



# MDIA3002

A i `hjd`Uhzcfa `A YX]U

GYa YghYf`C bY`#`&\$%



GWcc`cZHAY`5ftg`UbX`A YX]U`#`I BGK `5ftg`UbX`GcWJU`GWYbWg

7ci fgY`Cj Yfj JYk

`GHUZZ7cbhUWhi8YHUJ`g`

`7cbj Ybcfg`

B Ua Y	9a Uj`	5j Uj`UVj]jm	@cWUhcjb	D\cbY
? YffjY`8Uj JYg	_"XUj JYg4 i bgk "YXi "Ui	VmUddc]bha Ybh	' %%7`F cVYfh K YVghYf	- ' , ) ( , ) *

`Hi hcfg`

B Ua Y	9a Uj`	5j Uj`UVj]jm	@cWUhcjb	D\cbY
7\fg]F cX`Ym	_"XUj JYg4 i bgk "YXi "Ui			

GW\cc`7cbhUWhi`bZcfa Uhjcb

Fcca " %&Z`Yj Y`" `F cVYfhK YVghYf`6i ]X]b[

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

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

K YVg]hY: [\hdg.#gUa "Ufng"i bgk "YXi "Ui](#)

GWYbWg: \hdg.## k k "Ufng"i bgk "YXi "Ui #W ffYbhghi XYbhg#UWUXYa JW]bZcfa Uhcb#dfcfcWc`gl[i ]XY]bYg#

5 UWXYa JW]bZcfa Uhcb`

: cfYggYbhU`ghi XYbh]bZcfa Uhcb`fY`Uh]b[ `hc. `fYei Yghg`Zcf`YI hYbg]cb/fYj ]Yk `cZa Uf\_g/cVW dUhcbU` \YU`h  
UbX`gUZym/YI Ua ]bUhcb`dfcW`Xi fYg/gdYW]U`Wc]bg]XYfUhcb`]b`hY`Yj YbhcZ]`bYgg`cf`a ]gUXj Ybhi fY/  
ghi XYbhYei ]hmUbX`X]gUV]`]hm`UbX`ch`Yf`YggYbhU` UWXYa JW]bZcfa Uhcbz  
gYY: \hdg.## k k "Ufng"i bgk "YXi "Ui #W ffYbhghi XYbhg#UWUXYa JW]bZcfa Uhcb#dfcfcWc`gl[i ]XY]bYg#

7 ci fgY'8YHJ]`g

7 fYX]hDc]bng`\*`

Gi a a UfmicZh\Y'7 ci fgY

Gi VYWh5fYU.? WWS

H\]g`Wci fgY`ZcW`gYg`cb`h\Y`Z`h`fY`g`\_`g`h`U`h`ci`fbU`]ga`[`fUXi`UH`g`b`Y`Y`X`h`c`V`Y`]bXi`ghfmfYUXn`H\]g`a`YUbg`a`UghYf]b[`g`\_`g`]b`UbX`XYj`Y`cd]b[`U`W`h]W`U`ddfcUW`h`c`Ui`X]c`z`j`]gi`U`UbX`j`YfVU`Zcfa`g`cZ`ci`fbU`]gh]W`dfcXi`W]cb`"6miYI`dYf]a`Yb]b[`k`]h`j`]gi`U`UbX`Ui`X]c`g`h`c`f`m`h`Y`]b[`z`h`Y`g`d`Y`W`Z`W`U]a`c`Z`h`]g`W`ci`fgY`]g`h`c`dfcXi`W`a`UH`f]U`f`Y`UX`m`Z`c`f`f`UX]c!`UbX`h`Y`j`]g]cb!ghmY`bYk`g`]h`Y`a`g`"GdYW]U`UH`Y`b]h]cb`]g`[`j`]Y`b`h`c`bYk`Zcfa`g`UbX`ghmY`g`cZ`ci`fbU`]ga`Y`a`Yf[`]b[`c`b`h`Y`]b`h`f`b`Y`h`z`k`Y`f`Y`Ui`X]c`z`j`]gi`U`z`j`YfVU`UbX`]b`h`f`U`W`]j`Y`Y`Ya`Y`b`h`g`W`c`a`V]bY`]b]bcbj`Uh]Y`k`Um]g`h`c`h`Y`b`Y`k`g`k`c`f`h`m`a`i`h]g`Y`a`]c`h]W`g`h`c`f]Y`g`"5g`ci`fbU`]gh]z`j`]XYc[`f`U`d`Y`f`z`g`ci`b`X`Y`b[`]b`Y`Y`f`z`dfcXi`W`f`UbX`Y`X]h`c`f`z`Z`h`f`Y`ci`fbU`]gh]g`b`Y`Y`X`h`c`X]g`d`Um[`f`Y`UH`f`Z`YI`]V`]h`m`UbX`U`XY[`f`Y`Y`c`Z`YI`d`Y`f]a`Y`b`U`h]c`b`]b`h`Y`]f`b`Y`k`g`[`U`h`Y`f]b[`d`f`U`W`]W`g`"H\]g`W`ci`fgY`d`f`c`j`]X`Y`g`g`h`X`Y`b`h`g`k`]h`h`Y`c`d`d`c`f`h`b]m`h`c`X`Y`j`Y`cd`h`Y`g`Y`g`\_`g`z`UbX`h`c`U`X`X`j`U`i`Y`h`c`h`Y`]b`Z`c`fa`U`h]c`b`h`Y`m[`U`h`Y`f`z`V`c`h`]b`h`Y`f`a`g`c`Z`d`f`c`X`i`W]b[`W`c`a`d`Y`]b[`g`h`c`f]Y`g`UbX`]b`YI`d`Y`f]a`Y`b]b[`k`]h`a`i`h]d`U`h`Z`c`fa`b`Y`k`g`[`U`h`Y`f]b[`UbX`X]gg`Y`a`]b`U`h]c`b`d`f`U`W`]W`g`"

5 h\h\Y`W`c`b`W`i`g]c`b`c`Z`h`]g`W`ci`fgY`h`Y`g`h`i`X`Y`b`h`k`]`V`Y`U`V`Y`h`c`

- % I bXYfghUbX]bXi ghfmfYei ]fYa Ybng`Zc`f`Z`h`f`Y`ci`fbU`]ga`h`f]b]b[`UbX`ci`fbU`]gh]Wg`\_`g`UbX`U`h`f]V`i`h`Y`g`
- &" 7 f]h]W]m`Y`j`U`i`UH`h`Y`f`c`Y`g`d`Um`Y`X`V`m`k`f]h]Y`b`z`j`]gi`U`UbX`Ui`X]c`Y`Ya`Y`b`h`g`]b`h`Y`a`i`h]d`U`h`Z`c`fa`g`h`c`f`m`h`Y`]b[`d`f`c`W`g`g`
- ' " 9 ZY`W]j`Y`m]b`W`c`d`c`f`U`h`k`f]h]Y`b`z`j`]gi`U`UbX`Ui`X]c`]b`Z`c`fa`U`h]c`b`
- ( " I bXYfghUbX`h`Y`gh`f`Y`b[`h`g`UbX`k`Y`U`b`Y`g`g`Y`g`c`Z`k`f]h]Y`b`z`j`]gi`U`UbX`Ui`X]c`]b`Z`c`fa`U`h]c`b`]b`h`Y`g`h`c`f`m`h`Y`]b[`d`f`c`W`g`g`
- ) " K`c`f`\_`h`c`[`Y`h`Y`f]b`U`W`c`U`V`c`f`U`h]Y`Y`b`j`]f`c`b`a`Y`b`h`h`c`k`f]h]Y`UbX`d`f`c`X`i`W`c`f]j[`]b`U`UbX`W`c`a`d`Y`]b[`g`h`c`f]Y`g`h`U`h`W`c`a`V]b`Y`k`f]h]Y`b`z`j`]gi`U`UbX`Ui`X]c`Y`Ya`Y`b`h`g`h`c`h`Y`]f`a`U`i`]a`i`a`d`c`h`Y`b]h]U`

HYUWX]b[`G`h`f`U`h`[`]Y`g`

DSf]a`S`W`

FZ[e`U`ag`d`e`W`T`g[`V`e`a`f`Z`W`e][`^`e`S`V`]`ai`W`W`Y`W`k`ag`Z`S`h`W`V`W`h`W`a`b`W`W`[`k`ag`d`W`h`W`#`S`V`\$`U`ag`d`e`W`e`[`5`a`\_`\_`g`[`U`S`f]a`\_`~`<`ag`d`S`f`e`\_`z`F`Z`[e`\_`W`S`e`i`W`W`]`b`W`U`f`k`ag`f`a`U`a`\_`W`f`a`f`Z`[e`U`ag`d`e`W`d`W`S`V`k`f`a`g`V`W`d`f`S]`W`e`U`Z`a`S`d`k`d`W`e`W`S`d`U`Z`[`f`a`f`Z`W`U`a`e`f`d`g`U`f]a`a`X`a`g`d`S`f`e`f]U`f`W`j`f`e`[`i`Z`[U`Z`k`ag`V`d`S`i`a`f`Z`W`d`W`h`S`f`d`W`e`W`S`d`U`Z`f]W`d`S`f`g`d`W`f`a`[`X`a`d`\_`k`ag`d`S`S`k`e`W`e`a`X`b`g`T`f`e`Z`W`e`f`a`d`W`e`Z`I`W`S`e`a`W`j`b`W`U`f`k`ag`f`a`T`W`d`W`S`V`k`f`a`f`S]`W`a`f`Z`W`b`c`d`V`g`U`f]a`a`X`a`d`Y[`S`^`a`g`d`S`f`e`f]U`e`f`a`d`W`e`f`Z`S`f`[`U`a`b`a`d`c`f`W`\_`S`Y`W`e`S`V`e`a`g`V`z`F`Z`[e`\_`W`S`e`f`Z`S`f`k`ag`e`Z`a`g`V`T`W`i`W`z`h`W`e`W`[`Z`a`i`f`a`S`b`b`c`d`S`U`Z`S`V`[`f`W`h]W`]`W`k`e`a`g`d`U`W`e`X`a`d`k`a`g`d`e`f`a`c`k`S`V`f`a`U`a`V`g`U`f`S`^`[`f`W`h]W`e`[`S`b`c`d`X`W`e`e`j`a`S`^`S`V`W`Z`[U`S`^`S`\_`W`z`K`ag`e`Z`a`g`V`S`e`a`S`d`W`S`V`k`T`W`X`S`\_`[f]S`d`i`[f`Z`f`Z`W`e`f`d`g`U`f`g`d`W`S`V`W`W`\_`W`f`e`a`X`S`X`W`S`f`g`d`W`e`f`a`c`k`S`V`k`ag`e`Z`a`g`V`S`e`a`Z`S`h`W`S`i`W`z`V`W`h`W`a`b`W`W`e`W`e`W`a`X`i`Z`S`f`\_`S]`W`X`a`d`S`U`a`\_`b`W`f`Y``W`e`e`f`a`c`k`z`

HYUWX]b[`G`h`f`U`h`[`m`

@Y`W`h`f`Y`g`.

H\Y`Y`W`h`f`Y`h]a`Y`k`]`g`Y`f]Y`h`c`Y`I`d`U`b`X`m`c`i`f`i`b`X`Y`f`g`h`U`b`X]b[`c`Z`W`f`Y`b`h`i`a`i`h]a`Y`X]U`h`Y`X`]b`X`i`g`h`f`m`W`c`b`h`Y`I`g`U`b`X`h`Y`f`Y`e`i`]f`Y`a`Y`b`h`g`Z`c`f`ci`fbU`]gh]g`h`c`V`Y`g`\_`Y`X`]b`g`Y`j`Y`f`U`U`f`Y`U`g`c`Z`a`i`h]d`U`h`Z`c`fa`ci`fbU`]ga`"G`\_`g`h`U`h`U`j`Y`

U`fYUXmVYYb`hUi [ \h]b`%\$\$!`UbX`&\$\$!`Yj`Y`7ca`a`i`b]WU]cb`UbX`>ci`fbU`]ga`V`ci`fgYg`k`]`VY`fYj`]Yk`YX`k`]h`  
fYgdYVWh`c`h`Y`a`i`h`d`]WU]cb`c`Za`Y`Ub]b[ `h`Uhc`VW`fg`k` \Yb`h`Y`X]ZY`fYbh`Y`Ya`Y`bhg`fk`cfXg`z`gci`bXg`z`]a`U[`Ygk`  
Uf`V`a`V]bYX`]b`h`Y`a`i`h`gYa`]ch]WYbj`]fcb`a`Y`bh`

H\Y`Y`W`h`fY`h`j`a`Y`k`]`g`Y`f`Y`h`c`Y`l`d`UbX`m`c`i`f`i`b`X`Y`f`g`h`U`b`X`]`b[ `c`Z`W`f`f`Y`b`h`a`i`h`j`!`a`Y`X]U`h`Y`X`]`b`X`i`g`h`f`m`V`c`b`h`Y`l`h`g`U`b`X`  
h`Y`f`Y`e`i`]f`Y`a`Y`b`h`g`Z`c`f`c`i`fb`U`]g`h`g`h`c`V`Y`g\_]`Y`X`]`b`g`Y`j`Y`f`U`U`f`Y`U`g`c`Z`a`i`h`d`U`h`Z`c`f`a`c`i`fb`U`]ga`"G\_]`g`h`U`h`\`U`j`Y`  
U`f`Y`U`X`m`V`Y`Y`b`h`U`i`[ \h]b`%\$\$!`UbX`&\$\$!`Yj`Y`7ca`a`i`b]WU]cb`UbX`>ci`fbU`]ga`V`ci`fgYg`k`]`VY`fYj`]Yk`YX`k`]h`  
fYgdYVWh`c`h`Y`a`i`h`d`]WU]cb`c`Za`Y`Ub]b[ `h`Uhc`VW`fg`k` \Yb`h`Y`X]ZY`fYbh`Y`Ya`Y`bhg`fk`cfXg`z`gci`bXg`z`]a`U[`Ygk`  
g`h`c`h`c`a`v]bY]Zaj`z`X`f`V`h`j`Y`h`g`a`Y`d`d`W`U`b`Y`g`c`Z`a`Y`b`h`Y`X`Y`Y`Z`U`f`a`W`Y`Y`Y`W`h`f`Y`a`Y`U`g`k`]`V`U`f`Y`f`h`a`Y`d`d`Y`]W`U`h`V`Y`

5`h`c`i`[ \`h`Y`h`Y`U`f`Y`U`b`X`W`U`g`g`g`h`Y`U`f`Y`U`f`[`Y`z`k`Y`g`h`]`g`Y`Y`\_`h`c`a`U`\_`Y`h`Y`Y`W`h`f`Y`g`U`g`]b`h`f`U`W`h`j`Y`U`b`X`  
W`b[`U[`]b[ `U`g`d`c`g`g]V`Y`"5`h`h`j`a`Y`g`z`m`c`i`"V`Y`Y`b`V`c`i`f`U[`Y`X`h`c`g`d`Y`U`\_`U`b`X`U`g`\_`e`i`Y`g`h`c`b`g`z`\`U`j`Y`m`c`i`f`g`U`m`z`h`c`Z`Y`f`  
]X`Y`U`g`U`b`X`d`U`f`h]W`d`U`h`Y`]b`X`Y`V`U`h`Y`g`"K`Y`k`U`b`h`m`c`i`h`c`g`Y`Y`h`Y`Y`W`h`f`Y`U`g`U`W`U`b`W`h`c`h`h`b`\_`h`c`[`Y`h`Y`f`b`c`h`  
a`Y`f`Y`m`V`c`b`g`i`a`Y`d`f`Y`l`d`U`W`U[`Y`X`\_`b`c`k`Y`X`[`Y`"G`c`"]g`h`b`z`f`Y`Z`Y`W`h`U`b`X`[`Y`h]b`j`c`j`Y`X`"H`Y`Y`W`h`f`Y`g`]X`Y`g`k`]`V`Y`  
U`j`U]U`V`Y`c`b`h`Y`V`c`i`f`g`Y`A`c`c`X`Y`k`Y`V`g]h`V`Y`Z`c`f`Y`h`Y`Y`W`h`f`Y`"<`c`k`Y`j`Y`f`z`X`i`Y`h`c`V`c`d`m`f][ \`h`f`Y`e`i`]f`Y`a`Y`b`h`g`U`h`c`h`

# 5ggYgga Ybh

5`dfcXi W]cb`]XYUg'a i ghVY`Uddfcj YX`Vminci f`hi`fcf"

h]g`YbWci fU[ YX`h`Uhimci`dfYgYbhimci`f`cf][`]bU`dfcXi W]cb`]b`ZYY`a i`h]d`UhZcfa`Zcfa`Uhg`k`YfY`dcgg]V`Yz`gi`W`Ug`[5hu\]\\_glz`cf`"\]b\\_gj`\]U`J`\]a`YcZ`Gci`bXWci`X`cf`Mci`Hi`VY`"Mci`W\]b`dfcj`\]XY`h`YgY`"\]b\\_gj`\]U`A`ccX`Y`H\Y`](#)




a i ghVY'Wcdmf][ \hZYyZgc'gi dd'jYX'Zca'idi V'jWmz'hY'ck bY'fcZd\ch'cf'WYUhj] Y'Wca a cbg'j]WbWWE"

&"'5'Zj] Y'hc'gYj] Yb'a ]bi hY'dcXWUghzk ]h'ja U[ Y'fWcdmf][ \hZYyZE"

' "'5'Zj] Y'hc'gYj] Yb'a ]bi h'j ]XYc"

( "'5' - \$\$! %&\$\$'k cfX'ZYUhi fY'5B8'g\cfhfcbY'hc'hk c'a ]bi hYgE'dcXWUghcZcbY'cZh\Y' ]bhYfj ]Yk g ]b h\Y'ghc'fm' 'Mci'g\ci'X' bch\Uj] Y'hc'Xc'UXX]hcbU' ]bhYfj ]Yk g'Zcf'h]g'Wca dcbYbhz'fU\hYf'YX]hUb'Ui X]c fYWcfX]b[ 'cZcbY'cZmci f' ]bhYfj ]Yk g"

) "'5' - \$\$! %&\$\$'k cfX'ZYUhi fY'5B8'g\cfhfcbY'hc'h'fYY'a ]bi hYgE'j ]gi U'fY'UHY'hc'h\Y'ghc'fm!'Y' [ 'Ub ]bhYfj ]Yk h\Uhmci'Z'a YX'fUbX'i gYX'fUbgW]dh]b'ghc'fm'c'f'cdYb]b[ 'ccd'j ]XYcZ'c'WU]hcb]j ]XYcZ'c'f'h\Yf'fY"[ ; cc[ 'Y'YUfh\Z'XUfU'j ]gi U'g]U]h]cbZ'UfV\j U'Zc'hU[ YE"

Gi Va ]gg]cb' bchYg.A ccX'Y'H\Y'6cl' !'d'YUgY'fU\_Y' bchY'cZgi Va ]gg]cb' ]bghf] W]cbg

Hi fb]h]b'gYh]b[ . H\]g'g'bchU'Hi fb]h]b'Ugg][ ba Ybh

5ggYgga Ybh(. 'F YUX]b[ '>ci fbU'

GHUfhXUHY. 'Bch5dd'jWUV'Y

@Yb[ h. '9ei ]j "%\$\$\$'k cfXg

8YHU]g. 'Gh XYb]g'a i ghWca d'YH'Y][ \hW]h]W'fYZYW]cbg'cb' ]ghX'Wci fgY'fYUX]b[ g'fUddfci "'Yb[ h'dYf Wca a Ybh'&) '\$'k cfXgE" '6YghZci f'Yb]f]Yg'hc'VY'gi Va ]hYX'Zcf'Z]bU'UggYgga Ybh'5''Y][ \hYb]f]Yg'a i ghVY Wca d'YH'X'VmXYUX' ]bY'hc'Uj c]X'nYfc'a Uf\_ 'Zcf'fUg\_'9ei ]j "' %\$\$\$'k cfXg"C b[ c]b[ 'k f]hYb'ZYXVUW\_'j ]U Wca a YbhZ' bW]cb'UhWci fgY'k ]\_": cfa U'k f]hYb'ZYXVUW\_'VUgYX'cb'UggYgga YbhW]hYf]U'UhYbX'cZWci fgY k ]h' [ fUXY# Uf\_"

5XX]h]cbU'XYHU]g.

H\Y'fYUX]b[ 'ci fbU'g'UfY'Xi Y'U'k YY\_'UZhf'h\Y''YWhi fY'h\YmfY'UHY'hc"'-b'gca Y'k YY\_g'h\YfY' ]g'YI hfU'h]a Y Xi Y'hc'Ubch\Yf'UggYgga YbhXi Y'XUHY"

H\Y'Z]bU'gi Va ]gg]cb' ]g'mci f'VYghZci f'ci fbU'Yb]f]Yg" 'Hc'Z'Z' h]g'Ugg][ ba YbhZ'fYUX]b[ 'ci fbU' Yb]f]Yg'a i ghVY'gi Va ]hYX'h'fci [ \ci h'h\Y'gYa YghYf"

F YZf'hc'h\Y'fYUX]b[ '>ci fbU' ]bghf] W]cbg'Zcf'Z' f'h\Yf' ]bZcfa U]hcb"

Gi Va ]gg]cb' bchYg.C b[ c]b[ "

Hi fb]h]b'gYh]b[ . H\]g'Ugg][ ba Ybh]g'gi Va ]hYX'h'fci [ \Hi fb]h]b'UbX'ghi XYb]g'Xc' bchYg'Y'Hi fb]h]b g]a ]Uf]mifYdcf]g"



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 Ybhg"

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

≠mci`YbWci bhYf`U`dfcV`Ya`k`Yb`U`h`Ya`dh]b[`hc`gi Va ]hmcif`Ugg][ ba Ybh`h`fci [ \`Hi`fb]h]b`z`d`YUgY`h`Yd`cb`Y`9I`h`fb`U`Gi`ddcf`h`c`b`-`,`,)````%cf`Ya`U]`h`Ya`cb`[YI`h`fb`U`h`h`gi`ddcf`h`i`bgk`"YXi`"Ui](#)

f`G][ b]Z]W]b]h]m]U]Z]Y]W]h]m]i] f]d]Y]f]Z]c]f]a] U]b]W]W] ]b]U]g]g]Y]g]g]U]V]`]Y]`]k] c]f]\_]Z]V]Y]`]h]U]`]Z]c]f]a] U]`]Y]b]X]!]c]Z]g]Y]a] Y]g]h]Y]f]`]Y]I] U]a] ]b]U]h]c]b]Z]U] W]U]g]g]`]h]Y]g]h]Z]U]`]U]V]c]f]U]h]c]f]m]h]Y]g]h]Z]U]`]g]Y]a] ]b]U]f]d]f]Y]g]Y]b]h]U]h]c]b]`]c]f]U]b]m]i]c]h]Y]f]`]Z]c]f]a] `]c]Z]U]g]g]Y]g]g]a] Y]b]h]

: c]f]`]Z] f]h]Y]f]`]X]Y]h]U]`]g]`]b]`]f]Y]`]U]h]c]b]`]h]c]`]G]d]Y]W]U]`]7]c]b]g]X]Y]f]U]h]c]b]`]b]W]i] X]b]b] [ ]`]K] \]Y]b]`]h]c]`]5]d]d]`]m]Z]`]<]c]k]`]h]c]`]5]d]d]`]m]`]U]b]X] `]G]i] 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]`]G]d]Y]W]U]`]7]c]b]g]X]Y]f]U]h]c]b]`]k] Y]V]g]h]Y]`].

[\\]h\]c\]g.\]#\]g\]h\] X\]Y\]b\]h\]i\] b\]g\]k\] "Y\]X\]i\] "U\]i\] #\]g\]d\]Y\]W\]U\]`\]!\]W\]c\]b\]g\]X\]Y\]f\]U\]h\]c\]b\]](#)

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

D`U[ ]Uf]ga `]g`i g]b[ `h`Y`k cfXg`cf]XYUg`cZchYfg`UbX`dfYgYbh]b[ `h`Ya `Ug`mci f`ck b" `hWUb`hU`Y`a Ubm  
Zcfa gž Zca `XY`]VYfUHy`WXYUh]b[ `h`UWV]XYbU`mW`dm]b[ `Zca `U`gci fW`k ]h`ci hUW\_bck`YX[ Ya YbH`

I BGK `[ fci dg`d`U[ ]Uf]ga `]b`h`Y`Zc`ck ]b[ `WUHy[ cf]Yg.

7cdm]b[ .`i`g]b[ `h`Y`gUa Y`cf`j Yfmg]a ]Uf`k cfXg`h`h`Y`cf][ ]bU`hYI hcf]XYU`k ]h`ci hUW\_bck`YX[ ]b[ `h`Y  
gci fW`cf`i`g]b[ `ei`ch]cb`a Uf\_g`H\]g`U`gc`Udd`Yg`h`ja U[ YgžUfhUbX`XYg][ b`dfc`YWgžUg`k Y`Ug  
dfYgYbU]h]cbg`k \Yfy`gca YcbY`dfYgYbh]g`UbchYf`g:]XYUg`cf`k cfXg`k ]h`ci hWYX]h[ cf]Yg.

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

7 ci fgY`GWYXi `Y

[J\]yk`WUgg`ha`YhUV`Y](#)

H]a`YhUV`Y`

8UH	HmdY	7cbhYbh
K YY_%`&*: YVfi Ufm!`(` A UfVX	@YWhi fy	b]fcXi W]cb. Df]bW]d`Yg`cZ7cbj Yf[ Ybh>ci fbU]ga  F YUX]b[ g.`  G]a cbgZA "`f&\$%&L"<agd S]e_ Sf fZW5 daeedSve, 5 de]e S` V A bbadg` [fk Xad fZWBd]eeZA Y`Vci fbYZ5i gfU]U. GW]VY"7<5DH9F`CB9. >ci fbU]ga` Ug`Ub UWhcZYb[ U[ YX`W]h]nYbg\]dZdd"%&L&&"  <Y]b]W]XZ5" f&\$%&L": `cVU`BYk g 9I W]Ub[ Y`UbX`BYk cf_]>ci fbU]ga " b]7" DYh]fg/`A >6fcYfga Uz fXg]tZ F d]ef S` V BSd[U]bSf[a]` [ S F d] e]Xd_W @W e >S` VeUSbW/dd", -1%\$%L`BYk`Mcf_#@cbXcb. F ci hYX[ Y"  ? c`XnmZ>" f&\$%&L" BcSUf[U] Y 5a` hWd]W UW<agd S]e_, 3` ;` fcbVgUf]a` fa 5 daeeZ` W]S E fackfW] YzBYk`Mcf_#@cbXcb. F ci hYX[ Y"7<5DH9F`CB9.



<p>K YY_ ; . ! &amp; ' 5df ] ! ! &amp; - 5df ]</p>	<p>@YWi fy</p>	<p>9h ] Vg ] b h \ Y W b j Y f [ Y b h b Y k g f c c a</p> <p>F Y U X ] b [ g .</p> <p>6 Y b X Y f z &gt; F " z 8 U j Y b d c f t z @ 8 " z 8 f U [ Y f z A K " z U b X : Y X \ Y f z : " f l &amp; \$ \$ - E " D W b a d f ] Y</p> <p>x a d f Z W ? W [ S z - h \ Y X ] j c b z B Y k : M c f _ z B M # C I z e f X 1 ? . C I z e f X 1 b j Y f g ] m</p> <p>D f Y g g " 7 &lt; 5 D H 9 F ' &amp; % ' 9 h \ ] V g z d d " ) + + ! * \$ ' "</p> <p>7 f U ] [ z 8 5 " f &amp; \$ % % &amp; % U W * W U W [ A \ \ W &lt; a g d S [ e _ z @ d b X c b z I ? . G U [ Y "</p> <p>7 &lt; 5 D H 9 F ' &amp; . 5 b Y h \ ] W \ \ Y b g z c f \ \ c c _ ] b [ \ U h Y I W \ \ Y b W z d d " % ! &amp; (</p> <p>K U f X z G " f &amp; \$ % " E " H \ Y ' 9 h \ ] V g c z 8 ] [ ] h \ \ &gt; c i f b U \ ] g a z ] b .</p>

m

		<p>F YUX]b[ g"</p> <p>@UbWUghYfz?"f&amp;\$%&amp;E"H[VW&amp; &lt;agd S[e_ X&amp;dFZWI Wfz-bHYfi XY.'6UW_dUW_&gt;ci fbU]ga '8YZbYX"dd'(\$!( ' "</p> <p>J ]gz: "f&amp;\$% E"Hk ]hYfUg'U'F Ydcf]b[ 'Hcc' Zcf 6fYU_]b[ 'BYk gZ'6Y]fS^ &lt;agd S[e_ f f&amp;: %Z &amp;+!( + "</p> <p>Hca d_]bgZ5" f&amp;\$\$, E"@Yggcbg: fca '5 '6UW_dUW_&gt;ci fbU]gh'DcmbHYf'cf[ \hfdg.#k k k "dcmbHYf'cf[ #bYk g#Yggcbg!VUW_dUW_!ci fbU]gh</p>
<p>K YY_%&amp;. '&amp;%A Um!'&amp;+ A Um</p>	<p>@YWh fy</p>	<p>7ci fgY'K fUd'l d</p> <p>F YUX]b[ g.</p> <p>&gt;cbYgzG"f&amp;\$%+E"8]gfi dh]b[ 'hY'BUffU]j Y.'a a Yfg] Y'&gt;ci fbU]ga 'j]b'J ]fi U' F YU]mi"&lt;agd S^aX? VW[S BcSUf[UW'%'f&amp;! 'Ez%+%! '% ) "</p> <p>5`Vf[ \hZ&gt;"f&amp;\$%+E"K YWca Y'hc'hY'9fU'cZ: U_Y'BYk g"? WW[S S' V 5a_ _g' [USf[a' z &amp; f] E, +, - "</p> <p>@Y!K f[ \hZ'D"ZD\"]dgZ5"ZUbX'K ]hgW[ YzH" f&amp;\$%&amp;E"5ZS' Y[ Y' &lt;agd S[e_ " @cbXcbZl ? . 'F ci hYX[ Y"7\UdhYf: ci f. '8c]b[ ' ]h5"" ]b'U'A i 'h!G_]`YX I b]j YfgY dd"* !, \$"</p>
<p>K YY_% . '&amp;, 'A Um!' " &gt;i bY</p>	<p>GYa ]bUf</p>	<p>K YY_% ]g mci f'Ughk YY_ cZhi hcf]U'gzUg hY'h hcf]U'g fi b'U'k YY_ VY\ ]bX'hY 'YWh fYg"</p> <p>H\YfY ]g'bc'YWh fY h.]g k YY_ "</p> <p>Mci f'UggYgga YbhC f[ ]bU' DfcXi W]cb ]g'Xi Y'h.]g k YY_ "D`YUgY fYZf'hc A ccX'Y Zcf UggYgga Ybhgi Va ]gg]cb ]bgfhi W]cbg"</p> <p>Mci f'fYUX]b[ 'ci fbU'Z]bU'gi Va ]gg]cb fVYghZci fE]g'Xi Y'gccb"</p> <p>H\YfY UfY'bc'gYhfYUX]b[ g'Xi Y`Vi hd`YUgY fYZf'hc'5ggYgga Ybhg'Zcf XYUX']bYg Zcf mci f'fYUX]b[ 'ci fbU'UbX'cf[ ]bU'dfc'YWh</p>



F Ygci fWg

DfYgWf]VYX`F Ygci fWg`

H\YfY`jg`U`dfYgWf]VYX`fWca`di`gcfm`Vcc\_`Zcf`h`jg`Wci`fgY`Uj`Uj`UV`Y`Zca`h`Y`I`BGK`Vcc\_g\cd`UbX`U`gc`j`JU`h`Y`VfUfm`

6YXbUfY\_žA "žUbX`7 Ud`Yž<`"f&\$%&L`"BYk`g`8]gWci`fgY"@cbXcb`#BYk`Mcf\_`7cbh]bi`i`a`"

H\]g`Vcc\_`k`j`VY`gi`dd`Ya`YbhYX`VmifYUX]b[`g`gci`fW`X`Zca``ci`fbU`g`UbX`Vcc\_g`ža`cghcZk`\]W`k`j`VY`Uj`Uj`UV`Y`h`fci`[\`h`Y`VfUfm]W]h`c[`i`Y`cf`]b`ci`f`A`ccX`Y`g]h`7`ci`fgY`F`YUX]b[`g`h`U`h`U`gc`]b\_g`h`c`h`Y`]VfUfm]f`Ygci`fW`g`"H\Y`Z`f`YUX]b[`]gh]g`]b`h`Y`k`YY\_!Vm`k`YY\_`gi`a`a`UfmcZ`Y`W`f`Y`#`Y`UX]b[`]h`a`Y`h`U`V`Y`g`D`Y`U`g`Y`U`X`j`]g`Y`h`Y`Y`W`h`f`Y`f`c`f`h`h`c`f`]Z`m`ci`U`j`Y`X`]Z]W`h`Y`g`c`V`h`U]b]b[`]U`b`m`i`f`Y`U`X]b[`]g`"

F`Y`Z`f`h`c`A`ccX`Y`Zcf`h`h`c`f]U`df`Y`d`U`f`U`h`c`b`a`U`h`f]U`ž`]b`W`X]b[`]a`i`h`d`U`h`Z`c`f`a`Y`I`U`a`d`Y`g`h`U`h`k`j`VY`f`Y`Z`f`f`Y`X`h`c`]b`h`h`c`f]U`g`"

5XX]h]cbU`F Ygci fWg"

6YXbUfY\_žA "'UbX`7 Ud`Yž<`"f&\$%+L`F`Z`W`6`[e`U`a`g`d`e`W`a`X`@`W`e`H`S`g`W`e`,`:`,`a`i`@`W`e`A`d`Y`S`[e`S`f`a`e`5`d`W`S`f`W`@`W`e`i`a`d`Z`[`W`e`"@cbXcbžl`?`.`C`I`D`"

6YbXYfž>F "ž8Uj`Y`b`d`c`f`ž`@8`"ž8`f`U`[`Y`f`ž`A`K`"ž`U`b`X`:`Y`X`Y`f`ž`:"f&\$%-L`D`W`b`a`d`f`Y`X`a`d`f`Z`W`?`W`[S`ž`-`h`Y`X]h]cb`"BYk`Mcf\_#C`I`Z`f`X`.`C`I`D`"

6i`ž`5`"f&\$%\$L`"?`g`f`\_`W`[S`<`a`g`d`S`f`e`\_`,`3`B`d`S`U`f`[U`S`^`9`g`[V`W`ž`B`Y`k`M`c`f`\_`ž`B`M`F`c`i`h`Y`X`[`Y`"

7`f`U`[`ž`8`5`"f&\$%&L`"7`j`U`W`W`U`W`[`A`^`f`W`<`a`g`d`S`f`e`\_`ž`@cbXcb`"I`?`.`G`U`[`Y`"

;`]`h`Y`f`ž`G`"f&\$%\*L`"?`g`f`\_`W`[S`E`f`a`d`k`f`W`f`Y`X`a`d`6`[Y`f`S`^`5`a`\_`\_`g`[U`S`f`a`e`"BYk`Mcf\_ž`B`M`F`c`i`h`Y`X`[`Y`"

;`f`U`m`ž`>`ž`6`c`i`b`Y`[`f`i`ž`@`ž`7`U`a`V`Y`f`g`ž`@`f`Y`X`g`L`"f&\$%&L`F`Z`W`6`S`f`S`<`a`g`d`S`f`e`\_`:`S`V`T`a`a`]`"G`Y`V`U`g`h`c`d`c`ž`7`U`.

A Y]\_Yž; "žUbX'F YXXYbž; "f9XgE" f&\$%&E" @W e A` f W F d` eXd\_ Sf[a` e S` V 5a` f] g[fWēžBYk 'Mcf\_ž  
BM'DU' [ fUj Y'A UWā ]'Ub"

C'8cbbY`žD"žA W b] [ \hž8 "žUbX'9ghž">žf&\$%&E" <agd S'fe\_ Sf fZWE bWWW aX4kfWē, 3gefđS'fS`  
@W ebSbWē [ fZW\$#ef 5W fgdkžH\Y'K U`\_Ym: ci bXU]cb#A 955ž5i ghfU]Ub'F YgYUfW'7 ci bW]ž  
7 UbVYffU" \hd.##k.k."k.U`\_Ymg"Wēa #bYk g#%#%#

D\]`]dgž; "UbX'@]bX[ fYbžA "f&\$%) E"3gefđS'fS` 4đSVUSeF <agd S'fe\_ žGci h`A Y'Vci fbYž5i ghfU]U.'  
C I D"

D]WfXžF; "f&\$%&E"HS'gW5dWf[a` S` V fZW8gfgdWaX@W e A d'S` [eSf[a` e, I Zk S` V: ai <agd S'fe\_  
? gef 5ZS` YWfa DW\_ S[ D WWhS` f [ fZW\$#ef 5W fgdkž6UfW'cbUžGdU]b. 'A YX]U'LL =

F UnžJ "f&\$%) E" fZWF WWh[e[a` : S` VTaa], 3` ;` e[VWde 9g[VWfa TW' Y S 9 dWf 4đSVUSeF  
<agd S'fež@c bXcbžI ? . 'A UWā ]'Ub"

G]a cbgžA "f&\$%&E" <agd S'fe\_ Sf fZW5đeedaSve, 5đ[e]e S` V A bbađg` [fk XđfZWBdWē" 'A Y'Vci fbYž  
5i ghfU]U. 'GW]VY"

HUbbYfžG"ž? Ug]b[ YfžA "žUbX'F ]WUfXgcbžB "f&\$%- E"8WfsgdWl đf[ Y F W'f Y fZWE fackžGci h`A Y'Vci fbYž  
5i ghfU]U. 'C I D"

HUbbYfžG"žUbX'F ]WUfXgcbžB "f&\$% E" <agd S'fe\_ DWēWsdJZ S` V ;` hWēf[Ysf[a` [ 3 6 [Y[fS' adV"  
@cbXcbžI ? . 'C I D"

K ]\_]bgcbž>G"ž; fUblž'59"žUbX': ]g\Yfž8 >"f&\$%- E" Bđ U]b'Wē aX5a` hWđYW f <agd S'fe\_ žBYk  
Mcf\_#C I žcfx. 'C I D"

GcW]U' 'A YX]U

K Y'YI dYWhgh XYb]g'hc'a U]b]U]b'đfcZYgg]cbU`ghUbXUfXg' ]b'U` WēffYgdc bXYbWž]bWi X]b[ 'gcW]U' a YX]U"  
Mci 'Wb'i gY' A 8-5' \$\$&'cf'k YYh#ž`ck`4 8Uj ]YgA YX]U\_ fP Yff]Y'8Uj ]Ygž:žcf'Wēi fgY'Wēa a Yb]g'UbX žcf  
g\Uf]b[ 'YI Ua d'Yg'cZa i 'hđ'Uhžcfa 'cf'bYk g"'Gh XYb]g'k \c'a U\_Y' ]bUđđfcđf]U]h'fYa Uf\_g'k ]`VY'fYđcftYX  
hc'hY'I b]j Yfg]mUi hcf]h]Yg"

<][ \mF YWēa a YbXYX

Gh XYb]g'g\ci 'X'Wēbh]bi Y'hY]fYb[ U[ Ya Ybhk ]h`hY'5i ghfU]Ub'bYk g'a YX]U'UbX'k ]h` ]bh'fbU]cbU'bYk g  
a YX]U'cf[ Ub]gU]h]cbg'hUhicZZYf'U'fUb[ Y'cZdYfgdYW]j Yg'cb'W ffYbhk cfX'Yj Yb]g'hUhUfY'g\Ud]b[ 'hY'bYk g  
UbX'dUf]W'Uf'mhcgY'hUhYb[ U[ Y' ]b'a i 'hđ'Uhžcfa "

FZWE Sfgd/Sk BSbWēžFZW? a` fZ'k'UbX'FZWCgSđWđk 7eeSk 'UfY'ja đcftUbhgci fW'g'cZ'cb[ Yf'ēi fbU]gh]W  
YggUm]g" `bh'fbU]cbU`nž`cb[ fYUXg'cf[ 'UbX'`cb[ žcfa "cf[ 'W fU]h'Uf]h]WYg'žcfa 'Ufci bX'hY'k cfXžžcfa 'hY  
BYk 'Mcf\_Yf'hc'b]WXY'h]Yg'UWfcgg'U'fUb[ Y'cZgi V'YWgž]bWi X]b[ 'gđcft'@cb[ žcfa "cf[ 'U'g'c'Z'Yfg  
đcXW]ghg"

567 @W eDSV[ajž567 'DSV[aj @Sf[a` S^UbX'567 @W e\$&'cZ'Yf]b!XYd'h'Wēj YfU[ Y'cZk cfX'bYk g'UbX  
W ffYbhUZZ]fg'hfci [ \hY]f'fUX]c'UbX'HJ 'bYk g'đfc[ fUa g"

Gh XYb]g'a UmU'gc ž]bX' ]h\Y'dž `hc'Yb[ U[ Y'k ]h`c'hYf'UđđfcUWYg'hc'Wēbj Yf[ Ybh'ēi fbU]g'a "

F YWca a YbXYX'F Ygci fW'g

667'7c''Y[ Y'cZ>ci fbU]ga

K Y'\Uj Y'cb'j]bY''jVfUfmUW'gg'hc'hY'gi VghUbj]U'fYgci fW'g'dfcj ]XYX'Vm'hY'667'7c''Y[ Y'cZ>ci fbU]ga " H\YgY'j]bW' XY.

6f]YZ]b[ g'cb'\ck'hc'fYdcf'hc'b'j Uf]ci g'\_Ym'hd]WUfYUg'gi W'Ug'Dc'h]Wg'Z'F'Y'] [cbžGWYbW'ž'hY'9W'ebca m'

G\_]`g#h'hc'f]U'j ]XYcg'cb'U'k ]XY'fUb[ Y'cZ'Ym'ci fbU]gh]Wg\_]`g'gi W'Ug'k'f]h]b[ '\YUX'j]bYgž]b'h'f] ]Yk ]b[ ž d]h'W]b[ 'U'g'hc'f'm'ž'hU\_]b[ 'UbX'W'ccg]b[ 'd]W'h'fYgž] ]XYc'g\_]`gž'Ui X]c'g\_]`g"

D'YUgY'hU\_Y'hY'h]a Y'hc'k'U'W'h'hY'fY'Yj Ubh'h'hc'f]U'g'69: C F 9'mci 'Ya VUf'\_cb'mci f'a U'cf'dfc'Y'W'g"

5XcVY'DfYa ]YfY'UbX'5i X]h]cb'hfU]b]b[ . @mbXU"Wca '

@mbXU"Wca 'j]g'Ub'cb'j]bY'h'hc'f]U'h'cc''Z'f'gh'XYbh]hc''YUfb'cf'Yb\UbW'hY]f'dfcXi W]cb'g\_]`g'Uj U]UV'Y'j ]U hY''jVfUfm'Hi'hc'f]U'g'j]bW'XY'DfYa ]YfY'ž'5i X]h]cb'ž'5i XUW]m'ž'D\c'hc'g\cdž@[ \fcca 'UbX'Ub]a U]h]cb'gc'žk'UfY" @mbXU"Wca 'j]g'\[ '\m'fY'Wca a YbXYX'Z'f'gh'XYbh]k ]g\]b[ 'hc'ž'f'h'Y'f'h'Y]f'Ui X]c'#j ]gi U'g\_]`g"

7ci fgY'9j U'i U]h]cb'UbX'8Yj Y'cda Ybh

DYf]cX]W'`mgh'XYbhYj U'i U]h]Y'ZYXVUW'\_cb'hY'W'ci fgY'j]g'[ U'h'YfYX'ž'i g]b[ 'Ua cb[ 'ch'Y'f'a YUbgž] BGK'f] 7ci fgY'UbX'HYUW]b[ '9j U'i U]h]cb'UbX'ā d'fcj Ya Ybh'f] 5H9'±'D'fc'W'gg'"G'h'XYbh'ZYXVUW'\_j]g'hU\_Yb gYf]ci g'nž'UbX'W'cb'h]bi U'ja d'fcj Ya Ybh]g'U'fY'a UXY'hc'hY'W'ci fgY'VUgYX'j]b'dU'f'hc'b'gi W'ZYXVUW'"

: cf'Yi Ua d'Yž'ZYXVUW'\_Z'f'A 8-5' '\$&]b'&\$%&#% 'g\ck YX'h'U'gh'XYbh]k'YfY'W'cb'W'fbYX'UVci h dU'f]W'dU]h]cb'j]b'h'hc'f]U'g'"G'h'XYbh]bc'h'X'h'U'gh'ca Y'cZ'hY]f'd'Y'f'g'X]X'bc'h'W'ca Y'hc'W'U'gg'd'f'Y'd'U'f'Y'X'cf ]bXYX'\UX'bc'j]XYU'k'\Uh\UX'\UddYbYX'j]b'h'Y''Y'W'i'fY''H\Y'f'Y'Z'f'Y'ž'k'Y'ja d'Ya Ybh'X'U'g'm'gh'Ya 'cZ'f'h'hc'f]U' d'f'Y'd'U'f'U]h]cb'hUg\_g'f'ž'k'\]W'gh'XYbh]k'YfY'Yi d'Y'W'X'hc'W'ca d'Y'h'j]b'd'f'Y'd'U'f'U]h]cb'Z'f'h'Y'h'hc'f]U''H\Y'g'Y'hUg\_g' U'f'Y'VUgYX'cb'gh'XYbhYb[ U[ Ya Ybh]k ]h'h'Y''Y'W'i'fY'a U'h'f]U'UbX'f'Y'Yj Ubh'f'Y'UX]b[ g''

ā U[ Y'7fYX]h

6cX]Yg/ 'bh'f'Z]W'g'&\$%\*

7F ⇒ CG

7F ⇒ CG'Dfcj ]XYf'7cXY.'\$\$\$- ;