

⇒ a a][fUh]cb 8c_i a Ybh



8c_i a Ybh! '5``a Àbh

Hi f_]g_U

SSSS]Á]b`bYfYXyb`Zcfa `Vi `UW]`f]a 3
: fÁ[Uj Uf`Xi `Ub`ZÁ`YthZcfa i `Áf

:]bg_U

A]g`Á`ÒnX`Áb`ca U__Yb`SSSS] UfHb3

0Y [YQbY`nUa Ub`j Yf]`X]3

: fÁ[Ub`Áf`YthXc_i a Ybhj Uf`i hZ`ÁfXUh

A]`c]b`0Xc_i a Ybh]g]Ccb`a n`0bbYfHm3

0Y [YQbYfYXy`j Yf]`X]3

: fÁ[Uj Uf`YthXc_i a Ybhj Uf`i hZ`ÁfXUh

A]gg`Á`0Xc_i a Ybh]g]Ccb`a n`0bbYfHm3

?]a `]_`VY [Yb]n]b`g0Yg]`bY`nUa Ub`Xc`i mcf3

: fÁ[Ub`Áf`Yb`Y []h]a U]cb`[Áf`i h

? cg_U`Yb_]`0`]gm0jrcX]g]i_gYg]j Ub`YbY3

: cfa i `Xc`Xi fa Ua U`ntUfX a `YXYf`a]g]b]n3

: fÁ[Uca `bÁ[cb`Ub`À`dUf]`a YX`UthZm`U]`Zcfa i `ÁfYh

J c]g]h_c`U`HUU`a]bi U`ca U__Yb`h`Ánth`Áa]gYgg`Á3

SSSSSSSSSS]Á]b`Ub []`VY [YYf] [Yh]fa Y`m]a 3

: fÁ[Uj]`_U`Xc_i a Ybh]gca `Xi `a ÁgY`H]g]a YX

A]h`Á`Xc_i a YbhY`U`a]bi b`d]h`Á`h`cXU`SSSSSSSS] UfHb3

0Y [YQVU j i fi g] `Á]b`Yb`Uh bXUb`SSSSSSSS
[Yh]fa Y`g]b]n"

5 b [Y`j UX`gca `VY`0] g`Z0f`UthUbg0_U`ca `YthXc_i a Ybh

>chUj c]h`U`YU`0Xc_i a Ybh]U0]g]bi ``Uth `YY`c`U`U]bU_]b
SSSSSSSS"

0Y [YQVY [Ya `ÁU`bX`"

5 b [Y`UthYth]j `X]bU`Xc_i a Ybh`Uf`V`j]h]gi `Yh

A]bi b`0Xc_i a Ybh]b]Q] UfUgYh]b]"

6i `VU j i fi m] `SSSSSS`UX bU`m]d mcfi a`"

5 b [Y`UthXi `g_U`Áa bU]b`Yb`Ubg0_Ub`Z0f`bÁ[cb`UbbUb

>Áh`Áb`h`Áa`Áb`U`Ya i _g]b`SSSSSS`di c`Yg]U'

6i `V] []`0nY`X]f"

5 b [Y`Uthi dd []Z]YfbU`Áf`_cbZ]XYb]Y`U`cVW`]b]hY`Áa bU]gi h]j` `hYX`Y`dUfH

B`Áa`Á`h]YX`ch]c] Uth`i`chUa i _g]`]g]U'

6i `VU j i fi]Á]b`V]f`a U`Vi`n`U`UW]`f`a]m]a 3

: fÁ[Uca `Xi `Ub`ZÁ`Yth]_j]h]c`d`Á`X]b`Ubg0_Ub

J c]g]h_c`UbHU`a]bi ``Y`_i]h]b`h`Ág`Á`U`Ya i _g]g]U3

8c_i a Ybh! `DYf`gcb`][]bZcfa U]cb

Hi f_]g_U

:]bg_U

⇒a a][fU]cb
8c_i a Ybh



5X b n'bYX]f3
: fÁ[UYZhYf'bÁ[cbg'bLá b

A]_À'g]bi b'b]a Yg]`cb3

8cúi a `mYf]b]n]j Y`hUf]\]b]n]g`ÒmYmWV`]f'a]g]b]n3
: fÁ[Uj Uf`cWw`bÁf`bÁ[cb`Áf`Z`XX

J c]g]h_c`YfhcU'a]bi ``Y`gnbma`ÀdU]__Ug]`'U
gnbma`ÀU]_Ug]3

B YfYX`mU n`efg bi n3
: fÁ[Uj Uf`bÁ[cb`Vcf

A]gg`À'g]b`À'Ug] h3

_Ua YhUXfYg]b]n'bYX]f3
: fÁ[UYZhYf'bÁ[cbg]UXfYgg

A]_À'g]bi b'cg:]hYg]`cb3

<Ub[]`Ø`Y]j U]bXU`g b n3
: fÁ[Uca`bÁ[cbg]a YXVcf[Ufg_Ld

A]b_À'a UUb`_Ubg]U]bYb`g]b`À'c`Yr3

Ø`YQbY`nLa Ub[]`YX]b]n3
: fÁ[U`bÁf`bÁ[cb`Ub`ÀbXY`h]``UbXYh

? cg_U]g]b`À'g]U] i]h@ U]U]b3

?]a`]ú]b]n] [`ØYV`]f'a]m]a 3
: fÁ[Uca`bÁ[cb`_Ub]`]g]X][]g]b`Y[]h]a U]cb

J c]g]h_c`b`Àh`À`À'a]bi ``Y`Yb_]`ÒcX]g]i g]U]3

8c_i a Ybh! `7]j]`g]U]i g

Hi f_]g_U
A YXyb]`U]a`'SSSSSSSSSS"
5b[YX]b`W]]`g]U]i g

:]bg_U
A]b`À'c`Yb`'SSSSSSSSSS"

VY_Uf
7]j]`g]U]i g

bU]a U]cb

Yj`]
7]j]`g]U]i g

bU]a]g]gg]U

Uhf`a
7]j]`g]U]i g

Ug] a i g]f`cg]U

Vc_Uba
7]j]`g]U]i g

Yf`cbbi h

⇒ a a] [f U h] c b 8 c _ i a Y b h

V]f]_h'ntU ncf
7]j]`gthi g

Uj c`]]hcggu

a YXYb]V]f]_h']
7]j]`gthi g

fY_]ghYfQ]XnggÀ:dUf]g \hYggU

Yj `Yba Ya] `Ã]zh
7]j]`gthi g

dUf]g \hYggU

a YXYb]`cfhU` _]Ã]bXY
7]j]`gthi g

Uj c`]]hcggu

Xi `
7]j]`gthi g

`Yg.]

ÉcWúi bi nij Uf'a 3
: fÁ[Uca `bÁ[cb`Uf`VUfb

Cb_c`g]bi ``U`Udg]U3

6U_a U`Um0_0a `0c`Xi úi bi n`_]a gY`Yf]j Uf'a 3
: fÁ[Uca `bÁ[cb`Z]bUbg]YfUf`XY`g]a VcYbXY

5g i _c`hUci XYgg]g]`a i]hU`Yb_]Q]hA3

5]`Ya]`mub a U`Ua U`_]g]mcfi a "
5b[Y`X]b`Uj g]_h]UhiÁhYfZ0YbUg]a YX`X]b`Z]a]`^

C`Yb`a i i h]Ua Ugg]dYf`Yb]`_Ubgg]hU_]g]b`n`hYb"

8c_i a Ybh! `F Y[]gfYf]b[`]`ghUXYb Hi f_]g_U

Y\]fXY`_]_La Yh_UhX `mubhfa U`_]g]mcfi a "
5b[Y`UhiXi `h` `fY[]gfYfUX][`]`ghUXYb

:]bg_U

< U i U]g]b`fY_]ghYfQ]mÀ`_U di b[]b`Ug _U]g]"

< Ub[]`VY[Y`Yf]`[Y]fa Y]m]a 3
: fÁ[Uj]`_UXc_i a YbhXi `g_U`hU'a YX

A]h`Xc_i a YbhY`U'a]bi b`d]h]g]`chU]a i _U]b3

? Umh] `Ya `Yf]]Ã]b`0W]h0X]Ya Y]`a]m]a 3
: fÁ[Uca `X]hÁf`bÁ[fU`_cg]bUXYf`]bj c`j YfUXY`j]X`fY[]gfYf]b[

A U`g]U`c`fY_]ghYfQ]ma]bYb`^chU_]b3

_]_La Yh_UhX `mubhfa U`_]Ã]b`Vi fUXUma "
5b[Y`UhiXi `j]` `fY[]gfYfUX]b`VcghUX

Hi `]b`fY_]ghYfQ]a AAb`Ug]bdU_]U]b]"

⇒ a a] [f U h] c b 8 c _ i a Y b h

n j \ U ` W [Y g] V U j i f i g b X U V i ` i b a U _] g h] m e f i a " < U i U] g b h ` U U f] _ c g f Y _] g h f] c h h Y b "
5 b [Y U h i X i j] ` ` U b g Ò _ U c a ` Y h i W f h] Z _ U h Z Ò f [c h i i d d Z Ò f U b X Y

C h f a U] n b] V U j i f i g b X U V i ` i b a U _] g h] m e f i a " < U i U] g b \ U _ Y U c ` Y g _ Y i ` i d U U "
5 b [Y U h i X i j] ` ` U b g Ò _ U c a ` i d d Y \ A ` g] ` g h A b X

8 c _ i a Y b h ! ' G ' i _ Z Ò f g A _ f] b [

H i f _] g _ U

G l ü ` _] g [c f h u g m U] []] V U h ` g c f i ` U f ` g c f a U _] g h] m e f i a "

5 b [Y U h i X i ` U f ` b A [f U Z f A [c f ` c a ` g t _ Z Ò f g A _ f] b [

:] b g _ U

A] b i ` ` U c `] g ` a i i h U a U _ n g n a n g i g U] f U i g U _ i i h _ g Y b `]] h m Y b "

2 n Y ` g l ü ` _] g [c f h u g b U] \ h] n U W a j U f ` a 3
: f A [U c a ` X i ` W Y \ Ç Y f ` Y b ` d f] j U h i g t _ Z Ò f g A _ f] b [

H U f j] h g Y b _ c ` m _ g] m] g h A _ g U] f U i g U _ i i h g U B

G l ü ` _] g [c f h u g ` b Y ` Y f] ` _ U d g n e f 3
: f A [U c a ` j U X ` Z Ò f g A _ f] b [Y b ` h A W _ Y f

A] h A j U _ i i h i g _ U h U B

< U g h u b Y ` a U g f U Z U f
9 l Y a d Y ` d A ` j U X ` g t _ Z Ò f g A _ f] b [Y b ` h A W _ Y f

G U] f U U _ i ` i h

I n a U b ` X c _ h c f ` Ø W Y h Y f]
9 l Y a d Y ` d A ` j U X ` g t _ Z Ò f g A _ f] b [Y b ` h A W _ Y f

9 f] c] g A A _ A f] _ i g U b b i _ g Y h

H U b ` _ c m a U ` H Y g h Y f]
9 l Y a d Y ` d A ` j U X ` g t _ Z Ò f g A _ f] b [Y b ` h A W _ Y f

8] U [b c g] b Y b ` h i h _] a i g

7 Y f f U] ` c d Y f U g n e b ` U f
9 l Y a d Y ` d A ` j U X ` g t _ Z Ò f g A _ f] b [Y b ` h A W _ Y f

?] f i f [] g Y h i h c] a Y b d] h Y h

D g] _ m U f] ` h Y X U j] g]
9 l Y a d Y ` d A ` j U X ` g t _ Z Ò f g A _ f] b [Y b ` h A W _ Y f

D g m _] U f] b Y b ` \ c] h c

8] ` h Y X U j] g]
9 l Y a d Y ` d A ` j U X ` g t _ Z Ò f g A _ f] b [Y b ` h A W _ Y f

< U a a U g \ c] h c

; Ò n ` h Y X U j] g]
9 l Y a d Y ` d A ` j U X ` g t _ Z Ò f g A _ f] b [Y b ` h A W _ Y f

G] a A \ c] h c

⇒ a a] [f U] c b 8c_i a Ybh

8c_i a Ybh! J]g a

Hi f_]g_U

BXYb []f] j]nYg]g]mcfj bi n3
: fÁ [Uj UFZÖf`bÁ [cb`VY [Áf`]bfYgY]g a

:]bg_U

A]_g]gb`Ubchia U\Ubi `cj]]g a]U3

Ø_YQ]Á]b]nYmY`]\h]mUa j Ufa 3

: fÁ [Uf`ca `Xi `V\`Q Yf]]g a `ZÖf`UthfYgU`b`]Yth`UbX

HUfj]hgYb_c`j]]g a]U`U U\Ubi`Ua U`i gYUggb]3

J]nYa]`bUg`i`nU\U`]f]a 3

: fÁ [U\i f`Xi `]_Ub`ZÖf`Ab [U\X]Hj]g a

? i]b_Uj c]b`d]XYbh`Á]j]]g a]Ub]3

J]nY`VUj i fi a `bYXYb`fYXXYX`]X]3

: fÁ [Uj UFZÖf`X]Hj]g a UbgÖ_Ub`U`U`V`j]hUj gU`Yh

A]_g]j]]g a]\U_Ya i]_gYb]`cb`\m`Áhm3

? U Wch fi a]nb`]Á]b`VUj i fU`]f]a]m]a 3

: fÁ [Uf`ca `Xi `]_Ub`UbgÖ_U`ca `Uth`V`]Yb`dYfa Ubybhia YXVcf [UFY`]Yth`UbX

J c]b_c`U_YU`a Uub`_UbgU]Uj i HU3

8c_i a Ybh! `6]`_Öfb]b[

Hi f_]g_U

5 fU\Ua b`d`U`Ug`b`XYú] h]fa Y`]a]m]a 3

: fÁ [Uca `Xi `a ÁgY`VntU`i`hX]b`fY []g`fYf]b [gg_m]hica `Xi `U`f`a YX`X] [`X]b`V`]Z`Áb`Yth`Ubb`U`i`UbX

:]bg_U

HUfj]hgY_c`a]bi b] U]\HUU`U`hcb]`fY_]gYf_]`d]3

5 fU\Ua `]_UnX`Yth]fa Y_]g]mcfi a 3

5 b [Y`UthXi `V\`Q Yf`fY []g`fYfU`X]HjZcfXcb

< U i U]g]b`fY_]gYf`Q]X`A`U`cbYi j cb]"

9\`]mY]a `Vi fUXU [Y`ÁYf`]a]3

: fÁ [Uca `X]Hj`_Öf`cfh`Áf` []`h] [hX`Áf

? YdUU_c`U`c`cf`H]b]`h`Á`Á3

; Y`Á]VY`Y`]mYhVY [Yg] `Ua U_]g]mcfi a "

5 bgÖ_U`ca `Ythidfcj]gcf]g`h`_Öf`cfh

< U i U]g]b`\U_YUj`À`]U_]U]gU`U`c`cf`H]U'

SSSSSSSSSS`]Á]b`_Umhc`a U_]g]mcfi a "

5 b [Y`UthXi `j]`Vc`U`h]X`ZÖf`i`dd`_Öfb]b[

< U i U]g]b`g`cf]HUU`SSSSSSSS"

Hcf]_]g`bUj

Hnd`Uj`Hgh

Hcf]U_c_Yb

⇒ a a][fU]cb 8c_i a Ybh

X]fY_g]ncb'g bUj
Hnd'Uj 'h'gh

]bgg]U'cb

9\]mY]a XY_] 'SSSSSSSSSSSS'V] []g]b]'XYü] h]fa Y_
]g]ncfi a "
5 b[Y'UthXi 'j]'' 'ÄbXfU'bÄ[fU'XYü' 'Yf'dÄ'X]h]_Öf_cfh

< U i U]g]b' a i i HUU'SSSSSSSSSSS'U'c_cfh]gg]b]"

UXfYg
J UX'j]''Xi 'ÄbXfU3

cgc]hYHU

UX
J UX'j]''Xi 'ÄbXfU3

b]a YÄ

ZchcúfUZ
J UX'j]''Xi 'ÄbXfU3

_i j UU

9\]mY]a Y'XU'U'mø_gY'_UH[cf]'Yf'Y_'Ya Y_
]g]ncfi a
5 b[Y'UthXi 'j]'' 'Ä [[U'h'' \Ö[fY'_UH[cf]'Yf'ZÖf'X]h]_Öf_cfh

< U i U]g]b'']gÄhÄ''i c__]U'U'c_cfh]b]"

9\]mY]a]'mYb]'Ya Y_']g]ncfi a "
5 b[Y'UthXi 'j]'' 'ZÖf'bmU'X]h]_Öf_cfh

< U i U]g]b' i i g]U'U'c_cfh]b]"

6]f' SSSSSSSSSSS'Y\]mY]'XYü] h]fa Y_']g]ncfi a "
5 b[Y'UthXi 'j]'' 'YfgÄhU'X]h]_Öf_cfh

< U i U]g]b' i i g]U'SSSSS'U'c_cfh]b]"

_Umd
? Öf_cfhgdfcV'Ya

_UXcbbYyb

ÄU' ba
? Öf_cfhgdfcV'Ya

j UfUg]Yi b

\UgUf
? Öf_cfhgdfcV'Ya

j U f]c]h] bYyb

9\]mY]a]b]'dH'YX]'a Yg]bY]'h]fU'h'Yha Y_']g]ncfi a "
5 b[Y'UthXi 'j]'' 'j 'ÄX'U'X]b'_ÖfZÖf'vi X

< U i U]g]b' j U]HUU'U'c_]Y`cg]Ub]"

8c_i a Ybh! 'A YXVcf[Ufg_Ud
Hi f_]g_U

:]bg_U

⇒ a a] [f U h] c b 8 c _ i a Y b h



∅ _ Y g Z h Q j U h b X U ` ù] Ā] b ` V U j i f a U _] g h] m e f i a "
5 b [Y ` U h i X i ` g _ i ` ` Y j] ` U W ` c a ` Y h i a Y X V c f [U f g _ U d

< U i U] g j b ` \ U _ Y U ` @ U b Q _ U b g j U] g i H U "

∅] ` Q g b U j `] Ā] b ` b Y F y m Y ` _ U m h c ` U M] ` f] a 3
: f Ā [U j U f ` X i ` _ U b ` f Y [] g f Y f U X] [` Z Ō f ` Y h i g d f Ā _ h Y g h

A] g g Ā] c] b] a c] H U h i U Q _ J Y Y b Q _ c _ Y g Y m b 3

G U V _ U _ U h X a ` m e _ h i f "
5 b [Y ` U h i X i ` \ U f ` Y b Z Ā W _ Z f] h i g f U Z Z f Y [] g Y f

A] b i ` ` U c b ` d i ` \ X U g f _ c g f Y _] g Y f] "

; Y f Y _] ` ∅] ` Q g Y j] m Y g j b Y ` g U \] V] a "
5 b [Y ` U h i X i ` \ U f ` X Y b ` b j] Ā ` g c a ` _ f Ā j ` g U j ` g d f Ā _ Y h

A] b i ` ` U c b j U X] H U j U h i U j X c h Q _ J Y Y b Q _ J Y Y g g Ā "

∅ _ Y Q m U U a m i U] []] [Y b Y ` V] [] ` g b U j `] Ā] b ` _ U m h
m U h f a U _] g h] m e f i a
5 b [Y ` U h i X i ` j] ` ` V c _ U Y h i U ` a Ā b h _ i b g _ U d g h Y g i c a ` ` j Y h] ` U b X Y h

< U i U] g j b j U f U U ` U U b ` @ U b Q a U b h i b h Y a i g h Y g h] b "

J U h b X U ` _ ` V U j i f i g ` ∅ M Y h Y f] ` b Y ` _ U X U f 3
: f Ā [U c a ` U j [] Z h Y f b U Z Ō f ` Y b ` a Y X V c f [U f g _ U d g U b g Ō _ U b

? i] b _ U ` d U ` c b ` _ U b g j U] g i X Y b ` \ U _ Y a] b Y b ` a U _ g U U 3

9] a ` @] ` ` m Y h i g Z h Q j U h b X U X f "
5 b [j U b X Y ` U j ` b U h j c b U] h Y h b ` d Ā X] b ` a U _ Y # a U _ U

A] b i b ` d i c `] g c b] ` c b ` @ U b Q _ U b g j U] b Y b "