

2024

Oü=" *e,äl 5.4XO±_ç • 2010-s1x Å-ùlÊEf%ü*µ1 Dd/&4 s | h•1x6+HÐ J yö 5. 9
...!ÿ_ 1 %üOü="Ð+T Xâ ²Oü="díg—#<à²%ü*µ`ì(&Oü="1 Ddeÿ;AO Z½lÊEf <,%üFò; (&* " «o
5.h•1x-ÿZ½Oü=" *e,äl Ef 101?ix7 J yö 2019-s1 7 d_ h•1x%ü*µ ÿ<@6+HÐ -ùZ½
?,o 2021-s_ ^Æ4XO±_ç,äl 4XO± Z£ZÀ <1 7 Oü=" *e,äl œ1W "" *e,äl 1•6. " ÿMi*e
HÐo <'EÖ" FòOü="#"î CED Oü="JHg...&þo +) •Oü=" ;" ,ä ;B@',#<6O4~Ef £"Ê*eHÐ <

fa# %ü*µOü="1 Dd`ì(&eÿ;A#<Oü=" ,ä"î2 Mi"Ð+TX€;Ao&ø z v6 Qn(| 14†L z ,*µ%ü/Ä.ÿ %ü
eDXÅ`Í#<! 4†K½H)p2<2àOü="Ah`ix4G= <^k" !(D'E÷ rEfOü=" ,ä1•6.oOü(&'@c" ,ä Fò;,"
,ä ((@5; " ,ä Ð Ah" ,ä †Oü="JHWK #<g...&þ Í Š" ,äD † Ð †J C †1•6.J C Q•Oü Î2' ;
^Æl Z½Z †1•6.-ÿ"Ð ;HÐ*eG luJH,ä [o "™&ùG? ;*¼ ;9Oü!š ;ixL † ;6 /Ä.ÿ ;Oü1Ä.Ro .¶
5y RN•!² gfa"Ð+TEf Hç dç †1L#<! 4† 11Lo 1 9H= : H-ùZ½O #<2#Bi †o †!š1 %ü*B "G²
^½+ï#<G² ,#< "Eí7 <

6+ *eD :Ô #_ ^Æ 5-s,â"ðEfH= #< g...&þEf,ä [o ^½!/(• Ef"Ð+Tgf6 o!
o 1o OK Oü!šo! v6 Mû# ^İD'Pé@5HÐ*e ;,äl &ùG?#< FäZÅo ~D'B` âOü=" ,ä,ä v#<1•6.o
! 6•-uXâ ²Oü=" ,äE÷ rEf-ÿ"Ð Z½Z #<gxEíJ C JH4,fa(6A,äl díg—EfOü!šo v6 ! 4†K½H)#<^,
.9Ef,äl *•âOü!š <
o 2oH= † úo!v6 H= : H77.Å ö ;XÅoQn(|Ef 14†H= HÐ*eL zo/i*†,äl %C #<OK _R.¶o
v("î2 Mi"Ð+TC .ô <
o 3o ;ž_ £<@o! v(Qn(|Ef%âe K½H) ;;ž_ Wg^½Oü!š#<ç4†" £<@Oü!šo Oü(Ö # [-u&'(
*eHÐOË5n%âe ,WK ~OK`1 1Ä ú`ìX€XÑQq <
o 4o MÇ]ªe _o! v6 %üeD" XÅ`ío MÇ]ªe _ ;Pé1 2lìx ä"ÉOK IY ^EfOü!šo Oü(9Oü=" ,äWK
1•6.^Ú:d#<H= "Ð+T Y ù\ B- <

o yö FäZÅ#<Oü!šX€;A

Oü=" *e,äl Ef6+HÐ:Ô D -" v6 ä 12gxOü!šo!

1. ,äl FäZÅEf^İD'Oü!šo!Oü(+ 4o*e ;Pé@5HÐ*e ;,äl &ùG?#<" *e ;" ,ä FäZÅJH-"D' •
Wg^ï#<! 6•Oü="Ah`" *e^k" E÷ r^Æl ,Ef(6A" *e,äl díg—o -u2İ ùXâ ²4,7G <
2. díg—! 6•Oü!šo!Oü(Mû# -"D'4o*e ;Pé@5HÐ*e#<,äl HÐ*eEf&ù6+"žC o ZÅ!#<Wg^½Oü="Ah
`" *e^k" E÷ r^Æl ,Ef(6A,äQy#<,äl díg—o -u_ ^Æ4†B-G lu! 6•o R¶.-6 4GMÒZ¹ <

3. Z½Z/-ÿ"ĐXâ ²4,7GEfOü!šoOü(c†*øOü=•Ah\'' *e^k" E÷ r^ÆI ,Ef(6A,äQy#ç,äl díg—
Z½Z Xâ ²4,7GoZ½Z =à²Ax*TMey;AEfKúMß";T B1 ,äQy<@I o-uOü(&'Z½Z B@Q• , RB̄ ù! 4⁰ ZÄo
O UPH= ; d-¶ ; *^ g ; ; Ö.Š ; 4†" ä"ÉB@',JH%ßL <
4. G luOü!šo!Oü(&ù • *e#ç" ,äEf"žC -u`ÆD'HD*e4,;Ô*øOü=•Ah\'' *e^k" E÷ r^ÆI ,(6A" *e,äl díg—^ÚWKG luo" 1ë^ÚWK*çZ½Z *•4¼ 4o2m`ÆeÅ !6• ; ^Æ à/nMû# .-/Xâ ²dí
g—Ef# C 6 4GEfMÒZ' <
5. ~D'B̄ â,ä vEfOü!šoDü(c†*øOü=•Ah\'' *e^k" E÷ r^ÆI ,Ef(6A" *e,äl díg—o_ 1è ;
~D'D Pò-ÿ"Đ# C Ef1•6. ;C=• B̄ â,äl ,ä v#ç à/n1•6.,ä vo`ÆD'E÷ r ^n õo*ø u^ÚWKGf
<J 9 1Bo -uOü(C Xâ u+?eO/& <
6. H= \'' úo!Oü(&ù • *e,äl E÷ rFäZÄ# C !6•o ZÄ öOü=•" *e,äl 1?<"ÉEf*•ô#ç(6A
,äl díg—EfXâ ²4,7G*øH= ; d-¶ ; *^ g ; Ö.Š ä"É4†" Ef.p#ìo-uC Xâ 1#W-"1~1ÄEf\'' ú <
7. B@', "î2 Mi"Đ+To!Oü(...XâOü=•" ,äd ! ,EfB@',;`6Òdíg—o C Xâ#çZÄ öOü=•" *e,äl
Ef ,äl *•ô#ç(6A,äl díg—EfXâ ²^ÆI *øB@', H= "î2 Mi"Đ+TEf.p#ì <
8. OK XÄR o! v6 14†H= HD*eL z#çH= \'' úo o Oü(7 IÊH= : H77.Ä ö ;XÄo Oü(&'
Oü=•" *e,äl *•ô ,C Xâ-u_t*†,äl OK _R.¶#çXÄR o +dWK\'' ú <
9.)¹ %áe o!Oü(&' *•ô#ç(*eHĐOË5nEf%áe ,o Aë!É1 # [-ÿ+T,ä [o 1~1Ä) R ;
%áe 1 #W ä"É\'' 1JH(`ìXÑQq <
10. ;ž_ Oü!šo!Oü(+0(6AOü=•" *e,äl díg— DK# WK"ÉH= k ^ÚWK6 4G efa "â(3 £<@o
" 1ë3̄ ~1#H#çZ½Z 4†!> ,6 4GeG^i"ĐXÿ = 5oWg^½1 %Ý-"2 äo"-u v6 ÿ*TMef%üeDXÄ`ío v(&'
\\ç4†" OË5n ^ÚWK6 4G;ž_ £<@EfOü!š <
11. gxEíJ C Oü!šo!2ç2àOü=•" *e,äl EfOü`Î " ;gxEíJ C "žC #çMÍ<M ²JU4,;Ôo -uOü+ u
-"D' •(*eHĐOË5n EfOü=•" ,äZ½Z -ÿ"Đ <
12. MÇ]ªe _Oü!šo! v6 Pé :ªe _#çMÇ]ªe _0 ZÄo v(4-ªe _#ç_ -"Oü=•" *e,äl 4-"Đ+T
EfOü!š <
(ço FäZÄ#çOü!š^½1 4,7G
c†*ø ^i 12gx:Ô X€;Ao *²'S<*... v REf*•B̄ u# gxX€;AEf`L(VZýl o Wg 1o <

<p>1. ,äl FäZÄEf^iD'Oü !šo!Oü(+ 4o*e ;Pé@5HD *e ;,äl &ùG?#ç" *e ;" ,ä FäZÄJH-"D' •Wg^i #ç! 6•Oü=•Ah\'' *e^k" E÷ r^ÆI ,Ef(6A" *e,ä l díg—o -u2! ùXâ ²4, 7G <</p>	<p>1.1 Oü(+ 4o*e ;Pé@5HD*e ; ,äl HD*eEfFäZÄ#ç,ä vD' • Oü =•Ah\'' *e^k" E÷ rEf ,äl dí g—EfWg^i <</p>	<p>ixJH4o*eB(I ; II) (&*eAhCC(I ; II) Python4o2m! 6• 8•B†MpZ &ùG? " ,ä"žC (I)</p>
	<p>1.2c†*øOü=•Ah\'' *e^k" Ef "T B^ÆI o MÒ# 4o*e ;" *e ; " ,ä&ù6+C Z'1o -ù!É4o*e9 &Š " *e"l-" ,äl</p>	<p>" ,ä"žC (II) " ,ä?i!š*e " *e"l-" ,äl</p>

	;AXâ <	" ,ä-"D'^n õ
	1.3Oü(^İD'4o*e Pé@5HÐ*e FäZÅo Z J-69"É4o2m(C Fä ZÅo *øOü=•Ah\'' *e^k" 1?<^ "ÉEfE÷ r,äl díg—^ÚWK2§> ! 6• <	" ,ä"žC Zýl Z½Z " ,äD'OüZÄ ö " ,ä-"D'^n õ
	1.4Oü(^İD'Oü=•C=•^k" Ef &ùG?FäZÄ ;&ùG?C Z' ä"É" *Oü=•" ,ä,äQy*e (I) !ÿ,ä1•6.o *øOü=•Ah\'' *e^k " E÷ rEf,äQy#ç,äl díg—EfXâ Oü=•" ,ä,äQy*e (II) ²4,7G^ÚWK:Ó^,#çMü# <	Fò; !ÿ,ä,äl Oü=•" ,ä,äQy*e (II)
2.díg—! 6•Oü!šo!Oü(Mü # -"D'4o*e ;Pé@5HÐ*e#ç,äl HÐ*eEf&ù6+"žC o ZÄ !*#çWg^½Oü=•Ah\'' *e^k " E÷ r^ÆI ,Ef(6A,äQy #ç,äl díg—o -u_ ^Æ4†B-G lu! 6•o R¶.-6 4GMÒ Z¹ <	2.1 Oü(-"D'4o*e ;AhC "É" *eEf&ùG?FäZÅo ZÄ!*-u!#4-ç=•Ah\'' *e^k" 1?<^"ÉEf rd-" *edíg— <	M¾/& â4o D Ah" *e 4ß69" *e ! 6•" *e 6 69" *e AhC " *e (I ; II)
	2.2 Oü(&ù •HÐ*e"žC ;4o*e 9 &Šo ^İD'' *e,äl Ef&ùG?Fä ZÄ#ç&ù6+"žC o :bGmZÄ!*;!# 4-Öü=•Ah\'' *e^k" ^ÆI ,Ef " *e,äl díg— <	" ,ä"žC (I ; II) " ,ä?i!š*e " *e"İ-" ,äl " ,ä-"D'^n õ Oü=•^k" «" "žC
	2.3 v(" *e"İ-"^ÆI #ç! H° ^ÆI ! 6• ;Z½Z #ç-ÿ"ÐEfFäZÄ #ç"žC o Oü(:bGmWg^½Oü=• \'' *e^k" E÷ rEf!ÿ,ä1•6.#ç ,äQy <	Oü=•" ,ä,äQy*e (I) Fò; !ÿ,ä,äl Oü=•^k" «" "žC
	2.4 Oü(^İD'Pé@5HÐ*e#ç" ,ä E÷ rFäZÄo MÒ# 4†B-[G MÒ 6>o ÅGm! 6•Oü=•Ah\'' *e^k " E÷ r^ÆI ,(6AEf,äQy#ç,ä l díg—"É u.p#ì%ßL o R¶.-6 4GMÒZ¹-u2İ ùXâ ²4,7G <	D4,ä*e"É*ç Oü=•" ,äZ½Z &ùG? Oü" Mü# *ç :Ô Z½Z (Z¹4†)

3.Z½Z/-ÿ"ĐXâ ²4,7GEfOü!
!šo!Oü(ç†*øOü=•Ah\''
*e^k" E÷ r^ÆI ,Ef(6A
,äQy#ç,äl díg—Z½Z Xâ ²
4,7Go Z½Z =à\²Ax*™eÿ,
EfKúMþ ;"T B1 ,äQy<@
l o -uOü(&'Z½Z B@Q• ,
RB̄ ù! 4⁻0 ZÄo O UPH=
; d-¶ ;*^ g ;;Ô.Š ;
4†" ä"ÉB@,JH%ßL <

	-¶ ;;Ô.Š ;4†" ä"ÉB@',JH%ß L <	" ,äWÄ(2!;5 Oü=" ,ä4`6O4~ " ,ä*^ g B@ Ü
4. G luOü!šo!Oü(&ù • " *e#<" ,äEf"žC -u`ÆD' HÐ*e4,;Ô*øOü="Ah\'" *e ^k" E÷ r^ÆI ,(6A" *e ,äl díg—úWKg luo " 1ë úWK*·i<Z½Z *·4¼ ;4o 2m`ÆeÄ ! 6• ;_ ^Æ à/n Mû# .-/Xâ ²díg—Ef# C 6 4GEfMÖZ¹ <	4-1 Oü(^ID'" *e#<" ,ä*·i< "žC ;1•Oü"É! 6•<JZÔ4,;Ôo 3,-ù&ù6+*·i<WÄNmö *^ g ;# C ;6 4G&/-ÿ+T*·i<o -uR¶.- E÷ r*·i<4o2m <	4ß69 ! 6•" *e"É*·i< (I) AhC " *e*·i< (I ; II) 6 69" *e*·i< " ,ä"žC *·i< (I ; II)
	4-2 Oü(782mOü="Ah\'" *e^k " E÷ rEf"žC #<4,;Ôo MÒ# 4† B-[G o ! 6•(6A,äl díg—Ef Xâ ²4,7Go 782m*ø[Ax.€o _ 1èG lu!M¼o Z½Z *·i<4,7G <	Oü=" ,ä,äQy*e (I) Fò; !ÿ,ä,äl Oü=" ,ä,äQy*e (II) :Ô Z½Z (Z¹4†)
	4-3 Oü(782m*·i<4,7G6f-ù*· i<KúMþo *^ g&/-ÿ+T*·i<o :b Gm`ÆeÄ#<4sC *·i<4o2mo ! 6• #<Xâ`É*·i<4o2m1 *·i<MÖ6>o -u_ ^Æ à/nMû# (C R¶.-6 4G MÖZ¹ <	" ,ä"žC *·i< (I ; II) Oü" Mû# *·i< :Ô Z½Z (Z¹4†)
5. ~D'B` â,ä vEfOü !šo!Oü(c†*øOü="Ah\'" *e^k" E÷ r^ÆI ,Ef(6A " *e,äl díg—o _ 1è ; ~ D'D Pò-ÿ"Ð# C Ef1•6. ; ^C=" ;B` â,äl ,ä v#< à /n1•6.,ä vo `ÆD'E÷ r ^n õo *ø u^úWKgf<J 9 1þo -uOü(C Xâ u+?eO /& <	5.1 Oü(...XâOü=" *e,äl -7D'EfB` â é%g ; à/n1•6. ,ä v ;,äl ,ä v#<9 1þ^n õEf ~D"žC #<4,;Ôo -uC Xâ u+? eO/& <	" ,ä-"D'^n õ Oü" Mû# *·i< Z J-69^,!"Mx%ý
	5.2 Oü(c†*øOü="Ah\'" *e^k " E÷ r!ÿ,ä^ÆI ,(6AEf,äQy #<,äl díg—o _ 1è ~D'/o.R Ef ^n õJH,ä v^úWKZ J- ; ! 6• Z½Z <	" ,ä-"D'^n õ " ,ä"žC Zýl Z½Z " ,ä^ÆI Z½Z " -"%gZ½Z
	5.3 v6 ~D'Oü="Ah\'" *e^k " E÷ r!ÿ,ä^ÆI , -7D'7¿<J4, ;Ôo -ÿ"Ð1 _ D'E÷ rB` â! 6• é%g ; à/n1•6.,ä v ;,äl ,ä vD' •Xâ ²Ax*TM,äl díg—eÿ;A EfOü!šo -uC Xâ u+?eO/& <	:Ô Z½Z (Z¹4†) Oü" Mû# *·i<
6. H= \ " úo!Oü(&ù • " *e,äl E÷ rFäZÁ# C ! 6•o ZÄ öOü=" *e,äl 1? <^"ÉEf*·ô#<(6A,äl dí g—EfXâ ²4,7G*øH= ; d -¶ ;*^ g ;;Ô.Š ä"É4†" Ef.p#lò -uC Xâ ¹#W -¹~1ÄEf\ " ú <	6.1 Oü(C XâOü="Ah\'" *e^k " D !^ÆI ;Z½Z ;G lu -ÿ "ÐJH4,faEf1•6.7 Å ;FäZÁ ! 6B ; ! 4>JU ;;Ô.Š;ÔXÄ#< HSEJ C RKúo C Xâ # H= 4†" *ø,äl <:!§Ef.p#lò v (" *e,äl - Ef\ " ú0 ZÄ <	Oü=" ,äZ½Z &ùG? " ,äD'OüZÄ ö / /ò_R.¶ ;Ô;° " ,ä*^ g B@ Ü
	6.2 Oü(! 6•#<ZÄ öOü=" *e ,äl *·ô*øH= ; d-¶ ;*^ g ;;Ô.Š ä"É4†" Ef.p#lò ä "É^Ø š!5M%ø%ßL *øgxEf*·4¼E .p#lò -uC Xâ-¹~1ÄEf\ " ú <	" ,ä*^ g B@ Ü / /ò_R.¶ ;Ô;°*·ô Oü=" ,ä,äQy*e (I) Fò; !ÿ,ä,äl Oü" D !*· _

<p>7. B@, "î2 Mi"Đ+To! Oü(...XâOü=" ,äd ! , EfB@';`6Òdí—o C Xâ# ZĀ öOü=" *e,äl Ef ,äl *•ô#(6A,äl dí— EfXâ ²^ÆI *øB@, H= "î2 Mi"Đ+TEf.p#i <</p>	<p>7.1 Oü(C XâB@, Ü1£#<H= "î2 Mi"Đ+TEf0 Ho 7 IÉOü="* " *e,äl 4,faMpQq"É"î2 Mi"Đ +TC .ôo #<(6AOü=" *e,äl dí—Xâ ²^ÆI ,EfB@ Ü0 ZĀ <</p> <p>7.2 Oü(ÍB@, H= "î2 Mi "Đ+TEfXÑ-¥o *ø\C="!(D' ;` 6ÒAh(Nm#<* ge1R 2@4¼^Ú HĐ*e! 6#<ZĀ öo !#4-(6A,ä l dí—EfXâ ² ä"ÉOü=" ,ägx EíEf*4¼*øB@,#<H= "iOü_ 1 Ef2^*2 <</p>	<p>Oü=" ,ä*ûZ¹ Oü="^k" «" "žC Oü=" ,ä,äQy*e (II) Oü=" ,ä4`6O4~</p> <p>" ,ä* g B@ Ü Oü" Z£ZĀ* _ Oü" D !* _ Oü=" ,ä4`6O4~</p>
<p>8. OK XĀR o! v6 14† H= HĐ*eL z#<H= \ " ú 0 o Oü(7 IÉH= : H77 .Ā ö ;XĀo Oü(&'Oü="* *e,äl *•ô ,C Xâ-u_t*† ,äl OK _R.¶#<XĀR o +d WK\ " ú <</p>	<p>8.1C Xâ#<ôWK= : H77.Ā ö ;XĀo C Xâ) ¹ %ü*µ ;H= Ef rKúo v(¹_R : HK½ H] <</p> <p>8.2 Oü(&'Oü=" ,äEf*•ô , C Xâ-uPéXĒ_t*†" *e,äl - Ef OK _R.¶ ;XĀR o C Xâ,äl - *øH= "Đ+T#<B@, Ü1£EfH= \ " úo Oü(&' *•ô ,PéXĒ +dWK\ " ú <</p>	<p>:Ü;ü /ò#< ,%üAxQqH= : HC Z¹ R Kú8•Z¹o "É*•ôo ik J/ : H&ù6+"žC o "É*•ôo ,%ü^ĐB- â"ñM±X€o "É*•ôo _ ^Đ-r4`4ô â ,%üAxQqH= : H/ /ò8• Z¹o "É*•ôo š ŠC Z¹</p> <p>Đ,ä*_ "i-"%gZ½Z Oü" D !* _ / /ò_R.¶ ;Ô;°</p>
<p>9.) ¹ %áe o!Oü(& *•ô#<(*eHĐOĒ5nEf %áe ,o AëIÉ¹ # [-ÿ+T ,ä [o 1~1Ā) R ;%áe 1 #W ä"É\ " ¹JH(`ìXÑ Qq <</p>	<p>9.1 v6 %áe 0 ZĀ#<"N [K½ H]o 4áOü(AëIÉ¹<1 ,ä [o 1~ 1Ā) 1&'%áe ,Ef\ " úo ^Oü %áe 1 #W^ÚWK6 4G;ž_o ! / à/n p a ;# [p Š <</p> <p>9.2 &'*•ô^ÆI ,d:?) (*eHĐ OĒ5n Ef%áe # [Oü!šo Oü(OÚ ú) R ;%áe 1 #W ä"É\ " ¹JH(`ìXÑQq <</p>	<p>Oü" Mû# *•i< Oü" Z£ZĀ* _ Oü=" ,ä! 4*•ô š Š1•Oü</p> <p>Oü=" ,ä! 4*•ô Oü" D !* _ Oü=" ,ä! 4*•ô</p>
<p>10. ;ž_ Oü!šo!Oü(+0(6AOü=" *e,äl dí— DK# WK"ÉH= k ^ÚWK6 4G efa "â(3 £<@o " 1ë 3~¹#/#<Z½Z 4† > ;6 4GeG^"ĐXÿ ;= 5oWg^½ %Ÿ-"2 äo"-u v6 ÿ*™Ef %üeDXĀ`ío v(&`ç4†" OĒ5n ^ÚWK6 4G;ž_ £ <@EfOü!š <</p>	<p>10.1 v(+0Oü=" ,ä1?<^"É Ef(6A,äl dí— DK# WK"É H= k ^ÚWK6 4G;ž_ #< £<@ EfOü!šo " 1ë3~¹#/#<Z½Z 4† > ;6 4GeG^"ĐXÿ ;= 5oWg ^½1 %Ÿ-"2 ä <</p> <p>10.2 v6 ÿ*™Ef%üeDXĀ`ío O (...XâOü=" ,äg...&PEf%üe +TŠ!%#<G lu?i?,o C Xâ#<+ `ì DK # 4†" Ef,i. /&#<(76/& <</p> <p>10.3 Oü(e Zú (4†4† B-o v(`ç4†" £<@EfZiXÿ#<</p>	<p>Oü" D !* _ " ,ä"žC Zýl Z½Z " ,ä^ÆI Z½Z</p> <p>Oü=" ,ä*ûZ¹ !L;¾Z±-! Fò; !Ÿ,ä,äl .a!¾ 4>JU4XO±</p> <p>ixM!e6.QðZiI &ùG?*e6.QðZiI</p>

	efaWg^1/2Oü!šo Oü(&'\ç4†" OË5n ^ÚWK;ž_ #‹ £<@ <	_ D'(&*eQðZìI ixMi!*e6.QðZìII &ùG?*e6.QðZìI _ D'(&*eQðZìII _ D'(&*eQðZìIII _ D'(&*eQðZìIV :Ô Z½Z (Z'4†)
11. gxEíJ C Oü!šo!2‹2à Oü=•" *e,äl EfOüÎ " ;gxEíJ C "žC #‹MÍ<M ²JU4,;Ôo -uOü+ u-"D' •(*eHÐOË5n EfOü=•" ,äZ½Z -ÿ"Ð <	11.1 C Xâ#‹2‹2à,äl gxEí , <^"ÉEfJ C MÍ<M ²JU4,;Ôo " ,äOüÎZÃ ö4,;Ô < 11.2 Oü((&' *eHÐB®), o -"D',äl J C #‹" ,äOüÎZÃ ö JH4,;Ôo *øOü=•" *e,äl ,<^ "ÉEf" ,ä,äQy^ÆI #‹,äl gxEí ^ÚWK! 6•#‹ZÃ ö <	gxEíJ C MÍ<M ²JU " ,äD'OüZÃ ö Oü=•" ,äZ½Z &ùG? " ,äD'OüZÃ ö " ,ä^ÆI Z½Z Oü=•" ,ä4ˆ6O4ˆ
12. MÇ]ª*e _Oü!šo! v6 Pé :*e _#‹MÇ]ª*e _0 ZÅo v(4-ªe _#‹ -" Oü=•" *e,äl 4-ˆÐ+TEfOü !š <	12.1 C Xâ1•6.B®',Ef(76" #‹1•6.^Ú:d*ø •FäZÃ#‹Oü!šEf X€;Ao Oü(Z£ZÃ 4-2jL!#‹ªe _Ef.ÄX€/&o .a1 v6 Pé :*e _#‹MÇ]ª*e _Ef0 ZÃ < 12.2 Oü(c†*ø) 11 OK "Ð +TEfeÿ;Ao v(Pé :*e _EfOü !šo " 1ë2Ï ùdíg—EfOü!š ;1• 6.C Xâ!š#‹ ÜMÂMû^iOü!š <	(&*eD +0 2 *û Oü=•" ,ä*ûZ' Oü=•" ,ä,äQy*e (II) +0 2 *û :Ô Z½Z (Z'4†) !L;¾Z±-! Oü=•" ,ä! 4-ª•ô

" *e,äl 1•6. ;" *e

" ,ä"žC ;" *e"l-"äl ;" ,ä?i!š*e ;" ,ä*^ g B® Ü ;" ,ä-"D^ñ ö ;" ,äWÄ(2!;5 ;Oü
=•" ,äZ½Z &ùG? ;" ,ä^ÆI Z½Z ;Oü=•^k" «" "žC ;" ,äD'OüZÃ ö ;Fò,;!ÿ,ä,äl ;Oü=•" ,ä
,äQy*e ;Oü=•" ,ä4ˆ6O4ˆ ;Oü" Mû# *i<

*e!5o!%Ú-so *eD í -seO Pò l-s

2† †*e Lo!,ä*e*e'ê*e L

/ /ò4>;°4XO±	.Ä í	17*e!
	_ í	0*e!
_ ZÅ4XO±	.Ä í	21*e!
	_ í	4*e!
4XO±	.Ä í	82*e!

	_ í	6*e!
eÅ ,/&*•\ô4X*eB@Q•	.Ä í	35*e!
	_ í	0*e!
J+ <Zý'	.Ä í	"É7;
/:Z		165*e!
R¶.-*e'ê*e LX€;Ao!=à\²*e7 XÃ*™Ef*e L2‡ ‡6` õ		
1.4o*e Pé@5HÐ*eKzZýl "17.6%o"		
2.,äl &ùG?KzZýl ; &ùG?KzZýl Zýl "_ 35.8%o"		
3.,äl *•\ô :Ô Z½Z o Z'4‡o "_ 23.3%o"		
4. 14‡H= HÐ*eKz_ ZÃ4XO±Zýl "16.4%o"		
5.*•\ô4X*e*e! "_ 26.1% <		

//ò 4>, ^o 4XO:	C Z' .Ä í Zý	100844M002	,%ü^ÐB^- â"ñM±X€ Outline of Modern Chinese History	2	32	32				1	
		100844M014	/ /ò_R.¶ ;Ö; ^o Ideology, Morality and Rule of Law	2	32	32				1	
		100844X015	.a!¾ 4>JU4XO±oIo Situation and Policy(I)	0.5	8	8				1	
		100838T008	_ ^Ð-r4^-4õ â ,%üAxQqH= : H/ /ò8•Z' Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era	2	32	32				2	
		100844X018	.a!¾ 4>JU4XO±oIIo Situation and Policy(II)	0.5	8	8				2	
		100844M016	:Ü;ü //ò#ç ,%üAxQqH= : HC Z' RKú8•Z' Mao Zedong's Thoughts and Theoretical System of Socialism with Chinese Characteristics	2	32	32				3	
		100844X019	.a!¾ 4>JU4XO±oIIIo Situation and Policy(III)	1	48	48				3,4,5 ,6,7, 8	
		100844M015	ik J/ : H&ù6+"žC Basic Principles of Marxism	2	32	32				4	
		X€;A*e! : 12									
		//ò 4>, ^o 4XO:	C Z' _ í Zý o ç _ ýo	10XT01G007	, p ,(-õ*"@ -s"ñ Central Committee of the Communist Party of China in Yan'an	0	15	15			
10XT01G008	48fh-ÿ4="ñ The History of China's Reform and Opening Up			0	22	22				1,2	
X€;A*e! :											
*•\ò .Ä í Zý	*•\ò	100844X016	,%ü^ÐB^- â"ñM±X€H= *•\ò Social Practice of Outline of Modern Chinese History	1	16	16				1	
		100844X020	/ /ò_R.¶ ;Ö; ^o H= *•\ò Social Practice for Ideology, Morality and Rule of Law	1	16	16				1	
		100844X022	_ ^Ð-r4^-4õ â ,%üAxQqH= : H/ /ò8•Z'H= *•\ò A Social Practice Designed for The Theories-Study of Socialism with Chinese Characteristics	1	16	16				2	
		100844X017	:Ü;ü //ò#ç ,%üAxQqH= : HC Z' RKú8•Z'H= *•\ò	1	16	16				3	

		101099M006	RO± Ü dZý Sport Hygiene I	1	24	24			1,2,3 ,4
		101099M007	(&*e RO±.Ä ío VÅ1ò_Ro Physical Education (Taekwondo)	1	32	32			1,2,3 ,4
		101099M008	(&*e RO±.Ä ío JíC o Physical Education(Basketball)	1	32	32			1,2,3 ,4
		101099M009	(&*e RO±.Ä ío \²C o Physical Education(Football)	1	32	32			1,2,3 ,4
		101099M010	(&*e RO±.Ä ío dN•o Physical Education(Bodybuilding)	1	32	32			1,2,3 ,4
		101099M011	(&*e RO±.Ä ío NPC o Physical Education (Tennis)	1	32	32			1,2,3 ,4

		101500D001	AI+! 4-Z½Z / M6 AI + DesignThinking	2	32	16			16	HÊ
		X€;A*e! : 2 (! 4! Kzo -ùZ-(& ‹ íZúo Pò+ _ í 2dç)								
	à/n1•6. Kz	102014T042	Python4o2m! 6• Data Analysis with Python	2	48	32	16			3
		X€;A*e! : 2								
	gxEíJ C Kz	101000T001	gxEíJ C MÍ<M ²JU Project Management	2	32	26			6	4
		X€;A*e! : 2								
		X€;A*e! : 21								

	14†	X€;A*e! : 1 *eHE(14†*eHDo -ùZ-J+31 J+4*e6 _ í <)								
	H=	X€;A*e! : 1 HD*(H= HD*eo -ùZ-J+31 J+4*e6 _ í <)								
	,äl	X€;A*e! : L z (,äl L zo Zý,ñMÍ<'EÖE÷ r,,*o _ ZÄ_ í9 &V [X€;A <)								
4XO:	Pé@	X€;A*e! : HD*(Pé@5HD*eo Zý,ñMÍ<'EÖE÷ r,,*o _ ZÄ_ í9 &V [X€;A <)								
- í Zý	RO±	X€;A*e! : d-¶ (RO± d-¶o RO±KzZýl ,ñ<'EÖE÷ r,,*o _ ZÄ_ í9 &V [X€;A <)								
	Qy6.	X€;A*e! : 2 N*e(Qy6.N*e eo -ùZ-J+31 J+4*e6 _ í <)								
		X€;A*e! : 4								

		100616M018	ixJH4o*eBo o Advanced Mathematics B(I)	6	96	96				1

4XO: *eHE
 .Ä í &ùG'
 Zý Zý

			Foundation of Probability and Statistics							
		X€;A*e! : 27								
		100308T008	Oü=•" ,ä*ûZ¹ Introduction to Energy Chemical Engineering	1	16	16				1
		100617T061	6 69" *e Organic Chemistry	3.5	56	56				2

&ùG'
Zý

:-q Zý	100328T009	Oü=" ,ä,äQy*eo o ★ Energy Chemical Engineering Technology (I) (J+5*e6 # "l*e6 -yZý <)	2.5	40	40					5
	100328T014	Fö;!ÿ,ä,äl ★ Petroleum Processing Engineering	3	48	48					5
	100328T010	Oü=" ,ä,äQy*eo o ★ Energy Chemical Engineering Technology (II)	2.5	40	40					6
	100328T012	" ,äD'OüZÄ ö ★ Energy Utilization Evaluation of Chemical Process	2.5	40	40					6
	100328T011	Oü=" ,ä4~6O4~ ★ New Materials of Energy Chemical Engineering	2.5	40	40					7
X€;A*e! : 13										
X€;A*e! : 82										

eO_ 4XO: _ í Zý	100305E028	B^ â é%g! 6• *i< Modern Instrumental Analysis and Laboratory Experiments	2	32	28	4				5
	100305T115	" ,äKúMP 1,ä5yOü Chemical Process Intelligence Modelling and Application	2	32	32					6
	100305T116	;6Ö2!!5 MpQq" ,ä Pollution Control and Green Chemical Engineering	2	32	32					6
	100328T008	" ,ä! H°,äl Chemical Separation Engineering	2	32	32					7
	X€;A*e! : 4 (:c9 &V 9Oü=" *e,äl Ef,äl 1•6.Kz _ íZý 4dçZýl X€;APò+ _ í 2dçZý l)									
4,# Zý	100328T013	Oü=" ,äl 8•Z¹ Introduction of Energy engineering	2	32	32					4
	100305T047	" ,äHÐ1•Z¹4†7¿L! ~ [Chemical Engineering Science and Technology paper Retrieval and Writing	2	32	32					5
	100308T009	Oü=" *e,äl QðZì Professional English for Energy Chemical Engineering	2	32	32					6
X€;A*e! : 2 (ú_)										
*e6.	1303022	" ,ä4o2m! 6•(C	2	32	32					5

		(eÿX€4X! (J+ 6*e6 -ÿ(Ê2'Zýo ZãZý l J+ 6*e6 # "l*e6 -ÿZýo J+ 7*e6 !L "l*e6 MÒZý-uEzZ ⁻¹ Mè <)							
190305P001	" ,ä"žC Zýl Z½Z Course Design of Unit Operations Principles of Chemical Engineering	3	48			3#g		6	
100305P043	!L;¾Z±-! Professional Frontier Lectures	0.5	8			8		7	
100305P047	"l-"%gZ½Z Design of Chemical Reactor	1.5	24			1.5#g		7	
100328J001	Oü=" ,ä! 4 ⁻ *\ô Innovative Practice of Energy Chemical Engineering (! 4b^ÚWKO "Á!ÿHÐ! Z-MÂgxÉí1 *e HÐIÝ\Zo J+7*e6 2ÿ £:MÒ1¤#lo JS ^";F1¤)	1	16			16		7	
100328L004	Oü" Mû# *i< ★, Professional Comprehensive Experiment of Energy Chemical Engineering	2	72		72			7	
100328P001	:Ô Z½Z o Z¹4†o Graduation Design(Thesis)	8	240			15#g		8	
X€;A*e! : 35									

J+ < Zý'	101200X008 L \¹Ô+T Diathesis Developing ("Á@f1?&'*eeaJ+ <Zý' J C !•;Ô í Zú)	0	0					1,2,3, 4,5,6, 7	
X€;A*e! : (Zýl *e! 9 0o EZýl 9.Ä íZýl)									

