



HUMS2000

5 fmg' ðhY fbg\]d

HYfa `Hk c` #`&\$&\$

7ci fgY`Cj Yfj JYk

GHJZ7cbHJW`8YHJ`g

7cbj Ybcfg

B Ua Y	9a Uj`	5j Uj`UVj]m	@cWjhcb	D\cbY
@ci jgY`Gh XXm	gh XXm4 i bgk "YXi "Ui	9a Uj`Zcf Uddc]oha Ybh	Fcca`%*) !, ž]fghZccfž A cfj Yb`6fck b 6i]X]b[

GWcc`7cbHJW`bZcfa Uhjcb

GWcc`cZGcWU`GWYbWg

Fcca`%) -

A cfj Yb`6fck b`7 &\$

Ya Uj`.gcgg4 i bgk "YXi "Ui

d\cbY. '\$&-' ,)`% \$+

7ci fgY'8YHJ]`g

7fYX]hDc]bng`*`

Gi a a UfmicZ`hY'7ci fgY

Gi V`YWh5fYU. 3dfe

H\]g`Wci fgY`WUb`U`gc`VY`gh`X]YX`]b`hY`Zc`ck`]b[`gdY`WU`]gU]cbg. `5d_ [`a`aYk?` W[S/?` W[S`BdaVgUf]a` fi
?` W[S/E`UdW` S` V`Eag` Vfi?` W[S/5a`_`e` <agd` S`fe` fi?` W[S/BgT`U`DWSf]a` e` S` V`3VhWd]e[` Yfi

H\Y`<I` A`G&\$\$\$`Wci fgY`]g`Ub`Y`Y`W]j`Y`]b`hY`I` BGK` `5fng`UbX`GcWU`G`WYbW`g`dfc[` fUa`g`UbX`hY`
7`f]a`]bc`c[`ma`U`cf]b`hY`6`UWX`Y`cf`c`ZDgm`W`c`c[`]WU`G`WYbW`g`dfc[` fUa` `` `#ia`UmVY`hU`_Yb`Uh`hY`YbX`cZU`
Z]fghm`Y`Uf`c`Zgh`Xm`UbX`c`ZY`fg`gh`XYbng`k`cf`_YI`dYf]YbW`]b`U`f`Ub[`Y`c`Zcf[`Ub]gU]cbg`i`h`]g]b[`gcW]U`
fYgYUfW`UbX`dc`]Wm`UbX`\i`a`Ub]hY`g`g`_`g`"

H\Y`j`cW]h]cbU`d`UW`a`Yb`h`k`\]W`]g`k`cf`_YX`]b`hY`Gm`XbYma`Yf`c`dc`]hUb`UfYU`z`dfc]`]XYg`k`cf`_YI`dYf]YbW`
UhU`\cg]hcf[`Ub]gU]cb`Zcf`%(`Z` ``XUmg`f`%)`k`cf`_]b[`]ci`fg`"H\]g`d`fUW]WU`YI`dYf]YbW`]g`UW`W`a`d`Ub]YX`Vm`
U`fYUX]b[`dfc[` fUa` ``H\Y`fYUX]b[`W`a`dcbYbhYI`Ua`]bYg`X]ZY`fYbhUddfcUW`Yg`h`c`hY`gh`XmcZcf[`Ub]gU]cbg`z`
hY]f`ghf` W`h`fYg`z`Z`bW]cbg`UbX`dc`]WYg`z`Ug`k`Y` ``Ug`]b`_g`hY`gY`]ggi`Yg`h`c`hY`d`UW`a`YbhYI`dYf]YbW`"

B`chY`. `Gh`XYbng`a`i`gh`\Uj`Y`UW`Y]j`YX`U`WYX]h`Yj`Y`cf`VY`hY`f`Uj`YfU[`Y`UW`cgg`hY`Wci`fgYg`]b`hY]f`XY[`fYY`
H\Y`]bhYfbg`\d`a`UmVY`]bW`XYX`Ug`dUf]cZU`a`U`cf]b`hY`Y`UW`]midfc[`fUa`g`k`]h`hY`dYfa`]gg]cb`cZ`hY`
fY`Yj`Ubh7`cbj`Ybcf`"

:`cf`XYHJ]g`cb`\ck`h`c`Udd`mid`YUgY`W`b`hUW`hY`Y`UW`]miK`cf`_`b`hY[`fU`hX`@YUfb]b[`I`b]h. `: [5GGI](#)
[K`@4`i`bgk`"YXi`"Ui`"](#)

7ci fgY`@YUfb]b[`Ci`hW`a`Yg

%` `b]`Ygh[`U`hY`hY`XmbUa`]Mg`cZk`cf`_]b[`k`]h`]b`Ub`cf[`Ub]gU]cb`k`\Y`hY`f`df]j`U`hY`z`di`V`]W`cf`b`ch`Zcf`dfc`Z]h`
fB: `D`E`
&`D`U`h]W]dU`hY`]b`Ub`UW]cb`fYgYUfW`dfc`Y`W`h`c`f`hU`_Y`fYgdcbg]V`]miZcf`Vi`g]bYgg`fY`U`hX`hUg`_g`
'`" `5`f]W`U`hY`Ub`]b`XYd`h`i`bXYfg`h`UbX]b[`c`ZgYj`YfU`_YmiUgdY`W`g`cZcf[`Ub]gU]cbU`h`Y`cfm`k`]h`WYUf`
]b`_g`h`c`hY`\cg]h`UbX`]bhYfbg`\d`hUg`_g`#dfc`Y`W`h`
(`" `9I`dYf]YbW`hY`d`UW`UbX`df]cf]hY`g`cZU`dfc`Z]gg]cbU`k`cf`_Ybj`]f`c`ba`Ybh`UbX`]X`Y`bh]Zm`UbX`XYj`Y`cd`
gca`Y`cZ`hY`g`_`g`UbX`_bck`YX[`Y`b`Y`Y`X`h`c`[`U]b`Ya`d`c`ma`Ybh`

HYUW`]b[`G`h`f`U`hY[`]Yg`

HYUW`]b[`G`h`f`U`hY[`]Yg`UbX`f`U`h]cbU`Y.

H\Y`YUfb]b[`UbX`UggYgga`Ybh]b`h`]g`Wci`fgY`]g`U]a`YX`Uh[`]j`]b[`gh`XYbng`hY`fYU` ``Z`YI`dYf]YbW`Zcf`
Udd`m]b[`UbX`Z`f`hY`f`Yb`\UbW]b[`hY]f`_bck`YX[`Y`UbX`g`_`g`]b`fY`U]cb`h`c`hY]f`XY[`fYY`"

H\Y`]bhYfbg`\d`g`W`Y`X`i`Y`]g`gi`ddc`f`hY`X`Vm`U`fYUX]b[`dfc[` fUa` `h`UhYI`Ua`]bYg`X]ZY`fYbhUddfcUW`Yg`h`c`hY`
gh`XmcZcf[`Ub]gU]cbg`f`hY]f`ghf` W`h`fY`z`Z`bW]cbg`UbX`dc`]WYg`k`UbX`gh`XYbng`UfY`YI`dY`W`Y`X`h`c`]X`Y`bh]Zm`
]b`_g`h`c`hY]f`d`UW`a`YbhYI`dYf]YbW`"

Gh`XYbng`k`]`gdYbX`%)` \ci`fg`k`cf`_]b[`UhU`\cg]hcf[`Ub]gU]cb`[`YbYfU`micbY`cf`h`c`XUmg`dYf`k`YY`_`h`Z]h`

Ufci bX'hLY'hYb'k YY_'hYfa "'H\Y'ghi XYbh]g'U`cWUHYX'U\cgghgi dYfj]gcf'k \c'k]`dfcj]XY'cf]YbhUhcž
ZYXVUW_c'b'hLY'ghi XYbh]g'k cf_'UbX'gi ddcfH'7 cbgi 'hU]cb'k]h'hLY'\cgghgi dYfj]gcf'WU'b'Ugg]gh]b' [U]b]b [UWWY'gg'hc'fY'Yj Ubh]bZcfa Uhc'b'UbX'XcW a Ybhg'Ug'k Y`'Ug'U' [fYUHYf']bg] [\h]bhc'\ck 'hLY'U [YbWmk cf_g"

5g'h]g'Wci fgY']bWc'fdcfUHYg'U'fYUX]b ['dfc [fUa ž'ghi XYbhg'UfY'YI dYWWYX'hc'VY']bXYdYbXYbhUbX'gY'Z
X]fYWWYX'YUfbYfg" H\Y'7 ci fgY'7 cbj Ybcf'a YYhg'ghi XYbhg'Ufci bX'XUm'i'cZ'hY'f']bhYfbg\]d'UbX'h'Yb'cb'Ub
Ug!bYYXg'VUg]g'k \]ghdfcj]X]b ['Ya U]'UbX'#cf'hY'Yd\cbY'UWXYa]Wgi ddcfH'CbW'hLY'ghi XYbh\Ug
W\cgYb'hLY'gdYWZ'WZc'W g'Zcf'hLY'f'YggUmigi a a Ufmk]h'\Y'd'Zca 'hLY'7 ci fgY'7 cbj Ybcf'ž'hYmUfY
YI dYWWYX'hc'cWUHY']bhYfYgh]b ['Ufh]WYg'UbX'a UHYf]U'hc']bWc'fdcfUHY']bhc'hLY'f'gi a a UfmUbX'cf [Ub]gUhc'bU'
YggUm'

Gh XYbhg'UfY'Ybfc'YX']b' < I A G&\$\$\$'UZf'U\cgghcf [Ub]gUhc'b'\Ug'VYYb'gci fWYX'UbX'hLY'7 ci fgY
5WXYa]W\Ug'YbXc'fgYX'hLY']bhYfbg\]d"

5ggYgga Ybh

5ggYgga Ybhg

HUg_

@Yb[h`#Xi fU]cb

K Y][\h

8i Y`XUHY

@YUfb]b[`Ci hWca Yg

5ggYgga Ybh% `9ggUmd`Ub`gi a a Ufmž

+) \$ -`%\$\$\$`hcUJ`k cfX`Wci bh

&\$ i

6gW(b_ a` VSk) aXfZWhaUSf[a` S^b`SUW_ W f/ [žžSXWd) Xg^VSke ZShWTWY Ua_ b`Wwžfi

DfYw fgc f'hc h\Y'cf[Ub]gUhc bU'YggUm' +) \$'hc '%\$\$'k cfXg"K f]hYb'ZYXVUW'k]h]b'%\$'k cf_]b['XUmg"

5XX]h]cbU'XYHJ]g.

H\Y'ghi XYbhia YYhg'k]h' h\Y'5WUXYa]W7 cbj Ybcf'UZf'&! " 'XUmg'cZ h\Y']bhYfbg\]d'hc'X]gW gg'UfYUg'cZ]bhYfYghZcf'h\Y'hc d]WZcf'h\]g'YggUmgi a a UfmfUbx'h]g'hc d]W]g'a U]bhU]bYX'Zcf'h\Y' "cf[Ub]nUhc bU'YggUm'k H\Y'hc d]W]g'U'ghUHa Ybhcf'ei Ygh]cb'hUh]bW'f dcfUHY'g'U'Z'k' _YmUgdYWHg'cZ'cf[Ub]nUhc bU'h\Y'cfmY"["h\Y' ghf' Vh' fY'Z'Z' bW]cb'Z'W' h' fY'Z'YUXYfg\]d'Z'W'ca a i b]W]h]cb'Z'W'U'Yb[Yg'Y'hW'hUhW]b'VY'W'cgY'miFY'UH'X'hc' h\Y' ghi XYbh]g']bhYfb']hUg_g" 'Gh' XYbh]g'W]b' i gY'Ub'UddfcUW' hUh]bW'f dcfUHY'g'Y"["Ub cf[Ub]nUhc bU'dYfgdYWH] Y'za UbU[Ya YbhdyfgdYWH] Y'z_bck'YX[Y'dYfgdYWH] Y'cf'W]b' "cc_'Uhgca Y cf[Ub]nUhc bU'a cXY'g'UbX'hYghici h]Z'hYmUfY'YI d'U]b' \ck' h\Y]f' \cghcf[Ub]nUhc b'Z' bW]cbg" "H\Y' ghf' Vh' fY'cZ'h\]g'dUdYf'k]"VY'WUf]ZYX'YgdYWH]U'm]Z'ghi XYbh]g' \Uj Y' bchW'ca d'YHY'Ub'YggUmgi a a Ufm VY'Z'fY" '5'h'ci [\ 'U'gi a a Ufn'z']h]g'hc' VY'k f]hYb'Ug'Ub' 'UWUXYa]WdUdYf'gc' bchXchdc]bh]g" 'Gh' XYbh]g' XYj Y'cd'Ub'Uf[i a Ybh'z'UbX']XYbh]Z'm\ck' h\Y'mid'Ub'hc' i gY'fY'Yj Ubh'YI hg'UbX'Ufh]WYg'f'fgY'Y'Y[Ubhc'Z'f'ci f' h\Y' hg'UbX'gi [[Ygh'X']hYfUhi fY'k'hc'gi ddcf'h\]g" 'Gi [[Ygh'X']XYUg'UfY'g'UfYX'Vm'h\Y'7 cbj Ybcf'Z'Ug'bYXYXZ' UbX'gi ddcf'hVm'Ya U] 'UbX'Z' f'h\Y'f'a YH]b[g'UfY'dfcj]XYX" 'Hk c' 'gYa]bUfg'UfY'cZ'fYX'Xi f]b['h\Y' h'fa'Z'cf dYf'f'gi ddcf'h'UWUXYa]W[i]XUbW' 'UbX'g'Uf]b['cZ']bhYfbg\]d'YI dYf]YbW' "h]g'W' W]U'z'Ug'h\Y'fY'UfY'bc k YY'_mih' hc'f]U'g'z'hUhghi XYbh]g' hUfhiYUX]b['Ug'YUf'mUg'h\Y'miW]b'z'hc'UW'ei U]bh' 'h\Ya gY'j Yg'k]h'UgdYWHg' cZcf[Ub]nUhc bU'h\Y'cfm'hUh]bhYfYgh'hYa 'UbX'UfY'fY'Yj Ubh'hc' h\Y]f' \cgh' 'A U_]b[']b_g'k]h' h\Y'fYUX]b['hc cbYf]g' \cghW]b'VY'YI W]h]b['UbX']bg][\h'z' " 'Gh' XYbh]g'a i ghfY'Z'fYbW' h\]g'dUdYf'k]h'Uh'YUgh]Z] Y'f] k'Ufh]WYg]b'UXX]h]cb'hc' h\Y'Y' [Ubhc']ghk \]W' a YUbg'h\Y'mb'YXY'hc'gci fW'Z] Y'cf'a cFY'fY'Yj Ubh'Ufh]WYg'cf'W'Ud'hYfg cb'h\Y]f'W'cgYb'hc d]W'

Hi fb]h]b'gYH]b[. H\]g'Ugg][ba Ybh]g'gi Va]hYX'h'fci [\ 'Hi fb]h]b'UbX'ghi XYbh]g'W]b'gY'Y'Hi fb]h]b'g]a]Uf]m fYdcf'g"

5ggYgga Ybh&. FYZYWH] Y'>ci fbU'

GHUfhiXUH'. Gh XYbh]g'hc' UXX'bc'hY'g'k YY'_micb'h\Y]f'YI dYf]YbW'hc'Ugg]gh]b'Z]bU'dUdYf'

@Yb[h\ . +) \$'!'%(\$ \$'k cfXg

8YHJ]g.

&bX'cZ&Z]bU'YggUm' +) \$'hc'%'(\$ \$'k cfXg"K f]hYb'ZYXVUW'k]h]b'%\$'k cf_]b['XUmg"

5XX]h]cbU'XYHJ]g.

: cf'a cghigh XYbh]g'h\]g']g'Ub'Yb'c'mU'V'Y'dUdYf'hc'W'ca d'YH' "h]g'a UXY'YUg]Yf'Vm'UXX]b['gca Y'bc'hY'g'YUW' k YY'_hc'U'ci fbU'cb'k \Uh'h\Y'ghi XYbh'cVgYf] Yg'z']g'gi fdf]gYX'Vn'z'Ug'k Y' "Ug'W'U'Yb[]b['a ca Ybh]g'cf hUg_g'z'UbX' \] [\] [\ hg'hUh'h\Y'd'g'ck' h\Uh'h\Y']bhYfb']g'dfc[fYgg]b['k]h'g_]g'UbX'#cf'_bck'YX[Y'cZ'h\Y]f]bXi ghf'nz'h]g'fYW'ca a YbXYX'hc'fYUX'Ub'Ufh]WY'cf'k'c'cb' "]bhYfbg\]dg' "YUf'micb']b'h\Y']bhYfbg\]d' f'h\Y'fY UfY'a Ubr'k'hc' [U]b'gca Y']bg][\h]bhc'h\Y'c'mg'UbX'W'U'Yb[Yg'hUhW]b'VY'YI dYf]YbW'X']b'Ub']bhYfbg\]d' "h a Um[]j Y'ghi XYbh]g'W'cbZ]YbW'hc' hUW'_Y'U'W'U'Yb[Y'YUf'micb'f'Y"["VY]b[' [] Yb'fYdYh]h] Y'hUg_g'z'cf'bch fYWH]]b['Ybci [\ 'ZYXVUW'_cb'cbYf]g'k cf'_k' 'Gh' XYbh]g'UfY'YI dYWH'X'hc'W]h'Z'fca' 'hk'c'hc'h\Y'Y'Ufh]WYg'cb]bhYfbg\]dg'z'Z'fca' 'gYj YfU'd]YWH'g'cZcf[Ub]gUhc bU' "]hYfUhi fY'z'g'UfY' [ccX'YI Ua d'Yg'Z'fca' 'h\]g']bhYfbg\]d'hc gi ddcf'h'h\Y]f'W'ca a Ybh]g'UbX'hc']bW' XY'Ub'gk Yfg'hc'h\Y' 'ei Ygh]cbg'dfcj]XYX'cb' 'A ccX'Y' "5'V]]c[fUd\m]g hc'VY']bW' XYX'k]h' h\Y'Ufh]WYg'hUh'h\Y'ghi XYbh' \Ug'W]h'X'Z'fca' 'Ug'k Y' "]h'Ya g'Z'fca' 'h\Y'Y' [Ubhc']gh'hUhUfY i gYX' "Gh' XYbh]g'UfY'YbW'ci fU[YX'hc'X'fUk'cb']hYfUhi fY'Z'fca' 'h\Y]f' i b]j Yfg]migh X]Yg' "H\]g'dUdYf'W]b'VY

ghfi Wñ fYX Ug hY gh XYbhWccgYg Y "["]bhc ghU[Yg cZ hY]bhYfbg\jd'cf'i g]b['hY'gi [[YghYX\YUX]b[g'cb
A ccX'Y" " #i]g]a dcfUbhHUh hY gh XYbhWUbb]bX]WUHY 'hY]f' d'fc [fYgg'cb \ck 'hYm\Uj Y'hYmYb[U[YX'k]h
hY "]HYfUH fY 'UbX]XYbh]Zmk \Uh'YUfb]b['hYm\Uj Y'UWY]Y X']b'UfYUg'gi W'Ug'hY'WU'Yb[Y'cZa cj]b[
Zca 'hY'] b]j Yfg]mgYH]b['hc'hY'k cf_d'UW' fYgdYWU'm]Z]h]g'hY]f'Zfgh]bhYfbg\jd'Z'hY']a dUW'icZ
X]j Yfg]m'Ufci bX'hYa 'UbX'k \UhYh]W' 'UbX'gcWU' fYgdcbg]V']]HYg'UfY]bj c'j YX']b'hY]f']bXi ghf'icf'UfYU
cZgdYWU'm" @gh]b['_Ymg_]`g'UbX'bYk '_bck YX[Y [U]bYX'WU'VY']b_YX'hc'YI Ua d'Yg'Zca 'hY'gh XYbh]g
fc'Y'UbX'hUg_g'i bXYfU_Yb"

Hi fb]h]b'gYH]b[. H\]g'Ugg][ba Ybh]g'gi Va]HYX'h'fci [\ Hi fb]h]b'UbX'gh XYbh]g'WU'gYY'Hi fb]h]b'g]a]Uf]m
fYdcf'g"

5ggYgga Ybh' . C f[Ub]gUh]cbU'YggUm

GHUfhXUHY . Bch5dd]WUV'Y

@Yb[h. '&\$\$\$'k cfXg

8YH]`g.

%cZ&'I :]bU'YggUm]g'&\$\$\$'k cfXg" K f]HY'b'ZYXVUW'k]h]b '%\$'k cf_]b['XUm]g"

5XX]h]cbU'XYH]`g.

H\]g'W]h]W'UbU'm]g'Vi]Xg'cb'hY'YggUm]gi a a Ufm'U'fYUXm]gi Va]HYX'i g]b['U'g]a]Uf'ghfi Wñ fY'UbX'hY
gUa Y'ei Yg]h]cb'#ghU'Ya Ybh'Gh XYbh]g'UfY'YI dYW'YX'hc'\Uj Y'W'cb]h]bi YX'hc'fYUX'h'fci [\ci h'hY
]bhYfbg\jd'hc'Z]bX'UXX]h]cbU']HYfUH fY 'UbX'hc']bW'f'cd'fUHY'gi [[Ygh]cbg]b'hY'ZYXVUW' d'fcj]YX'cb'hY
gi a a Ufm' @Y[Ubhc' d'fcj]XYg'U'ghUf]h]b['dc]bhk]h' _Ym]h]Y]h]g'cb'Vch'B: D'UbX'd'fcZ]h]cf[Ub]nU]h]cb'Vi h
gh XYbh]g'bYX'hc'c'WUHY'gdYW]Z]WUf]h]WY'g'#]bZ'fa U]h]cb'h'Uh'dYf]U]b'hc'hY]f'\cgh]cf[Ub]nU]h]cb'#fY'Yj Ubh
]bXi ghf'm'7'YUf'YI Ua d'Yg'Zca 'hY'gh XYbh]g'\cgh]cf[Ub]nU]h]cb'UfY'hc' d'fcj]YX'UbX']b_YX'hc'hY
gY'YW'YX'c'cf[Ub]nU]h]cbU'W'c' d'cbYbh]g'hc'XYa'cbgh'UHY'gc']X'fYUX]b['UbX'fYZYW]h]cb'cb'hY'hc'd]W]g'Ug'k Y'Ug
hY'gh XYbh]g'UV']]m]hc'h'UgY'ci h\ck'fY'Yj Ubh'hY']HYfUH fY]g'hc'hY]f'gdYW]Z]W'cgh'Gh XYbh]g'UfY
YbW'ci fU[YX'hc'a Y'Yhk]h'hY]f'\cgh]gi dYf]]gcf'fY[i 'Uf'm]f]Z'cf'gi dYf]]g]cb'UbX'hc'[U]b'ZYXVUW'cb'hY]f'
k cf_ _Vi h]hc'U'gc' 'a U_Y' h]a Y'hc'X]gW'gg'hY]f'YggUm]hc'd]W]g'Ug'hc'[U]b'[fYUHY'f]bg][\h]g]bhc'hY
cf[Ub]nU]h]cb]g'Z' bW]h]cb]b['UbX'd'fcW'ggYgZ'\]g]hc'f'm]Z'W'h'fY'UbX'hc'Y'Ufb'\ck'hc'U'W'W'gg'Ubm]fY'Yj Ubh
XcW'a Ybh]g'f'a]gg]cb'ghU'Ya Ybh]g'Z'Ubbi U'fYdcf'g'Y'hW'G'i dYf]]gcf'g'g'lc'i 'X'\Uj Y'VYb' d'fcj]YX'k]h'U
Vf]YZ'ci h]bY'cZ'hY'<I A G&\$\$\$'UggYgga Ybh]g'Vi hik]'bYX']bdi hcb'k \Uh'hY'gh XYbh]g'Z'W'gg]b['cb'"5h
bc'h]a Y'XcYg'hY'gh XYbh]g'Ua Y'hY'\cgh]cf[Ub]nU]h]cb'Vi hfYZ'fg'hc'hY'\cgh'

Gh XYbh]g'UfY'hc'XYa'cbgh'UHY'Ub']b]XYd'h'Yb[U[Ya Ybhk]h'hY'fY'Yj Ubh'h'YcfY]h]W' '_bck'YX[Y'UbX'hc'VY
UV'Y'hc'X]gW'gg'h]g'k]h]b'hY'k]XYf'W'cb]h]i hcZ'5'i ghfU']Ub'UbX'cf'#cj YfgYUg'k \YfY'dcgg]V'Y'"5g'h]g']g'Ub
cf[Ub]nU]h]cbU'UbU'm]g]gZ'gh XYbh]g'bYX'hc'g\ck'gci bX'g_]`g']b'c'WU]h]b[Z'Yj U'i U]h]b['UbX'i g]b['fY'Yj Ubh
]bZ'fa U]h]cb'Ug'k Y'Ug'gi g]b['hY]f']b]h]U]h] Y'UbX'W'YU]h]]m]b'hY'a UbbYf']b'k \]W' hYm'Udd'f'c'UW' hY'hc'd]W
UbX'hY'W'cbW'g]cbg'hYm'X'fUk "'7'ca V]b]b['WUfYZ'c'VgYf] U]h]cb'k]h'g_]`Z' 'hUW]Z' 'ei Ygh]cbg'hc'
gi dYf]]gcf'g'UbX'ch'Yf'h'Ua 'a Ya VYfg'k]'VY'bYX'YX'h'fci [\ci h'hY']bhYfbg\jd'"

Gh XYbh]g'UfY'YbW'ci fU[YX'hc'_Y'Yd'fY[i 'Uf'W'cb]h]W'k]h'hY]f'5WUXYa]W7'cbj Ybcf'Z'cf[i]XUbW'Z'X]gW'gg]cb
cZk Um]g'hc'XYj Y'cd'h]g'UggYgga Ybh]g'Z'f'h]dg'cb'Z' f'hYf'fYUX]b["

Hi fb]h]b'gYH]b[. H\]g'Ugg][ba Ybh]g'gi Va]HYX'h'fci [\ Hi fb]h]b'UbX'gh XYbh]g'WU'gYY'Hi fb]h]b'g]a]Uf]m
fYdcf'g"

F Ygci fWg

DfYgWf]VYX`F Ygci fWg`

DF 9G7F -698`F 9GCI F 79G`

: cf'ghi XYbtg`]b`BchZcf`DfcZ]hfB: DŁ#Di V`]Wcf[Ub]gUh]cbg.`

5b\Y]Yfz<Y`a i h? "Bcb` `DfcZ]hCf[Ub]gUh]cbg`. H\YcfmžA UbU[Ya YbhUbX`Dc`]Wt`&bX`YX]hcb
<cVc_YbžF ci hYX[Yž&\$%("fl&bX`YX]hcb`]g`cb`]bY`UbX`a cfY`fYW`bhYX]hcbg`UfY`Uj`U]`UV`Y`]b
hY`Vcc_g\cdŁ"

D`i`g`W\ccgY`cbY`Zca .

Cf[Ub]gUh]cb`H\YcfmUbX`8Yg][b`"7Yb[U[Y`@YUfb]b["F`@8UZł`%&`h`YX]hcb`"7]bWbbUh`"&\$%)

`Cf`

7`Y[[žG`"A UbU[]b[`UbX`Cf[Ub]gUh]cbg. `5b`-bhfCxi`W]hcb`hc`H\YcfmUbX`DfUW]W`" "fX`YX`"@5`"GU[Y`
@cbXcb`"&\$%%"

&Ł: cf'ghi XYbtg`]b`df]j`UH`YbhYfdf]gY`cf[Ub]gUh]cbg.

7\ccgY`&`hYl`hg`Zca` .

7`Y[[žG`-`A UbU[]b[`UbX`Cf[Ub]gUh]cbg`-`Zcf`XYhU]`g`gYY`UVcj`Yž

7Yb[U[Y`fif`"8UZł`!Cf[Ub]gUh]cb`H\YcfmUbX`8Yg][b!`gYY`UVcj`Yž

K`ccXžYhU`"Cf[Ub]gUh]cbU`6Y\Uj`]ci`f`. `7cfY`7cbW`drg`UbX`5dd`]W]hcbg`"(`h`9X`"A`]`hcb`"E`X`"K`]Ym
UbX`Gcbg`"&\$%*`f\Ug`gc%o` %o`

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

7CI FG9'9J 5@ 5H€B'5B8'89J 9@CDA 9BH'

: YYXVUW_Zfca 'ghi XYbht'jg'k Y'Wca YX'UbX'\][\`m'j U'i YX'VmihY'7 cbj Ybcf'k]h' h'Y'U]a 'cZ]a dfcj]b['h'Y XY'j] YfmcZ'h]g'7 ci fgY'"Gh XYbht'UfY'k Y'Wca Y'hc'g\UfY'ZYXVUW_Xi f]b['h'Y'h'Yfa "'Hk c'gYa]bUfg'YUW h'Yfa 'k YfY']b]fcXi W'X'']b'&\$%- 'Ug'ghi XYbht'k Y'Wca YX'h'Y'cddcfh b]m'hc''hc'a YYh'ch'Yf'<I A G&\$\$\$ ghi XYbht'zX]gW gg'h'Y'UggYgga Ybht'UbX'hc'h'Y]f'g\UfY']b]h'fb'YI dYf]YbW'"Gh XYbht'\Uj Y'Ya d\Ug]gYX'h'Uh h'YmZci bX'h'Y'cbY'cb'cbY'Wcbgi 'h]h]cbg'j Yfm\Y'dZ ''hc'Yb[U[Y'k]h' h'Y'UWXYa]Wg]XY'cZ'h'Y'gi V'YW'h'z h'YUgY'ci hU'dUfh]W'Uf'ZcW'gZ'\Uj Y'cf[Ub]gUh]cbU'h'Ycfm]WUf]Z]YX'']b'h'Yfa g'cZ'h'Y]f'\cgh'UbX'hc'[U]b [i]XUbW'cb'k \]W'']h'YfUh'fY'a UmVY'a cghi gYZ "'A cfY'fYgci fW'g'UfY'XYj Y'cdYX'Ug'fYei Ygh'X'UbX'UfY g\UfYX'"A mYI dYf]YbW'ZYXVUW_]g'i gYX'hc'a U]b]U]b'UgdYW'g'h'Uhk YfY'gYYb'hc'VY'\Y'dZ ''UbX'hc'a cX]zn cf'UXX'dfcW'ggYg'cf'fYgci fW'g'hc'Ugg]gh'ghi XYbht'"

Gi Va]gg]cb`cZ5ggYgga YbhiHUg_g

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

Ʒmci`YbWci bHYf`U`dfcV`Ya`k` \Yb`UHYa` dh]b[`hc`gi`Va`]hmc`i`f`Ugg][`ba`YbhiHfci`[`\`Hi`fb]h]b`z`d`YUgY`
HY`Yd`cbY`9I`HYfbU`Gi`ddcfhcb`-`,`)`"``'``%cf`Ya`Uj`h`Ya`cb`YI`HYfbU`HY`hgi`ddcfh4`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`mY`Uf2`Ʒmci`
UfY`i`bUV`Y`hc`gi`Va`]hmc`i`f`Ugg][`ba`YbhiXi`Y`hc`U`Zi`h`k`]h`Hi`fb]h]b`mci`a`UmUdd`m`Zc`f`Ub`YI`HYbg]cb`z`Vi`hmc`i`
a`i`ghfYhU]b`mci`f`h]W`Yhbi`a`VYf`Zca`9I`HYfbU`Gi`ddcfhU`cb[`k`]h`Ubmc`h`Yf`fY`Yj`UbhXcW`a`YbHg`L`hc`
]bWi`XY`Ug`Yj`]XYbVW`hc`gi`ddcfhmc`i`f`YI`HYbg]cb`Udd`]W]h]cb`"Ʒmci`Ya`Uj`9I`HYfbU`Gi`ddcfhmc`i`k`j`
Ui`hca`U]W]m`fYW]j`Y`U`h]W`Yhbi`a`VYf`z`Vi`h]Zmci`HY`Yd`cbY`mci`k`j`b`YYX`hc`gd`YW]W]m`Ug`_`Zc`f`cbY`"
Hi`fb]h]b`U`gc`dfcj`]XYg`i`dXUH`g`cb`h`Y]f`gmgh`Ya`g`hU`h`g`cb`Hk`]hYf`"

;`YbYfU`mz`UggYgga`YbhiUg_g`a`i`ghVY`gi`Va`]hYX`Y`YWfcb]W]m`j`]U`Y]h`Yf`Hi`fb]h]b`cf`U`A`ccX`Y`
Ugg][`ba`Ybhi`h]b]ghU`bVW`g`k`YfY`h`g`]g`bchdcgg]V`Yz`]hk`j`VY`ghU`h`X`cb`mci`f`Wci`fgY`g`A`ccX`Y`g]h`k`]h`
U`HYfbU]h]`Y`gi`Va`]gg]cb`XYhU]g`"

:`cf]bZcfa`U]cb`cb`\ck`hc`gi`Va`]hUgg][`ba`Ybhi`cb]bY`j`]U`A`ccX`Y`.\`hdg`#gh`XYbhi`bgk`"YXi`"Ui`Ack`!
gi`Va`]hUgg][`ba`Ybhi`a`ccX`Y`"

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`" #WU`b`hU`_Y`a`Ubm`Z`fa`g`z`Z`ca`XY`]VYfUHY`WX`YU]b[`hc`UW]XYbhU`m`W`cdm]b[`Z`ca`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] [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[`Yg`z`Ufh`UbX`XYg][`b`dfc`YWg`z`Ug`k`Y`U`g`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`fYU]b]b[`hY`cf][]bU`ghf`W`fY`UbX`#`f`dfc[`fYgg]cb`cZ]XYUg`cZ`hY`cf][]bU`z`UbX`]bZ`fa`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`Y`f`ei`c`h`g`UbX`dUfUd`fUgYg`]bhc`U`bYk`k`c`Y`z`k`]h`ci`hUddfcdf]UHY`fY`ZfYbW]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`XYbhVY`Z`fY`hY`Xi`Y`XU]h`z`cf`Z`f`hY`di`fdcgY`cZ`hY`a`d`U[]Uf]g]b[`Uh`Ubmi]a`Y`z`dUm]b[`Ubch`Yf`dYfgcb`hc`dYfZ`fa`Ub`UWXYa`]W]Ug`_`z`gh`U`]b[`cf`UW`ei`]f]b[`Ubch`Yf`dYfgcb`g`UWXYa`]Wk`cf`_`UbX`W`cdm]b[]h`z`Z]f]b[`hc`W`ca`d`Y`h`Ubch`Yf`dYfgcb`g`k`cf`_`cf`gYY`_]b[`dUma`YbhZ`f`W`ca`d`Y]b[`UWXYa`]Wk`cf`_`

#Uddfcdf]UHY`W]U]cb.`7`h]b[`gci`fW`g`k`k`]W`U`j`Y`bchVYYb`fYUX`z`k`]h`ci`hUW`_bck`YX[]b[`hY`gYW`bXUfm`gci`fW`Z`ca`k`k`]W`_bck`YX[`Y`cZ`hY`a`U`g`VYYb`c`hU]bYX`

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

7 cffYW]fY`ZfYbW]b[`dfUW]W]g.

- DUfUd`fUg]b[`zgi`a`a`Uf]g]b[`zYggUm`k`f]h]b[`UbX`h]a`Y`a`UbU[`Ya`Ybh`
- 5ddfcdf]UHY`i`gY`cZ`UbX`U]h]f]Vi`h]cb`Z`f`U`fU]b[`Y`cZ`a`U]h]f]U`g`]bW`i`X]b[`hY`h]z`]a`U[`Yg`z`Z`fa`i`UY`UbX`W`cbW`d]g`"

#X]j`]Xi`U`U`gg]ghU]bW`]g`U]U]UV`Y`cb`fYei`YghZ`ca`H\Y`@YUfb]b[`7`YbhY`f`h`h`d`#`k`k`k`"Wi`bgk`"YXi`"Ui`#`"Gh`XYbh]UfY`U`gc`fYa`]bXYX`h`Uh`W]fY`Z`h]a`Y`a`UbU[`Ya`Ybh]g`Ub`]a`dcffU]bhdUfhcZ`gh`XmUbX`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`Gh`XYbh]g`g`l`ci`X`U`ck`gi`Z]W]Ybh]h]a`Y`Z`f`fYgYUfW`z`X`fU]Z]b[`UbX`d`fcdYf`fY`ZfYbW]b[`cZ`gci`fW`g`]b`dFYdUf]b[`U`U`ggYgga`Ybh]h]a`g`"

I BGK `@]VfUfmU`gc`U`g`hY`9`@G9`hc`U`j`U]UV`Y`hc`Ugg]ghmci`k`]h`mci`f`gh`XmUhi`BGK`"9`@G9`]g`XYg][`bYX`hc`]bhcXi`W`bYk`gh`XYbh]hc`gh`Xm]b[`Uhi`BGK`Vi`h]hW]b`U`gc`VY`U`[`fYUhfY`ZfYg`Yf`Xi`f]b[`mci`f`

- i bXYfghUbx'mci f'f][\hg'UbX'fYgdcbg]V]h]Yg'Ug'U'gh XYbhUhl BGK
- VY'Uk UfY'cZd'U[]Uf]ga ž'Wcdmf][\hžI BGK 'Gh XYbh7cXY'cZ7cbXi W'Ubx'5Ww'dhUV'Y'I gY'cZ I BGK '⇒H'F Ygci fW'g'Dc`]Wm
- VY'Uk UfY'cZh'Y'ghUbxUfXg'cZVY\Uj]ci f'YI dYW'X'cZYj Yfmcby'j]b'h'Y'I BGK 'Wca a i b]m
- `cWJh'gYfj]Wg'UbX'j]bZcfa Uh]cb'UVci hl BGK 'UbX'I BGK '@]VfUfm

Gca Y'cZh'YgY'UfYUg'k]`VY'ZJa]]Uf'hc'mci ž'ch'Yfg'k]`VY'byk "": U]b]b['U'gc`X'i bXYfghUbx]b['cZU`h'Y fY'UH'X'UgdYW'g'cZ9@G9'k]`Y'd'mci 'a U_Y'h'Y'a cghcZmci f'gh X]Yg'Uhl BGK ""

[\hhd.##ji V'YWf i \]XYg" \]VfUfm'i bgk "YXi "Ui #' \]gY#JVci h' \]gY](#)

