YXi "Ui #W ffYbh\]gh XYbhg#UW\]XYa \]W\]bZ'fa U\]cb#dfc`hW`gl \[ i \]XY`\]bYg#](#)

7ci fgY'8YHJ]`g

7fYX]hDc]bqg`\*`

Gi a a UfmicZ\hY'7ci fgY

Gi VYWh5fYU.?' WWS

A YX]U'Zcfa Uhg`Uj Y i bXYf[ cbY`U'fUd]X'dfcW'gg'cZX]Zi g]cb`UbX`X]j Yfg]Z]W]h]cbz`UbX`hY`X]ZYfYbh\_]bXg'cZ  
j Ybi Y`UbX`cddcfh b]h]Yg`Zcfj ]Yk ]b[ `a YX]U`Uj Y`a i `h]d`]YX. `cb`]bYza`cV]Y`a YX]Uz`ga U``UbX`Uf[ Y`gWfYb  
j Ybi Yg`UbX`[ U`Yfm]bgfU`U]h]cbg" H\]g`Vei fgY`Yi d`cfYg`hY`dfUW]WU`UgdYWg`cZ`WfYU]b[ `U: Ygh]j U`cf  
9I \]V]h]cbz`]bWi X]b[ `VebW`dh]cbz`d`Ubb]b[ z`Vea`a i b]W]h]cbg`UbX`a UbU[ Ya YbhcZdYcd`Yz`dfcXi W]UbX  
Z]W]h]Yg`z`Vi X[ Yh`z`dfca`ch]cb`UbX`Y[ U`]ggi Yg`h]fci [ \`h`h`Y`Z]bU`g]fU[ ]b[ `cZ`h`Y`Yj Yb`h`Mci `k`]`Uj Y`h`Y  
cddcfh b]h]mhc`[ U]b`dfUW]WU`\_bck`YX[ Y`cZ: Ygh]j U`g`UbX`9I \]V]h]cbg`h]fci [ \`Yi dYf]YbW]b[ `Z]fgh`UbX`h`Y  
gY`YW]h]cbz`cf[ Ub]gU]h]cb`UbX`Yi \]V]h]cb`cZa YX]U`Yi \]V]h]g`]b`U`dUf]W`Uf`Veb]h]i h`ZcW]g]b[ `cb`U`dUf]W`Uf  
dc]bhcZ`Veb]UW]h]VY`k`YYb`cV`YW]h]UbX`j ]Yk`Yfz`VY`k`YYb`A`YX]U`UbX`Ui X]YbW]"

5h\hY`VebWi g]cb`cZ`h]g`Vei fgY`h`Y`gh`XYbhk`]`VY`UV`Y`h`

%`5ddfY]W]h]h`Y`X]j Yfg]h]micZa YX]U`Yi \]V]h]cb`Veb]h]i h]g`UbX`h`Y]f`]a dUW]h]cb`h`Y`dfYgYbh]h]cb`cZ  
a YX]U`k`cf\_g"````  
&" ; YbYfU]h`]bbcj U]h] Y`]XYUg`Zcf`h`Y`Yi \]V]h]cb`cZa YX]U`k`cf\_g"````  
'`" =XYbh]Z]h]h`Y`]bXi gh]fmdfcW]ggYg`UbX`dfUW]W]g`]bj`c`j YX`]b`WfYU]h]b[ `U`Z]gh]j U`cf`Yi \]V]h]cb"  
(`9b[ U[ Y`YZYW]h]Y`mk ]h]b`U[ `fci d`h`dfcXi W]UbX`dfYgYbh]U`dfcdcgU`Zcf`U`Z]gh]j U`cf`Yi \]V]h]cb"

HYUWX]b[ `G]fU]h] [ ]Yg`

HYUWX]b[ `G]fU]h] [ ]Yg.

K`YY`\_mk`cf\_g`l`cdg`k`]`dfcj ]XY`mci `k`]h`h`Y`Zci bXU]h]cbg`cZ`h`Y`Vei fgY`z`fY[ i `Uf`gi ddcfh]Zcf`mci f`dfUW]WU`  
Yi dYf]YbW]g`UbX`dfYdUfU]h]cb`Zcf`h`Y`UggYgga Ybh]h]g\_g"K`YY`\_mk`cf\_g`l`cdg`k`]`XY`]j Yf`UbX`gi ddcfh  
UggYgga Ybh]h]g\_g`XY]h]`UbX`k`]`ZcW`g`cb`gdYW]Z]WUgdYWg`cZ`d`Ubb]b[ `UbX`fi`bb]b[ `U: Ygh]j U`cf`9I \]V]h]cb  
]bWi X]b[ `U`dfYgYbh]h]cb`Vm]Ub`UggcW]U]h]X`]bXi gh]fmdfUW]h]cbYf"K`cf\_g`l`cdg`k`]`dfcj ]XY`cddcfh b]h]m]Zcf  
W]h]WU`X]gW]gg]cb`UbX`[ `fci d`k`cf`\_`UbX`dfcj ]XY`U`Zcfi`a`Zcf`mci`h`dfYgYbh]UbX`g`UfY`mci`f`fYgYUfW  
Z]bX]b[ g"5ggYgga Ybh]h]g\_g`YbVei fU[ Y`Ub`Yi d`cfU]h]cb`UbX`W]h]WU`fYj ]Yk`cZ`Veb]h]a`dcfUfm]Z]gh]j U`g`UbX  
Yi \]V]h]cbg`k`]Y`XYj`Y`cd]b[ `YggYbh]U`dfcZ]gg]cbU`g\_]`g`]bWi X]b[ `h]Ua`k`cf\_z] YfVU`UbX`k`f]h]h]b  
dfYgYbh]h]cbg`z`]bbcj U]h]cb`UbX`fYZYW]h]cb"

## 5ggYgga Ybh

FYZf'hc'hY'a XJU' \$\$(: Yghj Ug/ '9I \J]h]cbg'a ccXY'k YVg]h'Zc'hY'a cghUWw fUH'UbX'i d'hc'XUH' ]bZcfa Uh]cb'UVci hUggYgga YbhiUg\_g"

## 5ggYgga YbhiUg\_g'

5ggYgga YbhiUg_	K Y][ \h	8i Y'8UH'	Gh XYbh@YUfb]b[ Ci hWca Yg'5ggYggYX
9I \J]h]cb'F Yj ]Yk '	' \$i	K YY_ '* 'H\i fgXUm' \$h 5i [ i g]ž&\$% "'#7`Ugg	%ž
F YgYUfW 'DFYgYbhUh]cb'	' \$i	K YY_ ; 'H\i fgXUm% h GYdhYa VYf'cf'K YY_ '- H\i fgXgUm&\$h'GYdhYa VYfž &\$% "'#7`Ugg	%ž
DfccZcZ7 cbWdhGWYYb 6UgYX': Yghj] U''	( \$i	K YY_ '% 'H\i fgXUm&) h CWcVYfž&\$% 'Gi Va ]hi# mci f'WUgg'h]a Y"	%ž&ž ž(

## 5ggYgga Ybh8YHJ]`g

5ggYgga Ybh% '9I \J]h]cb'F Yj ]Yk

GhUfhXUH'. Bch5dd]WVY

@Yb[ h. ; \$\$!%\$\$\$'k cfXg

8YHJ]`g.

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

F YZf'hc'hY'a X]U' \$\$(: Yghj U`g/ '9I \]V]h]cbg'a ccX'Y'k YVg]H'Zcf'hY'a cghUWW fUH'UbX'i d'hc'XUH  
]bZcfa U]cb'UVci hUggYgga Ybh]Ug\_g"

5ggYgga Ybh' . DfccZcZ7cbWdhGWfYyb'6UgYX': Yghj U`

GhUfhXUH. Bch5dd`]WV`Y

@Yb[ h. 'F YZf'hc'hY'a X]U' \$\$(: Yghj U`g/ '9I \]V]h]cbg'a ccX'Y'k YVg]H'Zcf'hY'a cghUWW fUH'UbX'i d'hc'  
XUH' ]bZcfa U]cb'UVci hUggYgga Ybh]Ug\_g"

8YHJ]^g.; fci dg'cZ(!) "%\*!&\$'dU[ Y'df]b]YX'Vcc\_'Yh]bW] X]b[ 'I G6'g]cFU[ Y'Wc]b]b]b[ 'X][ ]H'dfca ch]cbU`

Gi Va ]gg]cb`cZ5ggYgga YbhHUg\_g

Gh XYbng`UfY`YI dYW`X`hc`di h`h`Y]f`bUa Yg`UbX`gh XYbhbi a VYfg`cb`Yj YfmdU[ Y`cZ`h`Y]f`Ugg][ ba Ybng"

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

- K cf\_`gi Va ]hYX`%\$`hc`%-`XUmg`UZhYf`h`Y`gh]di`UH`X`XYUX`]bY`k`]`VY`UggYggYX`UbX`ZYXVUW`dfcj`]XYX`Vi`hU`a`Uf`\_`cZnYfc`k`]`VY`fYW`fYX`"Z`h`Y`k`cf`\_`k`ci`X`Uj`Y`fYW`]YX`U`dUgg`a`Uf`\_`Vi`hZcf`h`Y`UH`bYgg`UbX`h`Y`k`cf`\_`]g`U`W`a`di`gcfm`W`i`fgY`W`a`dcbYbh`f`i`fX`Y`fYei`]fYa`YbhZ`U`gh`XYbhk`]`VY`XYYa`YX`hc`Uj`Y`a`Yh`h`UhfYei`]fYa`Ybh`
- K cf\_`gi Va ]hYX`&\$`cf`a`cfY`XUmg`UZhYf`h`Y`gh]di`UH`X`XYUX`]bY`k`]`bchVY`UW`W`d`h`X`Zcf`UggYgga`Ybh`UbX`k`]`fYW`]Y`bc`ZYXVUW`Z`a`Uf`\_`cf`[`fUXY`"Z`h`Y`UggYgga`Ybh`Ug`\_`]g`U`W`a`di`gcfm`W`a`dcbYbh`c`Z`h`Y`W`i`fgY`U`gh`XYbhk`]`fYW`]Y`Ub`l`bgUhg`Z`U`W`c`fm`:`U`]`fl`:`k`[`fUXY`Ug`U`fYgi`hc`Z`i`bgUhg`Z`U`W`c`fmdYfZ`fa`UbW`]b`Ub`YggYbh`U`W`a`dcbYbh`c`Z`h`Y`W`i`fgY`"

H\]g`]bZ`fa`U`h`cb`]g`U`gc`Uj`U`]UV`Y`Uh`

[\h`dg`##k`k`k`"Ufng`i`bgk`"YXi`"Ui`#W`ffYbh`gh`i`XYbhg`#JW`X`Ya`\]W`\]bZ`fa`U`h`cb`#d`f`c`h`W`c`g`\[`i`\]X`Y`\]bYg`#`](#)

## GdYW]U`7`cbg]XYfU]cb`5`dd`]W]h]cbg`

Mci`W`b`U`dd`m`Z`c`f`gdYW]U`W`c`bg]XYfU]cb`k`Y`b`]`b`Y`gg`c`f`c`h`Y`f`W`f`W`a`g`h`U`b`W`g`]b`h`f`Z`Y`f`k`]h`m`ci`f`UggYgga`Ybh`d`Y`f`Z`fa`UbW`"

G]W`b`Y`gg`Z`a`]g`U`X`j`Y`bh`f`Y`c`f`c`h`Y`f`W`f`W`a`g`h`U`b`W`g`V`Y`m`c`b`X`m`ci`f`W`c`b`f`c``a`Um`

f`D`f`Y`j`Y`bh`m`ci`Z`c`a`W`c`a`d`Y`h`b`[`U`W`c`i`fgY`f`Yei`]fYa`YbhZ`

f`?`Y`Y`d`m`ci`Z`c`a`U`h`Y`b`X`]b`[`Ub`UggYggUV`Y`U`W`h`j`]mZ`

f`G`h`c`d`m`ci`gi`Va`]h`]b`[`UggYggUV`Y`k`cf`\_`Z`c`f`U`W`c`i`fgY`Z`

f`G`[`b`]W`b`h`m`U`Z`Y`W`h`m`ci`f`d`Y`f`Z`fa`UbW`]b`UggYggUV`Y`k`cf`\_`Z`V`Y`]h`U`Z`fa`U`Y`b`X`!`c`Z`g`Ya`Y`gh`f`Y`I`U`a`]b`U`h`c`b`Z`U`W`Ugg`h`Y`g`h`Z`U`U`V`c`f`U`h`c`f`m`h`Y`g`h`Z`U`g`Ya`]b`U`f`d`f`Y`g`Y`b`h`U`h`c`b`c`f`U`b`m`c`h`Y`f`Z`fa`c`Z`UggYgga`Y`bh`

:`c`f`Z`f`h`Y`f`X`Y`h`U`]g`]b`f`Y`U`h`c`b`h`c`GdYW]U`7`cbg]XYfU]cb`]b`W`i`X`]b`[`"K`Y`b`h`c`5`dd`m`Z`"<`c`k`h`c`5`dd`m`UbX`"Gi`d`d`c`f`h`b`[`8`c`W`a`Y`b`h`U`h`c`b`"d`Y`U`g`Y`f`Y`Z`f`h`c`h`Y`GdYW]U`7`cbg]XYfU]cb`k`Y`V`g`h`Y`."

[\h`dg`##gh`XYbh`i`bgk`"YXi`"Ui`#gdYW\]U`W`c`bg\]XYfU\]cb`](#)



5 WUXYa ]W<c bYghmUbX`D`U[ ]Uf]ga

D`U[ ]Uf]ga `]g`i g]b[ `hY`k cfXg`cf]XYUg`cZchYfg`UbX`dfYgYbh]b[ `hYa `Ug`mci f`ck b" `hWUb`hU`Y`a Ubm  
Zcfa gZ`Zca `XY`]VYfUHY`WXYU]b[ `hc`UWV]XYbhU`mW`dm]b[ `Zca `U`gci fW`k ]h`ci hUW\_bck`YX[ Ya Ybh`

I BGK `[ fci dg`d`U[ ]Uf]ga `]bhc`hY`Zc`ck ]b[ `WUHY[ 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`]Yg`hc`]a U[ YgZ`UfhUbX`XYg][ b`dfc`YWgZ`Ug`k Y`Ug  
dfYgYbhU]cbg`k \YfY`gca YcbY`dfYgYbh]g`UbchYf`g`]XYUg`cf`k cfXg`k ]h`ci hWYX]h`

hUddfcdf]UHY`dUfUd`fUg]b[ .`7`Ub[ ]b[ `U`ZYk `k cfXg`UbX`d`fUgYg`k \]Y`a cghmifYU]b]b[ `hY`cf][ ]bU`  
ghfi W`i fY`UbX`#`f`dfc[ fYgg]cb`cZ]XYUg`cZ`hY`cf][ ]bU`Z`UbX`]bZcfa U]cb`k ]h`ci hUW\_bck`YX[ Ya Ybh`H\]g`U`gc  
Udd`]Yg`]b`dfYgYbhU]cbg`k \YfY`gca YcbY`dUfUd`fUgYg`UbchYf`g`]XYUg`cf`k cfXg`k ]h`ci hWYX]hU`bX`hc  
d]YW]b[ `hc[ YhYf`ei chYg`UbX`dUfUd`fUgYg`]bhc`U`bYk `k \c`YZ`k ]h`ci hUddfcdf]UHY`fYZYfYbW]b[ "

7 c`i g]cb. `k cf\_]b[ `k ]h`chYfg`Vi hdUgg]b[ `cZ`hY`k cf\_]Ug`U`dYfgcb`g`]bX]j ]Xi U`k cf\_"`7 c`i g]cb`U`gc



7 ci fgY`GW`YXi `Y

[J`Yk`WUgg`hã`YhUV`Y](#)

H]a`YhUV`Y`

8UH`	Hmd`Y	7`cbh`Ybh
K`YY`_%`&`'`>i`m!`&-`>i`m`K`YV		<p>7`Ugg`Yg`W`ã`a`a`Yb`W`K`YY`_`&amp;</p> <p>5`[`i`]`XY`'`k`YY`_`m`U`W`h`j`]`h`Y`g`]`g`U`j`U`U`V`Y`'`cb`'`h`Y`'`a`X`]`U`'`\$\$`(``:``Y`g`h`j`U`'`g`/`'`9`I`\\`V`]`h`c`b`g`'`a`c`c`X`'`Y`'`g`]`h`Y`"</p> <p>F`Y`Z`Y`f`'`h`'`a`X`]`U`'`\$\$`(``:``Y`g`h`j`U`'`g`/`'`9`I`\\`V`]`h`c`b`g`'`a`c`c`X`'`Y`'`g`]`h`Y`'`Z`c`f`'`U`W`W`'`f`U`h`'`U`b`X`'`i`d`'`h`'`X`U`h`'`]`b`Z`c`f`a`U`h`c`b`'`U`V`c`i`h`h`Y`'`W`i`f`g`Y`"</p> <p>.</p>
6`f`Y`U`_`'`&`(``G`Y`d`h`Y`a`V`Y`f`!`'`\$`G`Y`d`h`Y`a`V`Y`f`	;`f`c`i`d`'`K`c`f`_`	

F Ygci fWg

DfYgWf]VYX`F Ygci fWg`

F YWca a YbXYX`F Ygci fWg

5XX]hcbU`F Ygci fWg`k ]`VY`Uj U]UV`Y`cb`h`Y`Wci fgYf`A ccX`Y`k YVg]h`"

K \Uha U\_Yg`U`; fYUh9I \]V]hcb3

9X]hX`VmDUi `U`A UfW]bWc`U`|`&\$\*\$`D\`]UXY`d\]U`9I \]V]hcbg`b]h]U]j YzD\`]UXY`d\]U`7 YbhfY`Zcf`5 fng`UbX`  
<Yf]U[ Y"

€6B!%\$. \$!- +\$, ' (\*!%\*

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\hfd.##WcbbYWUfng"Ui ghfU`UWci bWf"[cj "Ui #

: Yghj`U`g`5i ghfU`U

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<ck`Hc`Fi`b`U`: ]a` : Yghj`U`z`C b`]bY`6`c[ `fYgci fW`Vm`?`YfUb`Hi``m`

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7cbWdhi`U`]gY`5fh9I \]V]hcb

[\hfd.##Z\]bYUfhi`Uvci`h`Wca`#`X`#`i`fUrc`f`gg`#`i`fUhb\[!`5!G`ck!`b!`%\\$!9Ugm`GH`dg!`5!GH`d!`6m`GH`d!`i`\]XY!`c`f!`5`f!`  
Zi`fUrc`fg`\`ha`](#)

7i fUrcfg\]d`Gra`dcg]i`a`Dfc[`fUa

\hfd.##k k k "Ufh]bgh]i`h`"i`b]a`Y`V`YXi`"Ui`#SSXUu#UggYhg#dXZz]Y#\$\$\$+##+`-`'`(\$#`i`fUrcfg\]d]gma`dcg]i`a`!  
dfc[`fUa`"dXZ`

I`gY`cZ7`ca`di`hyf`@UVg`Mci`W]b`Z]bX`i`d`hc`XUHy`]bZc`fa`U]hcb`UVci`hK`YVghYf`UV`dfcW`Xi`fYg`UbX`]ggi`Yg`  
cb`h`Y`HF`7`k`YVg]hY.`\`hfdg.##fWUfng`"i`bgk`"YXi`"Ui`#HYWb]WU`dfcV`Ya`g`k`]h`Yei`]da`Ybhcf`gc`Zk`UfY`  
cdYfU]hcbg`fbchi`gY`E`]b`h`Y`UVg`z`Ya`U`]`h`Y`gYfj`]WXYg\_4`i`bgk`"YXi`"Ui`

7ci fgY`9j`U`i`U]hcb`UbX`8Yj`Y`cda`Ybh

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f]7`5H`E`Wci`fgY`UbX`h`Y`UW`]b[`Yj`U`i`U]hcb`UbX`]a`dfcj`Ya`Ybhdfc`W`gg`"5bYVW`c`U`9j`U`i`U]hcb`z`k`Y`fY`gh`XY`b]g`  
Z`ca`h`a`Y`h`h`a`Y`Xi`f]b[`h`Y`g`Ya`YghYf`UfY`Yb[`U[`YX`]b`]bZc`fa`U`X]gW`gg]cbg`UVci`h`h`Y`Wci`fgY`"  
C`VgYf`U]hcb`U`9j`U`i`U]hcb`k`Y`fY`h`Y`Y`W`i`fYf`f`W`bj`YbYf`cf`h`h`c`f`E`Y[`i`Uf`mic`VgYfj`Yg`h`Y`Y`ZY`W`h]`YbYgg`c`Z`  
W`UggYg`UbX`Y`W`i`fY`UbX`a`c`X]Z]Yg`h`Y`Wci`fgY`W`cbhY`bh`UbX`XY`]j`Yfm]b`fYgdc`bgY`h`h`c`gY`c`VgYfj`U]hcbg`"  
DUghYj`U`i`U]hcb`Z]bX]b[`g`Uj`Y`VY`b`U`W`Y`X`i`dcb`]b`h`Y`Zc`ck`]b[`k`Umg`"h`k`Ug`]XY`b]h]Z]YX`h`fci`[`\`ZY`XV`UW`  
h`U`h`gh`i`XY`b]g`VY`bY`Z]h`X`k`Y`b`h`Y`Wci`fgY`UggY`gga`YbhUg`\_g`k`YfY`U][`bYX`k`]h`b`Y`Y`X`g`c`Z`h`Y`dfc`Y`W`i`b`

fYgdcbgY'hc'hUhZYXVUW\_U''UggYgga YbhUg\_g'fY'Uf'X]fYWimihc'hY'dfc'YW'fik Ug']XYbhZYX'jb'dUgh  
ZYXVUW\_hUhYfY'k Ug'U'bYX'Zc'f'gh XYbhg'hc'\Uj Y'a cfY']b'WUgg'hja Y'hc'k cf\_'cb'[ fci d'dfc'YWg'UbX  
]bX]j ]Xi U'dfc'YWg''#fYgdcbgY'hc'hUhZYXVUW\_hYfY']g'a cfY'hja Y'U'cWUf'X'Zc'f']bXYdYbXYbh/ '[ fci d  
fYgYUfW'hUg\_g'k ]h]b'hY'k YY\_'mWci fgY'ghfi W'h fY''H\YfY']g'bck 'a cfY'WUgg'hja Y'hc'k cf\_'k ]h'chYf  
gh XYbhg'Z'Yb[ U[ ]b[ ' ]b'WYUfj Y'dfcV'Ya 'gc'j ]b[ ''#fik Ug']XYbhZYX'jb'dUghZYXVUW\_hUhUb'UWfj Y'UbX  
]bh'fUWfj Y'WUggfcca 'Ybj ]fcb' Ybhk Ug'a cghYb[ U[ ]b[ 'UbX'VYbY'Z'W]U'hc''YUfb]b[ ''#fYgdcbgY'hc'hUh  
ZYXVUW\_'YW'h fY'UWfj ]h]g'\Uj Y'VYb'fYXYg][ bYX'hc'YbWci fU[ Y[ fYUf'f'dUf]W]dUf]cb'UbX'gh XYbh  
Yb[ U[ Ya Ybhk ]h'Wci fgY'Wcbh'bhk ]h'Ub'Ya d\Ug]g'cb'gY'ZX]fYWf'X''YUfb]b[ ''

⇒a U[ Y'7 fYX]h