



ARTS2020

7 fYUhj Y`K f]hb[

HYfa `H\fYY`##`&\$&\$



7 ci fgY`Cj Yfj]Yk

GHJZZ'7cbHJW`8YHU]`g

7cbj Ybcfg

B Ua Y	9a U]	5j U]UV]]m	@WWhcb	D\cbY
F cUbbU'; cbgU] Yg	fcUbbU4 i bgk "YXi "Ui	VmUddc]bħa Ybh		

GW\cc`7cbHJW`bZcfa Uh]cb

GW\cc`cZħY`5frg`UbX`A YX]U

Fcca " %&ž@Y] Y` žF cVYfhK YVghYf`6i]X]b[`f] %Ł

D\cbY. f\$&Ł-' ,) '(,) *

9a U]: [gUa 4 i bgk "YXi "Ui](#)

K YVg]ħ: [k k k "Ufrg"i bgk "YXi "Ui #gUa](#)

H\Y`GW\cc`cZħY`5frg`UbX`A YX]U`k ci `X`]_Y`ħc`F YgdYWwZ`m5W_bck`YX[Y`ħY`HfUX]ħcbU`7 i għcX]Ubgž
ħY`6YXY[U`fP`Ybg]b[ħcb`WJa di gŁž; UX][U`f7]mUbX`5fñ/ `8Yg][b`7 Ua di gYgŁ`UbX`ħY`B [i bbUk U`
dYcd`Y`f5i għfU]Ub`8YZYbW` : cfW`5WUXYa m]b`7 UbVYffUŁcZħY`UbXg`k \YfY`YUW`WJa di g`cZI`BGK`]g
`cWWhYX"

7ci fgY'8YHJ]`g

7fYX]hDc]bhg`*`

Gi a a UfmicZ\Y'7ci fgY

H\Y'U]a `cZ\g`W`i fgY`jg`hc`Z]a`j]Uf]gY`mci`k`j]h`U`k`jXY`fUb[Y`cZW`bhYa`dcfUfm`]hYfUhi`fY`UbX`hc`
YbW`i`fU[Y`mci`hc`Yl`dYf]a`Ybhk`j]h`U`j`Uf]Y`micZX]ZYfYbhg]mYg`UbX`[YbfYg`]b`mci`f`ck`b`k`f]h]b[``6m`
i`bXYfU_]b[`h]g`W`i`fgY`mci`k`j]`UW`i`j]fY`U`dfUW]W`i`bXYfghUbX]b[`cZ\ck`j]hYfUhi`fY`k`cf_g`VmXYj`Y`cd]b[

g_`g`cZW]hVW`UddfU]gU`ž`YX]hb[`UbX`fYXfUz]b[

5ggYgga Ybh

%A]bcf'5gg][ba Ybh' F YUX]b['Ug'U'K f]hYf'

•

j]U'hfUW_`VXUb[Yg'cb'gcZnWcd]Yg'fN'Y'h'hc'f'k]''bYYX'hc'gYY'Yj]XYbW'icZh'jg'ZYXVUW`L'

YghUV`]g\`U`W]h]W`cf`ch\Yfk]gY`hcbY/\ck`]g`Yj`YfmXUm`Ub[i U[Y`gYa Ub]W`mfYcf]YbH`X`k` \Yb
]bWl`XYX`]b`U`dcYa /\ck`XcYg`U`]bY`VfYU`g\]Zicf`a`i`h`d`m`h`Y`a`YUb]b[`cZU`gYbH`bW3

- 7ca dYh'bw']b'WUzhg_]`g'ffY'UHj['hc' bUffUHj Y'j c]Wžd`chgfii Wfi fYž`]bY`VfYU_gžX]U`c[i Yž`YhW XYj Y`cdYX'h'fci [\ci hi'hY'gYa YghYfž'UbX'fY'Yj Ubh'hc'h'Y' [YbfY'k]h']b'k \]W'h'Y'k cf`cdYfUH'g fdcYhfmž`Z]W]cbž`Z]W'cW]h]W]ga ž`YhW
- a dfcj Ya YbhcZk cf`Z'ca`XfUZh'a Ubi gW]dhk cf_g\cddYX']b'WUgg'hc`Z]bU`dc`]g\YX'd]YW

5 hYbXUbW F Yei]fYa Ybhg

Gh XYbhg UfY'ghfcb['mYbWci fU[YX'hc UthYbX'U''WUggYg'UbX'fYj]Yk ''YWhi fY'fYWcfX]b[g"

7 ci fgY'GWXYXi `Y

[J Yk WUgg'ha YhUVY](#)

H]a YhUV`Y`

8UhY	HmdY	7cbhYbh
C`K YY_'; 'GYdhYa VYf! %%GYdhYa VYf		
K YY_%`%'('GYdhYa VYf! % 'GYdhYa VYf		hlfCXi W]cb. `D`chj Yfgi g`7\UfUWYf3 . DWSV[`Ye ShS[ST`Wh[S ? aaV`W 8Uj Y`9[[Yfgz`"BchYg`Zcf`U`GhcfmcZU`A Ub`K `c`K]` Bch8]Y`5`cbY` <Y`Yb`; UfbYfz`"@]Z`cZ5fh` 6UfVUfU`K Y`gZ`; cf[Yci g` <Y`Yb`;]Y`X]b[žcdYb]b[`hc`4dVYWF <a` We` 6[Sck DYHf`7UfYmž`"8c`Mci` @cj`Y`A`Y3`
K YY_`&.`&%GYdhYa VYf! &) 'GYdhYa VYf		A mGhcfmc f`H\Y]f`Ghcfm3`:]fghdYfgcb`UbX`H\]fX! dYfgcb`BUffU]cb . DWSV[`Ye ShS[ST`Wh[S ? aaV`W DUhf]W_`Gi`g_]bXžcdYb]b[`hc`BWDg_`W

		<p>6fcbk nb`@YUz`"H\Y`C h.Yf`K UmCi h`</p> <p>F cVYfh; fUnz`"@UH`": Yffm`</p> <p>7cfU`<i ``z`"<ck `8c`8YhWj Yg`A U_Y`@cj Y3`</p> <p>GhYd\Yb`@Uk fYbWz`"g`h`jg`DcYfm3`</p> <p>GUfU\`<c``UbX`6Uhz`"H\U`Uggc[fUd\m`</p> <p><YfU`@bXgYm6]fXz`"? YUhg`]g`8YUX`gc`": i W_a Y`Zca 6Y\]bX`</p> <p>6Yh`G\Yd\YfXz`": f]XUmA UfW`&%&\$\$`" "</p> <p>A]WUY`6Uh]b]Wz`"8YUH`]b`5i hi a b`</p> <p>5bXfYk `NUK UW]z`"z`"z`? SecgWdSVW</p>

	<p>;`YbXU`5XUa gž`F YWŁbgfhi W]cb`cZUb`9j Ybh`</p> <p>A Uf[UfYh5tk ccXžcdYb]b[`hc`FZW: S` V_ S[Me FS`W</p> <p>6fYh9Ughcb`9`]gž`"A cfb]b[" žca `3_ Wd[US` BekUZa</p> <p>gUVY`Y`5`YbXYž`"D\Ubrca `DU`UW`"</p> <p>F Uma cbX`7 Uf] Yfž`"5fY`Mci `U`8cWŁcf3`"</p> <p>@Ji fYbh6]bYhžcdYb]b[`hc`: : Z:</p> <p>.</p>
<p>K YY_ ; .& Bcj Ya VYf! `* Bcj Ya VYf</p>	<p>Dfc hYghDcYhfmUbX`I fVUb`DcYhfm</p> <p>.</p> <p>DWSV[Ye ShS[ST`Wh[S ? aaV`W</p> <p>5Xf]YbbY`F]Wž`"F UdY`"</p> <p>9f]WJ`8 Uk gcbž`"HcXUm`=Hc`X`8cbUX`Hfi a d`"</p> <p>;][`F mUbž`"ž`=\UX`U`; i b`"</p> <p>C i mUb[`M ž`": i W_`Mci `5i ghFU`]Už`""5`F UW]gh</p> <p>7\]bYgY`: UhYf`"</p> <p>5b]U`K U`k]Wž`"5i ghFU`]U`"</p> <p>@Yg`A i ffUnž`"H\Y`Gi gdYbg]cb`cZ? bcW_`"</p> <p>DUi ``8 Uk gcbž`"H\Ub_g`žcf`hY`DcYa gžDUi `]bY` < Ubgcb`"</p> <p>@]cbY`: c[Ufmž`": i W_`U``8YdUfha Ybhtg`ž`"5]bffiBc` 5Vc`K UmcZ7ca a i b]W]h]cb`"</p> <p>? YbbYh`G`Yggcfž`"K]`]Ua `GhfYYh`"</p> <p>7cfU`< i ``ž`"@j Yfdcc`"</p> <p>>c\b`A UhYfž`"A i g`]a `K ca Ubž7UfŁcb`"</p> <p>>]``>cbYgž`"GUh fXUmA cfb]b[`]b`5g\ž]Y`X`"</p> <p>C a Uf`A i gUž`"7 5D`#15`@`@9HH9F G`"</p>
<p>K YY_- .- `Bcj Ya VYf! % `Bcj Ya VYf</p>	<p>H\Y`mf]W `=UbX`]hg`C hYfg`"</p>

	<p>DWSV[Ye ShS[ST^Wh[S ? aaVW</p> <p>5bbY`GYI ħcbž“H\Y`5XX]Wf/“H\Y`6U`UX`cZĤY @cbY`mA Ugh fVUħf”</p> <p>G\Ufcb`C`Xgž“K \Yb`]h7 ca Yg”</p> <p>F i d]? Ui fž“UddUfYbhm]h]g`i b[fUWZ `cZa Y”/“] k Ubħħc`Udc`c[]nY`ħc`U`h\Y`k ca Yb”</p> <p>6fcbk nb`@YUž“8c[`8Umğ”/“5`D`UW”/“6fcbk nb @YU”</p> <p>7cfU`<i`ž“GdUffck`”</p> <p>C i mUb[`M ž“HfUbg`Uħb[`A mgY`Z”</p> <p>6cV`DYfY`a Ubž“7`fcb]WA YUb]b[g”</p> <p>6YfbUfX`K Y`ħž”=GħcddYX`K f]ħb[`DcYħfĩ</p> <p>9a a U`6UfbYg“=Ua`U`A Ub”</p> <p>H“7`”Hc`VYfħž“A mA Y`jggU”</p>
<p>K YY_`%\$.`%*`Bcj Ya VYf! &\$`Bcj Ya VYf</p>	<p>: fca`Z]fghXfUZhħc`df]bħYX`dU[Y.`XfUZh]b[ž fYj`]g]cbž`UbX`YX]ħb[</p>

F Ygci fWg

DfYgWf]VYX`F Ygci fWg`

K YY_mfYUX]b[g`k]`VY`Uj U]UV`Y`j]U`A ccX`Y

F YWca a YbXYX`F Ygci fWg

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

Gi Va]gg]cb 'cZ5ggYgga YbhiHUg_g

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

Ʒmci 'YbWci bHYf'U'dfcV'Ya 'k \Yb'UH'Ya dh]b['hc'gi Va]hmc i f'Ugg][ba YbhiH'fci [\ 'Hi fb]h]bž'd'YUgY
HY'Yd\cbY'9I HYfbU'Gi ddcfhcb'-',) "' ' ' %cf'Ya U]'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'fl *) 'XUmg'U'mYUfl" Ʒmci
UfY'i bUV'Y'hc'gi Va]hmc i f'Ugg][ba YbhiXi Y'hc'U'Zi 'hk]H'Hi fb]h]b'mci 'a UmUdd'm'Zcf'Ub'YI HYbg]cbž'Vi hmc i
a i ghfYHU]b'mci f'h]W_Yhbi a VYf'Z'ca '9I HYfbU'Gi ddcfhfU'cb['k]H'UbmcH'Yf'fY'Yj UbhXcW a YbHg'k'hc
]bWi XY'Ug'Yj]XYbVW'hc'gi ddcfhmc i f'YI HYbg]cb'Udd'jW]h]cb" Ʒmci 'Ya U]'9I HYfbU'Gi ddcfhmc i 'k]
Ui 'ca UH]WU'm'fYW]j Y'U'h]W_Yhbi a VYfž'Vi h]Zmci 'HY'Yd\cbY'mci 'k]'bYYX'hc'gdYW]Z]WU'mUg_ 'Zcf'cbY"
Hi fb]h]b'U'gc'dfcj]XYg'i dXUH'g'cb'H'Y]f'gmgh'Ya 'ghU'hi g'cb'Hk]H'Yf"

; YbYfU'mž'UggYgga YbhiHUg_g'a i ghVY'gi Va]H'YX'Y'YW'fcb]WU'mj]U'Y]H'Yf'Hi fb]h]b'cf'U'A ccX'Y
Ugg][ba YbH' 'b]bgHUbVW'g'k \YfY'H'lg]g'bchdcgg]V'Yž'hk]'VY'ghUH'X'cb'mci f'Wci fgY'g'A ccX'Y'g]H'k]H
U'HYfbUH] Y'gi Va]gg]cb'XYHU]g"

: cf]bZ'fa UH]cb'cb'\ck 'hc'gi Va]hUgg][ba YbHg'cb]bY j]U'A ccX'Y. \hhdg.#gh XYbH'i bgk "YXi "Ui #ck!
gi Va]hUgg][ba YbH'a ccX'Y

5 WUXYa]W< cbYgmiUbX`D`U[]Uf]ga

D`U[]Uf]ga `]g`i`g]b[`h`Y`k`c`f`X`g`c`f`]X`Y`U`g`c`Z`c`h`Y`f`g`i`U`b`X`d`f`Y`g`Y`b`h]b[`h`Y`a` `U`g`m`c`i`f`c`k`b`" `#`W`U`b`h`U`_`Y`a` `U`b`m`
Z`c`f`a`g`Z`Z`c`a` `X`Y`]V`Y`f`U`h`Y` `W`X`Y`U`h]b[`h`c` `U`W`W`Y`X`Y`b`h`U` `m`i`W`c`d`m]b[`Z`c`a` `U`g`c`i`f`W` `k`]h`c`i`h`U`W`_`b`c`k` `Y`X[`Y`a` `Y`b`h`

I`B`G`K` `[`f`c`i`d`g`d`U[]Uf]ga `]b`h`c` `h`Y` `Z`c` `c`k`]b[`W`U`h`Y`[`c`f`]Y`g.

- i bXYfghUbx'mci f'f][\hg'UbX'fYgdcbg]V]h]Yg'Ug'U'gh XYbhUhl BGK
- VY'Uk UfY'cZd'U[]Uf]ga ž'Wc'dmf][\hž' BGK 'Gh XYbh7cXY'cZ7cbXi W'Ubx'5W'W'dhUV'Y'I gY'cZ I BGK '⇒H'F'Ygci f'W'g'Dc`]W'h
- VY'Uk UfY'cZ'Y'ghUbxUfXg'cZVY\Uj]ci f'YI dY'W'X'cZYj Yfmcby']b'h'Y'I BGK 'W'a a i b]m
- 'cW'W'h'gYfj]W'g'UbX']bZ'fa U]cb'UVci hl BGK 'UbX'I BGK '@]VfUfm

Gca Y'cZ'Y'gY'UfY'Ug'k]''VY'ZJa]]Uf'hc'mci ž'c'h'Y'fg'k]''VY'bYk "'; U]b]b['U'gc`]X'i bXYfghUbx]b['cZU''h'Y fY'UH'X'UgdY'W'g'cZ9@-G9'k]''\Y'd'mci 'a U_Y'h'Y'a cgh'cZ'mci f'gh X]Yg'Uhl BGK ""

[\h'hd.##gi V'Y'W'i \]X'Y'g" \]VfUfm'i bgk "Y'X'i "U'i #' \]gY#\]V'ci h' \]gY](#)

5 WUXYa]WbZcfa Uh]cb

: cfYggYbh]U`gh XYbh]bZcfa Uh]cb fY`Uh]b[`tc.

- fYei Ygh]Zcf`YI H`bg]cb/
- `Uh`gi Va]gg]cbg`[i]XY`]bYg/
- fYj]Yk `cZa Uf_g/
- I BGK `<YU`h`UbX`GUZYmhc`]WYg/
- YI Ua]bUh]cb`dfcW`Xi fYg/
- gdYW]U`W`bg]XYfUh]cb`]b`h`Y`Yj YbhcZ]`bYgg`cf`a]gUXj Ybh fY/
- gh XYbhYei]m]UbX`X]gUV`]m/
- UbX`c`h`Yf`YggYbh]U`UWUXYa]W]bZcfa Uh]cbz`gYY

[\ftdg.#k k k "Uftg"i bgk "YXi "Ui #W ffYbh\]gh XYbh\]UWUXYa \]W\]bZcfa Uh\]cb#dfch`W`g`\[i \]XY`\]bYg#](#)

⇒ U[Y`7 fYX]h

D\chc`Vm[A UI `6Ö\`a Y`cb \] bgd`Ug\](#)

7F ⇒ CG

7F ⇒ CG`Dfcj]XYf`7cXY.`\$\$\$- , ;

5W_bck `YX[Ya YbhcZ7ci bhfm

K Y`UW_bck `YX[Y`h`Y`6YXY[U`dYcd`Y`k `c`UfY`h`Y`fUX]h]cbU`W`ghcX]Ubg`cZ`h`Y`UbXg`cb`k `]\W`I BGK