

# PPEC1001

hfcXi Wjcb`hc`Dc`]hWgZ`D\`]cgcd\mUbX`9Wt bca ]Wg

HYfa`Cby``##`&\$&\$



: UW`hmicZ5 frg`UbX`GcWJU`GWYbWg``##`H\Y`I`bJj`Yf

7ci fgY`Cj Yfj ]Yk

`GHJZ`7cbhJW`i8YHJ`g`

`7cbj Ybcfg`

B Ua Y	9a Uj`	5j Uj`UVj]m	@cWjhcb	D\cbY
: Yb[g\]`K i	: Yb[g\]`k i 4 i bgk "YXi "Ui	H\i fgXUmj &.\$\$(. \$\$da `UbX`Vm Uddc]bha Ybhj	F a `% ' ž A cfj Yb`6fck b 6`X[ "	- ' , ) ! ' * %

GVXcc`7cbhJW`i`bZcfa Uhjcb

7 ci fgY'8YHJ]`g

7 fYX]hDc]bqg '\*`

Gi a a UfmicZ`hY'7 ci fgY

H\]g`Wci fgY`]bfcXi W`g`hY`X]gWd`]bYg`cZD\]cgcd\mžDc`]hWg`UbX`9Wcbca ]WgžUbX`a cfY`gdYW]Z]WU`mi`hY`  
gmbYf[ ]Yg`UbX`hYbg]cbg`gi`ffci`bX]b[ `hY]f`X]gh]bW]j`Y`UddfcUWX`Yg`hc`\_bck`]b[ `hY`k`cfX`"H\Y`a`U`cf`  
W`U`Y`b[ ]Yg`Z]W]b[ `dc`]Wra`U`Yfg`hcXUm`-`Zca` `]bYei`U`]mihc`[ ]Ycdc`]hWU`]bgHUV`]m-`UFY`UhcbW`dc`]hWU`ž`  
YWcbca ]WUbX`d\]cgcd\]WU`" <ck`h`YgY`W`U`Y`b[ ]Yg`UFY`i`bXYfg]hcX`UbX`UXXfYggYX`fYghcb`]XYUg`UbX`  
a`Yh`cXg`XYj`Y`cdYX`VmZci`bXU]cbU`h`]b`\_Yfg`]b`D\]cgcd\mžDc`]hWg`UbX`9Wcbca ]WgžUbX`YgdYW]U`mVm`  
hcgY`k`l`cgY`h`ci`[ ]hYa`VfUWX`h`YgY`h`fYY`X]gWd`]bYg`" #`h`]g`Wci fgYžmci`k`]`gh`Xmi`hY`]XYUg`UbX`  
a`Yh`cXg`cZ`h`YgY`h`fYY`X]gWd`]bYgž`UbX`h`Y`W]hWU`]b]hYfUW]cbg`VYh`YYb`h`Ya`ž`]b`cfXYfž`Z]fghmž`hc`]XYb]h]m`  
h`Y]f`W`b]fU`fc`Y`]b`Wcb]hYa`dcfUfmid`i`V`]WX`Y`V`U`h`gž`UbXž`gY`WcbX`mž`hc`UggYgg`h`Y]f`fY`Yj`UbVW`hc`W`ffYbh`  
dfcV`Ya`gžei`Ygh]cbg`UbX`W`U`Y`b[ ]Yg`"H\fc`i`[ ]h`Y`UbU`mg]g`cZgdYW]Z]WUW]gY`gh`X]Ygžmci`k`]`Yb[ ]U[ ]Y`  
k`]h`h`Y`a`i`h]X]a`Ybg]cbU`bU]h`fY`cZ[ `cVU`W`U`Y`b[ ]Ygž`UbX`k`]`Wcbg]XYf`h`Y`XYg]fUV`]m]UbX`  
X]Z]W`hmicZa`i`h]X]gWd`]bUfmiUddfcUWX`Yg`hc`UXXfYgg]b[ `h`Ya`"

7 ci fgY`@YUfb]b[ `Ci hWca Yg

%`8YgW]VY`h`Y`\_YmZci`bXU]cbg`cZd\]cgcd\]WU`ždc`]hWU`UbX`YWcbca ]WUddfcUWX`Yg`hc`\_bck`]b[ `h`Y`  
k`cfXž`]b`cWU`UbX`[ `cVU`Wcb]h]h`  
&`5bU`mgY`dUf]hW`Uf`W]gY`gh`XmYI`Ua`d`Yg`cZd\]cgcd\]WU`ždc`]hWU`UbX`YWcbca ]WUddfcUWX`Ygž`  
UWcbg`UbX`dfUW]Wgž`]b`cWU`UbX`[ `cVU`Wcb]h]h`

Wci fgY 'k ]h 'Uddfcdff]UHY 'UbX 'fY 'Yj Ubh]bXYdYbXYbhfygYUfW "

H\Y 'XYg][ b 'cZHY 'HYUW ]b[ 'a cXY 'UbX 'WcbUW'h\ci fg 'fYZYWhVch 'U'Wca a ]ha Ybhic 'ZUW 'hc 'ZUW 'HYUW ]b[  
UbX 'Yb[ U[ Ya Ybhk ]h 'j Uf]ci g 'UgdYWg 'cZV 'YbXYX 'YUfb]b[ žUg 'ci h]bYX ']b 'hY 'I B GK ' &\$& ) 'GhfUHY [ m  
H\Ya Y '5& '9Xi W]hcbU '9I W 'YbW

# 5ggYgga Ybh

Mci f'k f]hYb'UggYgga Ybhg ]b`DD97%\$\$%a i ghicb`mi gY`hY`<Uf] UfX`gmghYa`cZfYZfYbW]b[ žUWw`fX]b[ `hc`hY`[ i ]XY`]bYg`gYhici h]b`hY`GW`cc`cZGcW]U`GW]YbW]f]F`YZfYbW]b[ ; i ]XYžk \]W`]g`Uj U]UV`Y`Uhc`b`hY`A`ccX`Y`dU[ Y`žcf`DD97%\$\$%`

## 5ggYgga YbhHUg\_g`

5ggYgga YbhHUg_	K Y][ \h	8i Y`8UH`	Gh XYbh@YUfb]b[ Ci hW`a Yg`5ggYggYX
6`c[ `Dcgh	&\$i	&#`\$` #&\$\$`\$`)\$`.\$`\$`DA	(
7 UgY`Gh XmDUdYf`	( \$i	(&) #\$( #&\$\$`\$`)\$`.\$`\$`DA	&ž(
9i Ua ]bU]cb`	( \$i	Bch5dd`]WUV`Y	%ž ž(

## 5ggYgga Ybh8YHU]`g

5ggYgga Ybh%`6`c[ `Dcgh

GhUfhXUH`. Bch5dd`]WUV`Y

@Yb[ h. `+) \$

8YHU]`g. Gh XYbhg`a i ghigi Va ]hU`+) \$`k`cfX`V`c[ `dcgh`H`]\]g`UW]j ]hm]g`k`cfh`&\$i`c`Z`h`Y`ž]bU`[`fUXY`" Gh XYbhg`g`lci`X`g`Y`W`h`U`h`Ya`Y`žcf`h`Y`f`V`c[ `dcgh`V`U`g`Y`X`c`b`f`Y`Y`j`Ub`h`U`b`X`W`b`h`Ya`d`c`f`U`b`Y`c`i`g`W`f`f`Y`b`h`U`Z`U]f`g`U`b`X`#`f`b`Y`k`g`a`Y`X`U`X`Y`V`U`h`g`U`b`X`U`d`d`m`f`Y`Y`j`Ub`h`W`b`W`d`h`g`]b`f`c`X`i`W`X`V`m`h`Y`Y`W`h`f`Y`g`"K`f]hY`b`Z`Y`X`V`U`W`ž`]b`W`i`X`]b[ `U`f`i`V`f]W`U`b`X`b`i`a`Y`f]W`U`[`f`U`X`Y`ž`k`]`V`Y`d`f`c`j`]X`Y`X`k`]h`b`%`\$`k`c`f`\_`b[ `X`U`m`g`c`Z`gi`Va`]g`g`c`b`"Gh XYbhg`k`]`V`Y`d`f`c`j`]X`Y`X`k`]h`[`i`]X`Y`]b`Y`g`c`b`U`g`g`Y`g`g`a`Y`b`h`Y`l`d`Y`W`U`h`c`b`g`ž`a`U`X`Y`U`j`U`]`U`V`Y`h`f`c`i`[`\`h`Y`W`b`i`f`g`Y`f]`A`cc`X`Y`d`U[`Y`"

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

H\]g`+) \$!`k`cfX`6`c[ `Dcgh]g`YggYbh]U`mU`g`l`c`f`h`f`Y`U`W]j`cb`YggUmcb`f`Y`Y`j`Ub`h`U`b`X`W`b`h`Ya`d`c`f`U`b`Y`c`i`g`W`f`f`Y`b`h`U`Z`U]f`g`U`b`X`#`f`b`Y`k`g`a`Y`X`U`X`Y`V`U`h`g`U`b`X`U`d`d`]Y`g`f`Y`Y`j`Ub`h`W`b`W`d`h`g`]b`f`c`X`i`W`X`V`m`h`Y`Y`W`h`f`Y`g`ž`c`a`k`Y`Y`\_`%`h`c`)"Mci`a`i`gh`Y`b[`U[`Y`k`]h`h`Y`Y`W`h`f`Y`W`b`h`Y`b`h`U`b`X`f`Y`e`i`]f`Y`X`f`Y`U`X`]b[`g`"

H\]g`9ggUm]g`k`cfh`&\$i`c`Z`h`Y`ž]bU`[`fUXY`"Hc`d`f`Y`d`U`f`Y`žcf`h`Y`ž]bU`X`f`U`ž`mci`U`f`Y`f`Y`e`i`]f`Y`X`h`c`g`i`Va`]h`U`g`l`c`f`h`b`c`h`Y`c`Z`b`c`a`c`f`Y`h`U`b`%`\$`k`c`f`X`g`]b`K`Y`Y`\_`(`g`c`h`U`h`m`c`i`a`U`m`f`Y`W`]j`Y`g`c`a`Y`g`d`Y`W`ž]W`Z`Y`X`V`U`W`ž`c`a`h`Y`W`b`i`f`g`Y`W`b`j`Y`b`c`f`"A`Y`U`b`k`]\]Y`ž`mci`W`U`b`U`g`c`i`g`Y`h`Y`A`cc`X`Y`:`c`f`i`a`ž`b`W]j`c`b`f]g`h`Y`X`i`b`X`Y`f`K`Y`Y`\_`)`É`h`c`f`U]g`Y`U`b`m`e`i`Y`g`h`c`b`g`U`V`c`i`h`l`c`k`h`c`k`f]h`h`h`g`9ggUm`"

Hi`fb]h]b`g`Y`h]b[`. H\]g`Ugg][`ba`Y`bh]g`g`i`Va`]h`Y`X`h`f`c`i`[`\`Hi`fb]h]b`U`b`X`g`h`XY`bh`g`W`U`b`g`Y`Y`Hi`fb]h]b`g`a`]`U`f]h`m`f`Y`d`c`f`g`"

5ggYgga Ybh&`7 UgY`Gh XmDUdYf`

GhUfhXUH`. Bch5dd`]WUV`Y

@Yb[ h. `&\$\$`k`cfXg

8YHJ]g. 'Gh XYbhg'a i ghgi Va ]hU'&Z\$\$\$k cfX'WUgY'gh XmdUdYf'H\]g'dUdYf']g:k cfh'(\$i 'cZhY'Z]bU'  
[ fUXY"K YY\_g') 'hc' - 'cZhY'Wci fgY'UfY'XYj chYX'hc'WUgY'gh XmUbU'mg]g'UbX'gh XYbhg'g\ci 'X'gY'YWhU'WUgY'  
gh XmcZhY]f'ck b'Wccg]b[ 'hc'fYZYWhcb'fY'Yj UbhWci fgY'hYa YgZ'XYVUH'gZ']bH''YWh U'\]ghcf]Yg'UbX'hY]f'  
dfUW]WU'Udd']WU]cb"K f]hY'b'ZYXVUW\_z']bWl X]b[ 'U'fi Vf]WUbX'bi a Yf]WU' '[ fUXYZk ]'VY'dfcj ]XYX'k ]h.]b' %  
k cf\_]b[ 'XUmg'cZgi Va ]gg]cb" 'Gh XYbhg'k ]'VY'dfcj ]XYX'k ]h.]b' [ i ]XY' ]bYg'cb'UggYgga YbhYI dYWWU]cbgZ'  
a UXY'Uj U]UV'Y'hfci [ \ 'hY'Wci fgYfg'A ccX'Y'dU[ Y''

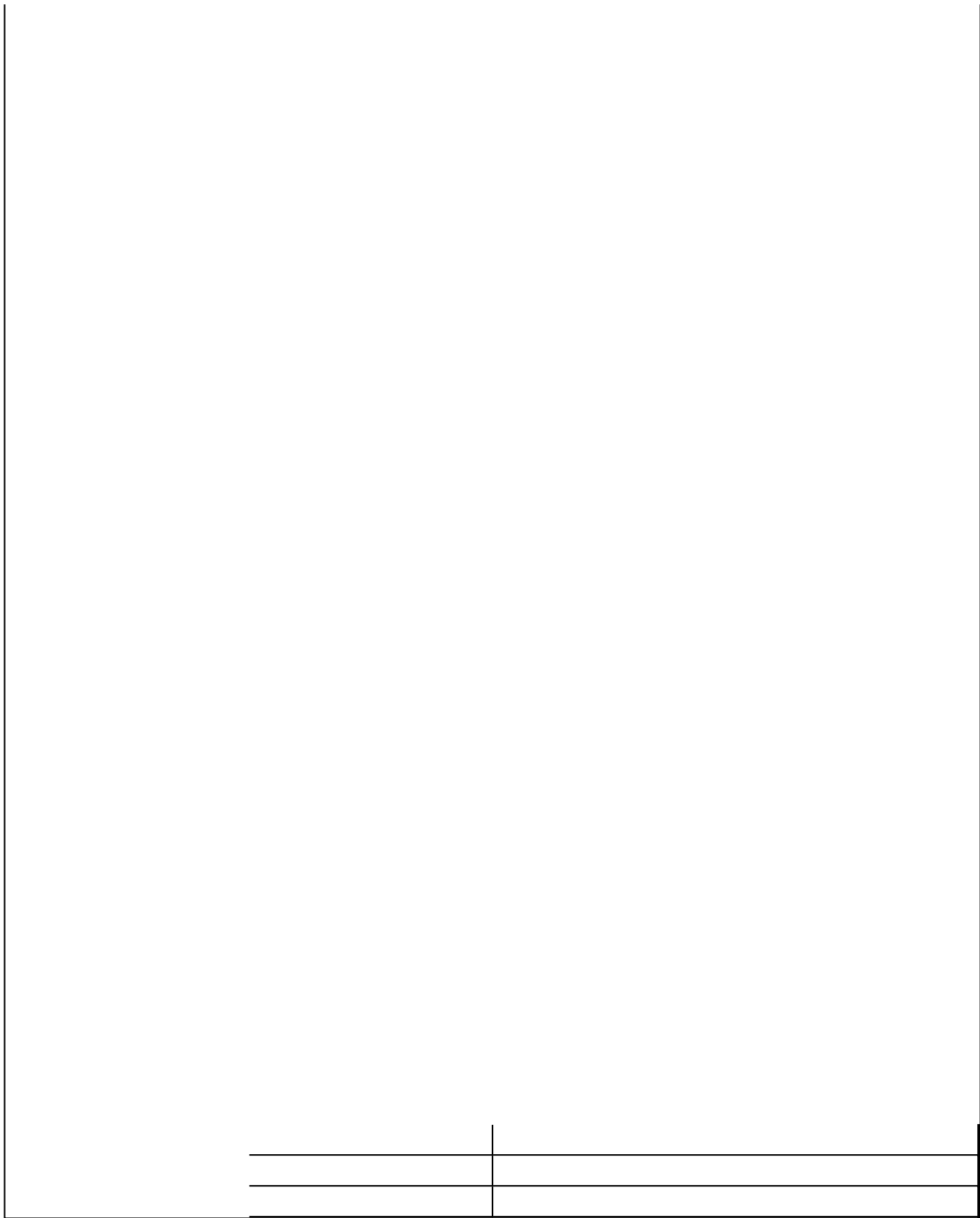
5XX]h]cbU'XYHJ]g.

VY'gi Va ]hYX'k ]h' mci f'9I Ua 'fYgdcbgYg"

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







## F Ygci fWg

DfYgWf]VYX`F Ygci fWg`

5`fYei ]fYX`fYUX]b[ g`fY["`Z`ci fbU`Ufh]WYgZ`Wca a YbhUf]Yg`UbX`Vcc\_`WUdHf]fgE`UfY`Y]h`Yf`]ghYX`cb`h`Y  
A ccX`Y`dU[ Y`Zcf`DD97%\$\$%cf`WUb`VY`Zci bX`UbX`UWw]ggYX`j ]U`I`BGK`@]VfUfm]cb`]bY`WUHu`c[ i Yz  
Y`ci fbU`UbX`YVcc`\_gYfj ]Wg"

F YWca a YbXYX`F Ygci fWg

D`YUgY`WXYW`\_A ccX`Y`Zcf`gi [ [ YghYX`fYUX]b[ g`UbX`UXX]h]cbU`fYgci fWg"

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

Gh XYbhYj U`i Uh] Y`ZYXVUW`\_]g[ U`h`YfYX`dYf]cX]W`mi`g]b[ `h`Y`I` b]j Yfg]m]g`'A m]I`dYf]YbW`'gi fj Ym`  
`Zcf`a U`ZYXVUW`\_]g`U`gc`]a`dcff]UbhZ`UbX`k`Y`Wca Yz`h`fci [ \`ci`h`h`Y`gYa YghYf`'Mci`f`ZYXVUW`\_]g`i`gYX`h`c  
\`Y`d`[ i ]XY`h`h`c]f]U`gZ`Y`W`i`fYg`UbX`h`c`\`Y`d`mci`U`ddfc]UW`mci`f`UggYgga Ybhg`"Gh XYbhZYXVUW`\_]g`hU`Yb  
gYf]ci`g`m`UbX`W`cb]bi`U`Yb\`UbW`a`Ybhg`UfY`a`UXY`h`c`\`Y`Ufb]b[ `UbX`h`Y`UW`]b[ `UW]j`]h]Yg`cb`h`Y`VUg]g`c`Z  
gh XYbhZYXVUW`\_`H\]g`]bW`i`XYg`a`U`\_]b[ `W`Ub[ Yg`h`c`h`Y`UggYgga YbhfY[ ]a Yz`h`h`c]f]U`UW]j`]h]YgZ`k`YY`\_`m  
fYUX]b[ gZ`A`ccX`Y`W`cb]h`b]h`UbX`gc`cb`"H\YfY`]g`U`gc`U`g`c`f`h`A ]X]h`fa`f`Yj`]Yk`g`W`Y`X`i`Y`X`i`b`K`YY`\_`+`Zcf  
gh XYbhg`h`c`fU]gY`h`Y]f`W`cb]W`fbg`UVci`h`Y`Ufb]b[ `UbX`h`Y`UW`]b[ "

Gi Va ]gg]cb`cZ5ggYgga YbhHUg\_g

Gi Va ]gg]cb`cZ5ggYgga YbhHUg\_g

Hi fb]hb`Gi Va ]gg]cb

≠mci`YbWci`bhYf`U`dfcV`Ya`k`Yb`U`H`Ya`dh]b[`hc`gi`Va`]hmc`i`f`Ugg][`ba`Ybh`h`fci`[`\`Hi`fb]hb`z`d`YUgY`  
H`Y`d`l`cb`Y`9I`H`fb`U`Gi`ddcfh`cb`-`,`)``%`cf`Ya`U`H`Ya`cb`YI`H`fb`U`H`hgi`ddcfh`i`bgk`"YXi`"Ui`"Gi`ddcfh`  
`l`ci`fg`UfY`,`.\$`\$Ua`-`%`\$.`\$`da`cb`k`YY`X`Umg`U`b`X`-`.`.\$`\$Ua`-`i`).`\$`da`cb`k`YY`Y`b`X`g`f`l`\*)`X`Umg`U`m`Y`U`f`l`"≠mci`  
UfY`i`b`U`V`Y`hc`gi`Va`]hmc`i`f`Ugg][`ba`Ybh`Xi`Y`hc`U`Z`U`h`k`]h`Hi`fb]hb`mci`a`Um`U`dd`m`i`Z`f`U`b`YI`H`bg]cb`z`Vi`hmc`i`  
a`i`gh`f`Y`h]b`mci`f`h]W`Y`h`bi`a`V`Y`f`Z`ca`9I`H`fb`U`Gi`ddcfh`f`U`cb[`k`]h`U`b`m`c`h`Y`f`f`Y`j`U`b`h`X`c`W`a`Y`b`h`g`l`hc`  
]b`W`i`X`Y`U`g`Y`j`]X`Y`b`W`hc`gi`ddcfh`mci`f`YI`H`bg]cb`U`dd`]W`h]cb"≠mci`Ya`U`9I`H`fb`U`Gi`ddcfh`mci`k`]`  
Ui`h`ca`U`h]W`m`f`Y`W`j`Y`U`h]W`Y`h`bi`a`V`Y`f`z`Vi`h]Z`mci`H`Y`d`l`cb`Y`mci`k`]`b`Y`Y`X`hc`g`d`Y`W`Z`W`m`U`g`\_`Z`f`cb`Y`  
Hi`fb]hb`U`gc`d`fc`j`]X`Y`g`i`d`X`U`H`Y`g`i`cb`h`Y`j`f`g`m`g`h`Ya`g`h`U`h`g`i`cb`H`k`]h`Y`f`"

;`Y`b`Y`f`U`m`z`U`gg`Y`g`ga`Y`b`h`U`g`\_`g`a`i`gh`V`Y`gi`Va`]h`Y`X`Y`Y`W`f`cb]W`m`j`]U`Y`]h`Y`f`Hi`fb]hb`cf`U`A`cc`X`Y`  
U`gg][`ba`Y`b`h`h`b`]b`g`h`U`b`W`g`k`Y`f`Y`h`l`g`]g`b`c`h`i`d`c`g`g]V`Y`z`]h`k`]`V`Y`g`h`U`H`X`i`cb`mci`f`W`ci`fg`Y`g`A`cc`X`Y`g`]h`k`]h`  
U`h`f`b`U`h]`Y`gi`Va`]gg]cb`X`Y`h]g`"

:`c`f`]b`Z`c`fa`U`h]cb`cb`l`ck`hc`gi`Va`]h`U`gg][`ba`Y`b`h`g`i`cb`]b`Y`j`]U`A`cc`X`Y`.\`h`td`g`#`g`h`X`Y`b`h`i`bgk`"YXi`"Ui`#`ack`!  
gi`Va`]h`U`gg][`ba`Y`b`h`a`cc`X`Y`"

## 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 gž`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[ YgžUfhUbX`XYg][ b`dfc`YWgžUg`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`U`b[ ]b[ `U`ZYk`k cfXg`UbX`d`fUgYg`k`Y`a cghmifYU]b]b[ `hY`cf][ ]bU`  
ghfi W`fY`UbX`#`f`dfc[ fYgg]cb`cZ]XYUg`cZ`hY`cf][ ]bU`ž`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`Yž`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  
]bWi XYg`dfcj ]X]b[ `mci f`k cf\_]hc`UbchYf`gh`XYbhVYZc`fY`hY`Xi Y`XUHYž`cf`Zc`f`hY`di fdcgY`cZ`hY`a



5 WUXYa ]WbZcfa Uh]cb`

: cfYggYbh]U`ghi XYbh]bZcfa Uh]cb`fY`Uh]b[ `hc.

- fYei Yghg`ZcfYI hYbg]cb/
- `UhY`gi Va ]gg]cbg`[ i ]XY`]bYg/
- fYj ]Yk `cZa Uf\_g/
- I B GK `<YU`h`UbX`GUZY`midc`]WYg/
- YI Ua ]bUh]cb`dfcVWXi fYg/
- gdYW]U`Vc]bg]XYfUh]cb`]b`hY`Yj Ybhcz]`bYgg`cf`a ]gUXj Ybh fY/
- ghi XYbhYei ]hmUbX`X]gUV`]`]m/
- UbX`chYfYggYbh]U`UWUXYa ]W]bZcfa Uh]cbz`gYY

[\hhdg.#k k k "Ufmg"i bkg "YXi "Ui #W ffYbhghi XYbh\]bZcfa Uh\]cb`dfc\]Vc`g!\[ i \]XY`\]bYg#](#)

⇒ U[ Y`7 fYX]h

GmbYf[ ]Yg`]b`Gci bX`&\$%\*`

7F ⇒ CG

7F ⇒ CG`Dfcj ]XYf`7 cXY. '\$\$\$- , ;