

7 = HM 7 C @@9; 9 C: G5 B: F5 B7 = G7 C

DfYd/GiWYgg; cjYfbUbW k D`Ubb]b[/6iX[Yf]b[DfcWgg; Ch\YfgUgU[fYYX

7 cd]YgcZh,Y:]bU 5 [YbXUžFYgc`i h]cbgUbX A UhYf]UgZcf h,Y 5 df]`%&ž &\$&` a YYh]b[Wub VY Zci bX]b h,Y 5 df]`%& A YYh]b[A UhYf]UgZc`XYf"

H\Y5\WXYa]\WGYbUHY9IYWHjjY7cibVly]g\wtaa]HHYXhcdfcj]X]b[UWWggUbXUWtaacXUHjcbhc9IYWHjjY7cibVlyaYHjb[g'HcaU_YUfYeiYgh\wtbbY\WXXhcUX]gUv]`]hmcf\YUH\wtbX]hjcb\wtbX]hjcb\wtbHUMh\Y5\WXYa]\WGYbUHYDfYgjXYbh(,\cifg]bUXjUbWcZUbm9IYWHjjY7cibVlyaYHjb["

K YXbYgXUnž5df]` &*ž&\$&' ž&' \$!).\$\$da A I 6 %(\$ cf J]UNcca \hdg##Wb2YXi 'ncca 'i g##-, -')+(*+, '

A cb]W16cggcbž A UWta < j`Ubž?]a VYf`m? YYbUbžHca ? YbbYXnž >YggY?c`VYfžG\Yf] A]fU[`]UžA UXY`]bY A i Y`YfžFcbUX DU[Y =ž@]gUFca UbcžA]lfUGUd]YbnUž @ci GWi VYfhžBi UUG\YYhnžA]WYYG[Y[`]hnž7\UXGhYd\Ybgcbž: fYXYf]VV HM-jž? Uhfnb K]YgY

5 XUa X 5 ei]ghcžA Uhh8 i Wk cfh\ž? UhY: fY] flYUj Y cZUVgYbWhž 7 Ufc`]bY Df]YghYmflYUj Y cZUVgYbWhž ŊV K cb[dfUggYfh'

@iVJUbU7Ughfcž5`Ub8 GcinUž@UbX]9\b`]žGjacb<Ubgcbž5`Yl<cgaYfž>Ybb]ZYf?]Ybn`Yž7fUj[?`YjbaUbž5`Yl@Ynhrcbž5bbU@jgU<YanžiMjb[@již>cYFYnYqžF]WUfXJYUceiYnž

?f]gh]b 7\Uf`YgžFUWY`7c\Ybž8]UbU; UfV]Ul8Ybgcbž>Yb?]Ybn`YžA UbXm@]Ub[ž;Y]gW@nž7\UbW``cf8Uj]X A Ufh]bž7\Yf]gUNUf_]b

=" 7U`hc CfXYf &') fla]bŁ

K Y UMbck `YX[Yh\uhk Y UfY cb h\Yi bWXYXžUbWghfu`\ca Y`UbX cZh\Y F Ua Umhi g\ C\`cbY k \c UfY h\Ycf][]bu`]b\UV]hUbngcZh\YGUb: fUbV]gwt DYb]bgi `U'5gh\Y]bX][Ybci gghYk UfXgcZh\]g`UbX UbX]b UwwtfXUbW k]h\ h\Y]f hfUX]h]cbgžh\Y

VmUW_bck `YX[]b[h\Y UbWghcfgžY`XYfgUbX fY`Uh]j YgcZh\Y FUa Uhhi g\
7 ca a i b]hmUbX VmU fa]b[h\Y]f gcj YfY][b f][\hgUg:]fghDYcd`Yg'
FYWd[b]nY mci f ck b]bX][Ybci g`UbX gYhhYa YbhUh\hndg##bUh]j Y!`UbX'WU
\hndg##k k k "fUa Uhhi g\"cf[#XcbUhY"\ha`
\hndg##gc[cfYUhY!`UbXhfi gh'cf[#XcbUhY#

- =" 5 Xcdh]cb cZ5 [YbXU&', f&a]bŁ

 A ch]cb hc Uddfcj Y Ua YbXYX 5 [YbXUk]h\ fYj]gYX 6D#5 D %%) "

 5 ddfcj YX VmA U'Wt'a <]``Ub UbX GYWbXYX VmF cb DU[Y
- =" Di V⁻]W7 ca a Ybh &(\$f%\$ a]bŁ

. =k Ubhhc UddfYVJUhY U`h, Yk cf_ XcbY cb h, Y CWUb 7 Ua di g'9j Yfmh,]b[`cc_gk cbXYfZi ` UbX VYUi h]Zi `"H, Ub_ nci hc h, Y < cfh]WV`hi fY 8 YdUfha YbhZcf Vf]b[]b[nci f ghi XYbhghc h, Y`]VfUfmhc k cf_ cb h, UhUfYU'

.; Uj YUg\cihcihcighiXYbhgk\cUfYkU]h]b[hcg\Y]Zh\Ym[ch]bhcI7@5hcXUmUh)da" ≠hgYlV]h]b[hcVYUfcibXcif ghiXYbhgUhh\]gacaYbh'

. H\]gk YY_YbX k]`` VY h\Y Gdf]b[dfcXi Wh]cb cZ 6][@cj Y]bh\Y H\YUrfY 5 fhg XYdUfha Ybh''±hk]`` VY c Wula dig h\]gk YY_YbXž: f]!Gi b"H\Y ghi XYbhgUfYa Ufj Y`ci g'A UXY`]bY k]`` dfcj]XYa cfY]bZcfa Uh]cb"Gi ddcfhci f ghi XYbhgžd`YUgY"

⇒" FYdcfhg&)\$

7\UbW`cf gFYdcfhf% a]bŁ

6`UW_Gri XYbhGi WWggK YY_Gruh/k]XY"H\YfY UfY gYj YfU Yj Ybhgh\fci [\ci hh\Y k YY_žbchcb`mUh77G Vi hUgc Gruh/k]XY"Gi ddcfh6`UW_Gri XYbhgGi WWggK YY_UbX dcd]bhc UNcca fcca "

8]Y[cF]j YfUA i fU"K YUfYWffYbhm`cc_]b[Uhh\Y`c[]gf]Wg hc Vf]b[]b[]hVUW hc 77G "H\YK cf_gcZ5fh7ca a]hhYk]`` VYXc]b[h\Yk U_h\fci [\cb Wa di ghc gYYk \YfY]ha UmVY \ci gYX Zcf h\YbYl h &mYUfg'

DUf_]b[i dXUhY. k Y`cgY ci f`ck Yf fYgYfj c]f k \]W k]``
fYXi W bi a VYf cZdUf_]b[gdUWg'K Y UfY Xc]b[Ub F: D Zcf
XYg][b gYfj]Wg Zcf UbYk dUf_]b[ghfi Wai fY Y]h\Yf VmF]cfXUb
<][\ GWcc`cf Vmh\Y hYbb]g Wdi fhg' =hk]``dchYbh]U`mVY
`' \$!') A]``]cb UbX k Y k Ubhhc [YhUgc`]X Ygh]a UhY VYZcfY k Y
[c UZhYf Zi bX]b[k \]W k Y WYffYbhmXcb h\Uj Y'
Gci h\YUgh7 YbhYf. K Y df]a Uf]`mc Yf 7 H9 Wdi fgYgUh9j Ubg

7 Ua di g Vi hh\ YfY UfY gca Y WUggfcca g h\ Uha UmVY Uj Uj`UV`Y Zcf hfUX]hjcbU``YWai fYž]"Y"; 9 WUggYgžh\]g: U``"

< YUH]b[Dfc^YVMg k Y UfY `cc_]b[UhU, !%(k YY_ XY`]j Yfm k]bXck Zcf h\ Y gi dd`]Yg'

8Y b]h]j Ya cj Yci hXUhYg Zcf 7cb`Ub < U` UfY ghUfh]b[hc VY]ggi YX hc W/ffYbhfYg]XYbhg cb 7 < "Gh]`` cb hfUW hc VY Zi ``mci h Vma]X!Gi a a Yf"

: D57. hU_YU`cc_ Uhh\Y7\UbWr`cf fYdcfhUhtUWYX hc h\Y 6cUfX XcWgZcf hca cffck ga YYh]b[k]h\ h\YfUb_]b[cZ XYdUfha YbhgVm: D57"

Dcg|h|cb 7 cbhfc`. k Y UfY Wbh|bi]b[hc WYUb hk]gi d hkfci [\Gi a a Yf h|a Y"K Y k Ubhhc a U_Y gi fY Yj Yfmhk]b[]gVY]b[WUf[YX hc hk Y WbffYWhXYdUfha YbhgUbX dfc[fUa g' 5 Wbck `YX[Ya YbhcZA]hfUGUb]YbnU Zcf GruhYk]XY fYdfYgYbhUh]j Y"

G\Yf] A]fU[`]UUg_YX UVci hGi a a Yf Ybfc``a YbhdfcV`Ya g k]h\ Vchgk \c UfY a Ygg]b[i d h\Y Wzi bh': UW\`hmUfY [c]b[hc bYYX Ugg]ghUbW k YYX]b[h\fci [\ h\Y Ybfc``a Ybh' 7\UbW``cf A Ufh]b gU]X h\Uh7 mbh\]U8 Yk Uf UbX \Yf hYUa UfY `cc_]b[]bhc \ck hc UXXfYggh\]gUbX h\Uhh\]g]gUdUfhbYfg\]d k]h\ h\Y GHUHY 7\UbW``cf gc \W' =hgUV]hZfi ghfUh]b[h\Uh \f ghk \Yb k YUfY a U_]b[dfc[fYggžh\Y Vchg Wzbh]bi Yhc VWza Ya cfY Wza d`YI"

Gacb < Ubgcb. h\YhaY]bYZcfh\]g]g]a dcfhUbhbchfgh VYWI gYcZh\YghUfhcZWUggYgVi hbck žVYWI gYh\YVch ghi XYbhgdi g\ ci hh\YfYU ghi XYbhgk \c k ci `X`]_Yhc Ybfc``" ? Uhfmb K]YgYUg_YX UVci hh\YgYWlf]hmcZh\YXccfgžcbY]b GVJYbW < U` k \]W\UgVYYb Vfc_Yb g]bW 5 i [i gh' =hgbch YUgmhc [Yhh\fci [\ h\cgY Xccfg]b Ub Ya Yf[YbWhYK Y fY \cd]b[h\Uhh\YfYk]`` bchVY Ub Ya Yf[YbWhVi hh\UhgUj Yfm dfYWJf]ci gd`UW hc VY"

7\UbWr`cf A Ufrijb Uggi fYX? Urfmb h\Uh\Yk ci `X `cc_]bhc h\]g'

C WfgFYdcfhgf%) a]bk

DfYq|XYbhqfYdcfh

Gdf]b[D`YbUfmk Ug`Ughk YY_"

89=FYgc`i h]cb k UgdUggYX cb 7CBG9BH

A YYM]b[A cXU]mmFYgc`i h]cb: U]`YX UbX k Ugi dXUmYX k]h\ U bYk fYgc`i h]cb k \]W\ \Ugi dXUmYX `Y[]g`Um]cb Zfca h\ Y GrUmY'' =h\ fYk a mbUa Y]b Zcf U GrUmY GYbUmY dcg]h]cb UbX bck =Ua

c VJU `mh\Y GHUHY GYbUHY B cf7U

Y`YMi]cbgh\unXum\H\]g[]j Ygi gcbYa cbh\ hc_bck k\ch\Y bYk Wdi bVJ/k]`` VY UbX h\YgYk]`` VY h\YdYcd`Yk\ck]`` j chY Zcf h\YbYk C Wfg'

@ci GWi VYfh =bch]WX h\uh]b cfXYf hc \uj Y ZYk Yf A Uh\
ZUW\`hmcb h\Y Wdi bV]/žk Y U`ck YX : fYX hc VY Wdbg]XYfYX]b U
X] YfYbhXYdUfha Ybh'7 Ub =Xc h\]gUgk Y`3

Gacb < Ubgcb a YbhjcbYX h\uhub YI Whdhjcb k Uga UXY Zcf : fYX VYWI gY\Y]gh\Y7\UJf cZ9X HYW k\]W\Ugbc ZUW\hm fYdfYgYbhUhjcb UbX Ubgk YfYX h\uhnti \Uj Y hc VY hYUW]b[U a U'cf]hmcZnti f WUggYg]b Ubch\Yf XYdUfha Ybh'

A UXY]bY A i Y`Yf. k Y\UX U& a Ya VYf Wi bVJ/YUf]Yf k \Yb k Y\UX Hx c X]j]glcbg 7 fYX]hUbX B cb! 7 fYX]h' K Y\UX cj Yf %\$\$\tilde{\$\trilde{\$\tilde{\$\tilde{\$\tilde{\$\tilde{\$\trile{\$\tilde{\$\trilde{\$\tilde{\$\trilde{\$\trile{\$\tilde{\$\tilde{\$\trile{\$\tilde{\$\trile{\$\tilde{\$\trile{\$\trile{\$\tilde{\$\tilde{\$\tilde{\$\trile{\$\trile{\$\tilde{\$\tilde{\$\trile{\$\tilde{\$\tilde{\$\tilde{\$\tilde{\$\trile{\$\tilde{\$\trile{\$\trile{\$\tilde{\$

A]WYYG]Y[`]hn h\Ub_YX h\Y 9`YMd]cb 7 ca a]gg]cbYfg Zcf U` cZh\Y]f \UfX k cf_ UbX Zcf h\Y ZUW\`hmk \c ghYddYX i d hc fi b Zcf Ub 5 G97 Wdi bV]/ gYUh'

H\YfY k Uggca Y X]g\N\yg|cb Ughc k \Yh\Yf G|a cb UbX \times Y k]`` fYa U|b Ug 9`Y\n|cb 7 ca a]gg|cb\YfgbY| hn\YUF'

K Y\UX gca Y dcg]h]j Ya cj Ya YbhUhh\Y VUlf[U]b]b[hUVY mYghYfXUnh K Y Yl dUbXYX\YUh\WlfY Zcf DH YfgUbX Ugc k Y Vlf]b[]b UVci h~%%* a]``]cb hc h\Y Wlf``Y[Y": UW\`hmk \c k cf_ (\$i cf a cfY Zcf WlffYbh gYa YghYf UbX bYl hgYa YghYf k]`` [Yh\YUh\WlfY"H\]gfY]a Vi fgYa Ybh Zcf DH\YUh\ Wlf`Y[Yk]`` VY %\$\$i fY]a Vi fgYX Vmh\Y GhUhY"K Y fY 1 ghk U]h]b[Zcf 6cUlfX Uddfcj U"

K Y a UXY U Wa dfY\ Ybg]j Y gU UfmdfcdcgU h\ Uhk ci `X `cc_ hc fY\]fY ci f `U]X c : H ZUW\`hmUbX]bVfYUgY ci f ZUW\`hm\ YUXWai bha cj]b[Zcfk UfX" &) ı gU Ufm]bVfYUgY Vch\ fYhfcUMdj Y`mZcf h\ Y dUghhk c mYUfgUbX Zcf h\ Y bYI hh\ fYY mYUfg' K Y k]``\YUf VUW_gccb Zfca h\ Y 8]ghf]Wa'

H\YVUX bYk g]gh\uhYj Yb h\ci [\kYk cb]b h\YVki fhgUfci bX VUX ZU]h\VUf[U]b]b[Vmh\Y8]ghf]Vkizh\YmUfYgh]``Vkibh]bi]b[hc Uf[i Y]b VUX ZU]h\žg\ck]b[i d`UhYžYhW

H\Ym\Uj Y bchVYYb UV`Y hc WUf]Zmk \UhWdbWgg]cb! fYghcfUf]cb k ci `X `cc_`]_Y Vi hh\YmUfY Wdbg]XYf]b[U *' a]``]cb Xc``Uf dfcdcgU` h\uh]gbchWYUf"

A cfY VUf[U]b]b[gYgg]cbg VYZcfY h, Y YbX cZ i bY Vi hh, Y 8]g/f]Vh/]g bchVk/a a]h/]b[hc XUfYgnYh'

5 gk Y Wzbłjbi Y hc VUf[U]bžk Y UfY VY]b[fYgdcbg]j Y hc ZUW/hm dYłjl·jcbg' G][b dYłjl·jcb gc k Y Wzb \ Uj Y U głfcb[Wza dU][b Zcf ZUW/hm UbX ghi XYbhg'

A]WYYG]Y[`]m Ug_YX UVci hVUX!ZU]h\ VUf[U]b]b[Wbhjbi]b[hc d`Um ci hUgVY]b[Udcgg]VY`Yj YfU[]b[hcc` Zfca 5: H' 5`Ub fYgdcbXYX VmgUnjb[h\ Uh5: H k UbhYX hc []j Y h\ Y 5Xa]b]ghfUnjcb hja Y hc [Yhi gYX hc h\ Y]f fc`YgUbX Zc``ck i d"

7ca a]hhyy cb 7ca a]hhyygfydcfhf) a]bŁ

J" 7cbgYbh5[YbXU '.(\$f) a]bŁ

5" 5ddfcj U cZA]bi H/gZfca 5df] %&z&\$&!

FYgc`j YXžh\uhh\Y5WbXYa]WGYbUhYUddfcj Ygh\YA]bi hYgZcf 5df]`%&ž&&&"

5 Xcdh/X Vm7 CB G9B G G'

6" : UW/`hmHfUj Y` 7 ccfX]bUhcf &V XYgVf/dhicb

FYgc'j YXžh\Uhh\Y 5 WXYa]WGYbUhY Uddfcj Ygh\Y: UW\'hmHfUj Y' 7 ccfX]bUhcf >cV 8 YqWf|dh|cb"

5 XcdhYX Vm7 CB G9B G G'

7" 5ddfcj U cZ7ca a]HYY 5ddc]bha Ybhg

J =" C`X 6i g]bYgg'.)\$

: **UW**/**hm**

<]f|b[8cWa YbhF Yj]g|cb f%\$a]bg/c A]lfUGUd]YbnUžh\]fX fYUXžj chY</p>
A]lfUh\ub_YX U` cZh\Y dYcd`Y k \c k cf_YX cb h\Y a UbmfYj]g|cbg rwwg
cZh\Y\]f]b[XcWa Ybhž]'Y'G]a cb < Ubgcbž xcY F YmYgžA UXY`]bY</p>
A i Y`Yfž8Uf`YbY 5`]chcžG\Yf] A]fU[`]U'

K Y UFY UWbck `YX[]b[h\uhh\]gXcWa Ybh\ugb hVYYb i dXUhYX g]bW%-% $K Y U f Y] b W i X] b [f Y j] g] c b g h U h] b W i X Y 8 9 =] b \] f] b [U b X$ fYVfii]ha YbhdfUMijWg' KYUgcUfYUWbck`YX[]b[U`h\YXYdUfhaYbhgUbX[fcidgh\Uh Wtblf]Vi hYX hc h\Y\]f]b[XcW/a Ybh' A Um%th k]" VY dfYgYbHYX hc Ghi XYbhGi WWggUbX Dc"]Wth G V!7ca a]HYY" K Y d'Ub ho dfYgYbhho h\ Y 6C H cb A Um% h\ Uhh\ Y `UghCdf]b[a YYh]b[" KYUfYaU_]b[h\YXcWa Ybhi dXUfYgU][bYX k]h\ 577≯ UWfYX]HUrjcbž % UW WKH WKHZLWK hYSUHVHQ & K \YfYUgzh\Y 5 WuXYa]WGYbUhY dUggYX F Ygc`i h]cb &\$&\$'%%, "*8 F Ygc`i h]cb cb 8]j Yfg]hmž 9ei]hmUbX =bWi g]cb k \]W ghUhYgz]b dUfhz h\Uhh\Y 5 WuXYa]WGYbUhY U fa g]hgWtfYj Ui Yg hc Ya VYX fUMJU Yei]hm]bhc dfUMi]Wghc \]fY UbX fYhU]b X]j YfgY ZUW\hmžhc]bVfMUgY fUMJU fYdfYgYbhUh]cb UbX df]cf]h]nY \]f]b[Ya d`cmYYgk \c XYa cbghfUhY Yei]hm!a]bXYX Wta dYhYbW UbX Ug_g 7 7 G 5 Xa]b]ghfUh]cb hc Wta a]hhc fYWfi]ha YbhUbX \]f]b[dfUMi]Wgh\Uhdf]cf]h]nY UhU]ba YbhcZfUMJU`mX]j YfgY Ya d`cmYYgUbX Ya d`cmYYgk \c XYa cbghfUhY Yei]hm!a]bXYX Wta dYhYbW /UbXž

K \YfYUgžh\Y 5 WuXYa]WGYbUhY `YUXYfg\]d \UgVYYb Wdbg]XYf]b[Uj Uf]YhmcZfYj]g]cbghc h\Y : UW`hm<]f]b[8cWa Ybhg]bW >i bY cZ&\$&&žk]h\ Wdbgi `hUh]cb UbX]bdi hZfca `YUXYfg]b < i a Ub F Ygci fWgž8 YdUfha Ybh7\U]fdYfgcb 7 ci bV]/ž: UW`hmDcg]h]cb 5 ``cWh]cb 7 ca a]hhYYž 9ei]j U`YbWh7 ca a]hhYYž5: H &%&%čUbX h\Y 5 WuXYa]WGYbUhY 9l YWh]j Y 7 ci bV]//h\YfYZcfYžVY]h

FYgc'j YXžh\Y 5 WuXYa]WGYbUhY Uddfcj Ygh\Y &\$&': UW\'hm<]f]b[8 cWa Ybhžhc VY dfYgYbhYX hc h\Y Ghi XYbhGi WWggUbX Dc']Wuh6cUfX gi WWfa a]hhYY UgUb]bZcfa UnjcbU]hYa cb A Um% a&\$&' UbX hc h\Y Zi `` 6cUfX cZHfi ghYYgA Um% h\ž&\$&' /UbX

FYgc`j YXžh\uhh\Y5WxYa]WGYbuhYfYWta a YbXgh\YfY[i`UffYj]Yk UbXfYj]g]cbžUgbYYXYXžcZh\Y:UW\hm<]f]b[XcWaYbhUh`YUghYjYfmY][\hmYUfg/UbX

FYgc`j YXžh\uhh\Y5WuXYa]WGYbuhYfYWda a YbXgh\uhh\Y: UM/`hm<]f]b[XcWaYbhVYdiV]g\YXUbXaUXYUWWgg]V`Ycbh\Y5WuXYa]WGYbUhYž<iaUbFYgcifWgUbXch\YfWc``Y[YkYVdU[YghcYbgifYcdh]aU`ZUW/`hmUWWgg/UbX

FYgc'j YXžh\uhh\Y5WuXYa]WGYbUhYW'YVfUhYgU'cZh\YZUW'hmžgtU žghi XYbhgUbXUXa]b]qhfUhcfqk \cWgbhf]VihYX hch\]qfYj]q]cb dfcWqq'

5ddfcj YX Vm577@5A 5H±CB"

6D %%) k jh hfuwyx wub [Ygæ}å 5D %%) k jh hfuwyx wub [Yg! 6cUfX Dc`]wh ubX 5 Xa]b]ghfuhjj Y Dfcwxi fY i dXuhYgfl/sa]bg/c ? f]ghjb 7 \ uf`Ygĕg\wab X fYuxž X]g\wgp]cbžj chY

?f]gh]b Wub[YX h\Y Zcfa U]hmcZh\Y 77@7 < YUX]b[Zcf YUW cZci f dc`]V]YgubX 1 ghgU]X h\uhci f dc`]V]Ygk YfY fY UhYX hc h\Y 77@7"

UXX UgYMijcb; UbX XY`YHY*'% gc U` h\Y ZYYg UFY]b h\Y gLa Y d`UM'

7\UX GhYd\Ybgcb Vfci [\hi d gca Y cZh\Y Waa a Ybhg\Ya UXY cb h\Y 6D k]h\ fY[UfX hc Ghi XYbhZYYgUbX WUf] YX h\Ya "K \c dfcj]XYgh\Y]bghfi WajcbU a UhYf]Ug3: YY!VUgYX]bghfi WajcbU a UhYf]UgWab VY `]WbgYX UbX dfcj]XYX Vmh\Y`]VfUfmhK Y Wab hdfcj]XY h\cgY a UhYf]Ugk \Yb ghi XYbhgUfY bc `cb[Yf Uh7 7 G " : fYX Hhh] WUf] YX h\Uhh\]gdfcdcgU \Ugbch\]b[hc Xc k]h\ k\Uh7\UX]gX]gW\gg]b[UbX Ua YbXYX h\Y dfcdcgU hc]bWi XY`Ub[i U[Y h\UhfY YWag WlffYbh ghi XYbh ghUh g'

A]WYY G]Y[`]hn Ug_YX]Zk Y bYYXYX hc VY Wz[b]nUbhcZ Ubm6D WUb[Yg]a dUMjb[UWfYX]hUhjcb"

G\Yf] A]fU[`]UU fa YX h\Uhh\]gk ci `X bch]a dUMf h\]b[gbY[Uh]j Y`nžUbX k ci `X UMi U`m`cc_ [ccX g]bW k YUfY i dXUh]b[ci f 6cUfX dc`]VJVg'

A UXY]bYA i Y`Yf Ug_YX Zcf WUf] Wufjcb UbX]Zh\YfY]g gdYWJ/ Wu`mU6cUfX Dc`]Wuh) "&+ Ugk Y` UbX 5 D) "&+ UbX : fYX qUJX h\YfYk Uq'

A UXY]bY Ug_YX]Zk Y\Uj Yh]bY Zcf UgYWzbX fYUX]b A UmUbX: fYX qU]X h\Uhl\]gk Ug bY"

5D) "&+ Ghi XYbh: YYgdfcdcgYX bYk 5D) "&+; žhc VY UXXYX hc 5D) "&+

G]ad`YGm`UVigf%)a]bgk_G\Yf]A]fU[`]Už:fYXHMj

5 Xcdhcb cZGa d'Y Gm'Wi gdfYqYbhUhcb

 $\label{eq:habblight} $$H\]ghy \ \ \ hcc\ \ \ Zchabblight \]b[fgm`UV]b]b[G\ Yh]UXY]$$

UXXY"

K Y k Ubhhc VffYUhY hYa d`UhYggc YUW XYdUfha Ybh\UgUj c]W]b XYg][b]b[gm`UV]"

Gca YcZh\YhfU]b]b[k]``VYcbidXUh]b[UAGKcfXcfD8: XcWaYbhgc]hWubVY`]ei]XgcghiXYbhgWubj]Yk]hcb ai`h]d`YX]YfYbhhndYgcZgWhYYbg'

±hk]``U`gc VY Worbg]ghYbhUMicgg Wori fgYg UbX X]gM[d`]bYg' >/b?]Ybn`Yk]``\Uj Y U GUbXVcl GYgg]cb cb \ck hck cf_k]h\ G]a d`Y Gm`UVi gcb A Um' fX Uh%&da "

? Urfmb K] YgY a Ybh]cbYX h\ Ung\Y k Ybhhc Uk cf_g\cd UmYUf UbX \UZU[c UbX k cbXYfYX k \Un\UddYbYX]b h\ Y X]gWygj]cb Ufci bX i g]b[G]a d`Y Gm`Uvi gg]bW'H\Y cbY h\]b[h\ Uhk Y k Ubhh\Y dfc[fUa hc Xc!]a dcfh]b[G@Cgl k Y Wbh[i UfUbhYY h\ UhG]a d`Y Gm`Uvi gk]` Xc"7Ub k YgYY Ub Yl Ua d`Y cZ\ck h\]gk cf_g3

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G\Yf] A]fU[`]UgU]X h\Uhh\Y`UghmYUf\UgVYYb gdYbhlfm]b[hc i gY FYUXm; c UbX h\YfY\Uj Y VYYb dfcV`Ya g' \dg Yfm X] \W`h\Zcf 7\U]fghc i gY UbX bchj Yfmi gYZi `"H\]gX]X [c hc 877 UbX h\YmX]X Ug_ h\Uhk Yi gY h\]ghcc`"

Hea ? YbbYXmt\ Ub_YX Yj YfnrcbY Zcf k cf_]b[cb t\]gUbX gU]X \]gWtbWfb]gt\ Uht\]g\UgUfYUXmVYYb XYVJXYX UbX]gbch gi fY\]g`ck! Yj Y` ghi XYbhgk]` VY UV`Y hc \UbX`Y t\]g' G]a cb < Ubgcb a Ybt]cbYX t\ UhYj YfnrcbY gYYgt\]b[gZfca t\ Y]f ck b dc]bhcZj]Yk "=hgci bXgk cbXYfZi `Zcf t\ YdYcd`Y k \c k Ubhtc UXcdhUbYk t\ Wbc`c[mVi h]hbY[UtYgt\ Y\ ci fg cZk cf_ t\ UhZUW`hm\Uj Y XcbY hc [Yht\ Y]f gm`UV] hc fYUX]b a i `t]d`Ydfc[fUa g' =Zgca YcbY k Ubhghc _YYd UD8: Zcf `ck `Yj Y` B 7 ghi XYbhgžk]``]hVY dcgg]V`Y3

G\Yf] A]fU[`]Ua Ybh]cbYX h\Uhnoci Wub a U_Y Ugm`\Uhi g]h\fYY X] YfYbhk UnogžU` Uhh\YgUa Yh]a Yž]b G]a d`Y Gm`\Uhi g': fca Ub UWMYX]hUh]cb ghUbXdc]bhžk Yk YfYa]gg]b[U`chcZgm`\Uh]]b 7 Ubj UgUbX =h\]b_ h\]gk]``gc`j Yh\]gdfcV`Ya "

A]WYYG]Y[`]hn Ug_YX Zcf WUf] Wh]cb cb k \UhHca a YUbhVm `ck `Yj Y B cb! 7 fYX]hghi XYbhg UbX \Y fYd`]YX h\UhH\Ym k YfY 9b[`]g\!`YUfbYfg'G\Y Ug_YX]Z\Y\UbXYX ci hdUdYf gm`Uv] hc \]gghi XYbhgUbX \Y fYd`]YX]b h\YU fa Uh]j Y'G\Y Ugc Ug_YX]Z]hk UgbYWggUfmhc i gY 7 Ubj Ug Zcf U` WUggYgž]bWi X]b[B 7 UbX \Ya Ybh]cbYX h\Uh\Y\UgU7 Ubj Ugg\Y` Zcf YUW WUggVi hh\YB 7 ghi XYbhgXcb h[YbYfU`mi gY 7 Ubj Ud"

A]WYYG]Y[`]hn Ug_YX]Z]hk Ugdcgg]V`Yhc]bWi XYa cfY ZUW`hm]b
h\]gK cf_[fci džWdbg]XYf]b[\ck]a dcfhUbh]h]ghc \YUf Zfca U
[fYUhYf X]j Yfg]hmcZZUW`hmUbX]XYUgUbX VYWI gY cZ\ck `]hh`Y
ZUW`hm]bdi hh\YfY\UgVYYb Uhh\YWI`Y[Ycj YfU``UhYnh
5 Zf]YbX`mUa YbXa Ybhk Uga UXYhca U_Yh\Yk cf_[fci d cdYb hc
U` ZUW`hmžfY[UfX`YggcZ5 G97 Wdi bV]Y!dUfh]V]dUh]cb"
A UXY`]bYA i Y`Yfa Ybh]cbYX h\Uhg]bWk YXcb h\Uj YUdYfWbhU[Y
cZh\Ybi a VYf cZZUW`hmk \cj chYX h\]ghYfa žh\Ybi a VYf k \c
dUfh]V]dUhYX]b h\YWffYbhY`YWi]cb f%; Ła UmbchVYh\Uh`ck "

FYgc`j YXžh\Uhh\Y9l YWhjj Y7ci bVJ/ Uddfcj YX hc FY!Wdbj YbYh\Y77G 7cbghjhi hjcb K cf_[fci d hc 7ca d`YhYh\YH\]fX N/YUf cZK cf_

K \YfYUgh\Y WYffYbh5 WWXYa]WGYbUhY 7 cbghjhi hjcb UbX 6miUk gk YfY XYj Y`cdYX k \Yb h\YfY k YfY Ua i W `Uf[Yf bi a VYf cZ77G: : UW`hma Ya VYfgUbX

K \YfYUgh\Y7cbghhi h]cb UbX 6miUk gK cf_[fci d k UgZcfa YX]b &\$&%VmfYgc`i h]cb &\$&%VmfYgc`i h]cb UbX VmiUk gUbX UXcdhYX h\YZc``ck]b[fYj]Yk [cUg

Dfcj]XYUWYUffUhjcbUYUbX dfcWlggZcfidXUhjb[h\Y77G 5WuXYa]WGYbUhYWzbghjhihjcbUbXVnh`Ukg'

5 ggYgg UbX fYVkta a YbX i dXUhYg hc h\ Y Vktbgh]hi h]cb UbX Vm\`Uk g hc VY a cfY]bWi g]j Yž hfUbgdUfYbhžUbX Yei]hm\a]bXYX"

5 ggYgg UbX fYWda a YbX i dXUhYg hc h\Y Wdbgh]hi h]cb UbX Vmh`Uk g hc a U]bhU]b UWW fUMda WYffYbWdaUbX VYghdfUMd]Wd'

K \YfYUgh\Y7cbgh]hi h]cb UbX 6miUk gK cf_[fci d Wta d`YhYX h\Y fghhk c cZh\fYYmYUfgcZ k cf_Vi h\UgbchWta d`YhYX h\Yh\]fX mYUfžVY]h

FYgc`j YX h\uhh\Y7cbgh]hi h]cb UbX 6miUk gk cf_[fci d fYWtbj YbY]b: U` &\$& hc Wta d`YhY fYj]g]cbghc h\Y Wtbgh]hi h]cbgUbX VmiUk gUgfYZYfYbWX]b h\Y cf][]bU fYgc`i h]cb &\$&%\$' '%\$'*7ž UbX VY]hZi fh\Yf

FYgc`j YX h\Uhk cf_[fci d dUfh]V]dUh]cb k]`` VY cdYb hc U` 77G : UW\hnh

5ddfcj YX			