

EDST6760

DfcZYgg]cbU`9I dYfjYbW`%

HYfa`%ZHYfa`&Z&\$&&



7 ci fgY`Cj Yfj]Yk

GHJZZ'7 cbHJW`8 YHJ]`g

7 cbj Ybcfg

B Ua Y	9a U]`	5j U]`UV]`]m	@cWU]cb	D\cbY
5bXm; Uc	Li Ygcb["[Uc4 i bgk "YXi "Ui	6m9a U]` Uddc]bħa Ybh	; &&'A cfj Yb 6fck b 6i]X]b[

5Xa]b]ghfUhc fg

B Ua Y	9a U]`	5j U]`UV]`]m	@cWU]cb	D\cbY
DfcZYgg]cbU` 9I dYf]YbVW K cf_d`UW #H[" fUHfX @YUfb]b[`fK @Ł	dfcZYgg]cbU`YI dYf]YbVW4 i bgk "YXi "Ui	Dcghei Yf]Yg`cb ħY`VŁi fgY`Ybei]fm Zcfi a `cb`A ccX`Y cf`Ya U]`hc UffUb[Y`Ub Uddc]bħa Ybh	A cfj Yb 6fck b 6i]X]b[ž @ck Yf ; fci bX	

GWXcc``7 cbHJW`#Zcfa Uh]cb

GWXcc``cZ9Xi WU]cb

5fngž8 Yg][b`UbX`5fWX]HfW`i fY

; fci bX: `ccfžA cfj Yb`6fck b`6i]X]b[`fi &\$Ł

H. ž`*%f&Ł`-` ,)`%` ++

9. YXi WU]cb4 i bgk "YXi "Ui

K . `łtdg.##k k k "Ufng"i bgk "YXi "Ui #YXi WU]cb

5W_bck`YX[Ya YbhcZ7ci blfm

I B GK `5fngž8Yg][b`UbX`5fWk]fYWhi fY? Ybg]b[hcb`UbX`DUXX]b[hcb`Wla di gYg`UfY`Vi]hcb`5Vcf][]bU`
@UbXg"K Y`dUmci f`fYgdYWhg`hc`hY`6]X^][U`UbX`; UX][U`dYcd`Yg`k`c`UfY`hY`7i`gfcX]Ubg`cZ`hY`gY`UbXg"
K Y`UW_bck`YX[Y`hY`5Vcf][]bU`UbX`Hc`fYg`G`fU]h`g`UbXY`f`dYcd`Ygž`hY`;]fgh5i`g`fU`]Ubgž`k`c`gY`UbXgž`
k`]bXg`UbX`k`U`fYg`k`Y`U`bck`g`U`fYž`UbX`dUm`fYgdYWhi`hc`hY`]f`i`b`jei`Y`j`U`i`Ygž`UbX`hY`]f`W`b`h`bi`]b[`UbX`
YbXi`f]b[`W`h`fYg`k`\\]W`XYYdYb`UbX`Yb`f]W`hY`Z`c`Zci`f`b`U`h`cb`UbX`W`a`a`i`b`]h`Yg`"

7ci fgY'8YhU]`g

I b]hg'cZ7fYX]h*'

K cf_`cUX

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

Gi a a UfmicZ'h\Y'7ci fgY

Yž ž R Yj ScZU T` f adVž;ež RgR]RS]V è S` e' f_UVcRuf Rē R_U a` dēRuf Rē def UV_ēž YV T` f adV T` _ē_ē UV]žVg R_U RddVdd^ V_ēh ž] SV žV_ēR] WcS` e' Xc` f ad` Wēf UV_ēž

h`h]g`V`i fgY`mci`k`]`XYj Y`cd`U`fUb[Y`cZHYUW]b[`g_]`g`UbX`i bXYfgHUbX]b[g`YggYbh]U`hc`d`Ub`Zc`f`UbX

	Udd`jWUjcb`hc`gi`ddcfhVebg]ghYbhUbX`Vca`dUfUV`Y`↑X[Ya`YbHg`cZgh`XYbh`YUfb]b["	
) "("	8Ya`cbghfUHY`hY`WUdUW]mhc`]bHY`fdFY`hgh`XYbhUggYgga`YbhXUHU`hc`Yj`U`i`UH`gh`XYbh`YUfb]b[`UbX`a`cX]ZniHYUWX]b[`dfUW]VW"	%
)")	8Ya`cbghfUHY`i`bXYfghUbX]b[`cZU`fUb[`Y`cZghfUHY[`]Yg`Zc`f`fYdcf]b[`hc`gh`XYbHg`UbX`dUfYbHg#WUfYfg`UbX`hY`di`fdcgY`cZ`YYd]b[`UWV`fUHY`UbX`fY`]UV`Y`fYVc`fXg`cZgh`XYbhUWX]Yj`Ya`Ybh"	%
*"%	8Ya`cbghfUHY`Ub`i`bXYfghUbX]b[`cZ`hY`fc`Y`cZ`hY`B`Uhc`bU`D`fc`Z`gg]cbU`GHUbXUfXg`Zc`f`HYUWX`Yfg`]b`]XYbh]Z]b[`dfcZ`gg]cbU`Y`Ufb]b[`bY`Y`Xg"	%
*"&	I`bXYfghUbX`hY`fY`Yj`UbhUbX`Udd`f`c`d`f]UHY`gci`fW`g`c`Z`d`f`c`Z`gg]cbU`Y`Ufb]b[`Zc`f`h`UWX`Yfg"	%
*"	GYY`_`UbX`Udd`m`Vebgf`i`W]j`Y`ZYXVUW`_`Zca`gi`dYfj`]gc`fg`UbX`h`UWX`Yfg`hc`]a`d`f`c`j`Y`h`UWX]b[`dfUW]VW`g"	%
* "("	8Ya`cbghfUHY`Ub`i`bXYfghUbX]b[`cZ`hY`f`Uhc`bU`Y`Zc`f`Vc`bh]bi`YX`d`f`c`Z`gg]cbU`Y`Ufb]b[`UbX`h`Y`]a`d`]WUjcbg`Zc`f`]a`d`f`c`j`YX`gh`XYbh`YUfb]b["	%
+ "%	I`bXYfghUbX`UbX`Udd`m`hY`_`Y`mid`f]bW]d`Yg`XYgW]VYX`]b`Vc`XYg`c`Z`Y`h`]Vg`UbX`Vc`b`X`i`Vh`Zc`f`h`Y`h`UWX]b[`dfcZ`gg]cb"	%
+ "&	I`bXYfghUbX`hY`fY`Yj`Ubh`Y[`]g`U`h`j`Y`z`U`X`a`]b`]g`h`U`h`j`Y`z`UbX`c`f[`Ub]g`U`h`c`b`U`d`c`]W]Yg`UbX`d`f`c`V`W`g`g`Y`g`f`Y`e`i`]f`Y`X`Zc`f`h`UWX`Yfg`U`W`V`c`f`X]b[`hc`g`W`c`c`g`h`U[`Y"	%
+ "		

5ggYgga Ybh

5ggYgga YbhHjg_	K Y][\h	8i Y'8UH'	7ci fgY'@YUfb]b[Ci hWca Yg'5ggYggYX
%"DfcZYgg]cbU`9I dYf]YbW`% F Ydcfh	%%\$i	Bch5dd`]WUV`Y	%z'

5ggYgga Ybh%"DfcZYgg]cbU`9I dYf]YbW`%F Ydcfh

HUg_%"!DfcZYgg]cbU`9I dYf]YbW`%F Ydcfh

H\]g`]g`hY`ZbU`UggYgga Ybh

5XX]h]cbU`XYHJ]g

H\Y`ZbU`[fUXY`Uk UfXYX`Zc`fk UfXYX`Zc`fk UfXYX`Zc`fk Uf- gga Ybh

8'''-8Ya cbgfhUHX

9'''-9I WYXg'9I dYWUjcbg

5hYbXUbW'F YeI]fYa Ybhg

GWcc`cZ9Xi WWhcb'5hYbXUbW'F YeI]fYa Ybh

H\Y'GWcc`cZ9Xi WWhcb'fG98L'fYeI]fYg'ghi XYbhg'a YYhU'a]b]a i a 'UhhYbXUbW'fYeI]fYa Ybhcz, \$i 'cZU`

F Ygci fWg

DfYgWf]VYX`F Ygci fWg`

\hfdg.##k k k "i bgk "YXi "Ui #Ufng!XYg][b!UfWk]hYWhi fY#ci flgWkcc`g#Xi WUhc b#gh XYbh`]Z#Mci fgY!
]bZcfa Uh]cb#dfcZ'gg]cbU!YI dYf]YbW`

5i ghfU`]Ub`bghh hY`ZcfHYUWk]b[`UbX`GWkcc``@YUXYfg\]d" f&\$% fZ 3f dæR]R_ c` WddZ`_R] eR_URdJd Wc
VRTYVadz eR_URdJdz`F Yhf]Yj YX`Zca`

[\hfd.##k k k "hYUWkYfghUbXUfXg"U\]hg"YXi "Ui #C f\[Ub\]gUh\]cbGHUbXUfXg#C f\[Ub\]gUh\]cb](#)

7\i fWk]`zF "z: Yf[i gcbz`D"z; cX]b\cZ`G"z>c\b gcbz`B": "z? YXX]Yz5"z@YhgZk "zJ]W`ZA " f&\$% Ł" VRTYZ`Xz
? R\Z`X R 6ZWWdv_TVz`f&bX`YX`cbk UfXg"Ł"A]hcbz`E @8. :>c\b`K]Ymi/`Gcbg"

Gi Va]gg]cb`cZ5ggYgga YbhiHUg_g

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

≠mci`YbWci bHYf`U`dfcV`Ya`k` \Yb`UH`Ya` dh]b[`hc`gi`Va`]hmc`i`f`Ugg][`ba`Ybhi`h`fci`[`\`Hi`fb]h]b`z`d`Y`UgY`
HY`Yd`cbY`9I`HYfb`U`Gi`ddcfhcb`-`,`)`"``"``%cf`Ya`Uj`h`Ya`icb`YI`HYfb`U`HY`hgi`ddcfh4`i`bgk`"YXi`"Ui`""`Gi`ddcfh`
`lci`fg`UfY`,`.\$\$Ua`-`-%\$.\$\$da`icb`k`YY`XUmg`UbX`-`.\$\$Ua`-`).\$\$da`icb`k`YY`YbXg`f1`*)`XUmg`U`mY`Uf2`≠mci`
UfY`i`bUV`Y`hc`gi`Va`]hmc`i`f`Ugg][`ba`Ybhi`Xi`Y`hc`U`Zi`h`k`]h`Hi`fb]h]b`mci`a`Um`Udd`m`Zc`f`Ub`YI`HYbg]cb`z`Vi`hmc`i`
a`i`ghf`Y`h]b`mci`f`h]W`Y`hbi`a`VYf`Z`ca`9I`HYfb`U`Gi`ddcfh`f`U`cb[`k`]h`Ubmc`h`Y`f`f`Y`Yj`Ubh`Xc`W`a`Yb`hg`L`hc`
]b`Wi`XY`Ug`Yj`]XYb`V`hc`gi`ddcfh`mci`f`YI`HYbg]cb`Udd`]W`h]cb`≠mci`Ya`Uj`9I`HYfb`U`Gi`ddcfh`mci`k`j`
Ui`hc`a`U`h]W`m`f`Y`W`j`Y`U`h]W`Y`hbi`a`VYf`z`Vi`h]Z`mci`HY`Yd`cb`Y`mci`k`j`b`Y`Y`X`hc`gd`Y`W`Z`W`m`Ug`_`Zc`f`cb`Y`
Hi`fb]h]b`U`gc`d`fcj`]XYg`i`d`XU`h`g`cb`h`Y]f`gm`g`h`Ya`g`h`U`h`g`cb`Hk`]h`Y`f`"

;`Yb`Yf`U`m`z`Ugg`Ygga`Ybhi`Ug_g`a`i`gh`VY`gi`Va`]h`Y`X`Y`Y`W`f`cb]W`m`j`]U`Y`]h`Y`f`Hi`fb]h]b`cf`U`A`cc`X`Y`
Ugg][`ba`Yb`h`h`h`]b`gh`U`b`W`g`k` \Y`f`Y`h`g`]g`b`ch`d`c`g`g]V`Y`z`]h`k`]`V`Y`g`h`U`h`X`cb`mci`f`W`ci`fg`Y`g`A`cc`X`Y`g`]h`k`]h`
U`h`Y`fb`U`h]`Y`gi`Va`]gg]cb`X`Y`h]g`"

:`cf`]b`Z`fa`U`h]cb`cb`l`ck`hc`gi`Va`]h`Ugg][`ba`Yb`hg`cb`]b`Y`j`]U`A`cc`X`Y`.\`h`d`g`#`gh`XYb`h`i`bgk`"YXi`"Ui`#`ck`!
gi`Va`]h`Ugg][`ba`Yb`h`a`cc`X`Y`"

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

D`U[]Uf]ga `]g`i g]b[`h`Y`k cfXg`cf`]XYUg`cZc`h`Yfg`UbX`dFYgYbh]b[`h`Ya `Ug`mci f`ck b`" `#WUb`hU`Y`a Ubm
Zcfa gZ`Zca `XY`]VYfUH`V`X`YU]b[`h`c`UW]XYbhU`m`W`dm]b[`Zca `U`gci fW`k]h`ci hUW`bck `YX[`Ya `Yb`h`

I BGK `[fci dg`d`U[]Uf]ga `]b`h`c`h`Y`Zc`ck]b[`W]h`[cf]Yg.

7cdm]b[.`I` g]b[`h`Y`gUa `Y`cf`j`Yfmg]a]Uf`k cfXg`h`c`h`Y`cf][]bU`h`I`h`cf`]XYU`k]h`ci hUW`bck `YX[]b[`h`Y`
gci fW`cf`i`g]b[`ei`c`h`U]cb`a`Uf`g`"H`[g]bW`i`XYg`W`dm]b[`a`U`h`f]U`gZ`]XYUg`cf`W`b`W`d`h`g`Zca `U`Vcc`_`Z`U`f`h]WY`Z`

5 WUXYa]WbZcfa Uh]cb

8i Y'lc'Yj c'j]b['UXj]W'VmB GK ' < YU'hžgh XYbhg'a i gh'WXYW'Zcf'i dXUH'X']bZcfa Uh]cb'fY[UfX]b['cb']bY
'YUfb]b['Zcf'U''5fngž8Yg][b'UbX'5fW]H'W'fY'W'i fgYg'h]g'h'fa 'fj]U'A ccX'Y'cf'W'i fgY']bZcfa Uh]cb
dfcj]XYX"Ł