

EDST5122

Gh XYbh@YUfb]b[']'b'<][\Yf'9Xi WWh]cb

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

7 ci fgY`Cj Yfj JYk

`GHUZZ7cbhUWhi8YHU]`g`

`7cbj Ybcfg`

B Ua Y	9a U]`	5j U]UV]J]m	@cWUhcjb	D\cbY
Gi Y`GHUfZ]Y`X	g"ghUfZ]Y`X4 i bgk "YXi "Ui	D`YUgY`WcbhUWhia Y VmYa U]"	%%\$"; ccXgY``	f\$&E`-' ,) &) &(

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5fng`UbX`GcW]U`GWYbWYg

@Yj Y`%ž>c\b`; ccXgY``@i]X]b[`fI &\$E

H. ž*%f&E`-' ,) `% ++

9. YXi WUhcjb4 i bgk "YXi "Ui

K . YXi WUhcjb"Ufng"i bgk "YXi "Ui

5hYbXUbW`F Yei]fYa Ybhg

5XX]h]cbU`GWXcc``cZ9Xi WUhcjb`UhYbXUbW`fYei]fYa Ybhg

h]g`YI dYWYX`h.UhUbmigh XYbhYbfc`YX`]b`Ub`98GH`Wci fgY`k]h`h`Y`GWXcc``cZ9Xi WUhcjb`k]`a U_Y`U Wca a]ra Ybhlc`h`Y]f`YUfb]b[`UbX`UhYbX`U`WUggYg`]b`Z`k`YfY`WcbhYbh]g`XY`]j YfYX`]b`U`ZUW!hc!ZUW a cXY`YI W`dh]b`W`fU]b`W]fW a ghUbW`g`k`YfY`UVgYbW`]g`Xi`Y`hc`]`bYggž`a]gUXj Ybh fy`cf`i bZcYgYYb W]fW a ghUbW`g`VYmcB`h`Y`gh XYbhg`Wcbhfc`"5`a]b]a i a`UhYbXUbW`fYei]fYa YbhicZ, \$i`]g`fYei]fYX`Zcf YUW`Wci fgY`" `b`W`fU]b`W]fW a ghUbW`g`Z`U`gh XYbhia Umia]gg`i d`hc`&\$i`cZU`Wci fgY`k]h`ci hZcfa U`Udd`]WUhcjb`UbX`i d`hc`" i`cZU`Wci fgY`k]h`Zcfa U`XcW a YbhUhcjb`fgYbhj]U`Ya U]`hc`Wci fgY`Wcbj YbcfE dfcj]X]b[`U`h`Y`fYei]fYa Ybhg`XYHU]YX`VY`ck`UfY`a`Yh`Gh XYbhg`bcha YYh]b[`h`Y`UhYbXUbW`fYei]fYa Ybhg`ci h]bYX`UVcj`Y`k]`VY`Uk UfYX`Ub`i`bgUhgZUW`c`fm: U]`fI : E`Zc`f`h`U`h`Wci fgY`fY[UfX`Ygg`cZ`h`Y]f`dYfZcfa UbW`]b`h`Y`UggYgga YbhUg`g`c`f`ch`Y`f`fYei]fYa Ybhg`Zc`f`h`Y`Wci fgY`"

: cf`Z`f`h`Y`f`]bZcfa Uh]cb`cb`9Xi WUhcjb`Wci fgY`UhYbXUbW`fYei]fYa Ybhg`ž`d`YUgY`fYZf`hc`h`Y`fYgdYW]j`Y`98GH`A`ccX`Y`a`cXi`Y`f`g`E`"

5WUXYa]W`bZcfa Uh]cb`

: cf`YggYbh]U`gh XYbh]bZcfa Uh]cb`fY`Uh]b[`hc`fYei Yghg`Zcf`YI`hYbg]cb/fYj`JYk`cZa`Uf_g/cWV`dUh]cbU`Y`YU`h`UbX`gUZY`m`YI`Ua`]bUh]cb`dfcW`Xi`fYg/gdYW]U`Wcbg]XYfUh]cb`]b`h`Y`Yj`YbhicZ]`bYgg`cf`a`]gUXj`Ybh`fY`/`gh`XYbhYei`]m`UbX`X]gUV]`]m`UbX`ch`Y`f`YggYbh]U`U`WUXYa`]W]bZcfa`Uh]cb`ž`gYY`[\hfdg.#k k k "Ufng"i bgk "YXi "Ui #W ffYbhghi XYbhg#UWUXYa \]W\]bZcfa Uh\]cb#dfchWc`gl\[i \]XY`\]bYg#](#)

7ci fgY'8YHJ]`g

7fYX]hDc]bHg`*`

K cf_`cUX

%) \$\`ci fg]bWi X]b[`WUgg`WcbhUWh\ci fgžfYUX]b[gžWUgg`dfYdUfU]cbžUggYgga YbžZc``ck`i d`UW]j]hYgž YhW

Gi a a UfmcZ`h`Y`7ci fgY

⊕`h`jg`Wci fgYžmci `k`j`Vi]X`cb`h`Y`Vf]YZ]b]fcXi W]cbg`hc`gh`XYbh`YUfb]b[`UbX`YZZYW]j`Y`h`YUW]b[dfYgYbhX`]b`h`Y`⊕]fcXi W]cb`hc`I`b]j`Yfg]mi@YUfb]b[`UbX`HYUW]b[`Wci fgY`H`jg`Wci fgY`]g`VUgYX`cb`h`Y Uggi a dh]cb`h`Uh]b`cfXYf`hc`]a`dfcj`Y`gh`XYbh`YUfb]b[ž`h`YUW]b[`dfUW]W`b`YYXg`hc`VY`i`bXYfd]bbYX`VmUb i`bXYfghUbX]b[`cZ`ck`dYcd`Y`YUfb`Mci`k`j`Wcbg]XYf`YUfb]b[`Zca`U`bi`a`VYf`cZdYfgdYW]j`Yg`h`Uh]bWi XY`h`Y`YI`dYf]YbW]g`cZgY`Z`Wc`YU[i`Yg`UbX`gh`XYbh]UbX`h`Y`X]j`YfgY`YXi`W]h]cbU``]h`fU]h`fY`h`UhXfUk`g Zca`Z]Y`Xg`gi`W`Ug`UXi`h`YUfb]b[ž`]\[\Yf`YXi`W]h]cbž`fYgYUfW]`]b]hc`X]gW]d`]bUfm`YUfb]b[`UbX`h`YUW]b[`UbX fYZYW]j`Y`dfUW]W``Mci`k`j`VY`Ug`_YX`hc`YI`d`cfY`h`Y`bU]h`fY`cZ[ccX`h`YUW]b[`]b`]\[\Yf`YXi`W]h]cb`UbX UddfcUW]Yg`hc`h`YUW]b[`h`Uh`YUX`hc`]\[\`ei`U`]mi`YUfb]b["

5h`h`Y`WcbWi`g]cb`cZ`h`jg`Wci fgY`h`Y`gh`XYbhk`j``VY`UV`Y`hc

%"

H\Y`hYUWX]b[`ghfUHY[]Yg`Zc`f`h\]g`Vti`fgY`UfY.`

%`""`hc`Vi`]X`cb`YUfb]b[`h\Ycf]Yg`UbX`UddfcUWX`Yg`hc`hYUWX]b[`]bfcXi`W`X`]b`98GH) %&%`f7`@C`%ž`&ž` `UbX`
(`Łf5ggYgga`Ybhg`%ž`&`UbX``Łf5ggYgga`Ybh` Ł

&""`hc`a`cXY`YZZ`Wj`Y`YUfb]b[`W`bfYX`UbX`V`YbXYX`YUfb]b[`UddfcUWX`Yg`]b`\[`Yf`YXi`Wj]cb`]b`h\Y`
hYUWX]b[`UbX`UggYgga`YbhdUWj]W`g`cb`h\]g`Vti`fgY`f7`@C`%ž`&ž` `UbX`(`Łf5ggYgga`Ybhg`%ž`&`UbX`` Ł

`""`hc`i`gY`h\Y`X]j`YfgY`Yi`dYf]YbW`cZWti`fgY`dUfh]W]dUbhg`Ug`k`Y`Ug`ch`Yf`UWUXYa`]Wj`hc`XYj`Y`cd

5ggYgga Ybh

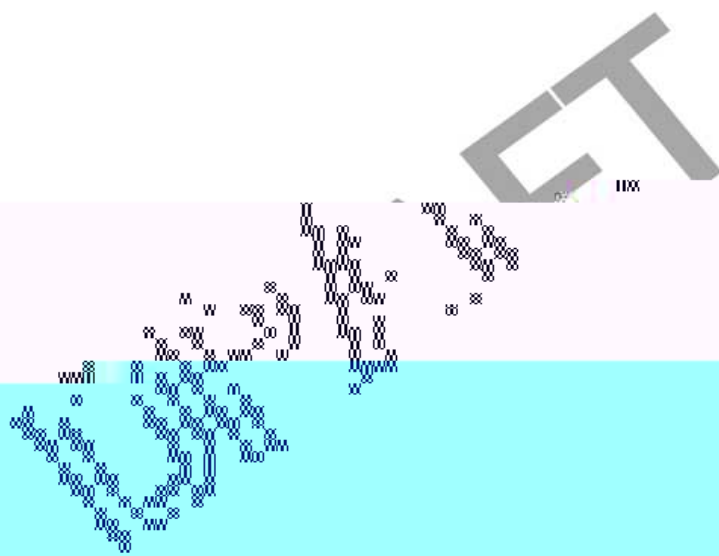
Q-YfY'mci 'WUbc'ci h]bY'UbmiFY'Yj Ubh]bZcfa Uh]cb'hUhk Ug'bch]bWl XYX'j]b'5 A G'Vi ha Umidfcj Y'\Y'dZ'`Zcf
mci f'gh XYbhg": cfYI Ua d'Yžmci 'a][\hdfej]XY'XYfU]g'cb'hY'fYZfYbW]b['gmghYa ž"b_g'hc'dfYj]ci g
gh XYbhYI Ya d'Ufg'cf'hY'XYg][bUHX'k YY_]b'hY'Wci fgY'hUhmci 'k]`X]gW gg'hY'UggYgga YbhU'hYb[h"
a dcfhUbhmž'h]g'gYW]cb:]g'Ub'UfYU'Zcf'mci 'hc'dfej]XY'j]bZcfa Uh]cb'hUhxYg'bch[c'h'fci [\ 'hY'Uddfcej YX
[cj YfbUbW'ghfi W'h fY"Q

5ggYgga YbhHUg_g'

5ggYgga YbhHUg_	K Y][\h	Gh XYbh@YUfb]b[Ci hWca Yg		

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H\Y`gYWŁbX`UggYgga YbhUg_]g`hc`k`f]H`Ub`YggUmcb`gh`XYbh`YUfb]b[`UbX`\ck`i]hfY`UHg`hc`mci`f`
UddfcUW`hc`h`UW]b[`ž`XfUk`]b[`Zca`mci`f`YI`dYf]YbWgž]bg][`hg`Zca`mci`f`W`YU[`i`Yg`YI`dYf]YbWgž`h`Y`
h`YcfYh]W]`]h`fUhi`fY`UbX`Zca`fYgYUfW`]b`hc`mci`f`ck`b`ghi`XYbhg`YI`dYf]YbWg`cZ`YUfb]b[`i]b`cbY`cZmci`f`
W`i`fgYg`"H\Y`U]a`cZ`h`Y`hUg_]g`hc`i`gY`h`YgY`]bg][`hg`hc`Z`fh`Yf`XYj`Y`cd`UbX`Ufh]W`UH`mci`f`ck`b`h`UW]b[`
d\]cgcd\mfU`gc`fYZffYX`hc`Ug`U`fU]h]cbU`Yž`UddfcUW`cf`ZUa`Yk`cf`Ł"



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Yei U`k Y][\h]b`XYHfa]b]b[`hY`fYWta a YbXYX`[fUXY"8YdYbX]b[`cb`hY`bUhi fY`cZhY`UggYgga YbhUg_ž
`YWti fYfg`a UmU`gc`WcbhYI hi U`]nY`UbX#cf`Ua YbX`hYgY`gdYW[Z]WWf]hYf]U" `H\Y`fYWta a YbXYX`[fUXY`]g
hYbhUj] Y`cb`mžgi Va`YWhc`ghUbXUfX]gUh]cb`dfcWYggYg`UbX`Uddfcj U`Vmh\Y`GW.cc`cZ9Xi WU]cb
@YUfb]b[`UbX`HYUW]b[`7ca a]hY"

I BGK 'G7 < CC @ 'C: '98I 75H€B 'FI 6F ⇨ # 998657? 'G < 99H'

98GH) %&&

5ggYgga YbhHUg_ '5ggYgga Ybh&'fl -B5@Ł

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8Ydħ'cZUbUmg]g'UbX#f'Wf]ħei Y']b'fYgdcbgY'ħc'ħY'ħUg_				
: Ua]'Uf]m]k]ħ'UbX'fY'Yj bW'cZdfcZYgg]cbU'UbX#f'fYgYUfVX]hYfUħi fY'i gYX'ħc'gi ddcfhfYgdcbgY				
Għfi Wħi fY'UbX'cf[Ub]nUħ]cb'cZfYgdcbg				
DfYgYbhUħ]cb'cZfYgdcbgY UWŁc'f]b['ħc' Uddfcd]Uħ'UWUXYa]WUbX]b[i]ghWŁbj Ybh]cbg				
; YbYfU' WŁa a Ybhg#fYWŁa a YbXUħ]cbg'Zcf'bYI h]ħa Y.'				

@YWħi fYf

F YWŁa a YbXYX.' ' ' #&\$'fl @DG'7F'8B' < 8Ł'

k Y][\ħ]b[' . '&\$i

'B 6. ħ.]g' h]W_g']b'ħY'j Uf]ci' g'Vcl Yg'UbX'XYg][bYX'ħc'dfcj]XY'ZYXVUW_ħc'gh' XYbřg/ħ.YmiUFY' bch[]j' Yb Yei U'k Y][\ħ]b'XYħfa]b]b['ħY'fYWŁa a YbXYX' [fUXY" 8YdYbX]b['cb'ħY'bUħi fY'cZħY'UggYgga YbhHUg_ž

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``UhYX`XYUX`]bY

5 WUXYa]W<cbYghmUbX`D`U[]Uf]ga

- i bXYfgHUbX'mci f'f][\hg'UbX'fYgdcbg]V']hYg'Ug'U'gh XYbhUhl BGK

		<p>⊖!WUgg'gYgg]cb. %&" \$! '&" \$da ž: f]XUm' %gh 5i [i gh''</p>
K YY_+. ' 'GYdhYa VYf! '- GYdhYa VYf	C b]bY'5Wj] jlm	<p>K YY_+. 'Gh XYbhg'Ug'dUfbYfg Gh XYbhg'Ug'dUfbYfgž Ug'fYgYUfWYfgžUbX'Ug'Wc! WfYUhc fg''</p>
K YY_'. : %\$ GYdhYa VYf! %* 'GYdhYa VYf	GYa]bUf	<p>K YY_'. : Gh XYbhg'Ug'dUfbYfg Gh XYbhg'Ug'dUfbYfgž Ug'fYgYUfWYfgžUbX'Ug'Wc! WfYUhc fg ⊖!WUgg'gYgg]cb. %&" \$! '&" \$da ž: f]XUm%(h GYdhYa VYf</p>
K YY_-'. : %+ 'GYdhYa VYf! &' 'GYdhYa VYf	C b]bY'5Wj] jlm	<p>K YY_-'. 'Gh XYbhUddfcUWYg'hc''YUfb]b[Gh XYbhWc bW'dh]cbg'cZ'UbX'UddfcUWYg'hcž 'YUfb]b[''</p>
6fYU_ '&' 'GYdhYa VYf! ' \$'GYdhYa VYf		
K YY_%. : %C WcVYf!' + C WcVYf	C b]bY'5Wj] jlm	<p>K YY_%. : 9i dYf]Ybh]U''YUfb]b[9i dYf]Ybh]U''YUfb]b[. @]b_]b['h'Ycfmhc'dfUW]W k]h' h'Y'YI Ua d'Y'cZK @'''' ..</p>
K YY_%%'. : 'C WcVYf!' % C WcVYf	GYa]bUf	<p>K YY_%%'. : 9i dYf]Ybh]U''YUfb]b[⊖!WUgg'gYgg]cb. %&" \$! '&" \$da ž: f]XUm %&h' C WcVYf''</p>
K YY_%&. : %) 'C WcVYf! &%C WcVYf	GYa]bUf	<p>K YY_%&. : @YUfb]b['UbX'hYUW]b[]b'U'WU b[]b[< 9'Wc b hYI h 9i d'c'f]b['Ya Yf[]b[]ggi Yg'Ua]X'h'Y'WU b[]b[< 9'Wc b hYI h' ⊖!WUgg'gYgg]cb. %&" \$! '&" \$ž: f]XUm%- h' C WcVYf</p>

F Ygci fWg

DfYgWf]VYX`F Ygci fWg`

F YWca a YbXYX`F Ygci fWg

F YWca a YbXYX`HYI hg

6][[gž>"/`HUB[ž7" f&\$+\$+L" FWSUZ[Y XadcgS ffk`MSd [Y Sfg` [hWde[fk" H\]fX`9X]hcb"A U]XYb\YUX. C dYb
I b]j Yfg]miDfYgg"

<i bhž@/`7\U'a Yfgž8" f9XgŁ" f&\$%&Ł" G` [hWde[fk fWSUZ[Y [X Ugež3`MSd [Y ŽUW fdW SbbcaSUZž
7Ua VYfk Y": 579F`DfYgg"

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

=k]`VY`hUW\]b[`hY`Wci fgY`Zc f`hY`Zfgh]a Y`h\]g`gYa YghYf" =:cc_`Zc fk UfX`hc`mci f`ZYXVUW`h\ fci [\ `hY
gYa YghYf`UbX`Uh`hY`YbX`cZ`hY`Wci fgY"

⇒ U[Y`7 fYX]h

Gi Y`GHUfZ]Y`X

7F ⇒ CG

7F ⇒ CG`Dfcj]XYf`7 cXY. \$\$\$- , ;