## ! "#\$%&'()\*+%\$'&,%-\*+.).#"(/0\*\*

## 12'3" (\*4\$"-'&'" ('3#\*

! "#\$#%&\$#\$% '(%) \*+ , +- . /%. O%. 1 , +-+\$2\*.2+ '-%.\$%.%)#-2\*./% , #. - \$% '(%\*#\$+\$2+-3%2"#%.4'/+2+'-%'(%

\$/.5#\*67%8#)'-\$2\*&)2+'-7%.-1%1#\$#3\*#3.2+'-7%)'-2+-&#%2'%+-('\*,%)\*+,+-./%9\*')#\$\$#\$%.-1%

+-\$2+2&2+'-\$%2'%2''+\$%1.6%46%#-.4/+-3%('\*,\$%'(%4\*&2./+26%.-1%1+\$\*#3.\*1%2''.2%0'&/1%4#%&-+,.3+-.4/#%

G'76.--.\*4-.B%(8.2\*%(8\*6.2\*7"(&. #: "2%2'.3H'(7-,8'())\*I2/%(\*J&.=.(3"()\*5%KL.6'3'\* ! "%&.3?\*5'#\*M'3.?\*4().-%\*N%='3?\*G%27\*O% # "(&\*+'--H%2.\*% # "()\*&6"3.\*%7&'=.-/\*:,23,'()\* 2.3'3&%(7.\*%(8\*76%().\*&''\*&6.\*6.).#"('7\*''28.2;\*<(\*4-.B%(8.2P3\*0RSTRU\*>''2E?\*!''#%G#O%H+,%I\*'07% 36.\*.3&%\$-'36.8\*&62..\*#%\"2\*3/3&.#3\*"9\*2%7'%-\*7"(&2"-\*'(\*4 #.2'7%(\*6'3&"2/0\*3-%=.2/?\*\"#\*!2">?\*%(8\* #%33\*'(7%27.2%&'''(;\*N.3:'&.\*36'9&'()\*%(8\*8.7.:&'=.\*26.&''2'7?\*&6.\*&.76(''-'')'.3\*%(8\*3/3&.#3\*''9\* 22% ( 39"2 # %&'" ( \*% ( 8\*&2% ( 3-%&'" (\*\$.&>.. (\*&6.3.\*3/3&. # 3:\*477"28'( )\*&''\*4 ( 82.%\*J # '&6\*0RSTRU?\*&6.\* 9"2#%&\"(\*"9\*&6.3.\*2%7'%-\*7%3&.\*3/3&.#3\*7%(\*\$.\*,(8.23&""8\*&62",)6\*&6.\*-.(3.3\*"9\*>6'&.\*3,:2.#%7/\* % (8\*3. &&-.2\*7"-"('%-'3#;\*J#'&6\*'8.(&'9'.3\*&62..\*:'--%23?\*"2\*:2'#%2/\*-")'73?\*"9\*>6'&.\*3,:2.#%7'3&\* 3. & - . 2\*7"-" ('%-'3 # 0\*C0TU\*3-%=. %\$'-'&/X% (& 'K I -%7E\*2%7'3 # ?\*>6'76\*% (76"23\*7%: '&%-'3 # Y\*0RU\*). ("7'8.?\* >6'76\*% (76"23\*7"-" ('%-'3# ]\*% (8\*0ZU\*"2'. (&%-'3# ]\*>6'76\*% (76"23\*>%2D\*0RSTRU;\*56.\*9'23&:'--%2?\* 3-%=.%\$'-'&/?\*6%3\*#%('9.3&.8\*'(\*8'99.2.(&\*9"2#3?\*'(7-,8'())\*36%2.72"::'()?\*'(8.(&,2.8\*3.2='&,8.?\*) 7" (='7&\*-.%3'()?\*%(8\*>6%&\*'3\*&/:'7%--/\*2.9.22.8\*&"\*%3\*3-%=.2/\*'(\*4 # .2'7%(\*6'3&"2/\*0J # '&6\*RSTRU:\* 56.\*7"(&'(,.8\*7"##"8'9'7%&'"(\*"9\*\$-%7E\*\$"8'.3\*&6%&\*7%(\*\$.\*"\$3.2=.8\*'(\*.%76\*"9\*&6.3.\* #%('9.3&%&'''(3\*'3\*2'''&.8\*'(\*%(\*''(&''-'')/\*&6%&\*6''-83\*\$-%7E\*'(8'='8,%-3\*%3\*'(6.2.(&-/\*3-%=.%\$-.\*%(8\* #.2.-/\*:2":.2&/\*0J #'&6\*RSTRU;\*56.\*3.7"(8\*:'--%2?\*).("7'8.?\*2.F,'2.3\*&6.\*8'3%::.%2%(7.H"2\*

B. (": 6"\$'%\*&">%283\*7.2&%'(\*)2", :3\*%(8\*(%&'"(3;\*56.\*7"(&'(,.8\*(%&,2.\*"9\*&6.3.\*:2"7.33.3\* 7"22.-%&.3\*>'&6\* I "(83\*%(8\*<(>""8P3\*QRST]U\*%2), #.(&\*"9\*%\*7"(&'(,.8\*:2"8,7&'"(H"2\*2%&6.2\* 2.:2"8,7&'"(H"9\*>6'&.\*3,:2.#%7'3&\*3/3&.#3\*&62",)6",&\*4 #.2'7%(\*6'3&"2/;\*56./\*%2),.?\*C<9\* :2'='-.).\*%(8\*2%7'3#\*%2.\*&6.\*3/#:&"#3?\*>6'&.\*3,:2.#%7/\*'3\*&6.\*8.9'('()\*-")'7\*"9\*\$"&6\*2%7'3#\*%(8\* :2'='-.).\*%3\*&6./\*%2.\*7,-&,2%--/\*%(8\*#%&.2'%--/\*:2"8,7.8D\*QI"(83\*%(8\*<(>""8\*^RSU;\*5"8%/?\*&6.3.\* &6.#.3\*"9\*>6'&.\*3,:2.#%7/\*%2.\*#%('9.3&.8\*'(\*&6.\*-.)%-\*3/3&.#P3\*,3.\*%(8\*%\$,3.\*"9\*'(7%27.2%&'"(;\*\* \* 4-#"3&\*'##.8'%&.-/\*9"--">'()\*&6.\*'((+)+./% 9"2\*7" (='7&'" (\*9"2\*&6.\*3%-.\*"9\*9'=.\*6, (82.8\*)2% # 3\*"9\*: ">8.2\*7"7%'(.\*%(8\*%\*7" (='7&'" (\*9"2\*&6.\*3%-.\* "9\*9'=.\*)2% # 3\*"9\*72%7E\*7"7%'(.\*04-.B%(8.2\*TTRU;\*\*

56'3\*)2"33\*3.(&.(7'()\*8'372.:%(7/\*%--">3\*9"2\*:2'3"(3\*&"\*\$.\*9'--.8\*>'&6\*#"2.\*\$-%7E\*%(8\* \$2">(\*'(8'='8, %-3;\*e"2\*.B% #:-.?\*"=.2\*&6.\*7", 23.\*"9\*"(-/\*&62..\*/.%23?\*&>"\*&6", 3%(8\*:.":-.\*>.2.\* 76%2).8\*>'&6\*9.8.2%-\*72%7E\*7"7%'(.\*='"-%&'"(3\*Q4-.B%(8.2\*TT`U;\*[9\*&6.3.\*2.7"28.8\*&>"\*&6",3%(8?\* %--\*\$, &\*.-.=. (\*>.2.\*\$-%7E\*%(8\*(''&\*%\*3'()-.\*'(8'='8,%-\*76%2).8\*>%3\*>6'&.\*04-.B%(8.2\*TT`U;\* + "22'9/'()-/?\*6">.=.2?\*4-.B%(8.2\*7'&.3\*%\*3&.8/\*:,\$-'36.8\*'(\*RSSS\*92" #\*&6.\*L%&'' (%-\*<(3&'&.&\*''(\* ,3.\*72%7E\*7"7%'(.\*%&\*.')6&\*&'#.3\*&6.\*2%&.\*"9\*\$-%7E\*3&,8.(&3?\*%(8\*,3.\*6.2"'(\*%&\*3.=.(\*&'#.3\*&6.\*2%&.\* "9\*\$-%7E\*3&, 8. (&3D\*04-.B% (8.2\*ddU;\*J"\*("&\*"(-/\*%2.\*492'7%(\*4 #.2'7%(3\*:"-'7.8\*%(8\*:.(%-'A.8\*%&\*\*\* 6') 6.2\*2% & \* & 6% (\*>6' & .3?\*\$, & >6' & .3 H 3:.7'9'7%--/\*7"--.).K%).8\*>6' & .3 H , 3.\*\$" & 6\*72%7E\*% (8\* :">8.2\*7"7%'(.\*%&\*6')6.2\*2%&.3;\*56'3\*'3\*,(9%&6"#%\$-.\*)'=.(\*&6.\*7"(='7&'"(\*2%&.3;\*12.3'8.(&\* I %2%7E\* [ \$% # %P3\*e%'2\*J.(&.(7'()\*47&\*'(\*RSTS\*2.8,7.8\*&6.\*TSS\*&"\*T\*72%7EX7"7%'(.\*3.(&.(7.\* 8'372.: % (7/\*&"\*% (\*T\_\*&"\*T\*2%&'"\*Q a 2%99\*TZSU;\*56'3\*'3\*, (9"2&, (%&.-/\*3&'--\*)2"33-/\*'(.F, '&%\$-.;\*e"2\* 3. (*k*. (7'()\**k*"\*\$.\*.F, '*k*%\$-.?\**k*6.\*2%*k*'"\*36", -8\*3' # :-/\*\$.\*T\**k*"\*T;\*\ (9"2*k*, (%*k*.-/?\**k*6.\**k*2%(3'*k*'"(\*"9\* 3/3&. #3\*"9\*2%7'%-\*7"(&2"-\*'(&"\*&6.\*7.22.(&\*3/3&. #\*"9\*#%33\*'(7%27.2%&'"(\*'3\*("&\*-'#'&.8\*&"\* 3. (&. (7'();\*\*

\* 56.\*9"2#3\*%(8\*3:%7.3\*"9\*:,('36#.(&\*8,2'()\*3-%=.2/\*>.2.\*&2%(3-%&.8\*'(&"\*9"2#3\*%(8\*3:%7.3\*
"9\*:.(%-\*:,('36#.(&\*&6%&\*%2.\*3&'--\*,3.8\*&"8%/;\*b%36%8\*J6%\$%AA?\*%,&6"2\*"9\*J9.2+./+K+-3%L/.)M-#\$\$C%
N\*) "+2#)2&\*#\$%'(%I'-(+-#, #-2%. -1%L/.)M%=.\$)&/+-+26%+-%I"+).3'?\*%2),.30\*\*

<(\*&6.\*\('&.8\*J&%&.3?\*7%27.2%-\*:">.2?\*>6'76\*>%3\*\$"2(\*",&\*"9\*&2%(3%&-%(&'7\*3-%=.2/?\* >%3\*.B:2.33.8\*"(\*&6.\*:-%(&%&'"(\*%(8\*'(\*&6.\*\$2"%8.2\*).")2%:6/\*"9\*&6.\*J",&6;\* !%27.2%-\*:">.2\*>%3\*7.(&2%-\*&''\*&6.\*:,('&'=.\*.7"("#/\*"9\*3-%=.2/\*%(8\*&6.\*-.)%-\* 4

.33.(&'%--/\*:.2#'33'\$-.;\*<(\*Tddc?\*1.--\*a2%(&\*.-')'\$'-'&/\*>%3\*%-3"\*"99'7'%--/\*3&2'::.8\*92"#\*7"(='7&.8\*1)

9.-"(3\*QG%37'\*\_TcU;\*\*

**56**.\*2')**6**&\*&''\*=''&.\*>%3\*(''&\*'('&'%--/\*)2%(&.8\*&''\*492'7%(\*4 #.2'7%(3

 $-.94\%'' # * ! 2" > *' ( \&\%7kD*QT^{U}; < ( \&6.*L. > *N. \%-P3*.7" (" # '7*2.9"2 # 3)*&6.*8. -. & .2'", 3* ( \%k, 2.*"9*$ 7"-"2\$-' (8(.33\*7%22'.3\*" (\*' ( &6.\*7%3.\*"9\*72' # '(%-\*V, 3k'7.\*:"-'7'.3;\*\*! "-"2K\$-' (8(.33\*3.2=.3\*%3\*%\*8.9. (3.\*9"2\*7" (&' (, '()\*&"\*7" (8,7k\*3/3k. # '7\*2%7'3 # ;\*<9\*) > .\*8" (Pk\*3..\*2%7.?\*>.\*7% (Pk\*3..\*2%7'3 # ;\*<9\*> .\*8. (/\*2%7.?\*>.\*7% (\*8. (/\*2%7'3 # ;\* ! " (3.F, . (k-/?\*7"-"2K\$-' (8(.33\*8".3\*(" &\*6.-:\*&"\*76%-..()).\*"2\*%882.33\*2%7'%-\*6.). # " (/;\*b".8').2\*%-3"\*7'k.3\*b%-:6\*f--'3" (P3\*: "'(&\*k6%k\*\*&\*7% (\*\$.\*k6.\*k. (8. (7/\*"9\*3" # .\*k"\*='. >\*6'3k"2/\*%3\*C3' # :-/\*\$%7E)2", (8\*% (8\*(" &\*%3\*%\*9, (7k'" ('()\*9"27.\*'(\*7,22.( &\*3"7'.k./D\* $QT_cU;*56'3*'3*% (*.-"F, . (&*3/(":3'3*"9*k6.*'33,.3*9%7.8*'(*% (*.99"2k*k*.(%7k*76% ()).*'(*%$ C7"-"2\$-' (8D\*"2\*C7"-"2K7" (37'",3D\*3"7'.k./\*\*4\*7"-"2K\$-' (8\*3"7'.k/\*3\*'(7%:%\$-.\*"9\*.B% # '('()\*%C7"-"2\$-' (8D\*"2\*C7"-"2K7" (37'",3D\*3"7'.k./\*\*4\*7"-"2K\$-' (8\*3"7'.k/\*3\*'(7%:%\$-.\*"9\*.B% # '('()\*%C7"-"2\$-' (8D\*"2\*C7"-"2K7" (37'",3D\*3"7'.k./\*\*6"3k'-'k/?\*"::2.33'" (?\*% (8\*6.). # "(/;\*!"-"2\*\$-' (8\*26.k"2'7\* $8".3*(" &*7" # $%k*k6.*%$'-'k/*"9*2%7'3 # *k6%k*' (9.7k*k6.*\,3k'7.*3/3k. # ;*<(*9%7k?**#"(-/*%--">3**k***$ '(9-'7k\*# "2.\*8% # %).;\*I /\* # .2.-/\*>6'k.>%36'()\*", 2\*="7%\$, %2/\*k"\*#%E.\*'k# #"2.\*C:"-'k'7%--/\*7"22.7kD\*% (8\*-.33\* # "2%--/\*2.:2.6.(3'\$-.?\*>.\*%2.\*(" &\*%882.33'()\*&6.\*, (8.2-/'()\*9"27.3\*"9\*2%7'3#\* $>'k6'(*&6.*\,3k'7.*3/3k. #;**$ 

8

56.\*:2'3" (\*'&3.-9\*'3\*\$"2(\*", &\*"9\*&6.\*.B:-"'&%&'"(\*"9\*-%\$"2\*%(8\*&6.\*>6'&.\*3,:2.#%7'3&\* '#:,-3.3\*&6%&\*,(8.2)'28\*'&\*%2.\*'(3.:%2%\$-.\*92" #\*&6.\*'(3&'&,&'"(\*'&3.-9\*;\*;\*;\*&6.\*:2'3"(\* '(7-,8.0\*:2'3"(\*%\$"-'&'"('3#\*2.3,-&3\*'(\*%(\*'##.8'%&.\*.-'#'(%&'"(\*"9\*:2'3"(3\*"2\*'(7%27.2%&'"(\* 3'#'-%2\*&"\*&6.\*3,::"3.8\*.(8\*"9\*3-%=.2/\*>'&6\*&6.\*56'2&..(&6\*4 #.(8#.(&Y\*3.7,2.\*7"(9'(.#.(&\*'3\*("\* -"().2\*%(\*":&'"(Y\*%(8\*3'#'-%2\*&"\*&6.\*:2.='",3\*:"'(&?\*%--\*='"-.(&\*"99.(8.23\*36",-8\*\$.\*%\$-.\*&"\*-'=.\* 92..-/\*%#"()\*3"7'.&/;\*\*

\* <(\*%7&,%-'&/?\*12'3"(\*%\$"-'&'"('3#\*'3\*'(3&.%8\*%(\*.B&2.#.-/\*:2"7.33\*"2'.(&.8\*#"=.#.(&?\* >6'76\*%'#3\*9"2\*.=.(&,%-\*8.7%27.2%&'"(?\*.B7%27.2%&'"(?\*%(8\*8.72'#'(%-'A%&'"(\*QN%='3\*%(8\* b"82'),.AU;\*N.7%27.2%&'"(\*'3\*&6.\*:2"7.33\*"9\*2.8,7'()\*.'&6.2\* 12'3" (\*%\$"-'&'" (\*6%3\*&6.\*: "&. (&'%-\*&"\*36'9&\*", 2\*: 2%7&'7.3\*"9\*V, 3&'7.\*92" #\*.B7-, 3'" (%2/\*% (8\* :, ('&'=.\*&"\*2.3&"2%&'=.\*% (8\*'(7-,3'=.\*0N%='3\*% (8\*b "82'), .AU;\*477"28'()\*&"\*4--.)2%\*G;\*G70. "8?\* >%3\*'(&.(8.8\*&"\*%76'

*GP87*%L1b?\*RS\*J.:&;\*RST`?\*

dSU;\* I .2E.-./?\*!4(
\*
\*
\*

 $dSU;*I.2E.-./?*!40* \setminus ('=.23'\&/*''9*!\%-'9''2('\%*12.33;**)$ 

 $J # '\&6?*4 (82.\%; *QRSTRU; *<(8').(.'\&/?*3.\&-.2*7"-"('\%-'3\&?*>6'\&.*3,:2. #\%7/; *<(*N;*G;**+"J\%()?*[;*O\% I.((.\&?*p*O;*1,-'8"*Qf83;U?*b\%7'\%-*9"2#%\&'"(*'(*\&6.*RT^{3\&*7}.(\&,2/*Q::;*``K$ 

. - 1%2''#%0 - ).\*)#\*.2+'-%L+-3#;%0%(6%#?\*GN0\*b''>#%(\*p\*O'&&-.9'.-8?\*RSTS;\*\*)