



HUMS1008

A i g]Wcb`A mA]bX. `Dgm\Xc`c[mUbX`A i g]W

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



7 ci fgY`Cj Yfj JYk

GHJZZ'7cbHJW`8YHJ`g

7cbj Ybcfg

B Ua Y	9a Uj`	5j Uj`UVj`]m	@cWJhcb	D\cbY
8f`5b`h`cbm7`a`jY`	Ub`h`cbm`V`a`jY`4`i`b`g`k`"Y`X`i`"U`i`	VmUddc]b`h`a`Y`b`h`	K`6`%`*`z` F`c`V`Y`f`h` K`Y`V`g`h`f` 6`i`j`X`]`b`[`	

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

GW`cc``c`Z`h`Y`5`f`g`U`b`X`A`Y`X`J`U`

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

D\cbY.`f`\$`&`Ł`-``'``)``(``,)``*`

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

K YVg]hY. [k k k "Ufng"i bkg "YXi "Ui #gUa](#)

H\Y`GW`cc``c`Z`h`Y`5`f`g`U`b`X`A`Y`X`J`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`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`Ł`z`;`U`X`[`U`"f`7`]`m`U`b`X`5`f`h`/`8`Y`g`[`b`7`U`a`d`i`g`Y`g`Ł`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`b`V`W`:`c`f`W`5`W`U`X`Y`a`m`]`b`7`U`b`V`Y`f`f`U`Ł`c`Z`h`Y`"U`b`X`g`k`Y`Y`f`Y`Y`U`W`W`a`d`i`g`c`Z`I`B`G`K`"j`g`
"c`W`J`h`Y`X`"

7ci fgY'8YHJ`g

7fYX]hDc]bng`*`

Gi a a UfmicZh\Y'7ci fgY

H\]g`Wci fgY`Ug_g`ei Ygh]cbg`UVci ha i g]Ww[b]h]cb`UbX`VY\Uj]ci f.`<ck`Xc`k`Y`dYfW]j`Y`a i g]Wb`K` \m`Wb`Ub`]bglfi`a`Ybhgci`bX`a i g]WU`3`<ck`Xc`k`Y`fYgdc`bX`hc`UbX`dfc`W]gg`h`Y`gci`bX`3`K` \Uh`\Udd`Ybg`k` \Yb`k`Y`UfY`dfY`dUf]b[`UbX`dYfZ`fa`]b[`a i g]Wb`K` \m`Wb`dYfZ`fa` Yfg`VY`Wca` Y`XYV]`]h]b[`mbYfj`ci`g3`K` \Uh]g`h`Y`fY`U]cb`VY`k`YY`b`a i g]Wz`gYI`UbX`W`YY`gY`WU`_Y3`7`Ub`a i g]Wa`U`_Y`mci`ga`UfY`fz`UbX`k` \Uh]g`h`Y`A`cn`Ufh`9`ZY`Wb`K` \m`Xc`Yg`h`Uh`h`bY`[`Y`h`g`h`W`_]b`a`m`\`Y`UX3`<ck`c`X`a i ghU`dYfg`cb`VY`VY`Z`fY`h`Y`m`Wb` \Y`Uf`UbX`Udd`fY`W]U`h`a i g]Wb`M`ci`k`]`U`X`X`fY`gg`h`Y`gY`UbX`fY`U`h`X`ei`Y`gh]cbg`h`fci`[`\`Y`I`Ua`]b`U]cb`c`Z`h`Y`a i g]W`dgm`W`c`c`[`m`]`h`f`U`h`f`Y`z`UbX`h`Y`W`]h`W`Y`j`U`i`U`h]cb`c`Z`mci`f`ck`b`a i g]WU`U`h]h`XY`g`z`VY`]Y`Z`g`UbX`VY`Uj`]ci`fg`

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

%`9I`d`U]b` \ck`a i g]W]g`XY`Z]b`YX`Z`ca`U`dgm`W`c`c`[`]WU`dc]b`h`c`Zj`]Y`k`"
&`" `X`Y`b`h]z`m` \ck`a i g]Wdgm`W`c`c`[`]g`h`]b`j`Y`gh]`[`U`h`Y`ei`Y`gh]cbg`UVci`ha`i`g]W`
'`" `F`Y`Wc`[`b]gY`h`Y`gci`f`W]g`UbX`k`U`m`g`]b`k` \]W`a i g]Wdfc`W]gg]b[`]g`i`b`XY`f`g`h`c`X`z`UbX`Wca`d`UfY`h`Y`gY`
k`]h`Zc`_`dgm`W`c`c`[`]WU`UbX`]b`h`]h]`Y`i`b`XY`f`g`h`U`b`X]b[`g`

HYUW]b[`GhfUH[]Yg`

H\Y`Wci`fgY`k`]`VY`d`fY`gY`b`h`X`h`fci`[`\`Z]W`!`h`!`Z]W`"Y`W`h`fY`g`"Hi`h`f]U`g`UfY` \Y`X`cb`]b`Y`z`k` \]W`a`Y`U`b`g`mci`g`lci`X`Y`I`d`Y`W`h`c`X`Y`j`c`h`Y`i`d`h`c`b`Y` \ci`f`d`Y`f`k`YY`_`f`b`c`h]b`W`i`X]b[`d`f`Y`d`U`f`U`h]cb`UbX`Ugg`Y`gga`Y`b`h]h`a`Y`E`h`c`b`]b`Y`]b`X]j`]X`i`U`U`W]j`]h]Y`g`UbX`Wc`U`V`c`f`U`h]j`Y`U`W]j`]h]Y`g`k`]h`c`h`Y`f`g`h`X`Y`b`h`g`"C`h`Y`f`U`gg`Y`gga`Y`b`h]h`U`g`g`k`]`VY`Wca`d`Y`h`X`]b`X`Y`d`Y`b`X`Y`b`h`m]b`U`X`X]h]cb`h`c`h`Y`cb`]b`Y`h`h`c`f]U`k`c`f`_`";`fci`d`Y`U`fb]b[`z`W]h]W`f`Y`Z`Y`W]cb`UbX`gY`Z`Ugg`Y`gga`Y`b`h`k`]`VY`X`Y`j`Y`c`d`Y`X`]b`g`Y`Y`W`h`X`h`h`c`f]U`h`U`g`g`h`c`Y`b`Wci`fU`[`Y`X]j`Y`fgY`a`c`X`Y`g`c`Z`Y`U`fb]b[`]b`U`X`X]h]cb`h`c`h`f`U`X]h]cb`U`Udd`f`c`U`W`h`Y`g`"

5ggYgga Ybh

5ggYgga YbhHUg_g'

5ggYgga YbhHUg_			

8YHJ]g.

H\Y`HYghUggYggYg`YWi fY`WcbYbhbchUggYggYX`]b`h\Y`E i]n""E i Ygh]cbg`k]`dfcVY`VUg]WwcbWdHg
dfYgYbhrX`]b`h\Y`Wci fgY`Wcbhrbhg""H\Y`hrghk]`Wcbg]ghcZa i `hd`Y`Wkc]W`UbX`g\cfhUbgk Yf`]ra`g""

: YYXVUW`k]`Wcbg]ghcZU`bi a Yf]W`a Uf_""

5XX]h]cbU`XYHJ]g.

GYY`A ccX`Y`Zcf`Z f\Yf`XYHJ]

F Ygci fWg

DfYgWfjVYX`F Ygci fWg`

BchiUj UjUVY

F YWca a YbXYX`F Ygci fWg

BchiUj UjUVY

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

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`cZc`hYfg`UbX`dFYgYbh]b[`hYa`Ug`mci`f`ck`b`" #WUb`hU`Y`a`Ubm`Zcfa`gZ`Zca`XY`]VYfUHY`WX`YU]b[`hc`UW]XYbhU`mWc`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[`WU]Y[cf]Yg.

7`cdm]b[.`i`g]b[`hY`gUa`Y`cf`j`Yfmg]a`]Uf`k`cfXg`hc`hY`cf][]bU`hY`hcf`]XYU`k`]h`ci`hUW`bck`YX[]b[`hY`gci`fW`cf`i`g]b[`ei`c`hU]cb`a`Uf`g`"H\`g`U`gc`Udd`Y]g`hc`]a`U[YgZ`Ufh`UbX`XYg][`b`dfc`YWgZ`Ug`k`Y`Ug`dFYgYbhU]cbg`k`YfY`gca`YcbY`dFYgYbh]`Ubch`Yf`g`]XYUg`cf`k`cfXg`k`]h`ci`hWYX]h`

#Uddfcdf]UHY`dUfUd`fUg]b[.`7`U]b[]b[`U`Zk`k`cfXg`UbX`d`fUgYg`k`Y`a`cghm`fY]b]b[`hY`cf][]bU`ghf`W`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`Y]g`]b`dFYgYbhU]cbg`k`YfY`gca`YcbY`dUfUd`fUgYg`Ubch`Yf`g`]XYUg`cf`k`cfXg`k`]h`ci`hWYX]h`UbX`hc`d]YW]b[`hc[Y`h`Yf`ei`c`hYg`UbX`dUfUd`fUgYg`]bhc`U`bYk`k`c`Yz`k`]h`ci`hUddfcdf]UHY`fY`ZYf`bW]b["

7`c`i`g]cb.`k`cf_]b[`k`]h`c`hYfg`Vi`hdUgg]b[`cZ`hY`k`cf_]Ug`U`dYfgcb`g`]bX]j`]Xi`U`k`cf_]`7`c`i`g]cb`U`gc`]bW`i`XYg`dfcj`]X]b[`mci`f`k`cf_]hc`Ubch`Yf`g`h`XYbh`VY`Zc`fY`hY`Xi`Y`XU]Y`Zc`f`Zc`f`hY`di`fdcgY`cZ`hY`a`d`U[]Uf]g]b[`Uh`Ubmi]a`Yz`dUm]b[`Ubch`Yf`dYfgcb`hc`dYfZcfa`Ub`UWXYa`]W]Ug`_`Z`gh`U`]b[`cf`UW`ei`]f]b[`Ubch`Yf`dYfgcb`g`UWXYa`]Wk`cf_]UbX`Wc`dm]b[`]h`c`Z`Yf]b[`hc`Wc`a`d`Y`h`Ubch`Yf`dYfgcb`g`k`cf_]cf`gY`_]b[`dUma`Ybh`Zc`Wc`a`d`Y]b[`UWXYa`]Wk`cf_]`

#Uddfcdf]UHY`W]U]cb.`7`]h]b[`gci`fW`g`k`]W\`Uj`Y`bch`VYYb`fYUX`Z`k`]h`ci`hUW`bck`YX[]b[`hY`gY`Wc`bXUfm`gci`fW`Zca`k`]W\`_`bck`YX[Y`cZ`hY`a`Ug`VYYb`c`hU]bYX`

8`i`d`]WU]cb`f]gY`Zd`U[]Uf]ga`E`gi`Va`]h]b[`mci`f`ck`b`k`cf_]b`k`c`Y`cf]b`dUf]Z`k`YfY`]h`Ug`dFY]`ci`g`m`VYYb`dFYdUfYX`cf`gi`Va`]hYX`Zc`f`Ubch`Yf`UggYgga`Ybhcf`Wc`i`fgY`Uhi`BGK`cf`Ubch`Yf`i`b]j`Yfg]h`

7`c`fY`W`fY`ZY`fY`bW]b[`dfUW]W]g.

- DUfUd`fUg]b[`Zgi`a`a`Uf]g]b[`Z`YggUm`k`f]h]b[`UbX`h]a`Y`a`UbU[Ya`Ybh`
- 5ddfcdf]UHY`i`gY`cZ`UbX`U]h]f]Vi`h]cb`Zc`f`U`fU]b[Y`cZ`a`U]h]f]U`g`]bW`i`X]b[`hY`h]`]a`U[YgZ`Zcfa`i`UY`UbX`Wc`bW`d]g`"

#X]j`]Xi`U`Ugg]gh`UbW`]g`Uj`U]UV`Y`cb`fYe`i`Ygh`Zca`H\Y`@YUfb]b[`7`YbhY`f`h`h`d`#`k`k`"Wi`bgk`"YXi`"Ui`#`G`h`XYbh]`UfY`U`gc`fYa`]bXYX`h`Uh`WUfY`Z`i`h]a`Y`a`UbU[Ya`Ybh]g`Ub`]a`dc`f]Ubhd`Uf]hc`Z`gh`Xm`UbX`cbY`cZ`hY`]XYbh]Z`YX`W]i`gYg`cZ`d`U[]Uf]ga`]g`d`cc`f`h]a`Y`a`UbU[Ya`Ybh`G`h`XYbh]g`g`l`ci`X`U`ck`gi`Z`W]Y`bh]h]a`Y`Zc`f`fYgYUfW`Z`X`fU`Z]b[`UbX`d`fcd`Yf`fY`ZY`fY`bW]b[`cZ`gci`fW`g`]b`dFYdUf]b[`U`UggYgga`Ybh]hYa`g`

I BGK `@]VfUfmU`gc`Ug`hY`9@G9`hc`Uj`U]UV`Y`hc`Ugg]gh`mci`k`]h`mci`f`gh`Xm`Uhi`BGK`"9@G9`]g`XYg][`bYX`hc`]bhc`Xi`W`bYk`gh`XYbh]hc`gh`Xm]b[`Uhi`BGK`Vi`h]hW]b`U`gc`VY`U`[`fYUhfY`ZYg`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]Zcf`YI H`bg]cb/
- `Uh`gi Va]gg]cbg`[i]XY`]bYg/
- fYj]Yk `cZa Uf_g/
- I BGK `<YU`h`UbX`GUZY`mdc`]WYg/
- YI Ua]bUh]cb`dfcW`Xi fYg/
-