

EDST5440

5Xj UbWX`H9GC @A YhcXc`c[m

GYa Yghf`Cby`##`&\$%

7ci fgY`Cj Yfj JYk

7ci fgY'8YHJ]`g

7fYX]hDc]bHg`*`

Gi a a UfmcZh\Y'7ci fgY

⊕`h]g`Vēi fgY`mēi` [U]b`bYk`'cf'i`dXUH'X'g_]`g`]b`h\Y`gdYW]U]ghH9GC`@Z]Y`X" `Mēi` `Yb[U[Y`k`]h`UXj`UbW'X`
`Ub[i U[Y`h'UW]b[`a`Yh'cXc`c[mUbX`]hg`dfUW]W]`Udd`]W]h]cbg`h'fci` [\`U`dfc[fUa`'cZgYa`]bUfg`UbX`cb`]bY`
]bH'fUW]cbg" `Hcd]Wg`Vēj`Yf`X]ZZYfYbhUddfcUW]Yg`hē`9b[`]g\` `Ub[i U[Y`YUfb]b[`UbX`h'UW]b[ž`bW]`X]b[
YZZYW]j`Y`h'UW]b[`ghfUH[]Yg`UbX`h'W]b]ei`Yg`Zc`f`h'UW]b[`fYUX]b[ž`k`f]h]b[ž`]gh'b]b[`UbX`gdYU_]b[ž`
a`UH'f]U`g`XYj`Y`cda`Ybž`UbX`h'Y`d`Ubb]b[`UbX`Yj`U`i`Uh]cb`cZ]bX]j`]Xi`U`Yggcbg`UbX`i`b]hg`cZk`cf_`"H\Y`fc`Y`

]b`hY`ZY`X`bYYX`fc`WcbghUbhmfYZYW`i`dcb`UbX`fY!Yj`U`i`UH`hY]f`i`bXYfghUbX]b[g`cZ`Ub[i`U[Y`UbX`ck
VYghfc`hYUVX`]h`H\Y`Wci`fgY`h\i`g`U]a`g`fc`W]hW]`miUbU`mgYz`fYj`]gY`UbX`YI`h`bX`gh`XYbhg`i`bXYfghUbX]b[
UbX`dfUW]W]`cZ`hY`WcfY`UddfcUVX`Yg`UbX`h`VX`b]ei`Yg`cZH9GC`@a`YhcXc`c[m`

5i ghfU`]Ub`DfcZYgg]cbU` ; fUXi UhY`HYUWx]b[`GhUbxUfXg

GhUbxUfX	8YgW]dhcb
&"%%"	8Ya cbghfUHY`_bck`YX[Y`UbX`i bXYfghUbX]b[`cZHY`W`bW`drg`gi VghUbW`UbX`grfi W`i fY`cZHY`W`bHYbhUbX`HYUWx]b[`ghfUHY[]Yg`cZHY`HYUWx]b[`UfYU"
&"%"	Gi ddcfhW`YU[i Yg`i g]`%`W`ffYbhUbX`W`a`%`fY`Ybg]j Y`_bck`YX[Y`cZW`bHYbhUbX`%`HYUWx]b[`ghfUHY[]Yg`c`XYj Y`cd`UbX`]a`d`Ya`YbhYb[U[]b[``YUfb]b[`UbX`HYUWx]b[

j Y`_bck`

5ggYgga Ybh

5ggYgga YbhHUg_g`

5ggYgga YbhHUg_	K Y][\h	Gh XYbh@YUfb]b[Ci hca Yg 5ggYggYX	5 HG@Dfc 54G@Df 5HG@Df 5HG@Df 5HG@Df HYUW]b['GHUbXUfXg' 5ggYggYX	UaY UUXi UH 8UH
8Yg][b'cZU	8Yg][b'cZU			

a UHrf]U`g`UbX`hUg_g`WkcgYbž`Ug:k`Y``Ug`hY]f`gi`]hUV`]mžcf`hY`WčbhY`h]b`k`\\]W`mci`k`ci`X`bcfa`U`m`hY`UW`"fl`\$\$\$`k`cfXgŁ

Hi`fb]h]b`gYh]b[.`H\]g`Ugg][`ba`Ybh]g`gi`Va`]hYX`hfc`i`[\`Hi`fb]h]b`UbX`gh`XYbhg`WU`b`gYY`Hi`fb]h]b`g]a`]Uf]m`fYdcfng"

Gi Va]gg]cb'cZ5ggYgga YbhHUg_g

Gh XYbng'UFY'YI dYW'X'hc'di h'AY]f'bUa Yg'UbX'ghi XYbhbi a VYfg'cb'Yj YfmdU[Y'cZ'AY]f'Ugg][ba Ybng"

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

zmc i 'YbWci bhYf'U'dfcV'Ya 'k \Yb'U'HYa dh]b['hc'gi Va]hmc i f'Ugg][ba Ybh'fci [\ 'Hi fb]h]bzd'YUgY
HY'Yd\cbY'9I HYfbU'Gi ddcfhcb'-',) '' '' %cf'Ya U]'h'Ya 'cb'[YI HYfbU'HY'fji ddcfh i bgk "YXi "Ui."](#)Gi ddcfh
\ci fg'UFY', .\$\$Ua '-'%. \$\$da 'cb'k YY_XUmg'UbX'-. \$\$Ua '-'). \$\$da 'cb'k YY_YbXg'f1 *) 'XUmg'U'mYUfL' zmc i
UFY'i bUV'Y'hc'gi Va]hmc i f'Ugg][ba YbhXi Y'hc'U'ZU' 'hk]h'Hi fb]h]b' mci 'a UmiUdd'm'Zcf'Ub'YI HYbg]cbz'Vi hmc i
a i ghfYh]b' mci f'h]W_Yhbi a VYf'Z'ca '9I HYfbU'Gi ddcfhfU'cb['k]h'Ubmc'h'Yf'f'Yj UbhXcW a Ybng'hc
]bW' XY'Ug'Yj]XYbW'hc'gi ddcfhmc i f'YI HYbg]cb'Udd']W]h]cb" zmc i 'Ya U]'9I HYfbU'Gi ddcfhmc i 'k]`
Ui 'ca U]W' m'f'Y'W'j Y'U'h]W_Yhbi a VYfz'Vi h]Zmc i 'HY'Yd\cbY' mci 'k]`b'Y'X'hc'gdY'W]W' m'Ug_'Zcf'cbY"
Hi fb]h]b'U'gc'dfcj]XYg'i dXUHYg'cb'h'AY]f'gmghYa 'ghU'h'g'cb'Hk]HYf"

; YbYfU'mz'UggYgga YbhHUg_g'a i ghVY'gi Va]HYX'Y'Y'W'fcb]W'mj]U'Y]h'AYf'Hi fb]h]b'cf'U'A ccX'Y
Ugg][ba Ybh' b]bg'U'ub'W'g'k \YfY'h']g']g'bchidcgg]V'YZ]hk]`VY'g'U'HYX'cb' mci f'Wci fgY'g'A ccX'Y'g]HY'k]h
U'HYfbU'h] Y'gi Va]gg]cb'XYh]g"

@UH'5ggYgga YbhDYbU'h]Yg

f`G][b]Z]WbhmUZZYWhmci f`dYfZcfa UbWV`]b`UggYggUV`Y`k cf_žVY`]hU`Zcfa U`YbX!cZgYa Yghf`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[`8`cW`a`YbUh]cb`"d`YUgY`fYZYf`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" #WUbb`hU_Y'a Ubm Zcfa gž Zca`XY]VYfUHy`WXYU]b['hc`UWV]XYbU`mWčdm]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[Ygž`Ufh`UbX`XYg][`b`dfc`YWgž`Ug`k`Y`"Ug`dfYgYbU]h]cbg`k`YfY`gca`YcbY`dfYgYbh]g`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`cghm`fYU]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`dfYgYbU]h]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`[YhYf`ei`chYg`UbX`dUfUd`fUgYg`]bhc`U`bYk`k`c`Yž`k`]hci`hfY`ZYfYbW]b[`UbX`U`gh`XYbh]g`ck`b`UbU`mg]g`hc`Vf]b['hY`a`UHyf]U`hc`[YhYf`"

7c`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`_"7c`i`g]cb`U`gc`]bWi`XYg`dfcj`]X]b[`mci`f`k`cf`_`hc`Ubc`h`Yf`gh`XYbhVY`Zc`fY`hY`Xi`Y`XUHy`ž`cf`Zc`f`hY`di`fdcgY`cZ`h`Ya`d`U[]Uf]g]b[`Uh`Ubmi]ja`Yž`dUm]b[`Ubc`h`Yf`dYfgcb`hc`dYfZcfa`Ub`UWUXYa`]W]Ug`ž`ghU`]b[`cf`UWči`]f]b[`Ubc`h`Yf`dYfgcb`g`UWUXYa`]Wk`cf`_`UbX`Wč`dm]b[`]ž`c`ZYf]b[`hc`Wč`a`d`YHy`Ubc`h`Yf`dYfgcb`g`k`cf`_`cf`gYY_]b[`dUma`YbhZc`f`Wč`a`d`Y]b[`UWUXYa`]Wk`cf`_"

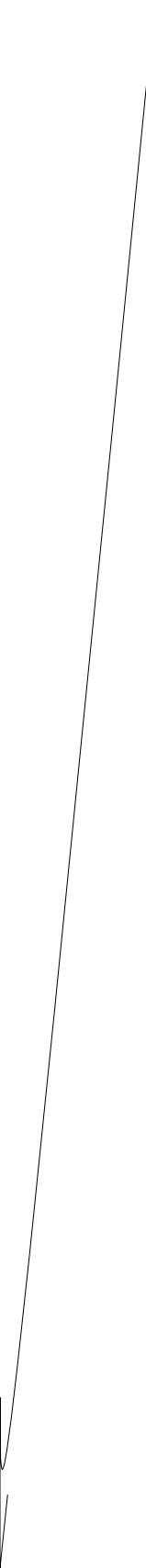
#Uddfcdf]UHy`W]U]cb.`7`]h]b[`gci`fW`g`k`W`Uj`Y`bchVYYb`fYUXž`k`]hci`hUW_bck`YX[]b[`hY`"gYWč`bXUfm`gci`fW`Zca`k`W`_bck`YX[Y`cZ`h`Ya`U`g`VYYb`cVU]bYX"

8i`d`]WU]cb`ffgY`Zd`U[]Uf]ga`"E`gi`Va`]h]b[`mci`f`ck`b`k`cf`_ž]b`k`c`Y`cf`]b`dUf]ž`k`YfY`]h`Ug`dfYj`]ci`g`m`VYYb`dfYdUfYX`cf`gi`Va`]hYX`Zc`f`Ubc`h`Yf`UggYgga`Ybhcf`Wč`i`fgY`Uhi`BGK`cf`Ubc`h`Yf`i`b]j`Yfg]m'

7c`ffY`W`fY`ZYfYbW]b[`dfUW]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'W'dmf][\hž' BGK 'Gh XYbh7cXY'cZ7cbXi WñUbX'5WwdfUV'Y'l gY'cZ
I BGK '⇒H'F Ygci fW'g'Dc`]Wñ



F Ygci fWg

DfYgWf]VYX`F Ygci fWg`

- 6i fbgž5"UbX`F]WUfXgž>"f9Xgl"&\$%"FZW5S_ Td\YVW9g[VWfa BWSYaYk S` V BdSuf[UW[EWJa` V >S` YgSYWFWSUZ[Yž7 Ua Vf]X[Y. 7 Ua Vf]X[Y`I b]j Yfg]miDfYgg"

F YWca a YbXYX`F Ygci fWg

- 6UhgcbYžF "f%- - (L"9 dS__ SdžCI žcfx. CI žcfx`I b]j Yfg]miDfYgg"

8U`hcbž7 / `GY]XY`cZYfž6" f%- - , L`Bda` g` U[Sf[a` "CI žcfx. CI žcfx`I b]j Yfg]miDfYgg

<Ufa Yfž>"f&\$\$(L": ai fa fWSUZ i dff` Y"<Ufck ž9ggYI. `DYUfgcb`9Xi WUhgcb`@hX"

B UhgcbžD"UbX`; i žM`f&\$+\$+L8aUge a` HaUSTg`Sck`GmXbYm`B UhgcbU`7YbhfY`žc`9b[`]g\ @Ub[i U[Y`HYUW\]b[`UbX`F YgYUfW

H\cfbVi fmžG" f&\$%&L": ai fa fWSUZ YdS__ Sd"<Ufck ž9ggYI. `DYUfgcb`9Xi WUhgcb

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

Gh XYbhZYXVUW_k]`VY`Wc`YWYX`h.fci [\ `h`Y`i b]j Yfg]migi fj Ymž`a]X!hYfa `Wci fgY`Yj U`i Uhc]b`UbX]bhYfUW]cbg`fY"["Ya U]`YI W\Ub[Ygl`5`h`Y`ZYXVUW_k]`VY`WfYž`miYI Ua]bYX`UbX`fYZYWYX`i dcb`hc]a dfcj Y`h`Y`Wci fgY`UbX`]hg`XY`]j Yfm`

⇒ U[Y`7 fYX]h

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

7F ⇒ CG

7F ⇒ CG`Dfcj]XYf`7cXY. \$\$\$- , ;