

# **ARTS4266**

Di nn`Ygž'D`Ubb]b[ ž'UbX'DfYgYbhUh]cb'Zcf'<cbci fg']b'h\YGcW]U`'GW]YbWYg

HYfa 'C bY''##'&\$%

# 7ci fgY<sup>-</sup>Cj Yfj ]Yk

## 'GhUZZ'7cbhUWh'8YhU]`g'

## '7cbj Ybcfg'

BUa Y	9a U]`	5j U]`UV]`]hm	@cWUhjcb	D\cbY
G]cV\Ub^Cf6i ``]Ub	g]cV\Ub"cgi ``]j Ub4 i bgk "YXi "Ui		; &\$žA cfj Yb 6fck b	-',)'\$*,-

### GWXcc``7cbHJWhʻ±bZcfa Uh]cb

GWXcc``cZGcWJU``GWJYbWYg

Fcca '%) -

A cfj Yb 6fck b 7 &\$

Ya U]`. 'gcgg4 i bgk "YXi "Ui

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

## 7ci fgY 8YHJ] g

7 fYX]hDc]bhg\*\*

### Gi a a UfmcZh\Y'7ci fgY

H\]g']g'U'Wca di `gcfmWci fgY Zcf'GcWJU`GWJYbW'g`\cbci fg'ghi XYbhg`]b'h\Y'GW\cc`cZGcWJU`GWJYbW'g" \= k ]```]b'ffcXi W'mci `hc'h\Y'dfUWJW'cZh\Yg]g'k f]h]b[ 'UbX'gi ddcfhmci ']b'h\Y'YUf'mghU[Yg'cZXYj Y`cd]b[ mci f`\cbci fg'Uf[i a Ybh'H\]g'Wci fgY']bWi XYg'hcd]Wg'gi W. `Ug. `i g]b[ ``]VfUfmfYgci fW'g'Zcf`\cbci fg ghi XYbhg`]bWi X]b[ 'fYgYUfW. `Wcbgi `hUhjcb'UbX'UWW'gg'hc'XUhUVUgYg/h\Y'fc'Y'cZa Yh\cxg']b'fYgYUfW. `UbX h\Y'i gY'cZh\Ycfm]b'ZfUa ]b[ 'UbX'WcbXi WJb[ 'U'fYgYUfW. 'dfc'YWf]b'h\Y'gcWJU`gWJYbW'g/mci f'Yh\]WU` fYgdcbg]V]`]hJYg'Ug'U'fYgYUfWX'd'Ubb]b[ 'UbX'a UbU[]b[ 'U'fYgYUfWX'dfc'YWf'k cf\_]b[ 'YZYWJj Y`mk ]h\ mci f'gi dYfj ]gcf/hja Y'UbX'XUhU'a UbU[Ya Ybhg\_]`g''H\Y'Wci fgY']b'ffcXi W'g'mci `hc'h\Y']XYU'cZZfUa ]b[ mci f'fYgYUfWX'Ug'Ub']bhYfj YbhJcb']b'U'X]gWJd`]bUfmXYVUhY'fcf'gYfJYg'cZXYVUhYgb''5 'dUfhJW`Uf'ZcW g'cZh\Y Wci fgY']g']b'ffcXi WJb[ 'ghi XYbhg'hc'h\Y'h\Yg]g'Zcfa "'H\]g']bWi XYg'`YUfb]b[ 'UVci hh\Y'Wca dcbYbhdUffg'cZU a ]bcf!h\Yg]g'Zbf'a Ul ]a i a ']a dUWf'

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

- %" ⇒XYbhZmh\Y`ZYUhi fYg`cZUb`ci hqhUbX]b[ h\Yq]g`cf`X]ggYfhUh]cb"`
- &" J YfVU``mdfYgYbha UhYf]U``]b Ub Yb[U[]b[ 'UbX ]bZcfa Uh]j Y k Um'
- ' "Kcf\_'Wc``UVcfUhjjY`mik]h\`Wc``YU[iYg'hc'g\UfY'g\_]``g'UbX'\_bck`YX[Y'fY`YjUbhhc'dfcXiWjb['U'a]bcf h\Yg]g

### HYUWX]b[ GhfUhY[]Yg

H\Y`]bh'bg]j Y`k cf\_g\cd'U``ck g`mci 'hc'[Yhk cf\_]b['cb'mci f'fYgYUfW.'dfc YWg'ei ]\\\_`m''\#i]g`XYg][bYX`hc Vch\'gi ddcfhmci ž'UbX`hc'YZ]\\Ybhm]bhfcXi W\'mci 'hc'h\Y'\_Ymd]YW\g'cZ\_bck 'YX[Y'mci 'k]``bYYX`hc Wa d'Yh'mci f\cbci fg`mYUf"'H\]g']bWi XYg']bZcfa Uh]cb'cb'h\Y'Yh\]\\U`'Udd`]\\Uh]cb'dfc\W\ggžXUhU`ghcfu[Yž k cf\_]b['k]h\'U'gi dYfj ]gcf'UbX``]\YfUfmfYgci f\\g'''H\Y'UggYgga YbhZc\W g`k]``VY`cb']\XYbh]Zm]b['YI \W``Yb\W ]b'h\Yg]g`k f]h]b['Vch\'h\Y'`]hYfUhi fYž'UbX'dUgh\cbci fg'h\YgYg"'\\ci 'k]``'U`gc'g\UfY'h\Y]f YI dYfh]gYžk ]h\'ch\Yfg']b'h\Y'\WUggžj ]U'mci f'[fci d'dfYgYbhUh]cbg"8]ZYfYbhdfYgYbhUh]cbg'k]``VY'Zc\W gYX cb'X]ZYfYbhYYa Ybhg'cZU'a ]bcf'h\Yg]g''

# 5ggYgga Ybh

## 5ggYgga YbhHUg\_g

5ggYgga Ybh'HJg_	K Y][\h	8i Y'8UHY	Gh XYbh@YUfb]b[ Ci hWca Yg 5ggYggYX
9ggUmi	*\$1	&) #\$' #&\$% `\$\$\$`5A	%
; fci d'dfYgYbHJh]cb'	' \$ı	&+#\$(#&\$%^'%\$.\$\$^5A	&ž
7 'Ugg'; i ]XY'! 'VUgYX'cb dfYgYbฟฟุ้cb'	%\$ı	&+#\$(#&\$%-*%\$.\$\$*5A	,

## 5ggYgga Ybh'8YhJ]`g

5ggYgga Ybh'% '9ggUm

GhUfh'XUhY.

 FYgci fWfg

DfYgWf]VYX F Ygci fWYg

FYWca a YbXYX FYgci fWYg

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

 $: YYXVUW\_{\ Zcf'h}]g'WcifgY'WcaYg'j]U'h\Y'lBGK~cb`]bY'ghXYbhZYYXVUW\_{\ gmghYa"}: YYXVUW\_{\ gmghYa"}g'igYX'hcaU\_Y'WkUb[Yg'hc'h\Y'WcifgY']b'h\Y'Zc``ck]b['mYUf''$ 

Gi Va ]gg]cb cZ5ggYgga YbhHUg\_g

Gi Va ]gg]cb cZ5ggYgga YbhHUg\_g

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

⊋mci 'YbWci bhYf'U'dfcV'Ya 'k \Yb'UhhYa dh]b[ 'hc'gi Va ]h'mci f'Ugg][ ba Ybh'h\fci [ \'Hi fb]h]bž'd'YUgY

#### 5 WUXYa | W < cbYghmUbX D`U[ | Uf]ga

D`U[]Uf]ga `]g`i g]b[ 'h\Y`k cfXg`cf`]XYUg`cZch\Yfg`UbX`dfYgYbh]b[ 'h\Ya `Ug`mci f`ck b"'\lefi\Wb'hU\_Y`a Ubm Zcfa gžZfca `XY`]VYfUhY`W\YUh]b[ 'hc`UVW]XYbhU`mWcdm]b[ 'Zfca `U`gci f\W' k ]h\ci hUW\_bck `YX[ Ya Ybh'

IBGK [fcidgdu[]Uf]ga ]bhch\YZc``ck]b[ WUhY[cf]Yg.

7 cdm]b[.'i g]b['h\Y'gUa Y'cf'j Yfmg]a]`Uf'k cfXg'hc'h\Y'cf][]bU`hYl h'cf']XYU'k]h\ci h'UW\_bck `YX[]b['h\Y gci fW'cf'i g]b['ei chUh]cb'a Uf\_g"'H\]g'U`gc'Udd`]Yg'hc']a U[Ygž'Ufh'UbX'XYg][b'dfcYWhgž'Ug'k Y``'Ug dfYgYbhUh]cbg'k\YfY'gca YcbY'dfYgYbhg'Ubch\Yf'g']XYUg'cf'k cfXg'k]h\ci h'WfYX]h'

⇒ Uddfcdf]UhY 'dUfUd\fUg]b[...7\Ub[]b[ 'U'ZYk 'k cfXg'UbX'd\fUgYg'k \]'Y 'a cghmfYhJ]b]b[ 'h\Y'cf][]bU` ghfi Wh fY 'UbX#cf'dfc[fYgg]cb'cZ]XYUg'cZh\Y'cf][]bU'žUbX']bZcfa Uh]cb'k ]h\ci hUW\_bck `YX[Ya Ybh'H\]g'U`gc Udd`]Yg']b'dfYgYbhUh]cbg'k \YfY'gca YcbY'dUfUd\fUgYg'Ubch\Yf'g']XYUg'cf'k cfXg'k ]h\ci hWfYX]hUbX'hc d]YW]b[ 'hc[Yh\Yf'ei chYg'UbX'dUfUd\fUgYg']bhc'U'bYk 'k \c`Yžk]h\ci hUddfcdf]UhY'fYZYfYbW]b[ "

7 c``i g]cb. 'k cf\_]b[ 'k ]th 'cth Yfg'Vi hidUgg]b[ 'cZZth Y 'k cf\_'Ug'U'dYfgcb'g']bX]j ]Xi U``k cf\_"'7 c``i g]cb'U`gc ]bWi XYg'dfcj ]X]b[ 'mci f'k cf\_'thc'Ubcth Yf'ghi XYbh'VYZcfY'th Y'Xi Y'XUHYZcf'Zcf'th Y'di fdcgY'cZth Ya

- i bXYfgfUbX mci f'f][\hg'UbX'fYgdcbg]V]`]hJYg'Ug'U'gh XYbhUhl BGK
- VY`Uk UfY`cZd`U[]Uf]ga ž`Wcdmf][\hzil BGK `Gh XYbh7cXY`cZ7cbXi WhUbX`5VWWdhUv`Y`I gY`cZ I BGK `=\forall H`F Ygci f\W\g`Dc`]\wh
- VY 'Uk UfY 'cZh\Y 'ghUbXUfXg 'cZVY\Uj ]ci f'Yl dYWYX 'cZYj YfmcbY ']b 'h\Y 'l BGK 'Wca a i b]hm
- `cWUHY 'gYfj ]WYg'UbX `]bZcfa UH]cb'UVci hI 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 bXYfgHJbX]b['cZU``h\YfY`UhYX'UgdYWng'cZ9@+69'k]``\Y`d'mci 'a U\_Y'h\Y'a cghicZmci f'ghi X]Yg'UhI BGK "'\\hd.##qi VYWfi |XYg"`]VfUfm'i bqk "YXi "Ui #\`]qY#JVci hY`]qY

#### 5 WUXYa ]W = b Zcfa Uh cb.

: cf`YggYbhJU``gh XYbh`]bZcfa UhJcb`fY`UhJb[ 'hc.

- fYei Yghg Zcf Yl hYbg]cb/
- `UhY`gi Va ]gg]cbg`[i ]XY`]bYg/
- fYj ]Yk 'cZa Uf\_g/
- I BGK '< YU`h\ 'UbX'GUZYhmdc`]\\\Yg/
- YI Ua ]bUhcb dfcWXi fYg/
- gdYWJU``Wcbg]XYfUHjcb`]b`H\Y`Yj YbhcZ]``bYgg`cf`a ]gUXj Ybhi fY/
- gh XYbhYei ]lmUbX X]gUV]`]lm/
- UbX'ch\Yf'YggYbhJU`'UWUXYa ]W]bZcfa UhJcbž'gYY

\hdg.#k k k "Uffg"i bgk "YXi "Ui #W ffYbhgh XYbhg#UWJXYa ]W]bZcfa Uf]cb#dfchcWc`g![i]XY`]bYg#

.

## ∍a U[Y'7fYX]h

GmbYf[]Yg']b'GcibX'&\$%\*

#### 7F = 7CG

7F = 7CG Dfcj ]XYf 7cXY. \$\$\$-,;