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8&4. 92: !; (027#!<16#7=(42!>??9+4&2+70!

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" (?' (02!7B!F01+O((#+01D!@7' ?. 2+01D!&O, !; &25(' &2+4&9!-4+(04()!

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; &25(' &2+4&9!' 7, (9+01!)!&!.) (B. 9!2(450+G. (127!, ()4#+H(!, : O&' +4)!5&??(O+01!! +25+0!(C(O2)!&O, ! &9971)!70(!27!&, , #())!G. ()2+70)!&O, !2()2!5: ?725() ()!25&2!' &: !072!H(!B(&)+H9(127!)2. , : !+0!# (&9+2: \$! E5+)!! 7#A!.) ()!' &25(' &2+4&9!' 7, (9+01!&O, !&O&9:)+)!2(450+G. ()!27!G. &O2+B: !25(!#79(125&2! +O2(#&42+70)!! +25!5 (&9254&#(! 7#A(#)!&O, !(OC+#70' (O2&9!?'&25! &:)!?'9&: !+0!25(!2&#O)' +)))+70!7B! , +) (&) (!+0!5 (&9254&#(!) (22+01)!\$

C d de dffc e!JC dffc eK!+!70(!7B!25(!' 7)2!B#(G. (O29: !+, (O2+B+(, !5 (&9254&#(L&4G. +#(, ! +OB(42+70)!+O!/O+2(, !-2&2()!57)?+2&9)\$!@7970+M(, !?'&2+(O2)!H725!): ' ?27' &2+4!&O, !&): ' ?27' &2+4!!5(, ! C dffc e!(O, 7)?7#()!25&2!4&O!). #C+C(!B7#!9701!?(#+7,)!70!). #B&4()!7. 2)+, (125(!57)2!&O, !&#(! #()+2&O2!27!' &O: !47' ' 709: !.) (, !, +)+OB(42&O2)!E#&O)' +)))+70!?'&25! &:)!4&O!+O49. , (!4702&42! +25! (O, 7)?7#()!70!B7' +2()!7H=(42)!9+A(9: !27!4&##: !+OB(42+70)!&O)!! (99!&)!5 (&9254&#(! 7#A(#)!4&##: +O1!)?7#()!B#7' !4702&42! +25!47970+M(, !7#!, +) (&)(, !?'&2+(O2)!7#!4702&' +O&2(, !). #B&4()\$!

E5+)!?'7=(42!+OC())2+1&2()!25(!#(9&2+C(!4702#+H. 2+70!7B!25(!' . 92+?9(!?'&25! &:)!27!C dffc e! 2#&O)' +)))+70!+0!5 (&9254&#(!) (22+01)!27!, (2(#' +O(!' (257,)!27!4702#79!, +) (&)(!)?#(&, \$!E5(!)2. , (O2! #() (-(!#! +99!, (C(97?!&! ' &25(' &2+4&9!' 7, (9!.)+01!7#, +O&#: !, +BB(#(O2+&9!(G. &2+70)!25&2!, ()4#+H()! +O2(#&42+70)!5&??(O+01!! +25+0!&!57)?+2&9! &#, !&O, !.) (!)+'. 9&2+70)!27!(N&' +O(125(!+ ?&42!7B!25(! #79!(OC+#70' (O2&9!). #B&4()!5 (&9254&#(! 7#A(#)!&O, !, 7427#)!4702#+H. 2(127!?'&2+(O2!47970+M&2+70\$! E5+)! ' &25(' &2+4&9!' 7, (9! +99!, (C(97?(, !)?(4+B+4&99: !27!470)+, (#!H725!4702&' +O&2(, !&O, ! . O4702&' +O&2(, !5 (&9254&#(! 7#A(#)!27!H(147' ?&#(, !27!?'(C+7.)9: !, (C(97?(, !' &25(' &2+4&9!' 7, (9)! 27!, (2(#' +O(! 5(25(#!25(!H())2!?'#(, +42(, !4702#79!)2#&2(1+!)!&#(!) (O)+2+C(127!25(!' 7, (9)!2#. 42. #(\$!

; &25(' &2+4&9!' 7, (9+01!&9971)!70(!27!, ()4#+H(!, : O&' +4)!5&??(O+01!+0!25(!#(&9! 7#9, !H: !2#&O)9&2+01! 25(!A071 9(, 1(!&O, !H(9+(B)!7B!+O2(#&42+70)!+O27!25(!9&O1. &1(!7B! ' &25(' &2+4)!\$87#!25+!#(&)70! ' &25(' &2+4&9!' 7, (9+01!)!&!.) (B. 9!2(450+G. (!.) (, !27!, ()4#+H(!O&2. #&9!744. ##(O4)!&O, !&9971)!70(! 27!&, , #())!G. ()2+70)!&O, !2()2!5: ?725() ()!25&2!' &: !H(!072!H(!B(&)+H9(127!)2. , : !+0!# (&9+2: \$!

; 7, (9+01!+O2(#&42+01!):)2(')!7B!25(!#(&9! 7#9, !#(G. +#()!47' ?#7' +)(\$!00!7#, (#!27!&C7+, !47' ?9+4&2(, !):)2(')! ' &25(' &2+4&9!' 7, (9(#)! ' .)2!B+#)2!+, (O2+B: !25(!' 7)2!+' ?7#2&O2!47' ?70(O2)!+0!25(!):)2(' ! 27!+O49. , (!+0!25(!' 7, (9)!N49. , +01!(C(#: 25+01!)(9)(\$!FC(O! +25!25() (!)+ ?9+B: +01!&)). ' ?2+70)! ' &25(' &2+4&9!' 7, (9)!4&O!H(!.) (, !27!, (C(97?!)4+(O2+B+4! O, (#)2&O, +01!2()2!25(! (BB(42!7B!45&O1()!+O!&):)2(' !&O, !&+, !+O!, (4+)+70! ' &A+01!\$P71 (C(#!25(!)2#. 42. #(!&O, !&)). ' ?2+70)! ' &, (! 5+9(! , (C(97?+01!&!?'+4. 9&#! ' &25(' &2+4&9!' 7, (9)!47. 9, !H(!#(B9(42(, ! 5(O!2()2+01!?'+4. 9&#!1601. 921. 92cmBT!O!, ((C((,)

(OC#70' (O2&9!#() (#C7+#)!'.)2!H(!+O47#?7#&2(, !+O27!' 7, (9+O1!, +)(&)(!, : O&' +4)\$!; :!4799&H7#&27#)!
&O, !0!5&C(!, (C(97?(!&! ' 7, (9!7B!

25+)!#(&)70#, (C(97?+01!&0725(#!' 7, (9! +25!4702&' +0&2(, !&0, !. 04702&' +0&2(, !P@Q)!&0, !, 7427#)!' &: !H(22(#!#(B9(42!#(&9+2: \$!

E5+)!/?#7?7)(, !/?#7=(42!&+')!27!&0)I (#!25(!B7997I +01!G. ()2+70)!
V\$ Q5+45!2#&0)' +)))+70!/?&25I &:)!JP@Q)!, 7427#)!, 7#125(!OC+#70' (O2!C+&!27. 45!). #B&4()K!9(O, !
' 7)2!27!07)747' +&9!47970+M&2+70)!7B!C d f f c e]!
R\$ " 7!' +2+1&2+70!)2#&2(1+()!, +BB(#!H&)(, !. ?70!25(!457)(O!' 7, (9+01!)2#. 42. #(!
S\$ Q5&2!&#(!25(!7?2+' &9!9(C(9)!7B!). #B&4(!49(&0+01!&0, !, +)OB(42+70!&)!I (99!&)!P@Q!5&0, !
5: 1+(O(!47' ?9+&04(!27!#(, . 4(!C d f f c e!+04+, (O4(!#&2()!+0!&!57)?+2&9!I &#,]!!

-+04(!C d f f c e!)?7#(!4&0!). #C+C(!B7#!9701!?(#+7,)!70!B7' +2()!072!&, (G. &2(9: !49(&O(, !7#!
, +)OB(42(, !&0, !&#(!47##(9&2(, !I +25!+OB(42+70!#&2()!+0!5(&9254&#(!)(22+01)!B7' +2()!4&0!H(!&!
4702+0. 7.)!)7. #4(!7B!2#&0)' +)))+70!>, , +2+70&99: !P@Q)!&0, !, 7427#)!47. 9, !H(!)?#(&, +01!25(!)?7#(!
, . (!27!/?77#!5&0, !5: 1+(O(!47' ?9+&04(\$!E5+)!#&+)()!25(!G. ()2+70!7B!I 5&2!4702#+H. 2()!' 7)2!27!25(!
2#&0)' +)))+70!7B!C d f f c e!

' &25(' &2+4&9!' 7, (90! +25!&!)2#. 42. #(!)+ ' +9&#!27!25(!7#+1+0&9!(0C+#70' (02&9!47' ?70(02)0! (! (#(!
&H9(!27!, #(429: !47' ?&#!25(!#7. 2(!)7B!2#&0)' +)) +70!27!)((!25(!?#+ ' &#: !4702#+H. 27#!7B! ?&2+(02!
47970+M&2+70\$00!7. #!H&)(9+0(!)4(O&#+70! !B7. 0, !25&2!eSh!7B!25(!47970+M&2+70)!4&' (!B#7' !&O!
+02(#&42+70!! +25!&!P@Q!Vgh!B#7' !+02(#&42+70!! +25!&!5+15L

2+')!7B!+04#(&)(, !47970+M&2+70)!&O, !7. 2H#(&A!27!)((!571 !25()(!)4(O&#+7)! ' 7, +B: !25(!7?2+' &9!
49(&O+01!&O, !5&O, !5: 1+(O(!)2#&2(1+(O)!&' 701!725(#)\$!

E7!)+' . 9&2(!25(!' 7, (9)!&O, !&??9: !7?2+' &9!4702#79!25(7#: !27!H725!25(!)2. , (O2!#()(-(#!I +99!.)(!
; >Ea>` !I 5+45!5&)!H. +92L+O!)79C(#)!B7#!):)2(')!7B!, +BB(#(O2+&9!(G. &2+70)!27!470)+, (#!?)7))+H9(!
?&2+(O2!&O, !(OC+70' (O2&9!49&))!2#&=(427#+C)\$!FC(O! !+257. 2!#?#7#!?#71#&' ' +O1!(N?(#+(O4(!)2. , (O2)!
4&O!9(&#O!25(!O(4())&#: !2779)!+O!; >Ea>` !25#7. 15!(N&' ?9(!47, ()\$!E5(!)2. , (O2!#()(-(#!I +99!9(&#O!
25(!O(4())&#: !7?2+' &9!4702#79!25(7#: !2(450+G. ()!H: !470, . 42+O1!#(&)70&H9(!2(N2H77A!(N&' ?9()!&O, !
25(O!&??9: +O1!25(!)A+99)!9(&#O(, !27!25(!N+)+O1!' &25(' &2+4&9!' 7, (9\$!>2!25(!47049.)+7O!7B!25(!
6#71#&' !25(!)2. , (O2!#()(-(#!)57. 9, !5&C(!#(). 92)!25&2!47. 9, !H(!+' ?9(' (O2(, !+O!&!57)?+2&9! !&#, !
27!H()2!#(, . 4(!C d f f c e l)?#(&, !&)! (99!&)!+, (&)!B7#!B. 2. #(!, +(42+70)!B7#!25(!' &25(' &2+4&9!' 7, (9\$!
>, , +2+70&99: !25(!47' ?&#+)7O!7B!25(!21 7!' 7, (9+O1!2(450+G. ()! +99!B. #25(#!&, C&O4(!#()(-!H(+O1!
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-74+(2: D\VTWe\$!
bRUC!>\$! #&' (#D!0\$!-45I (HA(D!&O, !*!\$! &' ?B\$!P7I !9701!, 7!07)747' +&9!??&2571(O)!?(#)+2!70!+O&O+' &2(!
) . #B&4()]!>!):)2(' &2+4!#(C+(I \$!` ; @!00B(42+7.)!" +)(&())D!eJVSUKV<W!RUUe\$!
bRVc!%\$!P\$!I I 70D!; \$!>\$!_9)(OD!&O, !F\$!3\$!" . HH(#A(\$!E5(!' 7#H+, +2: D! 7#2&9+2: D!&O, !47)2)!&))74+&2(, !I +25!
C d dffc e!+OB(42+70\$!00B(42+7.)!" +)(&(!@9+O+4)!7B!i 7#25!>' (#+4&D!RTJVK\VRS<VSd!RUVm\$!
bRRc!a\$!I :O(D!; \$!Q&#O: D!>\$!q&' &#D!&O, !@\$!6!I (99: \$!>): ' ?27' &2+4!4&##+&1(!7B!C d dffc e!&O, !
) (#.' !9(C(9)!7B!01*!&02+H7, : !&1&+O)2!27N+O!>\$!i (I !F019&O, !%7. #O&9!7B!; (, +4+O(D!SdRJeK\STU<STg!
RUUU\$!
bRSc!@\$!a&OM&D!F\$!3\$!" . HH(#A(D!p\$a. D!I \$!>\$!3()A(D!&O, !n\$!E\$!*#r50\$!F?+, (' +7971+4&9!' 7, (9!B7#!
C d dffc e!2#&O)' +))70!+O!5(&9254&#(!) (22+01)\$!00B(42+70!@702#79!&O, !P7)?+2&9!
F?+, (' +7971: D!SRJeK\mmS<meV!RUVV\$!
bRdc!E\$!" \$!a&l 9(: D!-\$!@9&#(D!a\$!%\$!" (&A+OD!" \$!*7. 9, +01D!%\$!a\$n(O!@!\$!3&+)(O!@\$!` #&O, 2D!%\$!a7C(99D!8\$!@77A(D!

bSTc!>\$! \$!-(25+dlQ\$!i \$!>9Li &))+#dl; \$!; \$!i (#&O, M+4dl*!\$!-\$!` 7H. 9)A: dl&O, !@\$!%\$!" 7O)A(: \$!6(#+)2(O4(!7B!
)A+O!47O2&' +O&2+7O!&O, !(OC#70' (O2&9!)5(, ,+O1!7B!C d d f f c e!, . #+O1!&O, !&B2(#!2#(&2' (O2!
7B!C d f f c e!+OB(42+7O!0OB(42+7O!@7O2#79!&O, !P7)?+2&9!F?+, (' +7971: dlSVJVK!RV<RgdlRUUVU\$!
bdUc!>\$!; \$!-5&')!a\$!%\$!37)(dl%\$!3\$!F, l &#,)dl>\$!" \$!@&9+dl-\$!P&##+)dl%\$!E\$!%&47Hdl>\$!a&8&(dl\$a\$!a\$!6+O(9!)dl! \$!>\$!
E57' dl\$a\$!@\$!; 4" 7O&9, dl; \$!%\$!>#, . +O7dl&O, !%\$!>\$!i 7H9(LQ&O1\$!>))())' (O2!7B!25(!7C(#&99!&O, !' . 92+, #. 1L
#()+2&O2!7#1&O+) !H+7H. #, (O!7O!(OC#70' (O2&9!) . #B&4()!+O!5 (&9254&#(!B&4+9+2+)\$!0OB(42+7O!@7O2#79!
&O, !P7)?+2&9!F?+, (' +7971: dl?&1()!V<gdlRUVe\$!
bdVc!; \$!l \$!-5&. 15O()): dl3\$!a\$!; +4+(99+dl" \$!" \$!" (6()2(9dl%\$!>#O, 2dl@\$!a\$!-2#&45&Odl! \$!` \$!Q(945dl&O, !@\$!F\$!
@5(O7l (25\$!FC&9. &2+7O!7B!57)?+2&9!#77' !&)) +10' (O2!&O, !&4G. +)+2+7O!7B!C d d f f c e!
+OB(42+7O!0OB(42+7O!@7O2#79!&O, !P7)?+2&9!F?+, (' +7971: dlSRJSKRUV<RUe!RUUVV\$!
bdRc!OQ! \$!-\$! +2)dl" \$!a: #&)dl" \$!" \$!" !a&4: dl; \$!P\$!Q+947Ndl&O, !F\$!%\$!l . +=?(\$!C d d f f c e!+OB(42+7O\$!
i &2. #(!3(C+(l)\!" +)(&)(!6#+ ' (#)dlRUVeURU!RUVe\$!
bdSc!%\$!; \$!-2&##dl>\$!@&' ?H(99dlF\$!3(O)5&l dlO\$!3\$!67N27Odl&O, !*\$!%\$!*+H)7O\$!-?&2+7L2(' ?7#&9!)2745&)2+4!
' 7, (99+O1!7B!C d d f f c e\$!%7. #O&9!7B!P7)?+2&9!0OB(42+7O!gVdT<med!RUUT\$!
bddc!` \$!-2(?5(O)7Odl@\$!a&OM&)dl-\$!a(O5dl&O, !%\$!" &: \$!_?2+' &9!47O2#79!7B!C&44+O&2+7O!#&2(!+O!&O!
(?+, (' +7971+4&9! 7, (9!7B!C d d f f c e!2#&O)' +)) +7O\$!%7. #O&9!7B!; &25(' &2+4&9!` +7971: dlgmJel
gKVeTS<VgV\$dlRUUVg\$!
bdmc!` \$!-2(?5(O)7Odl@\$!a&OM&)dl-\$!a(O5dlF\$!67O4(dl%\$!` +O2MdlF\$!3\$!" . HH(#A(dl&O, !%\$!" &: \$!@7' ?&#+O1!
+O2(#C(O2+7O!)2#&2(1+()!B7#!#(, . 4+O1!C d d f f c e!2#&O)' +)) +7O!+O!&4. 2(!5 (&9254&#(!) (22+O1)!
>O!&1(O2LH&) , !' 7, (9+O1!)2. , : \$!&44(?2(, !+O!` ; @!0OB(42+7.)!" +)(&)dlRURU\$!
bdec! dl\$a\$!87NdlP\$!3+245+(dl@\$!a&OM&)dl-\$!a(O5dl&O, !%\$!" &: \$!; &25(' &2+4&99: !' 7, (9+O1!25(!
(BB(42!7B!27. 45!B#(G. (O4: !7O!25(!OC#70' (O2&9!2#&O)' +)) +7O!7B!C d d e d f f c e!+O!5 (&9254&#(!
) (22+O1)dl; &25(' &2+4&9!` +7)4+(O4!)dlSdU!RURV\$!
bdgc!6\$!X(#+2: dl; \$!P\$!Q+947NdlOQ\$!8&l 9(: dl&O, !6\$!6&#O(99\$!6#7)?(42+C(!C&9. &2+7O!7B!(OC#70' (O2&9!
47O2&' +O&2+7O!H: !C d d f f c e!+O!+79&2+7O!)+, (!#77')\$!%7. #O&9!7B!P7)?+2&9!0OB(42+7O!dT!RUd<
RUT!RUUV\$!
bdWc!" \$!%\$!Q(H(#dl" \$!%\$!>O, (#)7Odl" \$!%\$!-(N27Odl&O, !OQ!>\$!3. 2&9&\$!379(!7B!25(!OC#70' (O2!+O!25(!
2#&O)' +)) +7O!7B!C d d f f c e!+O!5 (&925!4&#(!B&4+9+2+)\$!>' (#+4&O!%7. #O&9!7B!0OB(42+7O!@7O2#79!
dV!-VUm<-VVUdlRUUV\$!
bdTc!; \$!Q79A(l +2Mdl; \$!" (22(OA7B(#dlP\$!` (#2Mdl; \$!-45. ' &45(#dl&O, !%\$!P. (HO(#\$!FOC#70' (O2&9!
47O2&' +O&2+7O!&O)!&O!+ ' ?7#2&O2!#7. 2(!B7#!25(!2#&O)' +)) +7O!7B!25(!57)?+2&9!?&2571(O!X3F!; 7, (9+O1!
&O, !?#(, +42+7O!7B!49&)) +4&9!+O2(#C(O2+7O)\$!0OB(42+7.)!" +)(&)(!3()(-!&O, !E#(&2' (O2dlV!S<VVdlRUUV\$!
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E5(#(B7#(D&!)2. , (O2!I +25!9+229(!27!07!47, +01!(N?(#+(O4(!47. 9, !). 44((, !&)!9701!&)!25(: !&#(!I +99+01!27!
?. 2!+O!25(! (BB7#2\$!
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