



**EDST5808**



7ci fgY`Cj Yfj JYk


7 ci fgY'8YHJ]`g

7 fYX]hDc]bHg`\*`

Gi a a UfmicZh\Y'7 ci fgY

H\]g`Wci fgY`]g`Ub`]bfcXi W]cb`hc`h\Y`\_YmWcbW`dHg`UbX`]ggi Yg`gi ffc`i bX]b[ ` [ ]ZHX`YXi W]h]cb" H\fc`i [ \`U`a` ]l`h`fY`cZcb`]bY`Y`W`fYg`z`gY`Z`X]fY`W`X`U`W`h]`]h]Yg`z`X]g`W`gg]cb`Zc`fi`a`g`UbX`gY`Z`X]fY`W`X`fY`UX]b[ `z`mci`k`]"` [ U]b`]bZc`fa`U]cb`UbX`g\_]`g`fY`U]h]b[ `hc`h\Y`. `fU`E`XY`Z]b]h]cbg`z`WcbW`d]h]cbg`z`UbX`a`c`XY`g`c`Z [ ]ZHX`bY`gg`z` ]bW`i`X]b[ `h`c`gY`W`c`a`a`cb`mi`gY`X`]b`5`i`gf`U`]Ub`g`W`cc`g`z`fV`E`h`Y`W`c [ b]h] Y`UbX`U`ZZY`W]j`Y`W`U`f`U`W`Y`f]g]h]W`g`c`Z [ ]ZHX`g`h`i`XY`b`hg`f`U`b`X`h`Y`f`X]Z`Y`f`b`W`g`hc`h\Y`W`c [ b]h] Y`UbX`U`ZZY`W]j`Y`W`U`f`U`W`Y`f]g]h]W`g`c`Z`bc`b! [ ]ZHX`g`h`i`XY`b`hg`E`z`f`W`E`h`Y`a`U`c`f`d`f]b`W]d`Y`g`UbX`]b`g`f`i`a`Y`b`hg`i`gY`X`]b`h`Y`]X`Y`b`h]Z`W]h]cb`c`Z [ ]ZHX`g`h`i`XY`b`hg`z`f`X`E`X]j`Y`f`gY`[ `f`c`i`d`g`c`Z [ ]ZHX`g`h`i`XY`b`hg`z`]bW`i`X]b[ `h`k`W`Y`i`W`d]h]cb`U`gh`i`XY`b`hg`UbX`Y`i`W`d]h]cb`U`m [ ]ZHX`g`h`i`XY`b`hg`z`UbX`f`Y`E`W`Y`U`h]j`]h`f`

5 h\Y`WcbWi`g]cb`cZ`h]g`Wci fgY`h\Y`g`h`i`XY`b`h`k`]"`VY`UV`Y`hc`

- % " X`Y`b`h]Z`m`U`b`X`Y`j`U`i`U`h`Y`h\Y`W`f`f`Y`b`h]g`g`i`Y`g`h`U`h]b`Z`i`Y`b`W`h\Y`Y`X`i`W]h]cb`c`Z]b`h`Y`W`i`U`m [ ]ZHX`g`h`i`XY`b`hg`"
- &" 8 ]g`W`gg`k`U`mg`]b`k`\]W`X`]b`h`Y`W`i`U`m [ ]ZHX`g`h`i`XY`b`hg`X]Z`Y`f`Z`c`a`h\Y`f`U`[`Y`d`Y`f`g`]b`h\Y`f`W`c [ b]h] Y`UbX`g`c`V]c!`U`ZZY`W]j`Y`X`Y`j`Y`c`d`a`Y`b`h`"
- ' " 5 gg`Y`gg`h\Y`W`i`g`Y`g`c`Z`U`W`X`Y`a`]W`i`b`X`Y`f`U`W`X]j`Y`a`Y`b`h]b`[ ]ZHX`g`h`i`XY`b`hg`"
- (" 9 l`U`a`]b`Y`g`c`a`Y`c`Z`h\Y`W`c`a`a`cb`a`m`h]g`U`gg`c`W]U`h`X`k`]h`h\Y`Y`U`f`b]b[ `b`Y`Y`X`g`c`Z [ ]ZHX`g`h`i`XY`b`hg`"
- ) " 8 ]g`W`gg`k`U`mg`]b`k`\]W`X`h`Y`U`W`Y`f`g`a`U`m`V`Y`U`V`Y`hc`]X`Y`b`h]Z`m [ ]ZHX`g`h`i`XY`b`hg`"

HYUWX]b[ `G`h`f`U`h`Y`[ ]Y`g`

HYUWX]b[ `g`h`f`U`h`Y`[ ]Y`g`

H\Y`h`Y`U`W`X]b[ `g`h`f`U`h`Y`[ ]Y`g`hc`V`Y`i`gY`X`]b`h\Y`W`c`i`fgY`k`]"`W`c`a`d`f]gY`U`a` ]l`h`fY`c`Z`cb`]bY`Y`W`i`fY`g`z`gY`Z`X]fY`W`X`U`W`h]j`]h]Y`g`z`d`U`f]h]W]d`U]h]cb`]b`c`b`]bY`X]g`W`gg]cb`Zc`fi`a`g`z`UbX`gY`Z`X]fY`W`X`fY`UX]b[ `h`U`h`f`Y`Z`Y`W`i`Y`j`X`Y`b`W`!`V`U`g`Y`X`h`Y`U`W`X]b[ `d`f`U`W`h]W`g`"

F`U]h]cb`U`Y`

H\Y`W`c`b`h`Y`b`h`c`Z`h\Y`W`c`i`fgY`d`f`c`j`]X`Y`g`m`c`i`k`]h`U`b`c`j`Y`f]j`Y`k`c`Z`h\Y`a`U`c`f`]g`g`i`Y`g`f`Y`Y`j`U`b`h`c`h\Y`Y`X`i`W]h]cb`c`Z [ ]ZHX`U`b`X`h`U`Y`b`h`X`g`h`i`XY`b`hg`" H\Y`h`Y`U`W`X]b[ `U`d`d`f`c`U`W`X`U`h`Y`a`d`h]g`hc`U`W`h]j`Y`m`Y`b[ U`[`Y`m`c`i`]b`X]g`W`gg]cb`c`Z`W`f`f`Y`b`h`h`Y`c`f`m`U`b`X`d`f`U`W`h]W`z`U`b`X`U`gg]g]h]g`m`c`i`]b`Y`U`f`b]b[ `b`Y`k`]b`Z`c`fa`U]cb`UbX`g\_]`g`fY`U`h`Y`X`hc`\_Y`m`W`c`b`W`d`h]g`]b`[ ]ZHX`Y`X`i`W]h]cb`" `M`c`i`k`]"`V`Y`f`Y`e`i`]f`Y`X`hc`h`U`\_Y`f`Y`g`d`c`b`g]V`]h`m`Z`c`f`m`c`i`f`c`k`b`Y`U`f`b]b[`]b`h`g`W`c`i`fgY`"

5i ghfU`]Ub`DfcZYgg]cbU` ; fUXi UhY`HYUW ]b[ `GHUbXUfXg

GHUbXUfX	8YgW]dhcb
%"&"	9l dUbX`i bXYfghUbX]b[ `cZ\ck`ghi XYbhg`YUfb`i g]b[ `fYgYUfW`UbX`k cf_d`UW` _bck`YX[ `Y"
%) ""	9j U`i UhY`YUfb]b[ `UbX`HYUW ]b[ `dfc[ fUa`gzi`g]b[ `ghi XYbhUggYgga`YbhXUHž`hUhUFY` X]ZYfYbh]UhY`Zcf`hY`gdYW]Z`YUfb]b[ `bYYXg`cZghi XYbhg`UW`cgg`hY`Z`""fUb[ `Y`cZ` UV]]hYg"
' "" ""	Gi ddcfhWc`YU[ `i Yg`hc`gY`YWhUbX`Udd`mYZYW]j`Y`HYUW ]b[ `ghfUH[ `]Yg`hc`XYj`Y`cd` _bck`YX[ `Yžg_]`gždfcV`Ya`gc`j`]b[ `UbX`W]h]W`UbX`WYUhj`Y`h`b_]b[
' "*" &	9j U`i UhY`dYfgcbU`HYUW ]b[ `UbX`YUfb]b[ `dfc[ fUa`g`i`g]b[ `Yj`]XYbWž`]bWi`X]b[ `ZYXVUW` Zca`ghi XYbhg`UbX`ghi XYbhUggYgga`YbhXUHž`hc`]bZcfa`d`Ubb]b[ "
* "&" &	DUfh]W]dUhY`]b`YUfb]b[ `hc`i`dXUH`_bck`YX[ `Y`UbX`dfUW]Wž`hUf[ `YhY`hc`dfcZYgg]cbU` bYYXg`UbX`gW`cc`UbX`#cf`gmghYa`df]cf]hYg"
* "(" &	I`bXYfU`_Y`dfcZYgg]cbU`YUfb]b[ `dfc[ fUa`g`XYg][`bYX`hc`UXXfYgg`]XYbh]ZYX`ghi XYbh` YUfb]b[ `bYYXg"

# 5ggYgga Ybh

; YbYfU`UggYgga Ybh]bZcfa U]cb`a UmVY`UWwYggYX`]b`A ccX`Y"

## 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
F YZYW]cb`	( \$i	%z&z( z)	%&" z%) "" z "" "	&*#\$` #& \$% \$).\$\$ DA
5Xj cWUWniUfhjWY`	*\$i	&z z( z)	%&" z ""&z*"& &z*" ("&	&%( \$) #& \$% \$).\$\$ DA

D`YUgY`fYZf`hc`3gefS`[S` BdaXWee[a` S`^E fS` VSdVe XadFWSUZWde`cb`hY`dfYj`]ci`g`dU[`Y

## 5ggYgga Ybh8YhU]`g

5ggYgga Ybh%`F YZYW]cb`

GHUfhXUHY`. Bch5dd`]WUV`Y

8YhU]`g`. HUg\_`%!`DfYdUFY`U`dUdYf`h`UhdFcj`]XYg`U`fYZYW]cb`cb`[`]ZYX`gh`XYbtrg`#`]ZYX`YXi`WU]cb`k`]h`  
fYZfYbW`hc`h`Y`]]fYfUhi`fY`Gh`XYbtrg`k`]`fYW]j`Y`k`f]hYb`ZYXVUW`k`]h`]b`%\$`XUmj`cZgi`Va`]gg]cb`

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 ]hrci 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 ]hrci f'Ugg][ ba YbhXi Y'hc'U'ZU' 'hk ]h'Hi fb]h]b' mci 'a UmiUdd'm'Zcf'Ub'YI HYbg]cbz'Vi hrci  
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  
]bWi XY'Ug'Yj ]XYbW'hc'gi ddcfhrci f'YI HYbg]cb'Udd' ]W]h]cb" zmc i 'Ya U]'9I HYfbU'Gi ddcfhrci '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'gd'Y'W'Z]W' m'Ug\_'Zcf'cbY"  
Hi fb]h]b'U'gc'dfcj ]XYg'i dXUHYg'cb'h'AY]f'gmghYa 'ghU'g'cb'Hk ]h'Yf"

; YbYfU'mz'UggYgga YbhHUg\_g'a i ghVY'gi Va ]h'X'Y'Y'W'f'cb]W'mj ]U'Y]h'Yf'Hi fb]h]b'cf'U'A ccX'Y  
Ugg][ ba Ybh' b ]bg'U'b'W'g'k \YfY'h' ]g' ]g' bchidcgg]V'Yz]hk ]`VY'g'U'Y'X'cb' mci f'Wci fgY'g'A ccX'Y'g]h'k ]h'  
U'h'fbU'h] Y'gi Va ]gg]cb'XYh]g"

@UH'5ggYgga YbhDYbU'h]Yg

f`G][ b]Z]W]b]h]m]U]Z]Y]W]h]m]i] f`d`Y`f`Z`c`f`a` U`b`W`Y` ]b`U`g`g`Y`g`g`U`V`Y`k` c`f`\_`z`V`Y` ]h`U`Z`c`f`a` U`Y`b`X`!`c`Z`g`Y`a` Y`g`h`f`Y`I` U`a` ]b`U`h`c`b`z`U`  
W`U`g`g`h`Y`g`h`z`U`U`V`c`f`U`h`c`f`m`h`Y`g`h`z`U`g`Y`a` ]b`U`f`d`f`Y`g`Y`b`h`U`h`c`b`c`f`U`b`m`c`h`Y`f`Z`c`f`a` c`Z`U`g`g`Y`g`g`a` Y`b`h`

: c`f`Z` f`h`Y`f`X`Y`h`U`]g` ]b`f`Y`U`h`c`b`h`c`G`d`Y`W`U`7`c`b`g`]X`Y`f`U`h`c`b` ]b`W`i` X`]b`[ ``K` \`Y`b`h`c`5`d`d`m`z`<`c`k`h`c`5`d`d`m`U`b`X`  
"G`i`d`d`c`f`h`]b`[ `8`c`W`a` Y`b`h`U`h`c`b`"d`Y`U`g`Y`f`Y`Z`f`h`c`h`Y`G`d`Y`W`U`7`c`b`g`]X`Y`f`U`h`c`b`k`Y`V`g`h`Y`.

[\h`d`g`#`g`h`X`Y`b`h`i`b`g`k`"Y`X`i`"U`i`#`g`d`Y`W`U`!`W`c`b`g`\]X`Y`f`U`h`c`b`](#)

## 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 gž Zca 'XY]VYfUHy'WXYU]b[ 'hc'UWV]XYbU`mWčdm]b[ Zca 'U'gci fW'k ]h'ci hUW\_bck 'YX[ Ya Ybh'

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

7cdm]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'ja U[ YgžUfhUbX'XYg][ b'dfc'YWgžUg'k Y`'Ug dfYgYbhU]cbg'k \YfY'gca YcbY'dfYgYbhg'Ubc'hYf'g:]XYUg'cf'k cfXg'k ]h'ci hWYX]h'

#Uddfcdf]UHy'dUfUd\fUg]b[ .W\Ub[ ]b[ 'U'Zyk'k cfXg'UbX'd\fUgYg'k \]Y'a cghmfYU]b]b[ 'hY'cf][ ]bU'gf'i W\ fY'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'Ubc'hYf'g:]XYUg'cf'k cfXg'k ]h'ci hWYX]h' #U'gc'Udd']Yg'hc'd]YW]b[ 'hc[ YhYf'ei chYg'UbX'dUfUd\fUgYg']bhc'U'bYk'k \c'Yžk ]h'ci hfYZfYbW]b[ 'UbX'U'ghi 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'c'hYfg'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'hYf'ghi XYbhVYZc'fY'hY'Xi Y'XUHyžcf'Zc'f'hY'di fdcgY'cZ'hYa d`U[ ]Uf]g]b[ 'UhUbmi]ja Yž'dUm]b[ 'Ubc'hYf'dYfgcb'hc'dYfZc'fa 'Ub'UWXYa ]WUg\_žghU' ]b[ 'cf'UWči ]f]b[ Ubc'hYf'dYfgcb'g'UWXYa ]Wk cf\_'UbX'Wčdm]b[ ]ž'cZYf]b[ 'hc'Wč'a d'YHy'Ubc'hYf'dYfgcb'g'k cf\_'cf'gYY\_]b[ dUma YbhZc'f'Wč'a d'Y]b[ 'UWXYa ]Wk cf\_"

#Uddfcdf]UHy'WU]cb.'7 ]h]b[ 'gci fW'g'k \]W\Uj Y'bc'hVYYb'fYUXžk ]h'ci hUW\_bck 'YX[ ]b[ 'hY'`gYWčbXUfm' gci fW'Zca 'k \]W\_bck 'YX[ Y'cZ'hYa '\Ug'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'dUfž'k \YfY']h\Ug'dfYj ]ci g'm VYYb'dfYdUfYX'cf'gi Va ]hYX'Zc'f'Ubc'hYf'UggYgga Ybhcf'Wč'i fgY'Uhi BGK 'cf'Ubc'hYf'i b]j Yfg]m'

7cffYW'fYZYfYbW]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'h]a 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




