



EDST5128

7 ca a i b]WU]cb`8]gcfXYfg`UbX`5gg]ghj`Y`HYW\bc`c[m

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

GWXcc``cZ9XI WU]cb`#`I BGK ``5ffg`UbX`GcWU``G\WYbW`g

7 ci fgY`Cj Yfj]Yk

`GHUZZ7cbHJW`i8YHJ`g`

`7cbj Ybcfg`

B Ua Y	9a U]`	5j U]UV]`]m	@cWJhcb	D\cbY
8f`H\YfYgY`A 7i a a]b[

7ci fgY'8YHJ]`g

7fYX]hDc]bhtg`*`

Gi a a UfmicZ\hY'7ci fgY

H\Y'Wci fgY'dfcj]XYg'Ub'cj Yfj]Yk'cZWca a i b]WU]cb'X]gcfXYfgz'UbX'Ui [a YbU]h] Y'UbX'U'fYfbU]h] Y'f557Ł
Wca a i b]WU]cb'UddfcUWXyg'Zcf'j]bX]j]Xi U'g'k]h'gYj YfY'Wca a i b]WU]cb'ja dU]fa Ybhtg"9a d\Ug]g'j]g'cb
XYj Y'cda YbU'Wcbg]XYfU]h]cbgžYWc'c[]WU'`bYYXgžYXi WU]cbU'Wcbg]XYfU]h]cbgžW]b]WU'UggYgga Ybhtgž
gY'YWU]cb'UbX'ja d'Ya YbU]h]cb'cZUi [a YbU]h] Y'gmg]hYa gž'UbX'fYgYUfW!VUgYX'dfUW]Wg"

BchY.'H\]g'Wci fgY'j]g'h]i [\h]b'j]b]h]bg]j Y'a cXY"

5h\hY'WcbWi g]cb'cZ\h]g'Wci fgY'hY'ghi XYbhk]`VY'UV'Y'hc

% " 8Yg][b'U[Y'Uddfcdf]U]h']b]g]h]i W]cb'VUgYX'cb'hY'UXUd]h] Y'UbX'Wca a i b]WU]cb'g_]`g'cZgh XYbhtg
k]h'a cXYfU]h'UbX'gYj YfY'X]gUV]h]Yg"
&" F YWc[b]gY'UbX'XYgW]VY'fYgYUfW!VUgYX']b]g]h]i W]cbU'UbX'Wca a i b]WU]cb'ghfU]h] []Yg'UbX
dfUW]Wgž]bWi X]b['h]g_'UbU'mg]g'a i 'h]gYbgcfmž'UbX'WcbWYfY# Ub]di 'U]h] Y'hYWXb]ei Yg"
' " 8YZ]bY'Ugg]g]h] Y'hYWXbc'c[m]f5HŁž'Vch'`ck'UbX'\][\hYWX'UbX'hY]f'hYcfYh]WU'`i bXYfd]bb]b[g"
(" 5ggYgg'gh XYbhUV]h]Yg'UbX'YXi WU]cbU'Ybj]fcb]a Ybhtg'hc'd'Ub'Vch'Wca a i b]WU]cb'UbX'5H
]b]h]f]j Yb]h]cbg'Zcf'gh XYbhtg'k]h'Wca a i b]WU]cb'X]gcfXYfgž]b]h'`YWU'U'X]gUV]h]Ygž'UbX'Ui h]ga "

HYUWX]b['GhfU]h] []Yg'

⊕'cfXYf'hc'dU]h]W]dU]h'Z'`m]b'j]bWi g]j Y'Ybj]fcb]a Ybhtg'j]b'gWcc'UbX'hY'Wca a i b]mž]bX]j]Xi U'g'k]h
Wca a i b]WU]cb'X]gcfXYfg'ZfYei YbhmfYei]fY'Ui [a YbU]h] Y'UbX'f'U'fYfbU]h] Y'gmg]hYa g'cZWca a i b]WU]cb'
H\Y'Wcb]h]b]h]cZ\h]g'Wci fgY'j]g'ZcW'gYX'cb'Wca a i b]WU]cb'X]gcfXYfgž'UggYgga Yb]h]cZgh XYbhtg'`bYYXgž'UbX
ghfU]h] []Yg'h]U]h]U]h]U]h]Yfg'Wb'i gY'hc'gi W]W'ggZ'`m]a d'Ya Yb]h]U] [a YbU]h] Y'dfUW]Wg"HYUWX'Yfg'k]`\Uj Y
hY'cddcf]h] b]m]h]c'Yi dYf]YbW'h]YgY'U'fYfbU]h] Y'Zcfa g'cZWca a i b]WU]cb'Z]fgh\UbXž]b'cfXYf'hc'VY'Z'`m
Yei]ddYX'hc'Ugg]g]h]g]h] XYbhtg'k]h'gdYW]U'`bYYXg'j]b'h]g'UfYU" H\Y'Zc'ck]b['hYUWX]b['\U]h]U]h]U]h]Yf]

5ggYgga Ybh

5ggYgga YbhHUg_g`

5ggYgga YbhHUg_	K Y][\h	Gh XYbh@YUfb]b[Ci hWta Yg 5ggYggYX	5 #HG@DfcZYgg]cbU`'; fUXi UHY HYUW]b['GHUbXUFXg'5ggYggYX	8i Y 8UHY
5bbchUHYX V]V`]c[fUd\mi	&\$i	&ž	b#J	%* # \$ ' # & \$ % % % \$ \$ DA
F YgYUfW`dUdYf`	') i	&ž(b#J	% # \$ (# & \$ % % % \$ \$ DA
7 UgY`gh Xm	() i	%ž&ž(b#J	\$ (# \$ * # & \$ % % % \$ \$ DA

D`YUgY`fYZf`hc`3gefδ`S` BđXWée[a` S^E fS` VSdVe XadFWSUZWē`cb`h.Y`dfY

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 [`h`Hi fb]h]b`z`d`YUgY
h`Y`d`cb`Y`9I`h`fb`U`Gi`ddcfh`cb`-`'`,`)`''`'`%cf`Ya`U]`h`Ya`cb`[YI`h`fb`U`h`h`gi`ddcfh`i`bgk`"YXi`"Ui`"Gi`ddcfh](#)

f`G][b]Z]WbhmUZZYWhmci f`dYfZcfa UbWV`]b`UggYggUV`Y`k cf_žVY`]hU`Zcfa U`YbX!cZgYa YghYf`YI Ua]bUh]cbžU
WUgg`hYghž`U`UVcfUhc fmi`hYghž`U`gYa]bUf`dfYgYbUh]cb`cf`Ubmich`Yf`Zcfa`cZUggYgga`YbH`

: cf`Z`f`h`Yf`XYhU]`g`]b`fY`Uh]cb`hc`GdYWU`7`cbg]XYfUh]cb`]bWi`X]b[``K`Yb`hc`5dd`mž`<ck`hc`5dd`m`UbX
`Gi`ddcfh]b[`8cW`a`YbUh]cb`d`YUgY`fYZf`hc`h`Y`GdYWU`7`cbg]XYfUh]cb`k`YVgh]Y.`

[\hdg.#gh`XYbhi`bgk`YXi`"Ui`#gdYWU`!Wcbg\]XYfUh\]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" #WUb`hU_Y'a Ubm
Zcfa gZ`Zca`XY]VYfUHy`WXYU]b['hc`UWV]XYbU`mW`dm]b[`Zca`U`gci fW`k]hCi hUW_bck`YX[Ya`Ybh'

I BGK`[fci dg'd`U[]Uf]ga`]bhc`hY`Zc`ck]b[`WUHy`[cf]Yg.

7cdm]b[.`i g]b['hY`gUa`Y`cf`j`Yfmg]a`]Uf`k`cfXg`hc`hY`cf][]bU`hY`hcf`]XYU`k`]hCi 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]b[`Ubc`h`Y`f`g`]XYUg`cf`k`cfXg`k`]hCi hWYX]h'

#Uddfcdf]UHy`dUfUd`fUg]b[.`W`Ub[]b[`U`Zy`k`cfXg`UbX`d`fUgYg`k`Y`a`cghmfYU]b]b['hY`cf][]bU`
g]fi`W`fY`UbX`]bZcfa`U]cb`k`]hCi hUW_bck`YX[Ya`Ybh`"H`]g`U`gc`Udd`]Yg`]b`dfYgYbhU]cbg`k`YfY`gca`YcbY`
dUfUd`fUgYg`Ubc`h`Y`f`g`]XYUg`cf`k`cfXg`k`]hCi hWYX]h' #U`gc`Udd`]Yg`hc`d`]YW]b[`hc`[Y`h`Y`f`ei`chYg`UbX`
dUfUd`fUgYg`]bhc`U`b`Y`k`k`c`Y`Z`k`]hCi hfYZfYbW]b[`UbX`U`gh`XYbh`g`ck`b`UbU`mg]g`hc`Vf]b['hY`a`U`h`f]U`
hc`[Y`h`Y`f`"

7c`i`g]cb.`k`cf_]b[`k`]h`c`h`Y`fg`Vi`hdUgg]b[`c`Z`h`Y`k`cf_]`Ug`U`d`Y`fg`cb`g`]bX]j`]Xi`U`k`cf_]`7`c`i`g]cb`U`gc`
]bWi`XYg`dfcj`]X]b[`mci`f`k`cf_]`hc`Ubc`h`Y`f`gh`XYbhVY`Zc`fY`hY`Xi`Y`XU`h`Zc`f`Zc`f`hY`di`fdcgY`c`Z`h`Ya`
d`U[]Uf]g]b[`Uh`Ubmi]ja`Y`Z`dUm]b[`Ubc`h`Y`f`d`Y`fg`cb`hc`d`Y`f`Zc`fa`Ub`U`W`X`Ya`]W`h`Ug`_`Z`gh`U`]b[`cf`U`W`ei`]f]b[
Ubc`h`Y`f`d`Y`fg`cb`g`U`W`X`Ya`]W`k`cf_]`UbX`W`c`dm]b[`]`Z`c`Z`Y`f]b[`hc`W`c`a`d`Y`h`Ubc`h`Y`f`d`Y`fg`cb`g`k`cf_]`cf`g`Y`Y_]b[
dUma`YbhZc`f`W`c`a`d`Y`h]b[`U`W`X`Ya`]W`k`cf_]`"

#Uddfcdf]UHy`W`h]cb.`7`]h]b[`gci`fW`g`k`]W`U`j`Y`bchVYYb`fYUXZ`k`]hCi hUW_bck`YX[]b['hY`"gYW`c`bXUfm`
gci fW`Zca`k`]W`_bck`YX[Y`c`Z`h`Ya`U`g`V`Y`Y`b`c`V`h]bYX"

8i`d`]W`h]cb`f`f`g`Y`Z`d`U[]Uf]ga`"E`gi`Va`]h]b[`mci`f`ck`b`k`cf_]b`k`c`Y`cf`]b`d`U`f`Z`k`Y`fY`]h`U`g`d`fYj`]ci`g`m`
V`Y`Y`b`d`fY`d`U`fY`X`c`f`gi`Va`]hY`X`Zc`f`Ubc`h`Y`f`UggY`gga`Ybhcf`W`c`i`fgY`U`hI`BGK`cf`Ubc`h`Y`f`i`b]j`Yfg]h`"

7c`f`f`Y`W`h`f`Y`Z`f`Y`b`W]b[`d`f`U`W`h]W`g.

- DUFUd`fUg]b[žgi`a`a`Uf]g]b[žYggUmk`f]h]b[`UbX`h]a`Y`a`UbU[Ya`Ybh`
-

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



