

2. < í f

表2 发展岗位面向表

v"IP] 2±´.7µ	v"IP 2±´.7µ	/É>,P´.7µ	q?-6,P2± a´.7µ	q?· <í f5ÚL¶e N¼ tÁ	6, P ¶731•4Y A÷ œ t Á
CX5 [Cn] 2±´.63µ	8 p:[K62±´.6307µ	- P =M, d P´.51 = 52µ	918° >´.4-03-02-07µ Aú9l Ž´.6-02-06-11µ :[K6 Ž´.4-01-02-01µ ÷:[P Ž´.4-01-02-03µ € ´.4-02-02-05µ 8 p:[K6 l P ð Ž´.2-06-07-02	´µ :[K65 * < =G L 5 * < ÍKµ 0 x > /t q1x Ç´µ 8 q Q P Á918° / Aã =9lO¼9l 25 :[,° c E 7 P q Ç´µ 9l Q 4Y9l , Ö = 9l ,5 :[1x* < > 1•• PCz r D ^ æ Ò ‡9l P 7 Á P < f Á *Q x!W,° ¶ e ÞB = 5 :[1x* < í f >	Q 4Y918° > Q 4YÁú9l Ž



(一) 培养目标

b l P / ± S) u"ñ • Đ = í ¶ - \$ = í ° %05Ä é žM~ < ,
 F8 Ê)æ /t P,°M6?· ,M~ G G-79l , Y P C x =:[K6 Â1x* < 1b 64õ ,
 ?Ax H,° / ± - ?8¥³,°6, PF%o í Â6, P2ô" = ø í918° . Aü , Â
 9l ,+U Y Ö 8° = Y ÷C^H Y l =9l ,:[K6 ¶ e Â 7 P,°5 :[1x* <
 ¶73 , - ?9l , ÷C^1x* < =918° C x D:[K6,°73 Ñ ,73 Á9l ,Aú x
 D öPÂ =9l ,:[K6 D 8 p 6 =9lO¼5 :[1x* < =918°5L Q D>ž%J ,9l
 c,°AôAx D9l P4ú4y1• - %o ' ,F8 Ê9l P 7 P,°5 :[1x* < í f ,9l
 Y ÷ 8° D ÷C^ Y l í f =9l ½ L Þ µ 918° > í f ,° C > Á ¶ e ¶
 73 Á ð f >

´ Â µ / ± ? ú r

1. 3VC^?·"x

´ µ • Đ Ú c 3 § Y • N¼ 2 Â G 3/t P q • l Ü , ^ -F ©

æ , c 3(8"/t P q • S) = K A ,D+>, /t P q • n ù - r?ø ,

- ?\$' Đ,°(g 3 û U Â c,,"G 8 B U >

´ µ = P à# =F«# ¾4à = = í G ° =B Ô ¾ = @H +U ³ =

'#(g é Þ, ›>,F%o í ü O Â>, p?ú99, - ?/t PCY 1 U Â/t P ø

D EAü>

´ µ - ?8¥ ³,°/t P ø í Â6, PF%o í

´ µ - ? B = •³ œ=(g í ø P =B Ô ¾ = 5 ... ',°

N8¥ ÷C^

´ µ Dá %o › í = ›5Ä, Êô f E]œ+U %oC^ › í = ü F v?ú Đ,°

:N¯ = =

´ µ Êô f •6èG E æFPQ W]œ+U ù*< › í ' Ô ó4è?. F

´ B >, µ v?ú Đ,°?·"x = ù*< › í = ð r Â °

.Aü?·"x

I P. Aü

´ µ 8 pB9.J,° 0.v. Aü

´ µ ÞK6 D | xB> Z. Aü

´ µ :[K610E H. Aü

´ µ Ø m C x D1x*<. Aü

´ µ 9l, :[K6. Aü

´ µ Ø m#¾4Co ù*< D>, p. Aü

´ µ 9l, 7 P1x*<. Aü

´ µ

- μ 9l , | ÷. Aü
- μ 9l8° 0.v. Aü
- μ 9l ½ L. Aü
- μ 9l cAôAx D9l P4ú4ý. Aü
- μ æ È %oF :[. Aü 0.v. Aü
- μ û =,° S) u"ñ* < Ađ =0 œ ½ L 0.v. Aü Â c,, N/ö V5

½ L. Aü >

- μ Ax1Í p Ê+^ 0 b. Aü
- μ 5 #,,* < Ađ. Aü
- μ ? © | x#q Þ,°# Á# ?ú u10E 7 P?ú1 I Ü 0 b. Aü
- μ 6 Đ,° I P9'B#. Aü

°73 Ñ?-"x

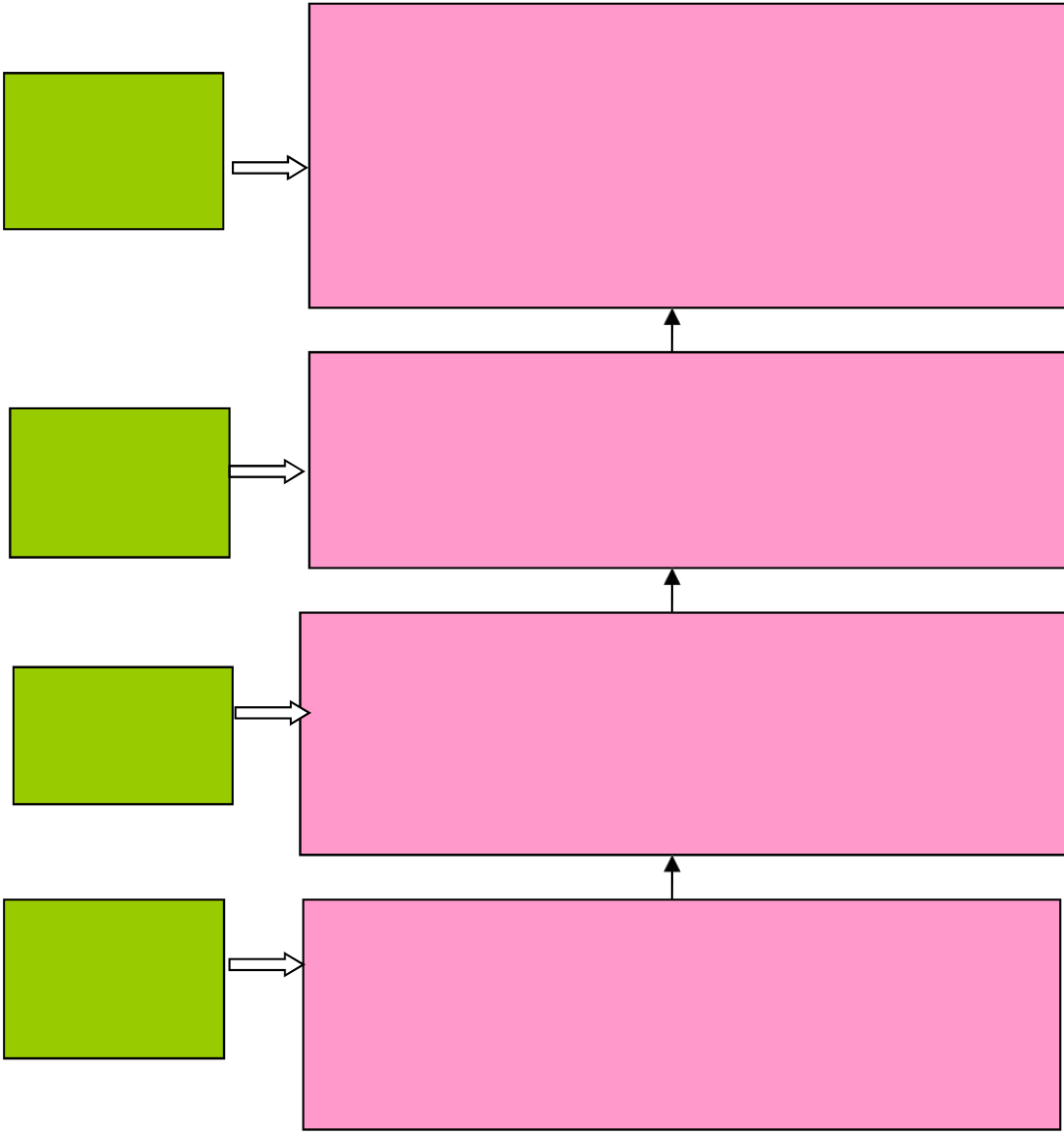
I P73 Ñ

- μ lLü = a* < = < ÆCz İ,°73 Ñ
- μ Ó æ ¥F >,N°#• = é10E73 Ñ
- μ 9l , | ÷,°Hª a73 Ñ
- μ - = D Ø mF >, | x"ÕFP73 Ñ
- μ K6 d73 Ñ
- μ :[K6#q Þ ½ ~,° I '73 Ñ
- μ 5 #,, > B,° Đ73 Ñ
- μ 5‡5 :[K6 P x :*<73 Ñ
- μ :[K6#q Þ10E H D Ù V73 Ñ
- μ K6 d-. ©CX xL\$NÎ :*<73 Ñ
- μ ÍM~L~ MAôAx73 Ñ
- μ 9l , l:[ÍM~F :[1x*<73 Ñ

- $\mu \text{ 9l\#q } \text{p}10\text{E H D4ú4ý73 } \tilde{\text{N}}$
- $\mu \text{ 9l -H}^{\text{a}}\text{C...73 } \tilde{\text{N}}$
- /t P73 $\tilde{\text{N}}$
- $\mu \text{ E}^1 \text{ p,}^{\circ}\text{/t P } \acute{\text{U}}\text{L}\{73 } \tilde{\text{N}}$
- $\mu \text{ 6 } \text{Đ,}^{\circ}\text{4ú4ý73 } \tilde{\text{N}} \hat{\text{A}} \dots \text{B973 } \tilde{\text{N}}$
- $\mu \text{ /t P D - \%}_0\text{)â }^1\text{,}^{\circ}\text{F8 } \hat{\text{E}} \text{ D } \hat{\text{E}} \text{ 73 } \tilde{\text{N}}$
- $\mu \text{ 8}\text{¥ }^3\text{,}^{\circ} \text{LU } \dots \text{' } \hat{\text{A}} \text{ } \check{\text{L}}\{\text{"}\check{\text{O}}\text{FP73 } \tilde{\text{N}}$
- $\mu \text{ 8}\text{¥ }^3\text{,}^{\circ} \text{B}\#\text{@6 } \frac{1}{2} \bullet \rightarrow \check{\text{z}}\text{E}\hat{\text{o}}73 } \tilde{\text{N}}$
- $\mu \text{ 8}\text{¥ }^3\text{,}^{\circ} \text{' } \check{\text{d}}/\text{r } \text{\$ } \pm = \text{C} \times \text{EA}\ddot{\text{u}}$
- $\mu \text{ 6 } \text{Q } \text{æ} = [\text{B}^{\wedge} \times \hat{\text{O}}\text{,}^{\circ} \text{' } \text{'O}$
- $\mu \text{ E}^1 \text{ p } \acute{\text{o}} \text{Đ,}^{\circ} \check{\text{d}} \frac{1}{2} \ddot{\text{E}}\text{:}^{\text{a}}$

(一) 课程结构

B40A < p] W • Æ6, P3V ± W • = I P 0.v W • ´ I P5Ú §
 áB40Aµ= I P ¶73 W • =6, P < W • ´ 6, P3V ± <B4 = I P73
 Ñ <B4 µ> - %_0 , A>ž v/p >



(二) 主干课程与职业岗位能力要求对应关系分析

,° EQ W ~ õ D u10E B4 • œ?·&i FF >, © ,Cz\$Æ * æ >B B40A
^ d ß]œ+U!™.æAÚAü æ , 3 » L ~ õ ,1b 6 ,L* Þ Þ •,°* <Að
Q æ F ÒF • †F B4 8F œ+U j7G , K 2]œ+U ü.æ* <@ •,° 0 b * <
Að = 0 bD%4õ = 0 b ï+ >

´ µ S u ÔD+´ œ , , œ < µ
pCe ± E æ , Q W S) u"ñ* <AðB4 • œ ´ 0 b?·"x F , Ô p S
) u"ñ •6è,°J¾ /] Â Ô ~] , K 2]œ+U0% · ø Ö ÔD+#q Þ , (6Aô
S u ÔD+B4 > œ+U ^ S uB4 • >,° = 2 A , *5 S) u"ñ* <AðB4,° • œ
» ï ,F? Ñ INÍ L'#&iL\$NÍ ,5 > I P(¬&i 6 ‹.J0¬]œ – L ¬
.J4ù#q Þ , œ+U E4ú,° ï E ø D • œ , E4ú F Ò ‹pAú Ð F5 > B
B40A ^ Ô p]œ+U,°/t PCY 1 = ¼ (µ³ U , / ±]œ+U8 q œ –
Â0 œ.J0–2ô/” >

´ µ › œ •6è D ÑAã ´ _ , œ < µ
bB40A –F © p Ñ S) Â –F © q œAæ © Ä •6è,°H ?·AðF&
pF« à , ?·E •6èG c d Ñ 3Lh Þ ŽG © Ä ! æFPQ 1• œ
W Ñ ÁB4 • œ]4è ,°FP. F •%ø8° O P – µ?·"x , Ñ Á* <
Að = Ñ Á ¶73Aã4ù Â › œ •6è p q?· » ï , 4à Á =>, p?ú99 =1
C'#q Þ1• ïM~F >,69 n ÂAú Ð ,%ö œ+U(g 3'# û , }œ+U 3Lh
EAü Â Ñ Á3V ± , Ö p œ+U4ú4ý4à Á] , p Ô ó Ñ"G=Ã > ‹ N+›
Â 0Aô 3Lh D = ÑH C x >

´ µ Ñ Á* <Að´ œ , , œ < µ
FPEý bB40A • œ ,Aß œ+U ¼@ Â Ñ Á* <Að Â 3Lh 0Aô 0.v.
Aü , Ô p 3Lh?ø + = 3 ï ç ž EAü Â Ù § p EAü , N ç(g 3 q •
2ô/” = V µ4Ø8” 0 = Q œ+U52 > 3Lh3VC^ > bB40A c 3 3Lh =
3 ï ç ž = Ñ Á S)=)æ N ç Â ¥L>û = p q?· » ï , •7B4 8

• œ Â • >M̃ ¾,° q\$VF%° ' + ^ , • 7* <AđAè ¾ D-*?ø • œ-.5 > , μ
F + ^ P È %° • œ , Q œ+U,°?ü = b ~ Ò ,:[FV+U Þ#q#2,° • œ
"Q * >

´ μ] œ %°6è´ œ , , œ < μ

E] œ %°6è D › í FB40A eQ 1• œ W •6è,°H ?·4ú FG < , e
œ W %°6è,° 0 b4ú4ý ~ E , e /6è œL~ : I P œ+U 0 b3V ±,° ¢ §
û \$B40A > bB40A e œL~ %°6è ´,° c ù)â8, e œL~ Ô ó3VC^ •
6è Â / ± žM̃ ‹ đ f,°H ?·FJ ° , • e Â F %°6è • œ 1 x , Ô p
œ+U %°C^ = Q œ+U žM̃3VC^,° q?·FJ ° > bB40A o π •6èG N· ,°
E ž 3 πFPQ 1• œ W %°6èB40A • œ = 24è?· F , *5 4pDá%°6è = ›
í1b6 qNÍ , žM̃:s Ô •,° •6è iJ¾ , Dá %°4ù – p q?· •!ë FÆý >* <
,° %°6è* <Ađ •6è Â0 œ,° %°6èKq&òEý0A S) ÷ í •6è = +U#q é Þ
%°6è ¶73 •6è ÄDá %°#q Þ - ? p5 > , E ô f Ô p œ+UDá %°
3VC^ , ùF Dá ù ÂBF ‹ , Â 0 bF Þ ¶73 , Q %°6è3V ±,°-\$,° ,
p / ±] œ+U 4pDá %°6è EAü – Đ 0.v >

´ μ ù* < › í •6è ´ œ , , œ < μ

pCe ±:s Ô c § c d = 3 xL~ E © ÄF 6!› Ö p Â oF] œ+U
S) u"ñ •6è,° E?÷ F ´ c O P - μ= •6èG Ô ¢ » E © Ä
πFPQ 1• œ W] œ+U ù* < › í •6è ´ Ô ó4è?· F ´ • S u »
- μ1• ½ ,2ô"/ , (Aô1 E] œ+U ù* < › í •6è F ¢ § û \$
B40A >B40A / ± œ+U,°8 GAÚ. 73 Ñ = ðL{ "ÖFP73 Ñ =8 GB98,73
Ñ p q?· • œ » i , žM̃ Q œ+U,° a %° ù* <3V ± , p œ+U,°4pDá
‹ – Đ8¥ ³ = › í,° ù* <3VC^ 0.v > QAô#q Þ,° û 1 , %°PÂ E œ –
p • œ W E , ù μ >+U =+U+U ^-. È § Â-. È Ú#w,°#q Þ c Ý+U\$'
q,° û U %°PÂ L ZGÈ œ+U » ù (?,°5 ¼ Â %°PÂ ,°ö œ+U Ý+U p&þ

,^ox. !h Â0% · œ -' # û , ù µ œ+U ^\$' q,^o U Õ cEô f ù* < › í
< = Q ù* < 3VC^,°-\$,° >

´ µ6, P < D g P = 2 ´ 6 µ´ œ , , œ < µ

bB40A e pCe ±:s Ô • c d = 3 xL~ © Ä = Ô • 3" P+U g P

,^o-. © ½ ,2ô/” , Q µ] œ+U,^o g P73 Ñ , 6Aô,°6, P = 2

B40A >FPEý bB40A,^o œ - , µ œ+UAÚAü f.¤1 8 Dá <-\$ =,^oH ?.

] , ¼@ -. ©6, P,^o([, S69 ` ›* <)6, P D v œ I P,^o ©31 ,

FF! ›.¤1 KµF 6B0i Ð,^o <-\$ = ,.¤ Ð ð+U C BLI!ë,°6, P-\$ =

- / Ê,^o+U#q W E , Ô p] œLI!ë œ -,°-\$,°] Â0% ·] >

´ µ6, P #d# • Ð, —x5ë %•E'f ;@

À Q PEý0A cM6?· Â ,° ©Kd. Äü&i Â Q P c i IF} f,°B% p ÂL-Lg ,
~ Á < Æ,° ~ E)æ5 œ+U , žM̃ } œ+U Q æ Q P73 Ñ >
´ µ é Þ ÔD+´ œ , , œ < µ
pCe ± ž 3 •6è] P2ô/” , Ö p] œ+U é Þ •6è , K 2] œ+U
0% · ø D+U Ý é Þ , G1 = P é Þ = @H é Þ = '#(g é Þ,°* < + ,
(^Aô1 é Þ ÔD+B4 > é Þ ÔD+B4 n r*# %o j õ8C =CY 1 • Ú =
CY 1 ç § p1• j+U µ û W # ½ D-™ Ž = W # j+U #7 Ž = W #
55 L p Lš9• = ç 1x* < ' ß* < =O 81x* < ' ß* < 1• ' p q
?· » i > ~ E P m,° é Þ pE³ %o = <™ é Þ,° p?· i E4ú4ý •
œ D69 n , K 2 œ+U ^ é Þ ÔD+ c •6è =Kµ f " = •CW)d , G1
!™.æ,° L+,?ø = ð+U?ø Â - r?ø >

´ µ Pç • S q • Ö* < , F& ´ œ , , œ < µ
bB40A e o æ c ÛG = •6è G ?ú Ð 6Aô,°Q 1• œ W œ+U,°F? \$
B4 > bB40A3]3] *5 ö ~ ePç • S q • = p ö ~?· 4p • 7Pç • S
q • = D m • 7 Â (Pç • S q • F 6 qNî , <5 Ađ =Pç • S q •
(œ =Pç • S q • u"ñ5 #,, œ Â0 œ/t P q • ? `G <5] œ+ULF
F&Pç • S q •,° 0 b1 p = 0 b?ø&i Â 0 b i# , d ß œ+U a %o
@* < @ Â À Pç • S q • ,!™.æAÚÄü ð2±/t P (,° 0 b?ú Á , G
1 0 œ,° L+,?ø = ð+U?ø Â - r?ø , • Ð c 3(“8"/t P q • + Â
§ Ý q • =Q * <) >

´ µ 4Ø8“%}\$Ž œ , , œ < µ
bB40A e o æ -F © q œAæ © Ä • (.J0→ Â4Ø8“ 0 V µ ´
,°H ?· =/p c ÛG = •6èG -. ©?ú Ð6B 6Aô,°Q 1• œ W œ+U,°F?
\$B4 > bB40A \$œ • • (p q4ð , FPEý · > ,!, =*¶*Þ U • =Mÿ ³
*! Ó1• • œ W • , 5 \$œ • § Ý • ðN¼ 2,°8!9 %o5 ,°Mÿ ³ Í ç =

:• C4Ø8" ð(ÿ = ® Á4Ø8" { Á1• , À N ø4Ø8" ½ L D] œ+U S) u
"ñ •6è5 >C- › >FPEý. Aü&,EÉ = û U /6è , µ4Ø8" 0 \$MF >v#è =
#® › ù • , K 2] œ+U Ô p µ³ û % ,. C\$SD •Cl , ¿ •/t P q
• > r 0Aô6; Â %M– Û*# ð >

´ µ] œ9'B# ´ œ , , œ < µ
pCe ± 3 ì •6èG EQ 6,Q I •6è9'B#B40A •œ 0 b?-"x F , / ±
M~ G ¶ e =+U Ý =1x* < = C x1•N¼ , °Q 1• Ê+^] IL ð f , (Aô1]
œ9'B#B4 >B40AF« à Ô+^ p q = U+^ p Û , ° Õ O , LB# •œ* < Að
p q?• = 2 , 9'B#B#@6 0.v. Aü D9'B#10E+› ÂD ½ L ÚL{ p q?• » ï ,
¬Lü < x •œ W E Â P0 •œ !ë p 6 % , ^ / ± œ+U - ? 6 Ð, ° b =
B* =B1 = Ì =B 73 Ñ , Â û?•, ° = Ô+^, °9'B#B#@6. Aü ÂB#@6 ¶73 ,
73 U ^ :0 6, P û¹ A&«#qF +^9'B# , 0 bEô f ž 3Q 1•œ W9'B# Ê+^
73 Ñ69B 4Ý, °"j © , ¬ p DF 6!› Q 9'B#, ° ÚL{73 Ñ % A 0.v ,
F8 Ê/t P ‹ Â5 #,, 0Aô, °?•-"x >

´ µ] œB# ½ ´ œ , , œ < µ
pCe ± E •6èG © Ä žM~ Q Q 1•6, P •6è •œC^H , °9 " E
?÷ F, ° ½ , 2ô/” , K 2 œ+U ^ c œB# ½ œ –, ° 0.v @F 6!› ó?ü
H = e:Ï ù ° = › ž ð r , Q ð ½3V ± , (Aô1] œB# ½B4 > b
B40A B#@6 = ½ • = ®2f = ½ œ = ½ L1• p q?• » ï , 0 b#ë- ¼
c ½ L+, ° 0 b ½ L »#ë > Ø0¬ E œ – p q?• ï E4ú4ý •œ , d
ß œ+U Q B# ½"j © = x5Ä3VC^ Â ½ L ÷ f , ‡FV] œ+U, ° ð ½2ô
/” >

´ µ Ê+^ ½ Ì ´ œ , , œ < µ
pCe ± E •6èG © Ä žM~ Q Q 1•6, P •6è •œC^H , °9 " E

?÷ F,° ½ ,2ô/” , μ œ+U ¼@ Â Â Ê+^ ½ Ï’,° 0.v. Äü ,73’Ö
4ù f Â ï’ ¶ , Q Ê+^ ½,° æ Ï73 Ñ ,(-Aô1 Ê+^ ½ Ï’B4 >
bB40A Á x2± ½ œ Â>, u2± ½ œ Ï’ p q?· » ï> Aè4ù5 >,° ï
E4ú4ý • œ , ^ μ œ+U315 Â n+^,° Ê+^2± ½1 ,° ÔL{+^FJ ¬
Ï’?·N¼ ,9í Q 3VC^ ¶ e ¶73 Á ð f v û =,° Ê+^2± ½1 Ï’ = <
Æ D :*<73 Ñ >

^a $\mu F, ^\wedge \neq L, 7 \neq A, / \pm \text{œ} + U : * < : 0 \neq, ^\circ 73 \tilde{N}, (- 6A\hat{o}$
 $Ax1\acute{I} p \hat{E} + ^\wedge B4 > bB40A \wedge A\beta \text{œ} + U \frac{1}{4} @ Ax1\acute{I} p, ^\circ 0.v. A\ddot{u}, \hat{A} \textcircled{A} \quad 31$
 $5 E\neq, \hat{A} \hat{E} + ^\wedge E\neq, ^\circ \mu + ^\wedge, - = Ax1\acute{I} p, ^\circ 68b \quad '73 \tilde{N} > q? \cdot ; " \quad \frac{1}{4} @$
 $'315, ^\circ \grave{z} > \hat{u} \quad '315 1x^* < D5^* \acute{U}, \tilde{O}4\grave{u} \hat{A} \quad \frac{1}{2} \bullet 5L$
 $E\grave{C}E\neq, \quad \mu = +k \dagger > \check{z} r : * < E\neq, \quad \mu = \% J/p \frac{1}{2} 0u l' E\neq,$
 $\mu, ^\circ \mu + ^\wedge i\# > q? \cdot / \pm \text{œ} + U, ^\circ \hat{O}D + \text{P} \bullet '73 \tilde{N}, \quad \mu$
 $\text{œ} + U73 U _ + ^\wedge \hat{O} \phi 8 \text{P} LE\neq, / n \acute{A} xF >, \neq L : * < , 73 \quad U _$
 $+ ^\wedge Ax1\acute{I} p p \quad D, ^\circ \text{œ} - = + U\#q = ' C x >$
 $\mu \neq \mathbb{I} e \quad \text{œ}, \quad \text{œ} < \mu$
 $pCe \pm G 3 E 3 \grave{i} cK\mu U \bullet 6\grave{e} oM\ddot{Y} \hat{A} \quad \langle ?\acute{u} H4\grave{e} ? \cdot$
^a $\mu F, C \grave{a} f \ddot{O} p \hat{A} \text{P} F \quad Ax1\acute{I} p \hat{E} + ^\wedge 73 \tilde{N} p n \grave{u}, ^\circ \neq \mathbb{I} e 0.vB4$
 $0A oM\ddot{Y} > \mu \text{œ} + U \frac{1}{4} @ = \hat{A} \quad \neq \mathbb{I} e, ^\circ 0 b, + = \tilde{O}^* < = S),$
 $n + ^\wedge - = \bullet !\grave{e} = \mathbb{I} e, ^\circ 0 b \quad ' D \hat{E} + ^\wedge > H \& i / \pm \hat{A} Q \text{œ} + U _ + ^\wedge$
 $\neq \mathbb{I} e \quad - @ \acute{e} \text{œ} - = ' \hat{A} + U\#q c \hat{O}L \{ L\$N\hat{I}, ^\circ 73 \tilde{N} > K 2 \text{œ} + U 0\% \cdot \emptyset$
 $0 \neg \mathbb{I} e \hat{E} + ^\wedge 5 / t P + U\#q \setminus \rangle, ^\circ L, F \ll \frac{3}{4} \cdot \textcircled{C}, ^\circ \setminus * < F\% \acute{e} D\# \acute{A}\# ?\acute{u},$
 $\sim F D \neq / t P \cdot F8 \hat{E}, ^\circ - r? \emptyset \hat{A}CY 1 U, 0\% \cdot = \quad CUCY = \grave{z} \check{z} = \rangle \acute{i}$
 $f \mu + ^\wedge \neq \mathbb{I} e >$
 $\mu \grave{z} \check{z} \bullet 6\grave{e} \quad \text{œ}, \quad \text{œ} < \mu$
 $o \times \bullet 6\grave{e} G E \textcircled{A} \ddot{O} p] c E \text{œ} 3 \grave{i} \grave{z} \check{z} \bullet 6\grave{e}, ^\circ \hat{O} \acute{o} E? \div F,]$
 $\text{œ} + U \hat{E} \hat{U} \quad 3 \grave{i} \grave{z} 315 L \text{œ} - A\grave{a}4\grave{u}, \hat{O} p 5^* \acute{U} 3 \grave{i} \grave{z} \check{z}, ^\circ CY 1 U \hat{A}$
 $73 \tilde{N}, (- 6A\hat{o} \grave{z} \check{z} \bullet 6\grave{e} B4 > bB40A q? \cdot A\grave{e} \frac{3}{4}] \text{œ} + U \grave{z} \check{z} \bullet 6\grave{e}, ^\circ \ddot{i} \ddot{M} \ddot{M}$
 $\ddot{M}, ;] \text{œ} + U W \# + U\#q \grave{z} \check{z} = \# \frac{3}{4} Lh \grave{z} \check{z} = 5 \ddagger 5 \grave{z} \check{z} D Ax1\acute{I} p F \# (\grave{a}$
 $5 N^o Lh = \delta D\acute{a} DCX \acute{Y} \grave{z} \check{z} = \acute{U} FP D \hat{u} >, \grave{z} \check{z} = / t \acute{U} D " x6, \grave{z} \check{z} = j + U$
 $\rangle \acute{i} \grave{z} \check{z} = 3 \grave{i} D / t P \grave{z} \check{z} = \acute{o} \ddagger = 8 \ddagger D \grave{z} \check{z} C \times 1 \bullet, \quad \wedge d \beta]$
 $\text{œ} + U. \pi 1 " E! \text{TM}. \pi \hat{A} (\sim 0, ^\circ \grave{z} \check{z}^* < +, \pm F8 \neq \textcircled{3}, ^\circ \grave{z} \check{z} - \% , \hat{O} p 8$

GLh9973 Ñ >

´ µ 5Ä6èB4 œ, œ < µ
pCe ± E 3 xL~ Ô ç » © Ä žM~ Ö p Â oF œ W5Ä6è ',° E
?÷ F ½ ,2ô"/ , / ±] œ+U,° x5Ä EAü = x5Ä?ø&i , Q x5Ä73 Ñ
Â QFV5Ä,°73 Ñ ,(-Aô1 5Ä6èB4 > bB40A N) †8° e = §?ü8° e =
8TD~8° e =5Ä e8° e1• p q?· » i > Aè ¾ D %oPÂ-.5 >,° i E ,
d ß œ+U †FV x5Ä,° ð+U 1+, , / ± ÂBF Â5Ä,° ð r >

I P 0.v W •

´ µ 9l , 8 p:[K6 ´ œ, µ
p ¼ G1 œ+U!™.x,°:[K6* < + ,.x1 2ô ü,° I P œ – i G ,31
5 AÚAü:[K6 žBÂ , * < Að ž v,°@ Ü /:[K6 ?\$; !AÚAü ,(-Aô1 !š
B40A > bB40A :[K6 0.v , + =:[K6?ø + = 8 p < Æ = 8 p4ü < =
-\$ = 8 p.x Ð = 8 p Ð f = Ý ÷ 10E+› = - r10E+› = \$VF%o10E+› = ùK6
10E+›1• p q?· » i , U ß P È %oAô óAô = 5±5 œ – © &F +^ ~
Á < Æ =B4 8APað =N-\$ • œ = j7GO ê = û ¥ W =Aè4ù5 >1•
P0 • œ i# D •!ë ,# H Eý0A D ÔD+73 Ñ69 n , µ œ+U Â :[K6
* < Að. Aü B , G1 !™.x,° ð+U?ø = - r?ø D:[K6 Í f6, PF%o í?ø ,
/ ± ž v N+› = > ' §C~ = ~8C D Í = ç P •)d = Ä6, ¾1•?ø +
D N8¥ ÷C^ >

´ µ #¾Co6;>, p œ´ œ, µ

p ¼Aß œ+U G1 !™.x,°#¾Co?ø + , /#¾Co6;,°>, p#q Þ?ú Á D
8 p:[K6,° ©31 ?\$; !,°AÚAü , p œ+U Q 8 Dá52 >3VC^F8 Ê5 #,,
)â 1 – Ð 6 `8¥ ¾,° 0.v ,(-Aô1 !šB40A > bB40A #¾Co6; ^+U#q
#¾CoEý0A c#¾Co6; `],°~ F ñ ù* < (· ,#¾Co6;>, p,° ù* < Eý
0A ñ L <?ú Á p q?· » i , U ß AÞAð E = .J0¬ E = L\$

NÍ E 1•P0 73 U e œ+U S5*,°•œ ï# , μ œ+U œ P , ‹ _+^:[K6
- § #¾Co6;#¾Co ù* < Â>, p , G1 !™.œ,°6, PF%o í?ø , - = LU >
,°2ô" =E1 p,° < Æ , " = "ÕFP Â ...B973 Ñ Q æ 2ô" >
´ μ 9l , | ÷. Aü ÔAã ´ ž ÔAã μ
ÔAã 6 ïM~FPEý \N¼ œ+U ñ9l , Ö 7 P,°9l # = Ö , ø?ø
œ - , μ œ+U Â 0 b,°9l #1x* < = ó6Û =Lh<i é =1• ¶ e , %oPÂ
9l8ó 9l G @Gý Ž A › f 8° l ,° žEý0A , ¼@ 9l , +U Ý Ö , °
: `#w0A / | ÷9l , ÷C^ § , 6 ïM~FPEý Ô fC!Aõ9l ,K6 d
4p1% ´: `9l ,L Í =Q ›9l , ¯ 8 p μ μ œ+U ¼@ 9l ,M, d
¯ 8 p,° 6 æ Þ 7 , 'Õ ¿ :2± | ÷9l,° ÷C^ = ;>û = ÷(,1• ¥ >
´ μ 9l ½ L ,Ađ ´ œ, μ
p μ œ+U Â 315 ,°9l ½ L. Aü , 'Õ ¿ \$œ • :2±9l ,° ½ L ¼
(, ¼@ 9l ,° <2± \$œ •-79l ,° q?· ÷0 D(-&ï , Â 9l ,
^ ¼ (C B , U,°(-&ï q#w ½ L , / ± œ+U,° 0 b đ ½3V ± Â/t
Ú/r , ¯ - =9l ,°8° e è# ¶73 Â9l ½ L V ã = Ê+^ Q æ,°
73 Ñ ,(-Aô1 bB40A >9l ½ L ,AđB4 œ -9l ½ LC-\$Æ D V ã = £
]9l2± 0 b. Aü =9l D › í =9l,° ÷Oœ D è# = 3 » LOœ9l - 1•
* <Ađ. Aü Â)ñ*1 ¥ =- .Í =3a.8 ,9l8° Ô 4ù - p q?· » ï > bB4
0AFPEýB4 8Aè@ = ¶73Aã4ù =?ø-A § Cz Ī1•#q Þ4ú4ý • œ ,Gý+^
• = œ =4ù ?6;5 > 4ù p q,° • œ ĩ E >
´ μ 9l8° 0.v ´ œ, μ
p ¼Aß œ e žM~ Â 9l8° ¶73 ,F8 Ê9l8° > D9l ,K6 d1•-. ©
Í f?·"x ,(- 6Aô bB40A > bB40A 9l8° > Â9l ,K6 d ' 1 x D
6, P73 Ñ < Æ5 Ò p Ó œ ,FPEý bB40A,° œ - , μ œ+U'Õ ¿ 9l8° <
2± , £]9l2±,° è# ¶ ,9l ½ LAè@ =# 9l#w0A D ¶ e p 0 b

» i , * < Ađ Ö Ô p • œ • !ë , μ œ + U73 UFPEý Â F - %oN - \$ Â
- . ©. Äü Â ¶73 , 73 & « #qF + ^9l8° DN' ØF > , "ÖFP , F > , 9l , , °

K6 d >

' μ 5 # , , œ 0.v ' œ , μ
p μ œ + U315 f ¼ @ 5 # , , œ < Eý0A = 8 p5 # , , F > , , ° 68b Ö
* < Â u Ò / 3"G5 # , , F > , Å?øB9 Ý , ° Ó æ = i# D • !ë , 9í Í _ + ^
ä?ø5 # , , Â Å?ø5 # , , * < Ađ D i# < Æ)æ Ô5 # , , L\$NÎ , ° - % D73 Ñ ,
B , • pF 6! > œ - ¬ 1 | P. Äü %o A 6 ` • Ô , ° 0.v , (^ Aô5æ!š
B40A > bB40A ; a ä?ø5 # , , œ Â Å?ø5 # , , œ ZG < , ä?ø5 # , , œ e
Ñ"x* < Ađ = #¾Co6 ; > , p* < Ađ = + U Ý* < Ađ = F b* < Ađ = 8 p5 ° * <
Ađ = 8 p g & « * < Ađ p q ? . » i , 6B Å?ø5 # , , œ O 3"G | > n1Í *
Ađ = 3"G | > é Ð * < Ađ = 5 # , , ž U * < Ađ = 5 # , , ÔKμ * < Ađ = g P ÂFP
C]7p6ö * < Ađ = CX u u10E DC] 7 u10E1 • p q ? . » i > ^ • œ , F « à 5
, , * < Ađ + U # q L , ° Ö O , g P p 2 G , 5 > œ + U ÔL { û ë , À C x
, ° | œ p 2 = * < Ađ < Æ Â ! œ W Á < Æ D / t P5 # , ,) æ B — . = Ñ > , pB95
, , œ , ° Ô + ^] Â D + U # q , ° CjF] , 0 • 0 œ + U , ° Ê + ^ 73 Ñ , B40A \$ MFE
đ ½ 3VC ^ = B Ô ÷ C ^ = CY 1 ù Â QFV73 Ñ 1 • / ± >

' μ + k † | x 0.v D Ê + ^ ' œ , μ

+k † | x © &AÚ. F >,69 n , K 2 œ+U žM~ ¼@ +k † | x,° 0 b |
i = 0 b » i Â Ô)æ i# >

´ µ)æ (ÿ#w 0.v ´ œ, µ
p Q œ+U / |Cn#wFP c(ÿ#w>, P,°AÚ. M~ , f 8 Dá | PN¼
c(ÿ#w1x*,<,°-. ©. Aü ,(Aô1)æ (ÿ#w 0.vB40A > q?· » i <
p(ÿ#w* <Ađ 0.v = Ê+^ Ô73 = INÍ(ÿ#w ? `)â8, >B B40AGý 1 x
PŞ Þ4ú4ý • œ ,5 > ® Á ~ ÁF >, < Æ ,# H Eý0A Á69 n , µ œ+U
Â (ÿ#w1x*,<,° 0 b. Aü , 'Õ ¿F Ñ. Aü ^ÿ#w1x* < c,° Ê+^ D
< Ç - =(ÿ#w1x*,<,° 0 b ¶73 , -73 ? ~@ é(ÿ#w1x* < c,° ÔL{L\$
NÍ,°73 Ñ >

´ µ 8 pB9.J ´ œ, žÔAã µ
8 pB9.J eF >, 8 pAôAx:[K610E+),°1b 6!› ,2ô ü,°B9.J
! ¢ < Æ p:[K6,° D5# ´ Ñ ¼ Ø?ø Ó ¢ , p ¼Aß œ+U D.ªB9.J
,°H ?·] =. %o RLü ¥ :*< ¥,°. Aü , ? / 8 pF >,B9
.J < Æ,°73 Ñ ,(Aô5ª E 8 pB9.J FB40A >!šB40A AôAx 8 pB9
.J i ~ = Ô ó 8 pB9.J = a* < D < Æ 8 pB9.JCz Ĩ Â æ Ĩ 8 pB9.J
Û € p q?· • œ » i > N~-\$ p 2 G , 1 xPŞ Þ p q?· • œ ĩ
E4ú4ý • œ D69 n , K 2 œ+U ^N~-\$ c ñ œ = ñ q5 , 6BEô fB4
0A • œ-\$,° >

´ µ 9l , xAú ¶ e 6 = Â ´ œ, µ
p ¼ µ B œ " ¼@ 9l , xAú ¶ e ^+U Ý c,°F +^99 * H ?·] ,
Â :2±9l , xAú i# Â ÷C^ = ü ,73 Ø?ø ¢!™,° | P@ Ü xAú
:2±9l ,C^H 1•4Ý ,!™.ª µ+^Aú9l eB# ,FPEý xAú9l , ´ 09l , ÷
C^ D+U Ý •L*,° ©31 ,(Aô1 9l , xAú ¶ eB40A >9l , xAú ¶ eB4
0A q?· Aú9l,°Aô = =+^"j+^ -?·"x ,9l , ÷C^ ~ F D 8°,° ©6Š =

£]9l2±,° U Î xAú =Aú9l eB#,° µ+^ =Aú9lAx < i# p q?. » i ,
ÔD+ • œ p q ,9l , xAú ¶ e 6 q?. 67 >/p99 , œ+U W 5,°
C Þ ' Q œ+U ÔD+73 Ñ ,9l , xAú ¶ e Â q?. 1 xP§ Þ E K 2
œ+U8 q S69L\$NÎ =@ éL\$NÎ ,5 > E4úApAđ =*# » Í9lAú9l" C'
1•P0 ~ E Q œ+UAú9l,°0% .]= CÙ ©] , Q œ+U,°9l œ l P
52 >3V ± >

3. l P n ù W •

' µ :[K610E H' œ, µ
8 p:[K6+g :[D K6 v ° F , 8 pF :[Í f?."x œ+U -
=E1 p,°:[K610E H D ï ~ æ Ì73 Ñ ,K6 d Í f O?."x œ+U / 7 PF
:[,° ï ~ ?E1 p,°N¼ Õ D Ô ó73 Ñ , p!š(ˆAô5ª E 8 p:[K610E H F
> / ± œ+U ^ 7 P 0 x,° 8 p10E H73 Ñ ,5 > œ+U ¶73 ó ,° = ü
c ? ©10E HG <,° » i ,B40A = ü p Ó ¢ , :[K610E H 0 b. Aü =
:[K6 Q E = ùK610E H = ¢ ©10E H = 7 P ~B—10E H = æ Ý ÷ @ 810E H
1•p q?. » i , U ß 7 PNˆ-\$E³% ,F +^B4 8*<Ađ œ - = ~ Á < Æ = Nˆ
-\$ Ô Aã4ù =99 Á '9b Â/t P Ô - ÔD+#q Þ1•• œ i# ,Gý Eý0A69
n p q =E» ß Ô ' ÷69 n,° i# , µ œ+U73 U'Õ4ù Â Í f ¶73 Â
8 p:[K610E H,° 0 b » i = / ±8¥³,°6, PF% í Â6, P*<) , G1 :[
K6?ø + = C x EAü Â LU ... '2ô"/ , p - F p 6 C 8 p:[K6 6; -
Ð8¥³,°. Aü = ¶73 0.v Â:[K610E H%'C^ >

' µ | x"ÕFP D ¶ ' œ, µ

p ¼Aß œ+U G1 !™.ª,°"ÕFP* < + , 'Õ ç!™.ª,°"ÕFP ¶ Â | x
B#@6 , p œ+U Q û | - Ð 6 `8¥³,° 0.v ,(ˆAô1 !šB40A > bB4
0A 0 b"ÕFP = | x"ÕFP =5±5 "ÕFP =B> Z. Aü =B> Z ¶ =B> Z
10E+>1•. Aü p 0 b » i ,FPEý ~ Á • œ# = W B> Z1• ï E / ± œ

+U8¥³,º/t Ú73 Ñ ="ÖFP73 Ñ ÂB> Z73 Ñ,º B ,Aß œ+U ~ F •N =
AÚ-U Â †?ø,º6, P 7 Ü , º Ä"ÖFP ,73 µ 6 Ð,º ' Á Ñ >

´ µ µ ∈ Ô x ´ œ, µ

µ ∈ e ùK610E+› 0 H ? •!ë •6 , p ¼Aß œ+U G1 !™.x,º µ

•:[K6 =/t5Ú:[K6 =8 È %:[K61• p q?· » ï , * <Ađ D Ô N-.5
>,° ï E 6 ‹ • œ ,Gý+^ 1 x69 n ï# , *5 æ È % © &F :['
Â æ È %:[K610E HF >,69 n , μ œ+U73 U&«#q _+^ æ È %:[K6 ï E ,
p 7 P@ é ÔL{ :[K6L\$NÎ >

´ μ 9IO¼5 :[D1x* < ´ œ , μ

p ¼Aß œ+U ¼@ 9IO¼F 69I Ý P ‹,°H ?-4ú FG < , /9IO¼
1x* <,°* <Ađ. Aü ? 6 ` žM~,°AÚAü , B , •73N¼+>9IO¼5 :[1x* <,°
ÔD+F ' ¶ , } ` ›9IO¼5 :[,°"j © , (6Aô bB40A > bB40A
9IO¼ P,° ‹ =/t P Ô73 5 :[(~&ï ,9IO¼F :[D10E+> ,9IO¼
~B— D ÷(, %FV ,9IO¼ ð Ñ =CX Ñ =(ÿ ÑCz\$Æ1x* <1• p • œ » ï ,
FPEý* <AđAè ¾ = ~ Á < Æ = û ¥ W 1• P0 • œ •!ëEô f • œ-\$,° >

´ μ 9I ,L ÍK6 d ¶ ´ œ , μ

bB40A ^ p L œ+U,°L ÍK6 d I P ¶73 , / ± œ+U73 U o π
qG ,°K6 dAx HF +^ C BK6 d ¶ I Đ •>, ï ~,°73 Ñ , q?·J¾ /
9I ,L Í5 :[,°Eý0A c ,K6 d#w0AAôAx =K6 dB#@6 =K6 d 7 Ü =K6
d ï# =-\$ =#¾Co6; ,° ù* < < Æ = , ‹ ÛF N' Ø = DN' Ø Ú#w D"Ô
FP1• » ïF >, • œ > q?· • œ ï# p* <Ađ D ÔD+-5 > , • œEý0A
cF +^,° q?· • œ •!ë ? ÆAè ¾ = ~ Á < Æ = 1 xP§ p • œ =N-\$
• œ1• ï# , ^ Q œ+U < ÆL\$NÎ Â@ éL\$NÎ73 Ñ,° B , ,Kq&ò œ
+U,°B#@64ú4ý73 Ñ Â ï '73 Ñ , p œ+UN° _ 6 ‹" PAôAx © < g
P % A8¥ ¾,° 0.v >

´ μ 9I , 7 PAÚ. ÔAã ´ ž μ

bB40A ^FPEýAß œ+U\$' › > ' W 7 ø?ø = b 7 P-. © ð Ž
Aè@ 1• ï E , žM~ ¼@ =AÚ. 9I ,:[K6F 66, P , ¼@ 9I ,:[K6
,°5 :[W E D ï E , Q 6, PAÚ B Ü >

´ µ 9l8° >69A÷ ÔÃã´ ž µ
9l8° > F p9l>, P-\$ f 6 p3]5p,° ð f , p ¼F8 Ê/t P /9l8°
> ð f,°.ç]M6"xAô5æ ¼9l8° >69A÷ ÔÃã > o æ c4Ý9l8° >Cz rA÷
?.x , 9l,°C-\$Æ D <2± = :2±9l ,,° Ö 8° è# ¶ =9l -
. Äü =Hª"j. Äü =3a.8 ,,°HªC... DF?Cc =9l8° C x =9l8°%J/p =9l
-Gf =1• iM~ p L œ+U*<Að. Äü , ¬ p L4ù – • » Ø Á9l8° ' p
69A÷ Ô G < >

´ µ Aú9l Ž69A÷ ÔÃã´ ž µ
o æ c4ÝAú9l ŽCz rA÷?.x , Aú9l)â ¹ =Aú9l+^"j =+^ - =
Aú9l eB#,°*<@ 1• iM~ p L œ+U*<Að. Äü , ¬ p L4ù – ?0 0 b9l
2±,°Aú9l0A Å ' p69A÷ Ô G < >

´ µ " P •6è´ ž µ
!™.æ,° g P?ø = P?ø-* Û § f" P+U73 C73N° _ ´ f >F8
,° ' Í f , p ¼Aß œ+U G1 !™.æ,° g P?ø = P?ø ,(^" P •
fAô5æ ¼" P •6èB40A , bB40AGý+^Aè Ý ¾B4 ï E / œ+U ^" P f
F >,° 6!W" E¹ žM~315 ,° S) •6è , " P •6èC^H ,°³ ... /" P
+U g P 'C--v C % fH ,° '+^ , ^ 6 Ð0A Ü @73E» ß" P+U ý ~
fC! G/t P ,=Ã >/t P >

´ µ " P Ô – D" PAôAx´ ž µ
" P+U ^!™ EF › ' Í f • D œ+U f 7 P Ž @ 8"Eç ~Eý
0A c P ? CF8 Ê , p ¼5 œ+U 6`F8 ÊEý0A , • p ¼Aß œ+U ^F8 Ê
U » /7 P û è ? 6` žM~ ¼@ =315 é*< D Ê+^F › ' Í f v
P =. Äü ,(6Aô" P Ô – D" PAôAx B40A , bB40A 0 b ^ Ô – «
f 'Eý0A c Â F > bB40A 7 P ÔL{ ' Í f Ô – FPEýB9
.J0¬ ,52 >F +^ v œ l P. Äü , p 7 P)"1 AôAx æ İ9l Á#q p1œ H ,

9| 7 P 9| Ý ÷ ùK61OE H1•p q?· » ï ,Gý 7 P 2 > D œ W 2 >
-5 >,° 2>| •œ WE , 7 P 2 > ¢ ' û ë œ W • > ¢ '
÷,° Eï 69 n ĩ E , µ œ + U9 í í v F ? | P ĩ GE¹ p ž M̃ , ° + U Ý Ô
+ ^ . A ü Â ' ¶ 73 , p F 6 !) E ô f . © í f ¶ 73 ? : " x – Ð 0 . v >

I P 73 Ñ ‹ B 40 A

' µ 5 ‡ 5 : [K 6 ' œ , µ

L Å - v / t P 5 ‡ 5 F P A å ¶ e , ° æ > 8 , ° ‹ , 5 ‡ 5 ¶ e (5 F ¼

: [K 6 û N ± , ° - , : [K 6 ð Ž C ø 5 ‡ 5 : [K 6 ¶ e g # ¾ ¾ 1 ` ›

' , 5 ‡ 5 : [K 6 e 8 p : [K 6 * < A ð ^ È 6 Š 5 ‡ = + k † | x © & @ , ° Ê + ^ ,

, ‹ _ + ^ È 6 Š 5 ‡ Ñ , ° : 0) æ ¥ ¶ e › 1 x * < # ¾ C o 6 ; M 6 " x F p : [K 6

ð Ž û \$ B 4 , p ! š (^ A ô 1 E 5 ‡ 5 : [K 6 F B 40 A > b B 40 A) å ¹ < Æ Â @ | ÷ , · D # (H v i ú p , 5 ‡ 8 x ©

5 :[D1x*<B4 , ÷(,5 :[D1x*<B4 ÷(, ,F& , ÷(, ‹ (, ÷(,
P μ,° - r , ÷(, a > V ã , ÷(, ³ C , ÷(, , n , ÷(, ½ L p q
?. » i > _+^ P È %o • œ , ~ ÁAÞAđ , @ 8" ¨%J1• P0 • œ i# 4ú
4ý • œ D69 n > K 2 œ+U ^ œ - c G1 +^ mM6"x8) @,° EAü ,Aã4ù
œ+U Â Ø m Ú#w,°6, P3V ± , / ± œ+U,° ù*< μ 73 Ñ D LU > '
2ô/" >

´ μ 9l8°9'B# ´ œ , μ

p ¼ μ c 39l ½ L * ³ fC! G L+, , / ± œ+U ø9l , ¼@ c 3
½ L ,73 U+^9'B#"ÕFP V ã c 39l ½ L,°73 Ñ ,(- 6Aô bB40A > b
B40AFPEý9l G0 C =9l ,,° l' è# #w0A c,° l PB " } , l P
eB#,° 5 ,Aß œ+U 0 b - =F +^9'B# ›F >,9l ,:[K6 P μ 9l
Á C x,°73 Ñ >

´ μ Ú>ž < Æ´ œ , μ

p ¼ Ö\$' /CX x Ú>ž,°*<@ , Â F +^CX x Ú>ž < Æ ÂAú - 7
P5 :[F Ò ÂCX x(i ë,° i# , 0 b - =FPEýCX x Ú>žAú -Eý ñ Â
N°#• ` ›,°73 Ñ ,(- 6Aô bB40A > bB40AF« à g P p 2 G =
• œ p c ù = 1 xP§ P / ± œ+U6, P ¶73 p 0 &i ,°AôAx*< + ,
Cz ÝCU p>ž < Æ = _#Ú>ž < Æ =)æH #wH >ž CX x Ú>ž52 > < Æ
p q?· » i ,Aß œ+UF >,CX x Ú>ž < Æ i# Â ¶ ,°Aã4ù ,73 UF8 Ê
` › ' Í f cCX x Ú>ž < Æ ,°M6?· >

´ μ 9l D › í+U#q ´ œ , μ

p μ œ+U Â 315 ,°9l D đ2± › í » ^6Š31,° 0.v. Aü , \$' q
%o P f9l / Ä đ2±Dá %o › í ù*< › íC- f,° ? _ '+^ , - = < Æ
9l D:[± =9l D › í,° ©31 0 œO¤9l,°*<Ađ Â ÔD+73 Ñ ,(-Aô1
E9l D › í+U#q FF L B40A >9l D › í+U#q q?· V5 c ,,9l ½ L

Â)æ 9l0 œ.J0¬ p b %o ,B H ¼ c ,,9l,°C-\$Æ = ‹ Â V ã,° ¼
(Â ¬ %o)æ 0,° ð ½2ô/” , ¬ ^ ž æ,°7 ¥ A ,+^0 œ,°?ü@ ›H
æAÚAü9l,° »#ë Â › í - r1• » ï p q > bB40AFPEýB4 8Aè@ = ~
Á < ÆEÞAð =?ø-A § Cz Ī1•#q Þ4ú4ý • œ , / ± œ+U ?* < ? ðLF
F& Á Ô ?ú99 >* <Oð9l,° – % >

´ µ c ,, ½ L (´ œ, µ
p ¼Aß œ+U Á?ø @ žM~\$' › f ¼@ /OE 3 Ö { = f ½ LF• Ý ,
Â c 3 ½ L,° 0 b(· =2ô/” , 6B * ³ f* <@ c 39l ½ L ,(6
Aô bB40A >B40A f* <7 ¥ =5 #, U =/t P5 °1• ĩM~ 5 c ,, "G
,° ½ L+U F p l ,8 F 8) c ,, ð"G § Â 3 F1 F 6 ,!ë » c ,, ½
L8 +U f 65 = P y =L¼- = »-7 ==Ã > =L~ ä 6 æ =&ø'Ö E ä =
=K æ+U,° ‹ ¼0A > • œ c _+^?üNÇ = ¼ (® {1•Cz Ī , F +^ ¥
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6 Ð,°N) †5Ä œ. Aü 9l Á#q Þ c,°Gf † >

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6Aô bB40A > bB40A 9l -,°#w N° Á ,5 > ¼ ,°Oð9l ĩ E ,
9l -,°0 2± = †C^ =FV Á = Ö+^1•. Aü p q?• • œ » ĩ , _+^ Ô
(ÿ ‹/p =* <Að 5 1• ĩ EAß œ+U Â -. ©. Aü >

´ µ5 ®B B HªC...

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%o)æ,°9l ½ L ,(6Aô bB40A > bB40AFPEý5 ®B B ,°C... Æ =B+B1 ,
/ ± B ½H³C...73 Ñ , œ – B ½C... Æ. Aü , Q œ+U ½ œ3V ± , Ö
p ð ½2ô"/"ÁL¬ , ÷ ©5 ® >

- œ#q P ,L* <Gf>ž ´ ?÷Lz>ž µ
- 6, P3V ± ‹ W •• œF 0A>ž ´ ?÷Lz>ž µ
- I P 0.v n ù W •• œF 0A>ž ´ ?÷Lz>ž µ
- I P 73 Ñ ‹ W •• œF 0A>ž ´ ?÷Lz>ž µ
- žB4 , œ ,5 Ax>ž ´ ?÷Lz>ž µ

(一) 专业教学团队

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¬ ÍQ W •>Cz r > I P • œ LU c ? 6 Đ" Á,° ²6, • > ,²

6, • > Ê e b p L b>, P,°)æ p I ì , ²6, • µ û ÔD+ • œ D

Ô – = 2 1 x p q , v µ û • œ 1 x – I PB4 œ , q I,°) >

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œL~FPEýGý » / Â L K,° Í Ñ à ó , μ b I P (? 6 e6,
0&5 °F8 %o , œ ¼5 ° N/ö , œ5N5 ° >*< , aU°5 ° ...B9 , I ²
5 > , F'Õ p { % #q Ñ Â N Í Ñ,° >CzLU C >

/ • >F \$ /Aã,°?."x

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0A oMÿ = ¶73]C' = I P +U1• iM~,° # Â5 PÂ , ¬ < /Aã œ –
F Ò ^ b •.J Ú Â Â4Ý œL~F >,"} Û Ú#w >

(二) 教学设施

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>û5¤ ¬ 78¥ ³(i 7 , 1\ >3] [+Å™?."x = = D t = 7F9+UFP
F%o+{FP Lq >

2. W » Ô – ÔAã Ú

W » ÔAã Ô – ûN± - =9I Á/r ÔAã Ú =9I , xAú1• ÔAã Ú ,
q?·Aô óAô = !H ?÷ A>ž >

1				50
2				50
3				50

(三) 专业教学资源

1. $\hat{A}^{-1} D \cdot \text{œCz}\$Æ \acute{E}$

$C \tilde{a} * \text{æ} \mid P5\ddagger N \ll , F 6! \rangle \{ \hat{O} \cdot \text{œCz}\$Æ \acute{E} > , < b \mid P \cdot \text{œAx} H = \cdot \text{œ} \mid 4\grave{e}1 \cdot \cdot \text{œ} \frac{1}{2} , q \ddot{ } n \grave{u} B40A, ^{\circ} > \cdot \text{œ} = 2 \text{œ} = \text{œ} + U \text{œ} - = 2 \text{œ} = \cdot \sim = B4 , = - \hat{N} \acute{E} 1 \cdot \cdot \text{œCz}\$Æ @5\ddagger , \neg , * \text{æ} >$

2. $\cdot \ddagger ? \cdot "x$

$\mu \text{ s } \%73F?+\wedge NC^{\wedge}, ^{\circ} 3 \grave{i} ? \acute{u} H \cdot \ddagger , \cdot \ddagger \gg \grave{i} \acute{E} \{ < \%_{oo} \} \text{æ}$
 $1 \times N^{-} \$ KN \frac{1}{4} = 6, P73 \tilde{N} 2 GB40A, ^{\circ} A \hat{o} Ax S) , 5 > 9 \mid 8^{\circ} D9 \mid , K6$
 $d \mid P : \acute{I} f6, PM6 "x , Q \text{æ} \gg \grave{i} , 0 \text{œ} A \hat{o} Ax , \grave{i} \tilde{o} \text{œ} + UB4 D4 \tilde{o} @$
 $\text{œ} - >$

$\mu \acute{E} < b \mid P6, P \# q \text{P} < @ F9 \ddot{ } \text{®} \acute{A}, ^{\circ} 1 \times N^{-} \$, ? \hat{A} F$
 $1 \times N^{-} \$, ^{\circ} M6 ? \cdot \hat{A} 1 \times N^{-} \$? \cdot "x4\acute{u}4\acute{y} \cdot \ddagger \gg \grave{i} > FPE\acute{y} \hat{O} x ' p \mid ,$
 $K \rangle \hat{u} ? , ^{\circ} * < A \tilde{o} . A \ddot{u} , \hat{O} \ddot{O} \hat{O} D + ' \gg \grave{i} , p L 0 b * < A \tilde{o} \wedge \hat{O} L \{ ' ,$
 $c, ^{\circ} \hat{E} + \wedge 73 \tilde{N} >$

$\mu \cdot \ddagger \gg \grave{i} \acute{E} \%_{oo} \} \text{æ} \sim F] = FP + \wedge] = \hat{O} + \wedge] , \mu \cdot \ddagger * C \mid F$
 $\mid P, ^{\circ} \langle \hat{A} \hat{O} L \{ M6 ? \cdot >$

3. $4 \text{œ} \frac{1}{2}) dGf = 0 b ? \cdot "x$

4 œ ½)dGf =73% Cé ð f / ± = I P 0Aô = •0 .J1• ',°M6
?· , ï ð >+U B = UL; > I P2± 4 œ ½)d ; " Æ ? ©9l8° D9l ,
:[K6 ïM~ I P* <Að = ¶ e = ï# = S5* Ô x '2± 4 œ Â ½)d >

(四) 教学实施

?'• • = œ = • > 6 ,° q %o Õ O , o ðB40A]C^ , Gý+^*#
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œ Ç Ê+^ ' # = ~ Á# = 1 xP§ Þ# 1•)æ • œ ï# Ç { < _+^
01 Þ È6ŠFP Aô = = P È %o =5±5 =0°L*1• ¥ L !ë Ô ó • œ ,
0% · 6 < >+U • œ È Þ ,] Ñ W 2 œ+U8 q œ - =8 q Ø3X , Eô f
§ B œ - = § B Q ,°-\$,° >

(五) 教学评价

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• 7* < Að D ÔD+- .5 > ,°* < + , # H /52 > 3VC^ ,°Aú - , 0· 0
I PB40A D ÔD+ Í f / Û ,°(-&ï , 01 n4é> , P 7 P Â/t P ? © ï
M~4ú4ý ø D ,° ~ F] P y69 nAú - %o31 >
2. Aú - ? · "x
´ µ :B40A,°69 nAú - ï EF? ?·1\ > E 6, P ¶ e œL~ œ
+U F5 1x* < Ô# F ´ L~ O P - µ ,°- . ©?ú Ð >
´ µ /œ+U,° œ P69 nAú - » ï ²N´AÚ. = ¶73 = û U1• ïM~ ,
%o)æAú - = ü =Aú - q %o =Aú - ï E =Aú -Eý0A,° P y L >
´ µ Ö p / • œEý0A,°C^H - Ý , oMÿ • œAú - ,° = ü Â ï# >

(六) 教学质量 管理

01 I P 0Aô Â • œC^H B ã D oF p l , › ž I P • œC^
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oMÿ V5 ,° œ+UAú - •!ë Â ï# , µ# n l g P ‹ f = >
' 7 P =/t P = ìKµ ø D œ+UC^H Aú - ,Gý Eý0AAú - D5 ÒAú
--.5 > , ‹N^Aú - D52 >Aú --.5 > , q5]Aú - D ‹]Aú
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©# Aú -,° P y] ,5 >B4 8 L\$ = œ+U ' P = © ,#•PÂ =
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žM~52 >Aú - œ+U73 Ñ >

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P œ W œ+U n>,p?ú99 F Ç

' µ Â Q 1•6, P œ W ûN±,° S) u"ñ* <Að =0 œ ½ L. Aü ,
- ? 6 Ð,° ð ½3V ± Â52 >3VC^ Ç

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ï G g P M ~ G í f ,° ' Ç

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2. - %o?-"x

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b3V ± ‹ œ < µ, I P 0.v W • D n ù W • œ< , ' a ÔAã Ô
D+)â8, œ < µ, I P 73 Ñ ‹ W • œ < ' a ÔAã ÔD+)â8, œ


< μ >

μ 69 c4Ý9l8° >A÷ L c4ÝAú9l ŽA÷ œ >

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Lz < 2 Æ ĉ §F? \$B4B40A>ž´ ?÷Lz>ž 6 μ

Lz < 3 Æ ð f / ± ĩ ~ * x ¯>ž´ ?÷Lz>ž 7 μ


职业技术学院2019级教学计划表

专业名称：茶艺与茶叶营销

培养目标：复合型技术技能人才

学制：三年

招生对象：高中毕业生及同等学力者

表一 教学活动时间分配表

环 节 学 期	理论教学 (理实一体)	入学教育 军训	课程 设计 大型 作业	课程 实训	专业 技能 综合 实训	社会 实践	考证 实训	毕 业 指 导	毕 业 教 育	顶 岗 实 习	毕 业 实 习	毕 业 设 计	机 动	复 习 考 试	总 周 数	假 期	总 计
1	16	2												1	19	4	23
2	18			1			1							1	21	8	29
3	17			3										1	21	5	26
4	17						1							1	19	7	26
5	17				2									1	20	5	25
6	0								1	10		6	2	1	20		20
合 计	85	2	0	4	2		2		1	10	0	6	2	6	120	29	149

表二 基本素养及拓展模块教学进程安排表

课程类别	课程编号	课程名称	课程代码	课程学分	课程学时			年级/学期理论课周数/周课时						考核方式		备注
					总学时	其中		一学年		二学年		三学年		考试	考查	
						理论学时	实验实训学时	1	2	3	4	5	6			
基本素养必修课程	1	思政基础	0601025	3.0	48	48		4*12							1	
	2	思政概论	0601024	4.0	64	64			4*16						2	
	3	形势与政策	0601028	1.0	16	16		4*2	4*2						2	
	4	思政实践	0601065-0601066	1.0	16		16								2	①
	5	入学教育与军训	0801001	2.0	56		56	2周								15天
	6	军事理论	0801178	2.0	32	32					2				4	
	7	大学体育	0603001-0603004	8.0	144	20	124	2			2	2			1-4	
	8	心理健康教育	0601039	2.0	32	32		2							1	
	9	职业发展与就业指导(一)	0601030	1.0	16	16		1							1	
	10	职业发展与就业指导(二)	0601030	1.0	16	16					1				4	
	11	创业基础	0801080	2.0	32	32					1*16				4	
	12	劳动实践	0801080	2.0	32		32								5	
	小计				29.0	504	276	228	5	2	2	5	0			
基本素养限选课程	1	马克思主义原理概述	0801179	2.0	32	32	2								1	
	2	红色潇湘	0801184	2.0	32	32		2							2	
	3	大学英语	0603001-0603004	8.0	120	40	80	4						2	1	
	4	大学语文	0201026	3.0	46	46		3							1	
	5	应用文写作	0201039	1.0	16	16			1						2	
	6	中国优秀传统文化	0801180	1.0	16	16			1						3	
	7	湘商文化	0201232	1.0	16	16			1						2	
	8	经济数学	0602001	4.0	60	60			4					2		
	9	计算机应用	0401001	2.5	40	20	20		3					2		
	10	信息技术	0801181	2.5	40	20	20		3						2	
	11	安全教育	0801080	1.0	16	8	8									
	12	美育课程	0801182	2.0	32										2	
小计				20.5	314	206	108	7	13	0	0	0			②	
基本素养拓展课程	1	网络通识课程														
	2	校内公共选修课程														
	小计				4.0	64	64		0		2	2	0	0		
合计				53.5	882	546	336	12	15	4	7	0	0			

①思政实践第一、二学期各开设8学时；

②创业基础，另安排选修网络课程16学时；

③劳动实践课以分散劳动方式开设，根据学校相关管理办法执行；

④大学英语分层授课，第一学期开设60节；第二学期A级班不开课，B级班开设60节；

⑤安全教育，第一、二学期各完成4学时理论授课，第三、四学期开展比赛、讨论、演讲等多种形式安全宣传教育；

⑥开设《硬笔书法》《音乐鉴赏》等美育课程，由学生选修；

⑦基本素养限选课程要求学生从12门课程共30学分中，修满20.5学分；

⑧网络通识课程和校内公选课程详见“公共选修课程表”。

表三 专业基础及核心模块教学进程安排表

课程类别	课程编号	课程名称	课程代码	课程学分	课程学时			年级/学期/理论课周数/周课时/实训周						考核方式		备注
					总学时	其中		一学年		二学年		三学年		考试	考查	
						理论学时	实验实训学时	1 16	2 18	3 17	4 17	5 17	6 0			
专业基础课程	1	经济法	0301005	2.5	40	20	20			3				3		
	2	经济学基础	0103001	3.0	48	40	8		3					2		
	3	电子商务基础与运用	0103003	2.0	32	20	12			2				3		
	4	现代物流基础	0103028	2.0	32	20	12				2			4		
	5	茶叶市场营销	0102001	4.0	64	40	24	4						1		
	6	消费者行为学	0102067	2.0	32	30	2	2							1	
	7	茶文化概论	0201187	3.0	48	30	18		3					2		
	8	茶叶概论	待定	3.0	48	30	18	3							1	
	9	茶艺基础	0104231	4.0	64	14	50			4					3	
	10	市场调研	0102002	3.5	56	28	28			4				3		
	11	茶叶审评技术（一）	0104248	4.0	64	32	32			4					3	
	12	茶叶审评技术（二）	0104248	4.0	64	32	32				4				4	
专业核心课程	1	茶馆经营与管理	待定	3.0	48	28	20				3				5	
	2	营销策划	0104236	3.5	56	28	28					4		4		
	3	茶席设计与茶会组织	0104251	3	48	24	24				3				4	
	4	茶叶门店销售技巧	0104247	3.5	56	28	28					4			5	
	5	新媒体营销	0104246	3.0	48	28	20					3		5		
	6	商务沟通与技巧	待定	3.0	48	28	20					3		5		
	7	广告实务	0104227	3.0	48	28	20					3		5		
小计				59.0	944	528	416	9	6	17	12	17	0	37	26	0
实践实训	1	茶叶商品知识实训	0104288	0.5	14		14		0.5周							
	2	茶叶企业认知实训	0104166	0.5	14		14		0.5周							
	3	茶艺师考证培训	0104263	1	28		28		1周							
	4	市场调研实训	0104260	1	28		28			1周						
小计				2.5	56		56		2周							
合计				61.5	1000	584	472	11.5	6	17	12	17	0	39.5	26	0

表五 周课时及学时统计表

年级	一年级		二年级		三年级		合计	模块	节(周)数	教学时		周	实	周	实	
	周	实	周	实	周	实				周	实					
0	12	0	17	0	0	17	528	1032	1560	专业基础及核心模块	9	0	6	0	17	
0	2	0	2	0	0	0	98	114	212	专业能力拓展模块	0	0	0	4	4	
0	24	0	19	0	0	17	1172	1482	2654	合计	24	2	24	4	26	
比例:	33.2%								基本素质及拓展课程学时数占总学时							
比例:	19.4%								专业基础及核心课程学时数占							
比例:	55.8%								专业能力拓展课程学时数占							
合计:	1485								学时数占							

Lz>ž Ā

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B40A CO&		B40A]C^		B9 "2- a	
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x : x n E?÷					
1. " >					
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(1) B9 a2± a q?· e =B40A CO& = œ , œ < = 6B4 ,L* = Ő 6 L ' 6B40A =
 B40A]C^ B40A,° ú \$ ÂF? \$ "] 69 n ě E1•,° P >
 B9 a ÁN e /B9 a » ě B9 a D ě f / ± ě ~ L û ě,°B 4üB* D >
 b>ž 6 E ? 3 , I P •.J Ú = Â4ÝL~ G = • x :: Ž 6 3 >