



---



"#\$%&!%'()\*!+, '-), !./O!12\*)O34!56\*2!7-893)8: 6' 1!;!<: ; \*-8!=>>?!(')\*@A81!; B!

9\*: 31\*235C!3!D\*D!; B!7-3O23!: \*!E6/!)' 2, : ' 56CF!

GHI HJ KL&M!; !E6' 6!1' 18: 6!NB2!-/D' ; ' )368281!\* )13: 356-\*O33!7-893)8: 6\*P!M!

E6/!)' 2, : ' 56C!9\*: 31\*2!?!>!7' 528): 3Q!185<O8; !7-893)8: 656; \*!. ' -35\*!

L3D' 2\*8; 3A\*!\$2C03: \*!3!7' 6' 1!7' A63!A86B-8!78-; BQ!( ' )!G2\*)313-\*!

G2\*)313-' ; 3A\*!R/63: \*P!S6' !NB2\*!1' <!-\*N' 6\*!)' !E6' ( ' !T !<!NB2!

9\*1856368281!-/D' ; ' )3682<!\*)13: 356-\*O33!7-893)8: 6\*P!+' !E6' ( ' !<!8U8!

: 8D' 6' -' 8!D' -' 6D' 8@7-\*; )\*@; -81<!NB2!7' 1' U: 3D' 1!-/D' ; ' )3682<!

\*)13: 356-\*O33!7-893)8: 6\*P!+' !E6' ( ' !<!9\*: 31\*25<!N39: 85' 1P!!

"#\$%&!GB!7' 1: 368@d\*D38!/!; \*5!NB23!' , 3)\*: 3<! 6!; : 8O: 84!7' 2363D3!R/63: \*@

D' ( )!56\*2' !<5: ' @A6' !' : !56\*: 86!7-893)8: 6' 1F!%\*D!; B!5-\*; : 3; \*23!7' )Q' )B!

D!' 6: ' O8: 3<1!VJ W!7' 9): 8(' !\$2C03: \*!3!: \*A3: \*XU8(' !R/63: \*F!

GHI HJ KL&M!GB!9: \*868@d/!18: <!; \*!E63!; ' 7-' 5B!856C!' )3: @: \*; 8-: ' 8@6\*D' 4!5!

' ): ' 4!56' -' : B!)' ; ' 2C: ' !' NU34@; !)-/(' 4!56' -' : B@1: 8!D\*, 865<@' : !

7-8)82C: ' !5' ' 6; 8656; /XU34!)8456; 3682C: ' 563! 6; 86P!%, )B4!-' 55345D34!

7-893)8: 6@d\*, )B4Y!: /!/: \*5!: 8!6\*D!1: ' ( ' !NB2' !3Q@356' -3<!



' 6: ' O8: 34!T !7-3Q' ) 36!- \*9' A\*-' ; \* : 38P!K! ; ' 9: 3D\*86!D\*D\* <[6' @\>> & > = & > > ]!D!  
5' , \*28: 3X@/ ; 8-8: : ' 56C! ; !6' 1@A6' !E63! ' 6: ' O8: 3<! /2/AO36C! : 8 ; ' 91' , : ' @  
7' 6' 1 /!A6' ! : \*5!) - /9C < 13! : 8!5A36\* X6P!L \*5! : 8!5A36\* X6! : 3!) - /9C < 13@ : 3!  
-\* ; : B13!7\* -6: 8-





;\*, : B@: ' !; ' ' NU8@<! : 3D' ()\*!: 8!5A36\*X@A6' !; ' 6!6\*1!; 56-863235C!); \*!  
 A82' ;8D\*@7' , \*23!) -/(!) -/(!- /D3!3!13-!56\*2!) -/(31P!S6' !6\*D\*<!  
 /7-' U8: : \*<! , /-: \*23565D\*<@D\*D!7-\*; 32' @3: 68-7-86\*03<!6' (' @A6' !  
 7-' 35Q' )36P!S6' @D\*D!7-\*; 32' @; 58[6\*D3!( ' 5/)\*-56; 8: : \*<!7' 2363D\*!;!  
 N' 2CO3Q!56-\*: \*Q!; 8UC!) ' ; ' 2C: ' !3: 8-03' : : \*<@3!856C!8U8!6\*D\*<!; 8UC@D\*D!  
 : \*03' : \*2C: B8!3: 68-85B!56-\*: @D' 6' -B8!6' , 8;! ' ) : ' A\*5C8!; 8!18: <X65<P!  
 I 3)8-B!56-\*: !7B6\*X65<! ' 656\*3; \*6C!E63! : \*03' : \*2C: B8!3: 68-85B!R' E6' 1/!  
 7-3!; 584!\>>f!>>]!5/)CN' : ' 5: ' 563!E63Q!; 56-8A!<@A856: ' !(' ; ' -<@: 3D' ()\*!  
 ' 6!: 3Q!; 8! , )\*2!A6' [6' !6\*D' (' !^; \*/\_!D' 513A85D' (' !K!E6' !; !7' 2: ' 4!18-8!  
 7-318: 31' !D!E6' 4!; 56-8A8!; !V2' ; 8: 33P!

"#\$%&!R' 5B2\*2!23!. 82B4!) ' 1!D\*D38[23N' !53(: \*2B!78-8)!E6' 4!; 56-8A84@  
 /D\*9B; \*XU34!6' @A6' !\*18-3D\*: 0B!Q' 6<6!Q' -' O3Q! ' 6: ' O8: 34@A6' [: 3N/)C@  
 A6' NB!/D\*9B; \*2' !: \*!6' @A6' !. /O!9\*(2<: 86!; !)/O!/R/63: /F!

GHI HJ KL&. /O!: 3D' 1/! : 8!) \*; \*2!9: \*6C@A6' !' : !5' N3-\*865<!9\*(2<: /6C!; !)/O/!  
 R/63: /P!L86!6\*D3Q!53(: \*2' ; P!R' !D-\*4: 84!18-8@7' !1' 84!23: 33!<!3Q! : 8!  
 ' U/U\*2P!g8, (' 5/)\*-56; 8: : B8! 6: ' O8: 3<@' : 3!, 8!6\*D38!1: ' (' (-\*: : B8@  
 1: ' (' !D\*: \*2' ; ! NU8: 3<P!V84A\*5@D!5' , \*28: 3X@56\*2' !18: CO8h!; !A8!@  
 : \*; 8-: ' 8@: 3A8(' !Q' -' O8(' !: 86P!L' @; ' ' NU8@3Q!) ' ; ' 2C: ' !1: ' (' P!R' !1' 84!  
 23: 33!6\*D3Q!53(: \*2' ; !: 8!NB2' P!. B2' !7' : <6: ' @A6' !: ' ; B4!7-893)8: 6P!e!  
 : 8(' !856C!D\*-6[N2\*: O!: \*!D\*D38[6' !: ' ; B8!7' )Q' )B!H: !: 8!9\*2' , : 3D!-\*: 88!  
 5' ; 8-O8: : BQ! O3N' DP!L!/E6' !D\*D38[6' !5\*1B8! NU38!6\*D38!-\*55/, )8: 3<P!W!  
 ; ' 6!D\*D3Q[6' !53(: \*2' ; !D' : D-86: BQ!<@7' !D-\*4: 84!18-8@: 8! U/632P!



"#\$%&!H): 31!39!-89/2C6\*6' ;!E6' 4!; 56-8A3!56\*2' !6' @A6' !. /O!5' ' NU32!R/63: /! !  
 : \*18-8: 3<Q!VJ W!; B463!39!)' (' ;' - \*!7' !7-' 63; ' - \*D86: ' 4! N' -' : 8!c6' !;!  
 %-8128!)/1\*23! N!E6' 1F!L8D' 6' -B8!D' --857' : )8: 6B!/6; 8-, ) \*X6@A6' !  
 318: : ' !; BQ' )!VJ W!39!)' (' ;' - \*!56\*2!1' 63; \*O384!)2<!- \*9- \*N' 6D3!  
 5; 8-09; /D' ;' (' !' -/, 3<!; !# 5533P!V' (2\*53685C!23!; B!5!E631!/6; 8-, )8: 381F!  
 L \*5D' 2CD' !; \* , : B1!NB2!; ' 7-' 5!7-' 63; ' - \*D86: ' 4! N' -' : B!)2<!  
 7' 2363A85D' 4!A\*563!\*18-3D\*: ' [-' 55345D3Q! 6: ' O8: 34F!

GHI HJ KL&!GB!9: \*868@; ' ' NU8@N89/52' ;: ' @)' (' ;' -: B8! 6: ' O8: 3<!T !E6' !: 8D\* <!  
 6\*D\* <!58-C89: \* <!X-3)3A85D\* <! 5: ' ; \*!1: ' (' !A8(' !S6' !3!: 8D\* <!535681 \*!  
 (\*- \*: 634@3!535681 \*@D' 6' - \* <!7' 9; ' 2<86! \>> & b& >>]!7' : 31 \*6C!: \*18-8: 3<!  
 56' -' : @7' 9; ' 2<86!7' : 31 \*6C@; !D\* D3Q!' (- \*: 3A8: 3<Q!D\*, ) B4!39!: \*5!  
 : \*Q' ) 365<@A6' !' : !31886!7- \*; ' ! )82\*6C!7' !E6' 1/!)' (' ;' - /@A6' !: 8!31886!  
 7- \*; \*P!% \*D!2XN' 4!)' (' ;' - @' : !7' ) 735B; \*865<!; !D' : D-86: BQ!/52' ; 3<Q@: ' !  
 7' 6' 1!/52' ; 3<!; ' D- /(!: \*5!18: <X65<P!K!/52' ; 3<!)' (' ;' - \*!1' (/!  
 56\*: ' ; 36C5<!N' 288!; B(' ): B13@18: 88!; B(' ): B13@; !A81 [6' !' : 3!56\*: ' ; <65<!  
 N' 288!; B(' ): B13!)2<!') : ' 4!56' -' : B@; !A81 [6' !)2<!)- /(' 4!56' -' : B!!

L' !; !7- \*D63D8!18, (' 5/) \* -56; 8: : BQ! 6: ' O8: 34!) \*!3@; ' ' NU8@; !

7- \*D63D8!: \*O84!, 39: 3!: 8!7-3: <6' !; BQ' ) 36C!39!E63Q!)' (' ;' -' ; !6\*DI28(D' P!  
 \$523!E6' !5- \*; : 36C!5!A81 [6' @1' , 86!NB6C@6 \*D31!N' 288!7-398128: : B1@; ' 6!  
 1B!58(' ): <!9 \*D2XA323!)' (' ;' - !D/723[7- ' ) \*, 3!T !D6' [6' !D/732@D6' [6' !  
 7- ' ) \*2@ \*!9\*; 6- \*!O8: \*!7' 18: <2 \*5CP!L' !)' (' ;' - [6' !/, 8!9 \*D2XA8: P!i (' !: \*)' !  
 357' 2: <6CP!K!; !E6' 1!51 B528P!\$( ' !9 \*D2XA323!58(' ): <!7' !58(' ): <O: 31!  
 O8: \*1!5!6' 4!3: ` ' - 1 \*O384@D' 6' - \* <!NB2\*!; !(' 2' ; 8!/!56' -' : !7-3!8(' !



9\*D2XA8: 33P!+\*@' : !1' , 86!68N8!9\*; 6-\*!NB6C!: 8; B(' ): B1@: ' !5A36\*865<!  
 : 87' -<)' A: B1!; B0' )36C!39!E6' ('!)' (' ;' -\*@8523!/!68N<!: 86!D\*D3Q[6' !' -5[  
 1\* , ' -: BQ!' N56' <682C56; @D\*D3Q[6' !) -/(3Q!' N56' <682C56; P!!  
 R' E6' 1/@D' : 8A: ' @: \*1!: 3D' ()\*!: 8!: -\*; 32' 5C@d' ()\*!1B!; 3)823!D\*D!  
 \*18-3D\*: 0B!28(D' 1B528: : ' !' 6: ' 5<65<!D!5; ' 31!18, )/: \*-') : B1!  
 ' N<9\*682C56; \*1@7' !D-\*4: 84!18-8@; !E6' 4!A\*563@; !A\*563!; B0' )\*!39!  
 )' (' ;' -' ; !g B!; 58() \*!35Q' ) 323!39!6' (' @A6' !)' (' ;' -!E6' !; 58[6\*D3!; \* , : \*<!  
 ; 8UCP!H: !)8456; 3682C: ' !: ' 536!56-\*68(3A85D34!Q\*-D68-@' : !58(' ): <!1' , 86!  
 : \*1!: -\*; 36C5<@9\*; 6-\*!: 8!: -\*; 36C5<@536/\*03<!8U8!?!>!7' 18: <865<@: ' !8(' !  
 5' Q-\*: 8: 38!E6' !6\*D\* <! A8: C!; \* , : \*<N\*9' ; \*<!; 8UCP!K!D' ()\*!') : \*!39!56' -' : !  
 ; 8)86!58N<!6\*D!28(D' 1B528: : ' !T!\*18-3D\*: 5D38!: \*O3!D' 228(3@d!  
 5' , \*28: 3X@1: ' (' !39!D\*D3Q!)' (' ;' -' ; !7' 528!E6' (' !8U8!6' , 8!; B0' ) 323!T !  
 : 3A8(' !Q' -' O8(' !; !E6' 1!: 86!S6' !-\*9-/O\*86@; ' ' NU8@) ' ; 8-38!; !13-8!K!  
 D\*D\* <!O8: \*!/!E6' ('!)' (' ;' -\*F!j \*A81!7' ) 735B; \*6C!E6' 6!)' (' ;' -@8523!9\*; 6-\*!  
 39!: 8(' !6\*D!28(D' !; B5D' A36CF!R' E6' 1/@D' : 8A: ' @E6' !NB2!: 8D34!6\*D' 4!  
 \>>?>&>>]!^klmnooplqrs tqr\_!58-C89: B4!: \*!: \*O84!56' -' : 8@: ' !39!D' 6' -' (' !  
 1B!)82\*23!D\*D38[6' !; B; ' )B!: \*!N/)/U88!; !6' 1!A3528P!L3A8(' !Q' -' O8(' !; !  
 E6' 1!: 8!NB2' P!VD\*9\*6C@A6' !E6' !D\*D' 4[6' !NB2!D' O1\*- [D' O1\*-!&!: 86@: 8!  
 D' O1\*-P!!

. 89/52' ; : ' @; 6' -\*<!A\*56C!; \*O8(' !; ' 7-' 5\*@) \*2' !23!E6' !D\*D' 4[6' !  
 317/2C5!-\*91BO28: 3<1!: \*!681!/!; ' ; BQ!; 3)' ; !; ' ' -/, 8: 3<@!<!5A36\*X!; !  
 D-/7: ' 4!56-\*: 8@d' 6' -\*<!9\*N' 6365<! ' !5; ' 84!N89' 7\*5: ' 563@  
 5' ' 6; 8656; /XU38!2X) 3!; 58() \*!)' 2, : B! ' N!E6' 1!)/1\*6CP!%!5' , \*28: 3X@13-!



6\*D!/56-' 8: !7' D\*43!7-\*; 32C: ' @A6' !E631!9\*: 31 \*X65<P!. B2!23!6\*D' 4!

58-C89: B4!. /O!; ' 6!318: : ' !; !=>>?!( ' )/F!M@8523!A856: ' @: 8!7' 1: X@/!18: <!

D\*D[6' !E6' !: 8! 62' , 32' 5CP!L8!1' (/!: \*!E6' 6!; ' 7-' 5!D\*D[6' !; : <6: ' !' 6; 8636CP!

"#\$%&!W!/!; \*5!NB2' !7' : 31\*: 38@7' A81/!' : 3!-8O323!; B463F!Z' !856C!NB2' !D\*D' 8[

6' !' Nu<5: 8: 38!: \*!6' 6!1' 18: 6F!

GHI HJ KL&!L86P!L/!' : 3!, 8!: \*1!' Nu<5: <23!3!; 581!' Nu<5: <23@A6' !31!E6' !

: 8; B( ' ): ' P!L/!6\*D' 8!' Nu<5: 8: 38!(-/N' @8523!/463!' 6!)86\*284!6\*1!T !







7' ; 3: : BQP!\>>&?d&>>]!c6' !E6' !1' , 86!; B9B; \*6CID-' 18!5' A/; 56; 3<d  
 5' N' 289: ' ; \*; 3<d: 8!9: \*X@d\*D3Q[6' !: ' -1\*2C: BQ!A82' ; 8A85D3Q!6\*D3Q!  
 -8\*D034FIG!J 6\*6\*Q!7' A81/[6' !1: ' (' !-\*9!A36\*2dA6' !6\*1!NB23!532C: ' !  
 /)3; 28: BdA6' !R/63: !78-; B1!7' 9; ' : 32!. /O/!3!; B-\*932!5' , \*28: 3<P!L/!6/6!  
 -\*9: 30\*!; ' !; -818: 3d5B(-\*2' !5; ' X!-' 2C@: ' !)2<!; \*5!NB2!: 3D\*D' 4!: 8!  
 7' 2363A85D34!O\*(!) \* , 8P!S6' !NB2!\*N5' 2X6: ' !A82' ; 8A85D34!O\*(!; !56-\*: 8d5!  
 D' 6' -' 4!/: \*5!7/5D\*4!52' , : B8d: ' !D\*D38[6' @; !O82' 1d: ' -1\*2C: B8!  
 ' 6: ' O8: 3<d7-' 39' O2\*!6-\* (8) 3<d3!; \*)' !2X)<1!; B-\*936C!5; ' 8!5' A/; 56; 38d  
 5' N' 289: ' ; \*; 38!3!5D\*9\*6CID\*D38[6' !: ' -1\*2C: B8!A82' ; 8A85D38!52' ; \*d  
 7' E6' 1/!; !E6' 1!) \* , 8!: 8!NB2' !: 3D\*D' 4!7' 2363D3P!S6' !NB2!6\*D' 4!3: 563: D6!  
 : ' -1\*2C: ' 4dE6' !NB2\*!: ' -1\*2C: \*<!A82' ; 8A85D\*-<!-8\*D03<!; \*!N8)/dD' 6' -\*<!  
 52/A32\*5C!/!D' (' [6' !)-/(' (' P!!

VI6' AD3!9-8: 3<!7' 2363A85D' 4!1B@dD' : 8A: ' dD' () \*!E6' !; 58!

7-' 39' O2' Y!; \*1!D\*9\*2' 5C@d3!1B!E6' dN89/52' ; : ' d; ; /6-3!6' , 8!D\*D[6' !  
 ' N5/, ) \*23dA6' d: /!: \*; 8-: ' 8d\*18-3D\*: OB!584A\*5!N/)/6!2/AO8!: \*5!  
 7' : 31\*6CP!G' 6! : 3!5\*13!5!E6' 4!9\*-\*9' 4!56' 2D: /235C@d' : 3!)' 2(' !: 8!1' (23!  
 7' : <6dA6' !, 8!/: \*5!6\*D' 8!7-' 350' ) 36d3!6\*1!356' D3!E6' 4!; ' 4: B!; !c8A: 8d  
 3!6\*1!/A\*5638!; !18, )/: \*-') : ' 1!68--' -3918!; !E6' 4!; ' 4: 8P!K!; 58(' !E6' (' !  
 ' : 3!)8456; 3682C: ' PPP!: ' !6878-C[6' !: 3!5!E631!56' 2D: /235CP!K!: \*1!  
 7' D\*9\*2' 5C!; !D\*D' 4[6' !1' 18: 6dA6' !/-' ; 8: C!; 9\*31' 7' : 31\* : 3<!1' , 86!  
 7' ; B536C5<dA6' !: 3d56' 2D: /; O35C!5!6' 4!, 8!N8)' 4dA6' !3!1Bd56\*: /6!  
 2/AO8!: \*5!7' : 31\*6CP!Z\*D38!1B523!/: \*5!6' A: ' !NB23P!H: 3!7' A63!: 8!  
 ' 7-\*; ) \*235CP!



"#\$%&!g 30\*32!j B(\*-C!73O86@A6' !; !=>>?!(' )/@: 851' 6-<! : \*!' N8U\*: 3<!VJ W@A6' !30!

N\*9\*!;!%B-(B956\*: 8!N/)86!; -818: : ' 4@6' ()\*O: 34!5' ;86: 3D!7' !

: \*03' : \*2C: ' 4!N89' 7\*5: ' 563!%' : )' 239\*!#\*45!5D\*9\*2\*!; \*1@A6' !\>>?f&>>]!

\*18-3D\*: 0\*1!: /, : ' !N/)86!5' Q-\*: 36C!E6!/N\*9/!: \*; 58() \*P!G8-: \*!23!E6\*!

3: 68-7-86\*03<!3!D\*D!; B!; ' 57-3: <23!E6' !9\*;<; 28: 38F!

GHI HJ KL!\$523!A856: ' @; !082' 1@536/\*03<! ' 735\*: \*!N239D' !D!3563: 8P!M!: 8!

7' 1: X!7-' !D' : D-86: ' 8!5' ' NU8: 38!%' : )' 239B!#\*45!1: 8@: ' !

)8456; 3682C: ' @D' ()\*!NB2\*!D63; : \*<!` \*9\*!' 78-\*033!; !W` (\*: 356\*: 8@

\*18-3D\*: 0B! N-\*63235C!D!%3-(3933!5!7-' 5CN' 4!-\*9185636C!6\*1!

;57' 1' (\*682C: /X!N\*9/!7' )5D' D\*!)2<!N' 288!E` ` 8D63; : ' (' !' 5/U856; 28: 3<!

' 78-\*033P!%' : 8A: ' @7-893)8: 6!%3-(3933!9; ' : 32!7-893)8: 6/!# ' 5533@

7' 5D' 2CD/!1B!N239D38!7\*-6: 8-B@3!Q' 682!' N5/) 36C@d\*D!-8\*(3-' ; \*6C!: \*!E6' !

' N-\*U8: 38P!K!7' 2/A32!-8\*D03X!N89/52' ; : ' !' 6!R/63: \*@A6' !E6' !N89/52' ; : ' !

1B!: 8!7-' 63; @7' 6' 1/!A6' !E6' !: \*O\*!' NU\*<!N' -CN\*!5!18, )/ : \*-') : B1!

68--' -391' 1@3!: \*1!\*18-3D\*: 5D38!D' 228(3@)8456; 3682C: ' @(' ;' -323@A6' !

E6' !: /, : ' !6' 2CD' !: \*!; -81<!D63; : ' 4!` \*9B! 78-\*034!; !W` (\*: 356\*: 8@: 8!

N' 288!A81P!K!6\*D31! N-\*9' 1!1B!)8[ ` \*D6' !\*18-3D\*: 08; !7' ))8-, \*23!; !E6' 1!

51B528@7' 6' 1



5; ' - \*A3; \*6C!E6!/IN\*9!/6\*1!: 86@\*!: \*O3!- \*9: B8!; ' 7- ' 5B!: \*1! ' 6; 8A\*23&!^L/!  
78-8)/1\*23P!gB!A6' [6' !7' )/1\*23!D\*D!\>>?b&>>]!528)/86!3!: \*1!E6' !: /, : ' !  
6878-C!: \*; 58() \* \_@: /!6\*D!(-/N' P!+86\*284!/ , 8!: 8!7' 1: X!L' !' NU34!51B52@  
N89/52' ; : ' @6\*D' 4P!L!/NB2' !: 87-3<6: ' 8!' U/U8: 38!' N1\*: \*@D' : 8A: ' !, 8@  
A6' !6' N' 4!; ' 57' 2C9' ; \*235CP!V: \*A\*2\*!5D\*9\*23!' ) : ' @7' 6' 1!5D\*9\*23!) -/(' 8P!  
WD63; : \*<!` \*9\*!' 78- \*O34!; !W` (\*: 356\*: 8!9\*; 8-O32\*5C@\*!, 82\*: 38!6\*1!  
' 56\*6C5<! ' 56\*2' 5CP!e!18: <!E6' !: 8!



5/U856;/86!18, )/!N239D313!7\*-6: 8-\*13!3!5' X9: 3D\*13@: '!: \*!D\*D' 4[6' !

E2818: 6!)' ;8-3<!NB2P!!

K!NB2' !, 82\*: 38!8(' !)\*, 8!D\*D[6' !6\*1!)-/(!)-/(/!)81' : 56-3-' ; \*6CP!

\>&=>&>>]!+' 7/5631@' !: \*A\*28!;' 8: : ' 4!' 78-\*033!; !



R/63: \*!;!36' (8!5' A2\*!3Q!\*- (/18: 6B!: 8/N8)3682C: B13F!K!9\*!E631!56' 36!

; \*O\*!23A: \*<!N' 2CO\* <!356' -3<!!; B!23A: ' !89)323!; !G\*O3: (6' : @A6' NB!

7' 7B6\*6C5<! ' 6(' ;' -36C!\*18-3D\*: 08; !' 6!; 6' -, 8: 3<@; 56-8A\*235C!5' !; 5813!

' 6!%' 223: \*!R\*/E22\*!)' !#\*45@c84: 3!)' !%3553: ), 8- \*@\>>=&=&>>]!3!6\*D, 8!

5' ' NU\*2' 5C@A6' !. /O!7-35/656; ' ; \*2!: \*!; \*O3Q!; 56-8A\*Q!5!#\*45!; !. 82' 1!

)' 18!%\*D!NB!; B! ' Q\* - \*D68-39' ; \*23!E63!; 56-8A3@; 85C!7- ' 0855!: \*A\*2\*!

3- \*D5D' 4!D\*17\*: 33@; ' ; 28A8: : ' 56C!# ' 5533F!K!7-\*; ) \*!23@A' 813: 35. 4(-)O. 1(!)T J ET



K!\*18-3D\*: 0B@d' : 8A: '!, 8@5' ;8-O323!D\*6\*56-' ` 3A85D/X!' O3ND/P!  
H: 3!-8\*2C: ' !; B3(-\*: : B4!W` (\*: 356\*: @; !D' 6' -' 1!/, 8!5\*13!6\*23NB!: 8!  
;8-323@A6' !' : 3!1' (/6!D' ()\*[6' !; 8-: /6C5<!>>=&d&>>]!D!; 2\*563@3!2X)3!: 8!  
;8-323@3!6\*1!56\*2\*!: \*A3: \*6C5<!/, 8!: ' -1\*2C: \*<!, 39: C@d' : 3!` ' D/5!  
78-8: 8523!: \*!K-\*D@: ' !;!36' (8!7' 68-<23!W` (\*: 356\*: !!g BI584A\*5!; 3)31!  
7-' )' 2, 8: 38!5' NB634@d' 6' -B8!-\*9; 3; \*X65<!; !2' (3D8!9\*7/U8: : ' 4!6' ()\*!;!  
0' )8!E6' 4!' O3ND3@d' ()\*!' : 3!/7/56323!W` (\*: 356\*: !!K-\*D@; !' NU81@  
: 3D\*D' (' !' 6: ' O8: 3<!; !' 623A38!' 6!W` (\*: 356\*: \*!D!68--' -391/!' 5' N' (' !: 8!  
3182!R' : <6: ' @6\*1!NB2!)3D6\*6' -!V\*)\*1!~/584: !!H: !D\*D!1: ' (38!  
)3D6\*6' -B!NB2!)\*28D! 6!5' ;8-O8: 56; \*!; ' !1: ' (3Q!7\*- \*186-\*Q! . 89/52' ;: ' @  
: \*- /O\*2!7-\*; \*!A82' ; 8D\*!3!NB2!63-\*: ' 1@: ' !7-\*; )\*!; !6' 1@A6' !: 3D\*D' (' !  
' -/, 3<!1\*55' ;' (' !/: 3A6' , 8: 3<!6\*1!; 8!NB2' !K!E6' !7' 6' 1!; 5D-B2' 5C@3!  
E6' !)' ;' 2C: ' !7' 56B): \*<!356' -3<!; !\*18-3D\*: 5D' 4!; : 8O: 84!7' 2363D8@  
D' ()\*!( ' 558D-86\*-C!V' 8)3: 8: : BQ!J 6\*6' ;!5!6-3N/: B!1\*Q\*2!E6' 4!  
7-' N3-D' 4P!%\*D!; B<5: 32' 5C@7' 6' 1!E63!)\*: : B8!NB23!5` \*2C53` 303-' ;\* : B!  
K!;!-89/2C6\*68!; 6' -, 8: 3<!7' 528)/XU8(' !NB2' !)' D\*9\*: ' @A6' !: 3D\*D' (' !  
' -/, 3<!1\*55' ;' (' !/: 3A6' , 8: 3<!; !K-\*D8!: 8!NB2' !' N: \*- /, 8: ' !L' !; 18568!5!  
681!' N85D/-' A323!E6/!56-\*: /!L \*!88! 56\*: D\*Q!; ' 9: 3D2' !K52\*15D' 8!  
"" 5/) \*-56; ' @D' 6' -' 8!7' 6' 1!7/5632' !5; ' 3!186\*56\*9B!; !)-/(38!5' 58): 38!  
56-\*: B!G!' NU81@/!E6' 4!' O3ND3!)' ;' 2C: ' !D\*6\*56-' ` 3A85D38!13-' ;' (' !  
/-' ;: <!7' 528)56; 3<!K!E6' @D' : 8A: ' @58-C89: ' P!!

K!6' ()\*!/!: \*5!NB2\*!: \*)8, ) \*!7' 7B6\*6C5<!; 58[6\*D3!; !7' 528): 34!-\*9!  
' N18: <6C5<!\*- (/18: 6\*13@3!1' , 86!NB6C@\*18-3D\*: O8; !/N8)36C!; !6' 1@A6' !



E6' !' O3ND\*!3!; !E6' 1!: 86!: 3D\*D' (' !51B52\*!Z81!N' 288@; 58[6\*D3!; 5<!E6\*!9' : \*!  
 \>>f&>>]!D!: \*1!)' ; ' 2C: ' !N239D\*!T !' 6!\*18-3D\*: 08; !E6' !)\*28D' @E6' !: \*!  
 )-/' 1!D' : 08!5; 86\*!\*)2<! : \*5!E6' !7-<1' !; !9' : 8!; 3)31' 563!T !; !78-8: ' 5: ' 1!  
 51B528!E6' (' !52' ; \*!) \*!R' !D- \*4: 84!18-8@6\*1!3!N8, 8: 0B@3!; 58!6\*1!S6' !  
 ; 58!5' ; 581!-<)' 1!D!: \*1!!

%\*D!\*18-3D\*: 0B!7B6\*235C! : \*5!/N8)36CF!L/!E6' !NB2' !: 81: ' , D' !  
 : \*3; : ' !L/! : 3!7B6\*235C!!!5D' -88@2' (3D\*!NB2\*!/!: \*O3Q!\*18-3D\*: 5D3Q!  
 D' 228(!7' D\*9\*6C@A6' !/!: \*5!6\*1!') : 3!3!68!, 8!; -\* (3P!M!7' 1: X@/6-' 1!<!  
 7-328682!; !G\*O3: (6' : @NB2@7' [1' 81/@; 8A8-!; ' 5D-858: C<@3!1B!5! : \*O31!  
 7' 52' 1!6' () \*!T !• -34!eO\*D' ; @D' 6' -B4!584A\*5!7' 1' U: 3D!7-893)8: 6\*!7' !  
 ; : 8O: 84!7' 2363D8!T !7' O23!6\*1!78-8D/536C!3!; B736C!73; \*!()8[6' !; !D\*D' 4[  
 6' !9\*N8(\*2' ; D8! : 8)\*28D' !' 6!7' 5' 2C56; \*!3! : !(' ; ' -36!^c6' [6' !; B!9: \*868@  
 \*18-3D\*: 0B!7B6\*X65<!; !7' 528): 34!1' 18: 6!(-\*` 3D!7' 18: <6C@7-8)2\*(\*X6!  
 5!/6-\*!; 56-8636C5<!5!€#e\_!Z\*1!NB2!Z8: 86!6' () \*!-/D' ; ' )3682C!€#e@6\*1!  
 : 85D' 2CD' !8(' !9\*1856368284!3!6\*D!) \*288P!G56-8A\*6C5<!; !9)\*: 33!





. 82B4!)' 1\_P!R' 6' 1!6\*1!D\*D!-\*9!; 56-8A\*!NB2\*!6\*1!5!%' : )' 239' 4!3!



532C: ' !6\*D!; ' 6!7-' 63; @6' !/!: \*5!, 8!6\*1!N' 2CO' 4!7' 68: 03\*2!6' -( ' ; ' [ ED' : ' 13A85D3Q!' 6: ' O8: 34P!j \*A81!, 8!: \*1!; 581!E631!-35D' ; \*6CF\_P!L\*18D3! 6\*D38!NB23P!L/!1B!E6' 6!-\*9( ' ; ' -!: 8!56\*23!7' ))8-, 3; \*6C@' : !3!35A89P!S6' ! : 8!NB2' !D\*D' 4[6' !9: \*A31' 4!\>>&v>&v>>]!A\*56CX!78-8( ' ; ' -' ; @: 86@E6' !6\*D@ 7/: D63-' 1!7-' O2' P!

"#\$%&!G528)!9\*!E6' 4!356' -384!D' 13553<!G' 2D8-\*!HHL!' N; 3: 32\*!; \*5!; !7' 2/A8: 33! ;9<6' D!' 6!V\*)\*)\*1\*!~/584: \*!; !` ' -18!: 8` 63P!R' 9, 8!; B<5: 32' 5C@A6' !; \*O\*! 7' )735C!NB2\*!7' ))82\*2\*P!%\*D!; B!)/1\*868@d6' !7B6\*25<!; \*5!7' )56\*; 36CF! j \*A81F!K!7-3O2' 5C!23!; \*1!D\*D[6' !)' 7' 2: 3682C: ' !)' D\*9B; \*6C!5; ' X! : 8; 3: ' ; : ' 56CF!K182' !23!E6' !7' 528)56; 3<!; !' 6: ' O8: 3<0F!

GHI HJ KL&!S6' !NB2' !)' ; ' 2C: ' !: 87-3<6: ' P!M!)8456; 3682C: ' !; )-/(! 6D/)\*[6' ! 6\*1!;/ 3)82P!S6' !NB2!7-8); \*-3682C: B4!6' !23! 7/N23D' ; \* : B4@6' !23!A6' @ E6' !NB2\*!7-8); \*-3682C: \*<!; 8-53<!--\*5528)' ; \* : 3<!G' 2D8-\*!6' ()\*@D' ()\*! G' 2D8-!8U8!E631!9\*: 31\*25<!; !HHL!K!6\*1!<!56-\* : B1!' N-\*9' 1PPP!1: 8!D6' [ 6' !6\*1!6' !23!7' 9; ' : 32@6' !23!7-352\*2@: 8!7' 1: X!/, 8PPP!<!; )-/(!52BO/!T! 1' <!` \*1323<!5; <9\*: \*!5!D\*D' 4[6' !6' -( ' ; 284!: 8` 6CX@K-\*D' 1!3!6\*D!)\*288P!!

c6' !3: 68-85: ' @A6' !<!; !5; ' 84!, 39: 3!: 8!; 56-8A\*25<!; 3!5! ) : 31!

3-\*D081@; ' ' NU8P!%\*D[6' !1' <! , 39: C!52' , 32\*5C!6\*D@A6' !<!7-' 56' !: 8!NB2! : 3D' ()\*!9: \*D' 1!: 3!5! ) : 31!3-\*D081P!K!E6313!; 9\*31' ' 6: ' O8: 3<!5!K-\*D' 1! : \*O313@7' : <6: ' @A6' !7' !23: 33!)372' 1\*63A85D3Q!; 8)' 156; @D\*D3Q[6' ! )-/(3Q!23: 34@7' : <6: ' @D\*D' 8[6' !; 9\*31' )8456; 38@: \*; 8-: ' 8@NB2' !5! -\*9: B13!-8, 31\*13!5' 6-/) : 3A856; \*P!M!23A: ' !: 3D' ()\*!; 8!NB2!; !E6' ! ; ' ; 28A8: P!S6' !NB2' !)2<!18: <@D' : 8A: ' @D\*D' 4[6' !6\*D' 4!5' ; 581!



7' 268-(8456@; ' ' NU8&! : 87' : <6: ' !A6' !!+ \*!3!6' -( ' ; 284! : 8` 6CX!<! : 3D\*D' 4! : 8!

9\* : 31 \*25<!M@; ' ' NU8@; !6' !; -81<!- \*N' 6\*2!-/D' ; ' ) 368281!\* ) 13: 356-\*03



)' 56\*6' A: ' !: ' -1\*2C: ' @NB56-' !' 6; 86323@5D\*9\*23&!^+\*@' D84@: ' !: \*1!: \*)' !  
 6\*4: ' @()8[6' !: \*!: 846-\*2C: ' 4!68--36' -33\_P!M!( ' ;' -X&!^G' ' NU8@: 3A8(' !  
 6\*4: ' (' @; ' ' NU8@; 58!\*N5' 2X6: ' !' 6D-B6' @(' 6' ;!; 56-8A\*865<\_P!H: 3!  
 (' ;' -<6&!^L/!1B!6' ()\*!1' , 81!;!g' 5D; /!7-328686C\_P!T !^HD84\_P!K!' : 3!  
 7-3286823!;!g' 5D; /P!!

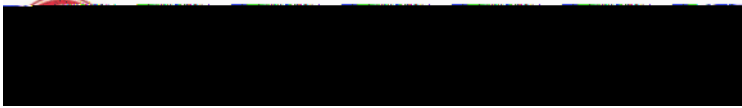
M!6' ()\*!/, 8!: 8!-\*N' 6\*2!;!\*) 13: 356-\*033!D!E6' 1/!1' 18: 6/@D' ()\*!E6' !  
 ; 58!6\*1!-\*5D-/A3; \*2' 5CP!K!<!6' ()\*!NB2!7-8)58)\*68281!5' ; 86\*!)3-8D6' -' ;!  
 #We!^\$SV!# 5533\_P!S6' !: \*O\*N' 2CO\*<IE: 8-(863A85D\*<ID' 17\*: 3<!6\*D\*<@  
 D' 6' -\*<!6' ()\*!NB2\*!( ' 5/)\*-56; 8: : \*<@7' 6' 1!NB2\*!-8` ' -13-' ; \*: \*@  
 -\*9)828: \*!: \*!A\*563!;!-\*1D\*Q!6\*D' 4!\>>&vd&>>]!N' 2CO' 4!7-' (-\*11B!7' !  
 )81' : ' 7' 239\*033!E: 8-(863D3P!K!/!18: <!NB2!' ` 35!6\*1!6\*D' 4!5D-' 1: B4!;!  
 E: 8-(863A85D' 4!D' 17\*: 33@; ' 6!6\*1!;!E6' 1!' ` 358!1B!; 56-8A\*235C!5!E6313!  
 -8N<6\*13!39!D' 135533!HHL@d' 6' -\*<!9\*: 31\*2\*5C!E631!-\*5528)' ; \*: 381P!!

G' 6!6\*1!<!31!-\*55D\*9\*2@A6' !<!)/1\*2P!+/1\*6C!1: 8!: \*!E6!/681/!NB2' !  
 6<, 82' P!#8\*2C: ' !D!6' 1/!; -818: 3!/!18: <!8U8!: 8!NB2' !-89/2C6\*6' ;!  
 -\*5528)' ; \*: 3<@D' 6' -B1!9\*: 31\*25<!SD3: !"\*17!3!%- ' 22P!L' !57/56<!  
 : 85D' 2CD' !185<08;!T !<!584A\*5!: 8!7' 1: X@7' [1' 81/@E6' !NB2' !=!323!v!  
 185<0\*!T !7-3O23!-89/2C6\*6B@)8456; 3682C: ' P!S63!-8N<6\*PPP!\*!6\*1!8U8!O2\*!  
 ;' 4: \*!;!K-\*D8@' : 3!6/) \*!5286\*23!3!;!D\*D3Q[6' !7' 2/-\*9-/O8: : BQ!3-\*D5D3Q!  
 \*-Q3; \*Q!: \*O23!7\*-/!N-8)' ; BQ!\*N5' 2X6: ' !N/1\*(P!S6' !735C1\*!<D' NB!<ID\*D!  
 -/D' ;' )3682C!\* ) 13: 356-\*033!: \*!D\*D3Q[6' !D-3; BQ!N\*: D\*Q!\* ) 13: 356-\*033!





5' N-\*: : BQ!; 5<D3Q!E63Q!' 678A\*6D' ;!7\*2C08;@



"#\$%&!GB!/, 8!5D\*9\*23@D!E6' 1/!1' 18: 6/!; B!7D23!39!\* )13: 356-\*033@3!5!E631!

5; <9\*: !; ' 7-' 5!7' !\*-856/! =>>v!( ' )!T







7-3)86!D6' [6' !)-/(' 4P!R' : <6: ' 8!)82' @A6' !)2<!: \*5!eD-\*3: \*!' A8: C!N239D\* <!  
56-\*: \*@5!D' 6' -' 4!: \*5!5; <9B; \*86!: 8!6' 2CD' !7' 2363D\*!323!ED' : ' 13D\*@323!  
A6' [6' !8U8@\*!8U8!)85<6' D!13223' : ' ;!: 36' A8D!A82' ; 8A85D3Q!' 6: ' O8: 34P!e!  
D\*, )' (' !; 6' -' (' !-' ): B8@)-/9C<!: \*!eD-\*3: 8@)\*P!+2<!: \*5!E6' !7-' 56' !: 8!  
A/, \* <!56-\*: \*P!g' 8!)8656; ' !6' , 8!A\*563A: ' !5; <9\*: ' !5!eD-\*3: ' 4P!K!  
-' )56; 8: : 3D3!/!18: <!6\*1!NB23!39!%38; \*@39!V/1B@39!K; \*:' [f-\*: D' ; 5D\*@  
39!H)855B@: /!' 6D/)\*!6' 2CD' !: 8!NB2' P!%38; !<!D\*D!(' -' )!9: \*X! : 8!Q/, 8@A81!  
g' 5D; /@; !082' 1P!K!)2<!18: <!E6' !6' , 8!' )3: !39!1' 3Q!2XN3184O3Q!(' -' )' ; P!  
R' E6' 1/!)2<!: \*5!E6' !; 58!6\*D\* <!356' -3<!7' : <6: ' !)82' !: 87-' 56\* <P!+2<!: \*5@  
D' : 8A: ' @' A8: C!; \* , : ' @A6' !6\*1!7-' 35Q' )36!: \*!eD-\*3: 8P!L' !1B! : 8!)/1\*23!;!  
68-13: \*Q!7-88156; 8: : ' 563P!M!5D\*9\*2!NB@/, !D' 2C!1B!( ' ; ' -31!7-' !  
eD-\*3: /@A6' !eD-\*3: \*!' A8: C!52' , ; \* <!56-\*: \*P!H: \*!52' , ; \* <P!# 553<!6' , 8!  
N' 288!A81!: 87-' 56\* <P!!

K!eD-\*3: \*@D\*D!3!# 553<@D56\*63@' 6: ' 5365<@<!NB!E6' !: \*9; \*2!D' 17' 936: \* <!56-\*: \*@  
56-\*: \*@; !D' 6' -' 4!856C!D/5D3@d' 6' -B8!' 6: ' 5<65<!D!-\*9: B1!03; 3239\*03<1@  
D!-\*9: B1!-823(3<1@d!-\*9: B1!D/2C6/-\*1@<9BD\*1!3!6\*D!) \*288P!\>>&dd&>>]!K!  
: \*!eD-\*3: 8!<!7-<1!A/; 56; ' ; \*2!) \* , 8!; !)8656; 8@d' () \*!6/) \*!89)32!D!-' ): 8@<!  
A/; 56; ' ; \*2!(-\* : 30/!03; 3239\*033P!G' 6!6/6!8U8!D\*D\* <[6' !6\*D\* <!03; 3239\*03<!  
: \*O\*@D\*D[6' !7' Q' , \* <!: \*! : \*O/@\*!; ' 6!6/6!7-<1' !D\*D\* <[6' !)-/(\* <P!%' () \*!6\*1!  
()8[: 3N/)C!; !)8-8; : 8!7' )!K; \*:' [f-\*: D' ; 5D' 1!1B!7-389, \*23!3!6\*1!; !  
; ' 5D-858: C8!: \*!2\*; ' AD8!53)82!)8)/OD\*@)' 7/5631@; !O2<78!3!732!D' ` 8P!G!  
: \*O84!)8-8; : 8!D' ` 8!/6-' 1!)\*!8U8!; !O2<78!; !)8-8; : 8!: 3D6' !: 8!732P!L/!E6' !  
7' ; 8-Q: ' 56: ' 8!-\*923A38@: ' !9\*!E631!856C!3!1: ' (' !; 5<D3Q!(2/N3: : BQ!





\*N5' 2X6: ' !-8(3' : B!K!<[6' !5A36\*2@A6' !; ' 6!5!5\*1' (' !: \*A\*2\*!: 89\*; 3531' 4!

eD- \*3: B!: \*)' !NB2' !NB!31!: /!D\*D[6' !' Nu<; 36C!E6' !; 58!5; ' 31!

: \*03' : \*2C: B1!N' (\*656; ' 1!G' 6!E6' !518O8: 38!D/2C6/-&!856C!-/55D\*<!



/D-\*3: 5D' 1!<9BD8P!L/!' D84@<!5!E631!' D84P!g' (/!: \*735\*6C!3!: \*!

/D-\*3: 5D' 1P!c/6D\*!9: \*XP!%' (/!)\*, 8!57-' 536C!/!6' ;\*-3U\*!A6' NB!' : !6\*1!

' O3ND3!; BA36\*2!7' 6' 1P!M@;' ' NU8@/D-\*3: 5D34!<9BD!2XN2X!: \*!52/QP!%: 8@

; ' ' NU8@)' 56\*; 2<86!' (-' 1: ' 8!



L' !D56\*63@j \*7\*)!3!W18-3D\*!;58() \*!; !-8, 318!^mp•r!op‡tt\_!

7' ))8-, 3; \*2!; ' 6!E6!/D-\*3: 39\*03X!eD-\*3: B!3!;58() \*!: \*!E6' 1!: \*Q' )32!

D\*D38[6' !7' 236D' --8D6: B8!6\*D38!



+' 7/5631@??!58: 6<N-<!G!-\*9(\*-!;' 4: B!;!c8A: 8!1B!: 85D' 2CD' !-\*9!T !  
 E6' !NB2' !/, 8!7-3!. /O8!T !1B!7B6\*235C!/2/AO\*6C!: \*O3!' 6: ' O8: 3<!3!  
 ; -' )8!; 58!D\*D[6' !G' 6!/, 8@. /O!9\*(2<: /2!;! (2\*9\*!R/63: /@A6' [6' !6\*1!;/ 3)82@  
 /, 8!; -' )8!D\*D[6' @NB23!D\*D38[6' !O\*: 5B!; \*!/2/AO8: 3<P!W!; /!: \*5!6\*1!  
 9\*( \*5\*XU\* <!8U8!; ' 4: \*!NB2\*!; !c8A: 8!6\*1!D\*D38[6' !-803)3; B!K!1B!  
 ; B<5: <23@: \*O3!578052/, NB@A6' !\*18-3D\*: 5D38!7' 5' 2C56; \*!; !j \*D\*; D\*9C8@  
 6\*1!; !ZN32353@; !. \*D/!: \*Q' )<65<!; !D' : 6\*D68!5!E6313!A8A8: 5D313]!  
 N' 8; 3D\*13!T !A6' !' : 3! 66/) \*!; B: B-3; \*X6!39!; ' 4: B@)' N8(\*X6!)' !  
 \*18-3D\*: 5D3Q!7' 5' 2C56; !3!7' 6' 1!6\*1!7-3' N' )-8: : B8!; ' 9; -\*U\*X65<P!)"8[  
 6' !31!6\*1!7' ))82C: B8!7\*57' -6\*!7' 1' (\*X6!5)82\*6CP!)"8[6' !)8: C(\*13!3Q!  
 5: \*N, \*X6P!S6' !: 8D\* <!6\*D\* <!356' -3<@D' 6' -\* <!NB2\*!D-\*4: 8!: 87-3<6: \*P!!  
 R' 5D' 2CD/!1B!: \*Q' )3235C!; !56\*)33!7' 7B6D3!/2/AO36C!-' 55345D' [  
 \*18-3D\*: 5D38!' 6: ' O8: 3<@1B!) \*, 8!39!E6' (' !: 3D\*D38!7/N23A: B8!5D\*: )\*2B!  
 : 8!)82\*23P!gB!7' !23: 33!5' ' 6; 8656; /XU3Q!; 8)' 156; !; B<5: <23!



;8)' 156; \*!23N' !D\*D38[6' !57803\*2C: B8!52/, NB!; 8)/6!; 5X!E6/!)8<682C: ' 56CP!  
W!/: \*5!6\*1!-8\*2C: \*<!; ' 4: \*d/!: \*5!6\*1!2X) 3!(3N: /6!D\*, )B4!)8: Cd/!: \*5!  
;9-B; B!;! : \*O3Q!( ' - ' ) \*QP!%\*D!E6' F!c6' NB!E6' !NB2' !7' : <6: ' !\*18-3D\*: 0\*1P!  
R' A81/!<!; 57' 1: 32d)' 7/5631@d7- ' !?!58: 6<N-<P!Z\*1!NB23!E63!/- ' )B!  
732' 6B@d' 6' -B8!: \*7-\*; 323!5\*1' 286B!;!)' 1\*!; !-\*9: B8P!S63!732' 6B!NB23!  
68--' -356\*13P!g' , 868!58N8!7-8)56\*; 36C@8523!NB!; )-/(!; B<5: 32' 5C@A6' !  
E63!732' 6B!7-8, )8!A81!5' ; 8-O36C!E6/!; 8UC! : \*D\* : /: 8!NB23!NB!; !  
-' 55345D' 1!7' 5' 2C56; 8!; !H66\*; 8!323!()8[6' !; !g8D53D8!323!()8[6' !8U8!3!  
7' 2/A\*23!NB!6\*1!7' ))82C: B8!7\*57' -6\*P!g' , : ' !58N8!6\*D' 8!7-8)56\*; 36CF!  
W18-3D\*!5!: \*13!E6' !)82\*2\*P!%\*D!1B!)' 2, : B!D!E6' 1/!' 6: ' 536C5<F!+-/9C<d  
6' ; \*-3U3F!!

K23!) -/(' 4!7-318-!6' , 8!; !D' : 68D568!?!58: 6<N-<P!G!W18-3D8!NB2' !  
: 85D' 2CD' !352\*15D3Q!` ' : )' ; !D-/7: BQP!K52\*15D38!` ' : )B!NB; \*X6!-\*9: B8P!  
. B; \*X6!\*N5' 2X6: ' !7' 9363; : B8P!G!) \* : ' 1!52/A\*8!NB2' !: 85D' 2CD' !` ' : )' ; @  
D' 6' -B8!-8\*2C: ' !` 3: \* : 53-' ; \*23!; ' 4: /!; !c8A: 8!3!78-3' )3A85D3!1B!6\*1!  
; B<; 2<23!D\*D38[6' !)8: 8, : B8!7' 6' D3@d' 6' -B8!57' 5' N56; ' ; \*23!E6' 4!; ' 4: 8P!  
gB!; B<5: <23! 6: ' O8: 3<!5! \*18-3D\*: 5D313!D' 228(\*13! : \*!-\*9: BQ!/- ' ; : <Q!  
3!( ' ; ' -323!31&!



7' 528!?!58: 6<N-<!; !68A8: 38!=[v!185<08; !; 58!E63!` ' : )B!35A8923@' : 3!; 58!







/N340\*@/!: 88!-/D3!; !D-' ; 3@23N' !' : \*!; B)\*XU345<! )8<682CP!K23!E6' !

: ' -1\*2C: ' !; 58!D\*D!; !^...pxmt!p•!Žntkm\_!G58[6\*D3! Nu<5: 3!1: 8F!S6' !; 58[6\*D3!





\$56C!\>?&d&>>]!); \*!O\*( \*!: \*9\*)P!G' 9C181!; !A81!W18-3D\*!; 823D\* <!

56-\*: \*@) \*P!#8\*2C: ' !88!5' 9)\*23!6\*2\*: 623; B8!2X) 3@5u80\*; O385<!5' !; 58(' !

13-\*!: \*!E6!/9812X!T !: \*3N' 288!7-8)7-331A3; B8@A/6C[A/6C!\*; \*: 6X-: B8@

6\*2\*: 623; B8@6-/) ' 2XN3; B8@





(' 5/)\*-56; 8: : B1!78-8; ' -' 6' 1@' : !-8O\*86P!%' ()\*@)' 7/5631@; !%38; 8!  
; 2\*56C!7' 18: <2\*5C!: 8D' : 5636/03' : : B1!7/681@' A8; 3): ' @)\*P!M: /D' ; 3A!  
' 65/656; ' ; \*2!; !%38; 8!7' 26' -\*!): <P!R' 528!6' (' @D\*D!7' )735\*2!5' (2\*O8: 38!5!  
' 77' 930384!3!5!(\*-\*: 63<13!: \*O3Q!\>?&b&>>]!8; -' 7845D3Q!D' 228(@' : !NB2!  
6\*1!518U8: P!S6' !7-' 39' O2' !6' A: ' !; !: \*- /O8: 38!D' : 5636/033P!I XN' 1/!  
: ' -1\*2C: ' 1/!X-356/! A8; 3): ' @A6' !E6' !(' 5/)\*-56; 8: : B8!78-8; ' -' 6P!Z\*D!



W18-3D8!7-' 35Q' )36@6\*1!6' , 8!D-3935B!D\*D38[6' !NB; \*X6@: ' !; 58[6\*D3!  
D' ()\*!6\*1!6' 27\*!; -B; \*865<!; !%\*736' 234@E6' !D\*D[6' !' NU856; ' !5A36\*86@A6' !  
A6' [6' !: 8!6\*D@A6' !: 8!6\*D31!' N-\*9' 1P!~' 6C!3!2X)3!; 8D' 6' -B8!/6; 8-, )\*X6@  
A6' !7-3O23!6/) \*!; \*!ED5D/-53X@: ' !31!; 3D6' !: 8!; 8-36!L' !; !)-/(3Q!  
56-\*: \*Q@8523!2X)3!7-3O23!; \*!ED5D/-53X!; !1856: B4!7\*-2\*18: 6@6\*1!D/) \* [  
6' @6' !' : 3!-8; ' 2XO3' : 8-B@8523!D!; 2\*563!; !-89/2C6\*68!E6' 4!-8; ' 2XO33!  
7-3Q' )36!6' 6@\>?&?>&>>]!D6' !: -\*; 365<!V' 8)3: 8: : B1!J 6\*6\*1!G' 6



' 6)82C: \*<!356' -3<d<! : 8!/; 8-8: @A6' !: \*O31!\*18-3D\*: 5D31!D' 228(\*1!E6' !  
532C: ' !3: 68-85: ' P!H: \*!' A8: C!: 87-' 56\*<!E6\*!356' -3<P!G!52/A\*8!5!H586384@  
6\*1!' 7<6C!, 8!N' 2CO8; 3D3!-8O323!-\*9)8236C!' 5863: 5D34!: \*-')@6\*1!: \*!  
V8; 8-: /X!H5863X!3!• , : /X!Z\*1@V8; 8-: \*<!H5863<!7' 7\*2\*!; !5' 56\*;!  
#' 5533@• , : \*<!7' 7\*2\*!; !5' 56\*;! "-/933@Q' 6<!E6' !\*N5' 2X6: ' !T !6\*1!581C3!  
-\*9)828: : B8!T !E6' !' )3: !3!6' 6!, 8!: \*-')P!%\*D38[6' !D' 11/: 356B!7-' ;' )323!  
6\*1!D' ()\*[6' !7' !Q-8N6/!23: 84D' 4!E6/!\>?&=?&>>]!





A6' !; ' 6!D\*D[6' !D\*-6B!52' , 3235C!;!)\*: : B4!D' : D-86: B4!1' 18: 6P!%' : 8A: ' @

NB2\*!` \*: 6\*563A85D' 4! O3ND' 4!7-856/728: 38@: ' !j \*7\*)!NB2!: \*56' 2CD' !



GHI HJ KL



€8: 6-\*2C: B4!N\*: D!323!6\*1!^' tk\_!; !J 6\*6\*0@f8)8-\*2C: \*<!--898-; : \*<!  
535681\*@\*!856C!N\*: D3!; 6' -' (' !7' -<)D\*P!Z' , 8!5\*1' 8!; !08: : B0!N/1\*( \*QP!\$56C!  
08: 6-\*2C: B4!)87' 936\*-34@()8!D' : 8A: B8!7-\*; \*!: \*!08: : B8!N/1\*(3!  
/A36B; \*X65<P!e!; \*5!: 8!NB2' !D' ()\*[6' !08: 6-\*2C: ' (' !)87' 936\*-3<@A6' !: 8!  
: -\*; 32' 5C!1: ' (31!3: ' 56-\*: : B1!3: ; 856' -\*1!3!: \*O31!6' , 8P!K!1B!; !5; ' 8!  
; -81<!T !E6' !NB2' !)' ; ' 2C: ' !)\*; : ' !/, 8@5D' 2CD' [6' !286!6' 1/!: \*9\*)!T !1B!  
5' 9)\*23!E6' 6!08: 6-\*2C: B4!)87' 936\*-34P!!

g' 4!7-3<682C!T !)-/(@1' , : ' !5D\*9\*6C!T !g3O\*!j /-\*N' ;@D' 6' -B4!

D' ()\*[







E` ` 8D63;: B13@7' 1' (\*86!39N8, \*6C! O3N' D@: ' !1' : ' 7' 2356' 1!NB6C!; 58() \*!

7-3<6: ' P!!

c8(' !W18-3D\*!)' N32\*5C!;!K-\*D8F!G!K-\*D8!7' (3N2' !7' A63!56' 2CD' !, 8!

\*18-3D\*: 08; @D\*D!?!58: 6<N-<P!g' 2' )B8!-8N<6\*@D' 6' -B8!: 3!9\*!A6' @; ' ' NU8P!

#\*9-/O323!E6!/56-\*: /!)' 62\*P!Z\*1!; ' 9: 3D2' !352\*15D' 8!( ' 5/) \*-56; ' P!



6; ' 3!3: 68-85B!K!; 58@d6' !68N8!7' ) 78; \*86!T !E6' !6; ' 3!5' X9: 3D3@\*!; 58@d6' !  
7-' 63; @E6' !6; ' 3!; -\* (3!S6' !)' ; ' 2C: ' !/N' (34!3! A8: C!: 8/56' 4A3; B4!13-P!!  
M!1: ' ( ' !; -818: 3!7-' ; 82!; !7' 2363D8!g' <!56-\*: \*Y!1B!6' , 8!D\*D38[6' !  
' O3ND3!5' ; 8-O\*81!g BI!52' , : \*<!56-\*: \*@D' 6' -\*<!)' !53Q!7' -! : \*Q' ) 365<!;!  
5' 56' <: 33!6-\*: 936\*!39!6' ( ' @A6' NB!NB6C!V' ; 865D' 4!3!56\*6C!D\*D' 4[6' !  
-\*9; 36' 4!; !- \*9: BQ!51B52\*Q!56-\*: ' 4P!%' : A8: ' @E6' !6<, 82B4!7/6C@  
1/A3682C: B4!g BI!5' ; 8-O\*81! O3ND3@1B!6' , 8!) \*28D3! 6!5' ; 8-O8: 56; \*P!K!  
D' : 8A: ' @: \*1!D\*D! : 3D' 1/! : / , : B!) ' N-B8! 6: ' O8: 3<!; ' D-/(! : \*5!T !1B!  
N' 2CO8@A81!) -/(38!9\*3: 68-85' ; \* : B!G!W18-3D8!3!6\*D!; 58!N' 288!3!18: 88!; !  
7' -<) D8!N2\* (' 7' 2/A: \*<!56-\*: \*!5!; B5' D31!/-' ; : 81!N89' 7\*5: ' 563@5!  
; B5' D31!/-' ; : 81!- \*9; 363<!ED' : ' 13D3P!R' : <6: ' @D\*D!; !2XN' 4!N' 2CO' 4!  
56-\*: 8!856C!) ' ` 3(\*!7-' N281P!W18-3D\*: 0B!3Q!2/AO8!; 58Q!9: \*X6@: ' !; !  
O82' 1@8523!5-\*; : 3; \*6C!5!7-' A31!13-' 1@; 58!; 8!6\*D!72' Q' P!e! : \*5!7-' N281!  
(' -\*9)' !N' 2CO8P!K! : \*1!( ' -\*9)' !N' 2CO8! : / , : B!) ' N-B8! 6: ' O8: 3<!5!6813!  
, 8!V' 8) 3: 8: : B13!J 6\*6\*13@5!6813!, 8!8; -' 7840\*13P!L\*1!E6' !N/) 86!  
532C: ' !; !7' 1' UC@E6' !N/) 86!7' 1' (\*6C! : \*O81!/- \*9; 363X!; !56' -' : /!  
5; ' N' ) : ' 4@) 81' D-\*63A85D' 4@5\*1' 56' <682C: ' 4@7-8/578; \*XU84!# 5533!5!  
; B5' D31!/-' ; : 81!, 39: 3!2X) 84P!G' 6!A8(' !1B!Q' 631P!HA8: C!6-/) : ' !56-' 36C!  
6\*D38! 6: ' O8: 3<!; !5' ; -818: : ' 1!13-8@d' ( ) \*!856C! ) 3: !1' : ' 7' 2356@  
D' 6' -B4!; 58Q!; ' D-/(!9\*7/(3; \*86!3!/, 8!5! : 31!7-' U8!5' (2\*536C5<@A81!  
57' -36C!S6' !D\*D!A8-: \*<! ) B-\*@D' 6' -\*<!; !58N<!; 58!9\*6<(3; \*86P!

!