



IEST5001

: fUa Yk cf_g`Zcf`9bj]fcba YbhU`A UbU[Ya Ybh

HYfa `C.bY`#`&\$%-

7ci fgY`Cj Yfj]Yk

`GHUZZ7cbhUW`i8YHJ]`g`

`7cbj Ybcfg`

B Ua Y	9a U]`	5j U]`UV]`]m	@cW]h]cb	D\cbY
5#DfcZHYa U A]ghY]b	hYa U"a]ghY]b4 i bgk "YXi "Ui	D`YUgY`a U_Y`Ub Uddc]bha Ybhj]U Ya U]`	A cfj Yb`6fck b 6i]X]b[" A 6' * (

`@YW`i fYfg`

B Ua Y	9a U]`	5j U]`UV]`]m	@cW]h]cb	D\cbY
8f`>c\b`7Uff	^c\b"W]ff4 i bgk "YXi "Ui	d`YUgY`a U_Y Uddc]bha Ybhj]U Ya U]`	A cfj Yb`6fck b 6i]X]b[" A 6' *'	

GWXcc``7cbhUW`i`bZcfa Uh]cb

7 ci fgY'8YHJ]`g

7 fYX]hDc]bqg '*`

Gi a a UfmicZ\hY'7 ci fgY

H\]g`Wci fgY`dfcj]XYg`Ub`]bfcXi W]cb`tc`h\Y`A UghY`f`cZ9bj]fcb`a YbhU`A UbU[Ya Ybhdfc[fUa "'Mci`k`]"`[U]b
Ub`UddfYW]U]cb`cZ\hY`Wca d`YI`UbX`fUbg!X]gW]d`]bUfmbUhi fY`cZYbj]fcb`a YbhU`]ggi Yg`UbX`cZ\hY`]b\YfYbh
W\U`Yb[Yg`]b`a i`h]X]gW]d`]bUfmiUddfcUW\Yg`tc`Ybj]fcb`a YbhU`a UbU[Ya Ybh`H\Y`Ya d\Ug]g`]g`cb`YI d`cf]b[
WcbW]dhi U`UbX`dfUW]W]ZUa Yk cf_g`UbX`[`cVU`ghfU]Y[]Yg`Zcf`UXUdh] Y`Ybj]fcb`a YbhU`a UbU[Ya Ybh`
GHU]h]b[`Zca`h\Y`dfYa]gY`cZ`"gi ghU]bUV`Y`XYj Y`cda Ybh[cU`g`"Ug`U`W ffYbhVfcUX`mYbXcfcgYX`ZUa Yk cf_
Zcf`Ybj]fcb`a YbhU`a UbU[Ya Ybh`mci f`YI d`cfU]h]cb`k`]"`]bW] XY`h\Y`XYj Y`cda YbhicZ\hY`WcbW]d]g`cZ
gi ghU]bUV`Y`XYj Y`cda YbhUbX`gi ghU]bUV`]m]UbX`dfcV`Ya g`]b`dfUW]W]m]b]YfdYf]b[`UbX`]a d`Ya Ybh]b[
gi ghU]bUV`]m]Mci`k`]"`YbWci bhY`f`U`fUb[Y`cZfY`Yj UbhdYfgdYW]j Yg`]bW] X]b[`Zcf`YI Ua d`Y`X]Y[Ybci g
k cf`X`j]Yk gZ`d\]cgcd\mUbX`Yh]W]ZgcW]U`^ gh]W]Z`d`Ubb]b[Z`Y`W`bca]W]Z`Y`U`h`g]W]YbW]gZ`Y`W`c[mZ`a YX]Uz
UbX`W`h`fU`UddfcUW\Yg`"Mci`k`]"`YI d`cfY`h\Y`df]bW]d`Yg`cZgi ghU]bUV`Y`XYj Y`cda Ybh]b`h\Y`]f`Udd`]W]h]cbZ
]bW] X]b[`]c] YfbUbW`fYgdcbgYg`tc`h\Y`"gi ghU]bUV`Y`XYj Y`cda Ybh[cU`g`"U]hX]ZYfYbh`Yj Y`g`cZ
[c] Yfba YbhZ`Vmibcb`[c] Yfba Ybhcf[Ub]nU]cbgZ`Vm]W`f`dcfU]h]cbgZ`UbX`VmidfcZYgg]cbU`cf[Ub]nU]cbg`"Mci
k`]"`YbWci bhY`f`W]h]ei Yg`cZgi ghU]bUV`]m]Ug`U`ZUa Yk cf_`Zcf`Ybj]fcb`a YbhU`a UbU[Ya YbhZ`UbX`YI d`cfY
U`hYfbU]h] Y`a cXY`gZ`UbX`dcgg]V`Y`gc`i`h]cbg"

7 ci fgY`@YUfb]b[`Ci hWca Yg

%`8]gW gg`h\Y`W\Ub[]b[`ghU]Y`cZ\hY`Ybj]fcb`a YbhUbX`dYfgdYW]j Yg`cb`W ffYbh`_YmYbj]fcb`a YbhU`
]ggi Yg`Ug`]bZi Ybh]U`ZUW]cfcg`]b`ZUa Yk cf_g[c] Yfb]b[`Ybj]fcb`a YbhU`a UbU[Ya Ybh
&"

a UbU[Ya YbH'5`_Yma YggU[Y`]g`hUhhYgY`ZUa Yk cf_g`UfY`bchghUqWwi hWbhb`bi U`mYj c`j`]b[žk`]h`hY
dUW`cZVXUb[Y`dUfhW`Uf`mfUd]X`UhdFYgYbH`

5ggYgga Ybh

: i ``XYHJ]g`Uj U]UV`Y`j]U`mci f`A ccX`Y`g]H

5ggYgga YbhHUg_g`

5ggYgga YbhHUg_	K Y][\ h	8i Y`8UH	Gh XYbh@YUfb]b[Ci Hta Yg`5ggYggYX
5bbchUH`X`6]V`]c[fUd`m	' * i	8UH`H65	%z&z ž(ž)
; fci d`DfYgYbhUH]cbg`	%&i	h`mci f`Ugg][bYX`k YY_	%z&z ž(ž*
:]Y`X`Hf]d`9I WfW]gY`	%&i	Gi Va]ha]X`HYfa ``8UH`H65	%z&z ž(ž*
F YgYUfW`9ggUm	(\$i	5h`hY`YbX`cZHYfa ``8UH`H65	%z&z ž(ž) ž*

5ggYgga Ybh8YHJ]`g

5ggYgga Ybh%`5bbchUH`X`6]V`]c[fUd`m

GHUfhXUH. `H\Y`V]V`]c[fUd`mXYj Y`cdg`UW`cgg`hY`Wci fgY

8YHJ]`g. `6f]YZgi a a Uf]Yg`ZcF`_YmdUdYfgz`Vcc_`WUdhYfg`UbX`c`hYf`fYZYfYbW`g"5ddfcI`%`\$\$`k`cfXg"
K f]Hb`ZYXVUW_`dfcj]XYX`UW`c`fX]b[`h`U`fi`Vf]W

5XX]h]cbU`XYHJ]`g.

: i ``XYHJ]g`Uj U]UV`Y`j]U`mci f`A ccX`Y`g]H

5ggYgga Ybh&` ; fci d`DfYgYbhUH]cbg`

GHUfhXUH. `Mci`k]`VY`Ugg][bYX`U`k YY_`]b`k` \]W`h`c`dfYgYbh`

8YHJ]`g. `5`W]gY`gh XmdfYgYbhUH]cb`]b`WUgg`cf`Ug`Ub`cb!`]bY`Zcfi a`dcgh`K f]Hb`ZYXVUW_`dfcj]XYX`

5XX]h]cbU`XYHJ]`g.

: i ``XYHJ]g`Uj U]UV`Y`j]U`mci f`A ccX`Y`g]H

5ggYgga Ybh' . :]Y`X`Hf]d`9I WfW]gY`

GHUfhXUH. `H\Y`Z]Y`X`Hf]d`]g`YUf`m]b`hY`HYfa

8YHJ]`g. `Gh XYb]g`k]`VY`fYeI]fY`h`c`gi Va]hU`k f]Hb`fYdcfhVUgYX`cb`U`Z]Y`X`Hf]d`

5XX]h]cbU`XYHJ]`g.

: i ``XYHJ]g`Uj U]UV`Y`j]U`mci f`A ccX`Y`g]H

5ggYgga Ybh(. `F YgYUfW`9ggUm

GhUfhXUHY.

8YHU]g. 'DUdYf]b'k \]Wk 'mci 'Udd'miU'g]l 'ghYd'gi ghU]bUVY'XYj Y'cda YbhiUbU'mg]g":]bU'Ugg][ba YbhiZcf'hAY
Wci fgY''Uddfcl ' ') \$\$'k cfXg''K f]hYb'ZYXVUW_dfcj]XYX'UWwcfX]b['hc'U'fi Vf]W

5XX]h]cbU'XYHU]g.

: i ''XYHU]g'Uj U]UV'Y'j]U'mci f'A ccX'Y'g]hY

5 WUXYa]W<c bYghmiUbX`D`U[]Uf]ga

D`U[]Uf]ga `]g`i g]b[`h`Y`k cfXg`cf]XYUg`cZchYfg`UbX`dfYgYbh]b[`h`Ya `Ug`mci f`ck b" `hWUb`hU`Y`a Ubm
Zcfa gžZca `XY`]VYfUh`W`YU]b[`h`UW]XYbhU`miW`dm]b[`Zca `U`gci fW`k]h`ci hUW_bck `YX[Ya Ybh`

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

7cdm]b[.`i g]b[`h`Y`gUa Y`cf`j Yfmg]a]Uf`k cfXg`h`h`Y`cf][]bU`hI hcf]XYU`k]h`ci hUW_bck `YX[]b[`h`Y

5 WUXYa]WbZcfa Uhcb`

: cfYggYbh]U`gh XYbh]bZcfa Uhcb`fY`Uh]b[`rc.

• fYei Ygh`Zc`YI hYbg]cb/

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