EXAME NACIONAL DO ENSINO MÉDIO

ESSA É A COR DO SEU CADERNO DE PROVAS!
MARQUE-A EM SEU CARTÃO-RESPOSTA

1º DIA

CADERNO

1

AZUL

enem
EXAME NACIONAL DO ENSINO MÉDIO
UM ENSAIO PARA A VIDA

2010

PROVA DE CIÊNCIAS HUMANAS E SUAS TECNOLOGIAS
PROVA DE CIÊNCIAS DA NATUREZA E SUAS TECNOLOGIAS

LEIA ATENTAMENTE AS INSTRUÇÕES SEGUINTES

1 Este CADERNO DE QUESTÕES contém 90 questões numeradas de 1 a 90, dispostas da seguinte maneira:

a. as questões de número 1 a 45 são relativas à área de Ciências Humanas e suas Tecnologias;

b. as questões de número 46 a 90 são relativas à área de Ciências da Natureza e suas Tecnologias.

2 Marque no CARTÃO-RESPOSTA, no espaço apropriado, a opção correspondente à cor desta capa: **1-Azul; 2-Amarela; 3-Branca ou 4-Rosa**. **ATENÇÃO:** se você assinalar mais de uma opção de cor ou deixar todos os campos em branco, sua prova não será corrigida.

3 Verifique, no CARTÃO-RESPOSTA, se os seus dados estão registrados corretamente. Caso haja alguma divergência, comunique-a imediatamente ao aplicador da sala.

4 Após a conferência, escreva e assine seu nome nos espaços próprios do CARTÃO-RESPOSTA com caneta esferográfica de tinta preta.

5 Não dobre, não amasse, nem rasure o CARTÃO-RESPOSTA. Ele não poderá ser substituído.

6 Para cada uma das questões objetivas, são apresentadas 5 opções, identificadas com as letras **A**, **B**, **C**, **D** e **E**. Apenas uma responde corretamente à questão.

7 No CARTÃO-RESPOSTA, marque, para cada questão, a letra correspondente à opção escolhida para a resposta, preenchendo todo o espaço compreendido no círculo, com caneta esferográfica de tinta preta. Você deve, portanto, assinalar apenas uma opção em cada questão. A marcação em mais de uma opção anula a questão, mesmo que uma das respostas esteja correta.

8 O tempo disponível para estas provas é de **quatro horas e trinta minutos**.

9 Reserve os 30 minutos finais para marcar seu CARTÃO-RESPOSTA. Os rascunhos e as marcações assinaladas no CADERNO DE QUESTÕES não serão considerados na avaliação.

10 Quando terminar as provas, entregue ao aplicador este CADERNO DE QUESTÕES e o CARTÃO-RESPOSTA.

11 Você somente poderá deixar o local de prova após decorridas duas horas do início da sua aplicação. Caso permaneça na sala por, no mínimo, quatro horas após o início da prova, você poderá levar este CADERNO DE QUESTÕES.

12 Você será excluído do exame caso:

a. utilize, durante a realização da prova, máquinas e/ou relógios de calcular, bem como rádios, gravadores, *headphones*, telefones celulares ou fontes de consulta de qualquer espécie;

b. se ausente da sala de provas levando consigo o CADERNO DE QUESTÕES e/ou o CARTÃO-RESPOSTA antes do prazo estabelecido;

c. aja com incorreção ou descortesia para com qualquer participante do processo de aplicação das provas;

d. se comunique com outro participante, verbalmente, por escrito ou por qualquer outra forma;

e. apresente dado(s) falso(s) na sua identificação pessoal.

INEP Ministério da Educação

CIÊNCIAS HUMANAS E SUAS TECNOLOGIAS

Questões de 1 a 45

Questão 1

Fonte: Incra, Estatísticas cadastrais 1998.

2 JUi¿FR UHSUHVHQWD D UHODomR HQWUH R WDPDQKR H D WRWDOLGDGH GRV LPyYHLV UXUDLV QR %UDVLO 4XH FDUDFWHUtVWLFD GD HVWUXWXUD IXQGLiULD EUDVLOHLUD HVWi HYLGHQFLDGD QR JUi¿FR DSUHVHQWDGR"

Ⓐ $ FRQFHQWUDomR GH WHUUDV QDV PnRV GH SRXFRV
Ⓑ $ H[LVWrQFLD GH SRXFDV WHUUDV QDV PnRV GH PXLWRV
Ⓒ 2 GRPtQLR WHUULWRULDO GRV PLQLIÚQGLRV
Ⓓ $ SULPD]LD GD DJULFXOWXUD IDPLOLDU
Ⓔ $ GHELOLGDGH GRV SHTXHQRV plantations

Questão 2

$QWHV HUDP DSHQDV DV JUDQGHV FLGDGHV TXH VH DSUHVHQWDYDP FRPR R LPSpULR GD WnFQLFD REMHWR GH PRGL¿FDo}HV VXVSHQV}HV DFUpVFLPRV FDGD YH] PDLV VR¿VWLFDGDV H FDUUHJDGDV GH DUWLIÍFLRV (VVH PXQGR DUWL¿FLDO LQFOXL KRMH R PXQGR UXUDO

SANTOS, M. A Natureza do Espaço 6mR 3DXOR +XFLWHF

&RQVLGHUDQGR D WUDQVIRUPDomR PHQFLRQDGD QR WHLWR XPD FRQVHTXrQFLD VRFLRHVSDFLDO TXH FDUDFWHUL]D R PXQGR UXUDO EUDVLOHLUR p

Ⓐ D UHGXomR GR SURFHVVR GH FRQFHQWUDomR GH WHUUDV
Ⓑ R DXPHQWR GR DSURYHLWDPHQWR GH VROR PHQRV IpUWHLV
Ⓒ D DPSOLDomR GR LVRODPHQWR GR HVSDoR UXUDO
Ⓓ D HVWDJQDomR GD IURQWHLUD DJUtFROD GR SDtV
Ⓔ D GLPLQXLomR GR QtYHO GH HPSUHJR HM FDPSR

Questão 3

$ PDLRULD GDV SHVVRDV GDTXL HUD G
p KRMH H[SRUWDGRUD GH WUDEDOKD
3ULPDYHUD GR /HVWH (VWDGR GH 0DW
R EDLUUR GH 9LOD 0DULD SDUD FRQV
JHQWH LQGR GLVWDQWH GDTXL
WUDEDOKDU SDUD JDQKDU VHWH FRQ
DQRV PDUDQKHQVH HQWUHYLVWDGR

5LEHLUR 2 PLJUDQWH H D FLGDGH GLUDUDXÀQWRV

2 WH[WR UHWUDWD XP IHQ{PHQR
DJULFXOWXUD EUDVLOHLUD QDV ~OWL
FRQVHTXrQFLD

Ⓐ GRV LPSDFWRV VRFLDLV GD PRGHUQL
Ⓑ GD UHFRPSRVLomR GRV VDOiULRV GR
Ⓒ GD H[LJrQFLD GH TXDOL¿FDomR GR V
Ⓓ GD GLPLQXLomR GD LPSRUWkQFLD G
Ⓔ GRV SURFHVVRV GH GHVYDORUL]Dom

Questão 4

2V PDL[HV VmR RS LRU WLSR GH GLVSR
SUREOHPD DPELHQWDO H GH VD~GH S
R OL[R p MRJDGR GLUHWDPHQWH QR V
QHQKXPD QRUPD GH FRQWUROH R TXH
SUREOHPDV D FRQWDPLQDomR GR VR
FKRUXPH OtTXLGR HVFXUR FRP DOW
SURYHQLHQWH GD GHFRPSRVLomR GH
SUHVHQWH QR OL[R

RIC $5'2 % &$13$1,Ã Almanaque Brasil Socioambiental 2008.
6mR 3DXOR ,QVWLWXWR 6RFLRDPE

&RQVLGHUH XP PXQLFtSLR TXH GHSR
VyOLGRV SURGX]LGRV SRU VXD SRSXOD
SURFHGLPHQWR p FRQVLGHUDGR XP
SÓLIDO SRTXH RV OL[}HV

Ⓐ FDXVDP SUREOHPDV UHVSLUDWyULR
EKHLUR TXH SURYpP GD GHFRPSRVLo
Ⓑ VmR ORFDLV SURStFLRV D SUROLIH
GRHQoDV DOpP GH FRQWDPLQDUHP
Ⓒ SURYRFDP R IHQ{PHQR GD FKXYD iF
JDVHS RULXQGRV GD GHFRPSRVLomR
Ⓓ VmR DOVWDOGRV SUy[LPRV DR FH
DJUHWDQGR WRGD D SRSXODomR TXH
Ⓔ VmR UHVSRQViYHLV SHOR GHVDS
QDV PHQWHV QD UHJLmR RQGH VmR L
RMFDVDH] GH iJXD

Questão 5

Ⓐ D DXVrQFLD GH SDGUHV GH FRQVXPR
Ⓑ D DXVrQFLD GH PHFDQLVPRV GH FRQWUROH
Ⓒ D DXVrQFLD GH SURFHVVRV GH SURGXomR
Ⓓ D DXVrQFLD GH SURFHVVRV GH GHVPDWH
Ⓔ D DXVrQFLD GH SURFHVVRV GH GHVVDORUL]DomR

Figura para as questões 5 e 6

7(,;(,5$: HW DecifraDoJa/Terra 6mR 3DXOR &RPSDQKLD (GLWRUD 1DFLRQDO

Questão 5

2 HVTXHPD UHSUHVHQWD XP SURFHVVR GH HURVmR HP HQFRVWD 4XH SUiWLFD UHDOL]DGD SRU XP DJUiFXOWRU SRGH UHVXOWDU HP DFHOHUDomR GHVVH SURFHVVR"

- Ⓐ 3ODQWLR GLUHWR
- Ⓑ $VVRFLDomR GH FXOWXUDV
- Ⓒ ,PSODQWDomR GH FXUYDV GH QtYHO
- Ⓓ $UDomR GR VROR GR WRSR DR YDOH
- Ⓔ 7HUUDFHDPHQWR QD SURSULHGDGH

Questão 6

0XLWRV SURFHVVRV HUURVLYRV VH FRQF
SULQFLSDOPHQWH DTXHOHV PRWLYDG
YHQWR 1R HQWDQWR RV UHÀH[RV WDPEpP VmR VHQWLGRV QDV
iUHDV GH EDL[DGD RQGH JHUDOPHQWH Ki RFXSDomR DE EDQD
8P H[HPSOR GHVVHV UHÀH[RV QD YLGD FRWLGLDQD GH PXLWDV
FLGDGHV EUDVLOHLUDV p

- Ⓐ D PDLRU RFRUUrQFLD GH HQFKHQWHV Mi TXH RV ULRV DVVRUHDGRV FRPSRUWDP PHQRV iJXD HP VHXV OHLWRV
- Ⓑ D FRQWDPLQDomR GD SRSXODomR GH PDLRUHV HWWLQ}HV GHVVHV DQLPD WUD]LGRV SHOR ULR H FDUUHJDGRV GH PDWHULDLV RUJkQLFR
- Ⓒ R GHVJDVWH GR VROR QDV iUHDV GH QDVFHQWH GR ULR SHOD UHGXomR GR HVFRDPHQWR VXSHUILFLDO QD EDFLD H QD encosta.
- Ⓓ D PDLRU IDFLOLGDGH GH FDSWDomR GH IJXD SRW WYHO SDUD R DEDVWHFLPHQWR S~EOLFR Mi TXH p PDLRU RH HLWR GR HVFRDPHQWR VREUH D LQ¿OWUDomR
- Ⓔ R DXPHQWR GD LQFLGrQFLD GH GRHQ¿DV FRP D DPHEtDVH QD SRSXODomR XUEDQD HP GHFRUUrQFLD GR HVFRDPHQWR GH iJXD das encostas.

Questão 7

3HQVDQGR QDV FRUUHQWHV H SUHVWH
GHULYD GD &RUUHQWH GR *ROIR SDUD
XP YLGUR GH FDIp VRO~YHO YD]LR &R
QRWD FKHLD GH]HURV XPD EROD FRU
D SRVLomR H GDWD /DWLWXGH ž ¶ 1
7DPSHL H MRJXHL QD iJXD 1XQFD LPD
XPD FDUWD FRP D IRWR GH XP PHQ
VHJXUDQGR D EROLQKD H D HVWUDQKD

./,1. $ Parati: entre dois pólos 6mR 3DXOR &RPSDQKLD GDV /HWUDV

1R WH[WR R DXWRU DQRWD VXD FRRUG

- Ⓐ D UHODomR TXH VH HVWDEHOHFH H UHSUHVHQWDGDV QR PDSD H DV G VXSHUItFLH FDUWRJUDIDGD
- Ⓑ R UHJLVWUR GH TXH RV SDUDOHO FRQYHUJHP SDUD RV SRORV H RV FtUFXORV LPDJLQiULRV KRUL]RQWD
- Ⓒ D LQIRUPDomR GH XP FRQMXQWR GH TXH SHUPLWHP ORFDOL]DU XP SR JHRJUi¿FR QD VXSHUItFLH WHUUHVW
- Ⓓ D ODWLWXGH FRPR GLVWkQFLD HP J H R 0HULGLDQR GH *UHHQZLFK H D GLVWkQFLD HP JUDXV HQWUH XP SR
- Ⓔ D IRUPD GH SURMHomR FDUWRJUi QDYHJDomR RQGH RV PHULGLDQ GLVWRUFHP D VXSHUItFLH GR SODQH

Questão 8

$(,;,5$: HW DecifraDoJa/Terra.
6mR 3DXOR &RPSDQKLD (GLWRUD 1DFLRQDO

2 HVTXHPD PRVWUD GHSyVLWRV HP TX
GH DQLPDLV GR 3HUtRGR -XUiVVLFR $
HQFRQWUDP HVVHV ¿VVHLV VmR
PDJPiWLFDV SRLV D DomR GH YXO
PDLRUHV H¿WLO}HV GHVVHV DQLPD
ORQJR GD ¿VVXUD WHUUHVWUH
XUEDQDV FDXVDQ SRL RV UHVWRV SR
PDJPiWLFDV SRLV VmR DV URFKDV
HURGLGDV SRVVLEL LWDQGR D IRU
IRUDP SRVWHULRUPHQWH ODFUDGDV
VHGLPHQWDUHV Mi TXH FDGD XPD
HQFRQWUDGDV QD ¿JXUD VLPERO]D
GHVVD IUHD UHSUHVHQWDGD
HP GHFRUUrQFLD GR RV DQLPDLV
SRUH¿VDYDM HVWDU SHUWR GH ORFD

Questão 9

2 * p R JUXSR TXH UH~QH RV SDtVHV GR * RV PDLV LQGXVWULDOL]DGRV GR PXQGR (8 $UL-DVmR $QHDQKD)UDQoD 5HLQR 8QLGR ,WiOLD H &DQDGi D 8QLmR (XURSHLD H RV SULQFLSDLV HPHUJHQWHV %UDVLO 5~VVLD &KLQD ÈIULFD GR 6XO $UiEIA 6DXGLWD &RUHLD GR 6XO ,QGRQpVLD 0p[LFR H 7XUTXLD GH SDtVHV YHP JDQKDQGR IRUoD QRV IyUXQV LQWHUQDFLRQDLV GH GHFLVmR H FRQVXOWD

$//$1 5 Crise global 'LVSRQtYHO HP KWWS FRQWHXGRFOLSSLQJS SOODHMDPHQWR JRY EU $FHVVR HP MXO

(QWUH RV SDtVHV HPHUJHQWHV TXH IRUDPP R * HVWmR RV FKDPDGRV %5,& %UDVLO 5~VVLD &KLQD H &KLQD WHUPR FULDGR HP SDUD UHIHULU VH DRV SDtVHV TXH

- **A** DSUHVHQWDP DFWHUtVWLFDV HFRQ{PLFDV SURPLVVRUDV SDUD DV SUy[LPDV GpFDGDV
- **B** SRVVXHP EDVH WHFQROyJLFD PDLV HOHYDGD
- **C** DSUHVHQWDP tQGLFHV GH LJXDOGDGH VRFLDO H HFRQ{PLFD PDLV DFHQWXDGRV
- **D** DSUHVHQWDP GLYHUVLGDGH DPELHQWDO VX¿FLHQWH SDUD LPSXOVLRQDU D HFRQRPLD JOREDO
- **E** SRVVXHP VLPLODULGDGHV FXOWXUDLV FDSD]HV GH DODYDQFDU D HFRQRPLD PXQGLDO

Questão 10

$,QJODWHUUD SHGLD OXFURV H UHFHLD OXFURV 7XGR VH WUDQVIRUPDYD HP OXFUR $V FLGDGHV WLQKDP VXD VXMHLDD OXFUDWLYD VXDV IDYHODV OXFUDWLYDV VXD IXPDoD OXFUDWLYD VXD GHVRUGHP OXFUDWLYD VXD LJQRUkQFLD OXFUDWLYD VHX GHVHVSHUR OXFUDWLYR $V QRYDV IHEULFDV H RV QRYRV DOWRV IRUQRV HUDP FRPR DV 3LUkPLGHV PRVWUDQGR PDLV D HVFUDYL]DomR GR KRPHP TXH VHX SRGHU

'($1(3 A Revolução Industrial 5LR GH -DQHLUR =DKDU

4XDO UHODomR p HVWDEHOHFLGD QR WH[WR H QXPD RXWUD RX QRYD WHFQROyJLFRV RFRUULGRV QR FRQWH[WR GD 5HYROXomR ,QGXVWULDO ,QJOHVD H DV FDUDFWHUtVWLFDV GDV FLGDGHV LQGXVWULDLV QR LQtFLR GR VpFXOR ;;

- **A** $ IDFLOLGDGH HP VH HVWDEHOHFHU UHODo}HV OXFUDWLYDV WUDQVIRUPDYD DV FLGDGHV HP SDUD D OLYUH LQLFLDWLYD FDUDFWHUtVWLFD VRFLHGDGH FDSLWDOLVWD
- **B** 2 GHVHQYROYLPHQWR GH PpWRGRV GH SURGXomR RU XUEDQR DXPHQWDYD D H¿FLrQFLD GR WUDEDOKR
- **C** $ FRQVWUXomR GH Q~FOHRV XUEDQRV LQWHJUDGRV SRU PHLRV GH WUDQVSRUWH IDFLOLWDYD D RFRUUrQFLD GH WUDEDOKDGRUHV GDV SHULIHULDV DWp DV liEULFDV
- **D** $ JUDQGLRVLGDGH GRV SUpGLRV RQGH VH ORFDOL]DYDP DV liEULFDV UHYHODYD RV DYDQoRV GD HQJHQKDULD H GD DUTXLWHWXUD GR SHUtRGR WUDQVIRUPDQGR DV ELGDGHV HP ORFDLV GH H[SHULPHQWDomR HVWpWLFD H DUWtVWLFD
- **E** 2 DOWR QtYHO GH H[SORUDomR GRV WUDEDOKDGRUHV LQGXVWULDLV RFDVLRQDYD R VXUJLPHQWR GH DUORPHUDGRV XUEDQRV PDUFDGRV SRU SpVVLPDV FRQGLo}HV GH PRUDGLD VD~GH H KLJLHQH

Questão 11

$ HVFROXomR GR SURFHVVR GH WUDQVI SUL-DVmR $QHDQKD DFDEDGRV RFRU DUWHVDQDWR EDXPDWXUD H PDTXLQ H RV SULQFLSDLV HPHUJHQWHV %UDVLO &KLQD 8P GHVHVH HVWiJLRV IRL R DUWHVDQD WUDEDOKDYD EDXPDWXUD H PDTXLQ

- **A** traEDOKDYD FRQIRUPH R ULWPR GDV PDQHLUD SDGURQL]DGD
- **B** WUDEDOKDYD JHUDOPHQWH VHP R X PRGR GLIHUHQWH GR PRGHOR GH SU HPSUHJDYDP IRQWHV GH HQHUJLD D [XOFLRQDPHQWR GDV PiTXLQDV
- **C** UHDOL]DYD SDUWH GD SURGXomR SR XVR GH PiTXLQDV H WUDEDOKR DVVD
- **D** ID]LDP LQWHUIHUrQFLDV GR SURFH WpFQLFRV H JHUHQWHV FRP YLVWDV GH SURGXomR
- **E** WUDEDOKDYD FRP SURFLVVRUDV HFRQ{PLFD

Questão 12

$ VHUUDULD FRQVWUXtD UDPDLV IHUUH DV JUDQGHV PDWDV RQGH JUDQGHV JXLQGDVWHV H FRUUHQWHV JLJDQWH PHWURV DUUDVWDYDP SDUD DV FRPS WRUDV TXH MD]LDP DEDWLGDV SRU HT TXH DQWHULRUPHQWH SDVVDYDP SHO JXLQGDVWH DUUDVWDYD DV JUDQGHV FRPSULPHQWR GH WUHP RV HUYDLV QD PHWURSROH OXFUDWLYD HH RV QRYRV RUL,JHP GD FKDPDGD *XHUUD GR &RQ LPSDFWRV HQFRQWUDYD VH

- **A** D DEVRUomR GRV WUDEDOKDGRU SURFHVVR GH r[RGR UXUDO
- **B** SRR GH SHQHWUDomR GR SHOD LQWU &RQ D QHFHVV REUD
- **C** D GHVRUSDQL]DomR GD HFRQRPLD VXVWHQWDYD RV SRVVHLURV H RV W HJLmR
- **D** D GLPLQXLomR GR SRGHU GRV JUD HJLmR TXH SDVVDYDP GLVSXWDU RV QRYRV DJHQWHV
- **E** P FUHVFLPHQWR GRV FRQÀLWRV H SHUHJULQDomR GRV QRYRV HPSUHHQGLPH SURSULHWiULRV OLJDGRV DR FDSLW

Questão 13

$V VHFDV H R DSHOR HFRQ{PLFR GD $ EXRUQD FKLDG ¿HSLpVGXLFR GH %HOR 0RQ
TXH QR ¿QDO GR VpFXOR ;,; DOFDQoDYDX SURIRXQGDPHQWH QR VHQWLGR GH ;
PHUFDGRV LQWHUQDFLRQDLV ² PRWLYDUDP WHUULWyULRV GH PXQGR H
GH PDVVDV KXPDQDV RULXQGDV GR 1RUGHVWH GR %UDVLO SDUD GH GH
R $FUH (QWUHWDQWR DWp R LQtFLR GR VpFXOR ;,; KDYLDP DHDLmR DOLVDJHP
SHUWHQFLD j %ROtYLD HPERUD D PDUULQKD DRUDVLOHLUD QR
IRVVH EUDVLOHLUD H QmR REHGHFHVVH DRV WUDWDGRV ¿UPDGRV HQWUH DPEDV QDFLRQDOLGDGHV
3DUD UHDJLU j SUHVHQoD GH EUDVLHLURV H EROLYLDQRV GH
/D 3D] QHJRFLRX R DUUHQGDPHQWR GD UHJLmR D XPD
HQWLGDGH LQWHUQDFLRQDO GH GHIHVD GRV GRHUHLURV GH %RQ
YLROHQWDV GLVSXWDV GRV GRLV ODGRV GD IURQWHLUD 2 FRQÀLWR
Vy WHUPLQRX HP FRP D DVVLQDWXUD GR 7UDWDGR GH
3HWUySROLV SHOR TXDO R %UDVLO ¿FRX SURPHWHQDO R %HOR 0RQ
PLOK}HV GH OLEUDV HVWHUOLQDV

'LVSRQtYHO HP ZZ PUH JRY EU &RPSUHHQGHQGR R FRQWH[WR HP TXH RFRUUHUDP RV
IDWRV DSUHVHQWDGRV R $FUH WRUQRX VH SDUWH GR WHUULWyULR
QDFLRQDO EUDVLOHLUR

A) SHOD IRUPDOL]DomR GR 7UDWDGR GH 3HWUySROLV QD GHFDGD GH ;;
LQGHQL]DYD R %UDVLO SHOD VXD DQH[DomR
B) SRU PHLR GR DXVWDO SyndicaW aos
HPLJUDQWHV EUDVLOHLURV QD UHJLmR
C) GHYLGR j FUHVFHQWH HPLJUDomR GH EUDVLOHLURV TXH
H[SORUDYDP RV VHULQJDLV
D) HP IXQomR GD SUHVHQoD GH LQ~PHURV LPLJUDQWHV
HVWUDQJHLURV QD UHJLmR
E) SHOD LQGHQL]DomR TXH RV HPLJUDQWHV HVWUDQJHLURV GD PmR GH
SDJDUDP j %ROtYLD

Questão 14

1R GLD GH IHYHUHLUR GH
(VWUDGD GH)HUUR &DUULO VH HQFRQWUDYD QR
RSHUDGD SHOD &RPSDQKLD &DU95DOHQ GR 5LR RFH
UHJLmR 1RUWH GR SDtV OLJDQGR R
GD UHJLmR &RQ RH/PXtV 3RU VHXV DSUR[LPDGDPHQWH
TXLO{PHWURV GH OLQKD SDVVDP RRRH
ORFRPRWLYDV

'LVSRQtYHO HP KWWS ZZ WUDQVSRUWHV JRY EU &RPSUHHQGHQGR R FRQWH[WR HP TXH RFRUUHUDP RV
$ IHUURYLD HP TXHVWmR p GH H[WUHPD LPSRUWkQFLD SDUD D
ORJtVWLFD GR VHWRU SULPiULR GD HFRQRPLD EUDVLOHLUD HP
HVSHFLDO SDUD SRUo}HV GRV HVWDGRV GR 3DUi H 0DUDQKmR
8P DUJXPHQWR TXH GHVWDFD D LPSRUWkQFLD GD VR
GHVVD SRUomR GR WHUULWyULR p D

A) SURGXomR GH HQHUJLD SDUD DV
LQGXVWULDLV GR SDtV
B) SURGXomR VXVWHQWiYHO GH UHFXUVRV PLQHUDLV QmR
PHWiOLFRV
C) FDSDFLGDGH GH SURGXomR GH PLQHUDLV PHWiOLFRV
D) ORJtVWLFD GH LPSRUWDomR GH PDWpULDV SULPDV
LQGXVWULDLV
E) SURGXomR GH UHFXUVRV PLQHUDLV H[WUDWLYRV

Questão 15

%$&&&,1$ ' 48(,52= * %25*(6 5)LP GR OHLOmR FRP
Istoé Dinheiro. $QR Q ž DEU DGDSW

A) DR SRWHQ¿DO KLGUHOpWULFR GRV
TXDQGR FRPSDUDGRV jV EDFLDV K
QDJLLHV &XO &XGHVWH H &HQWUR 2
B) j QHFHVVLGDGH GH HTXLOLEUDU H
LQYHVWLPHQWR QR FUHVFLPHQWR G
SDUD DHWURSROLV DomR DPELHQWDO
C) HUDomR GH TXDQWLGDGH GH UHFXUVR
REUDV H j HVFDVVH] GRV UHFXUVRV
SDJDPHQWR SHOD GHVDSURSULDomR
D) DR GLUHLWR KLVWyULFR GRV LQGtJ
WHUUDV H j DXVrQFLD GH UHFRQKHF
SRU SDUWH GDV HPSUHLWHLUDV
E) DRV VHUYLDORHQWRV GD PmR GH
GLVSRQtYHO QD UHJLmR 1RUWH H F
QD YLQGD GH SUR¿VVLRQDLV GR 6XG

Questão 16

HUD LQDXJXUDGD D
2 ¿SpULR ,QFD TXH FRUUHVSRQGH
WHUULWyULRV GD %RQ]DOH H GR 3HU
HQUUH FRQWLQJHQWH SRSXODFLRQ
[LPDGDPHQWH
VDJHUDGD HUDR FHQWUR DGPLQLVWUD
IRUWHPHQWH HVWUDWL¿FDGD H FRPS
QREUHV VDFHUGRWHV IXQFLRQiULRV
FDPSRQHVHV HVWUDWR VRV H VROGDGRV
FRP YiULRV GHXVHV H D EDVH GD
DJULFXOWXUD SULOLSDOPHQWH R FX
HVWDGRV GR 3DUi H 0DUDQKmR
$SUHVHQWDQDO FDUDFWHUtVWLFD GD VR
GLWDGXUD WHRFUiWLFD TXH LJXDO
H[LVWrQFLD GH DiULJXDO GDGH VRFLDO H
HVWUXWXUD VRFLDO GHVLJXDO
FRQWHVW]DomR GH WRGRV RV EHQV
H[LVWrQFLD GH PRELOLGDGH VRFL
FRPSRVLomR GD HQWH SHOR PpULW
LPSRVVLELOLGDGH GH VH PXGDU G
HH[WLQWRU DR XPD DULVWRFUDFLD

A) GLWDGXUD WHRFUiWLFD TXH LJXDO
B) H[LVWrQFLD GH DiULJXDO GDGH VRFLDO H
C) HVWUXWXUD VRFLDO GHVLJXDO
FRQWHVW]DomR GH WRGRV RV EHQV
D) H[LVWrQFLD GH PRELOLGDGH VRFL
FRPSRVLomR GD HQWH SHOR PpULW
E) LPSRVVLELOLGDGH GH VH PXGDU G
HH[WLQWRU DR XPD DULVWRFUDFLD

Questão 17

&RXEH DRV ;DYDQWH H DRV 7LPELUD GR &HUUDGR XP UHFHQWH H PDUFDQWH UHDOL]DomR GH VXD WUDGLFLRQDO HP SOHQD $YHQLGD 3DXOLVWD 63 GH VXDV WHUUDV H D GHJUDGDomR DYDQoR GR DJURQHJyFLR

5,&$5'2 % 5,&$5'2) Povos indígenas do Brasil: 2001-2005 6mR 3DXOR QVWLWXWR 6RFLRDPELHQWDO DGDSWDGR

$ TXHVWmR LQGtJHQD FRQWHPSRUkQHD QR %UDVLO HYLGHQFLD D UHODomR GRV XVRV VRFLRFXOWXUDLV DWXDLV SUREOHPDV VRFLRDPELHQWDLV HQWUH

- **A** D H[SDQVmR WHUULWRULDO GR DGURQHJyFLR H DV SRUSHFWLYDV GH QDV UHJL}HV &HQWUR 2HVWH H SURWHomR LQGtJHQD H DPELHQWDO
- **B** RV JULOHLURV DUWLFXODGRUHV GR DJUROHJyFLR H RV SRYRV LQGtJHQDV SRXFR RUJDQL]DGRV QR &HUUDGR
- **C** DV OHLV PDLV EUDQGDV VREUH R HVVH SRSXODWRV DPELHQWH H DV VHYHUDV OHLV VREUH R XVR FDSLWDOLVWD GR PHLR DPELHQWH
- **D** RV SRYRV LQGtJHQDV GR &HUUDGR H RV SRORV HFRQ{PLFRV UHSUHVHQWDGRV SHODV HOLWHV LQGXVWULDLV SDXOLVWDV
- **E** R FDPSR H D FLGDGH QR &HUUDGR TXH ID] FRP TXH DV WHUUDV LQGtJHQDV GDOL VHMDP DOYR GH LQYDV}HV XUEDQDV

Questão 18

2V YHVWtJLRV GRV SRYRV 7XSL JXDUDQL HVGH DV 0LVV}HV H R ULR GD 3UDWD FRP DOJXPDV RFRUUrQFLDV DLQGD PDQLIHVWDP VXD $PD]{QLD $ OHVWH RFXSDYDP WRGD D OLWRUkQHD GHVGH R 5LR *UDQGH GR 6XO DW R 0DUDQKmR $ RHVWH DSDUHFHP QR ULR GD 3UDWD QR 3DUDJXDL H QDV WHUUDV EDL[DV GD %ROtYLD (YLWDP DV WHUUDV LQXQGiYHLV GR 3DQWDQDO H PDUFDP VXD SUHVHQoD GLVFUHWDPHQWH QRV FHUUDGRV GR %UDVLO FHQWUDO SUHIHUrQFLD DV UHJL}HV GH ÀRUHVWD DW R SDUDOHOR &RQWR DV UHJL}HV GH FDU

35286 $ O Brasil antes dos brasileiros 5LR GH -DQHLUR -RUJH =DKDU (GLWRU

Questão 19

2V WURSHLURV GtJHQDV ¿JXUDV GHFLVL YDV QD HFRQRPLD GR %UDVLO FR YHP GH WURSD TXH QR SDVVDGR VH GH KRPHQV TXH WUDQVSRUWDYD JDG YROWD GR VpFXOR ;9,,, PXLWD FRLV OXJDU D RXWUR QR ORPER GH PXODV DVVRFLDGR j DWLYLGDGH PLQHUDGR H[SORUDomR GH RXUR HP 0LQDV *HU HP *RLiV $ H[WUDomR GH SHGUDV S DWUDLX JUDQGHV FRQWLQJHQWHV S RXDV iUHDV H SRUWXJXHV HUD FDGD YHZ PHQRV GLVSRQLEHOWRV H SURGXWRV GRV WURSHLURV HUD FRQVWLWXtGD S IDULQKD SLPHQWD GR UHLQR FDIp HRQRJGHLR OHDJUHSHFLO XWR FiXVW SRXWRV HRV WURSHLURV FRPLDP IHLM FRP SHGDoRV GH FDUQH GH VRO H V YHUYLGR FRP FDUID H FRXYH SLFDG p XP GRV SUDWRV WtSLFRV GD FR]LQ XVR WUDGLFLRQDO GR PHLR HVVH QRPH SRSXOH HUD SUHSDUDGR GDV WURSDV TXH FRQGX]LDP R JDGR

'LVSRQtYHO HP KWWS ://ZZ.WULEXQDGRSODQDOWR FRP

$ FULDomR GR JHLmR WURSHLUR QD UHQDFLRQDGD j

- **A** DWLYLGDGH FRPHUFLDO H[HUFLGD WUDEDOKDYDP QDV PLQDV
- **B** DWLYLGDGH FXOWLYDYD H[HUFLGD QD &DPSDQKD &DUDQ &DUULDV H[HUFLGD QD &DPSDQKD &DUDQ &DUULDV H[HUFLGD
- **C** DWLYLGDGH PHUHDQWLO H[HUFLGD WUDQVSRUWDYDP 3DGR H PHUFDGR
- **D** DWLYLGDGH DJURSHFXiULD H[HUFL TXH QHFHVVLWDYDP GLVSRU GH DO WHUUDV LQXQGiYHLV
- **E** DWLYLGDGH PLQHUDGRUD H[HUFLGD HP RXUR

Rascunho

2V SRYRV LQGtJHQDV FLWDGRV SRVVXtDP WUDGLo}HV FXOWXUDLV HVSHFtiFDV TXH RV GLVWLQJXLDP GH RXWUDV VRFLHGDGHV LQGtJHQDV H GRV FRORQL]DGRUHV HXURSHXV (QWUH DV WUDGLo}HV WXSL JXDUDQL GHVWDFDYD VH

- **A** D RUJDQL]DomR HP DOGHLDV SROLWLFDPHQWH LQGHSHQGHQWHV GLULJLGDV SRU XP FKHIH HOHLWR SHORV LQGLYtGXRV PDLV YHOKRV GD WULER
- **B** D ULWXDOL]DomR GD JXHUUD HQWUH DV WULERV H R FDUiWHU VHPLVVHGHQWiULR GH VXD RUJDQL]DomR VRFLDO
- **C** D FRQTXLVWD GH WHUUDV PHGLDQWH RSHUDo}HV PLOLWDUHV R TXH SHUPLWLX VHX GRPtQLR VREUH YDVWR WHUULWyULR
- **D** R FDUiWHU SDVWRULO GH VXD HFRQRPLD TXH SUHVFLQGLD GD DJULFXOWXUD SDUD LQYHVWLU QD FULDomR GH DQLPDLV
- **E** R GHVSUH]R SHORV ULWXDLV DQWURSRIiJLFRV SUDWLFDGRV HP RXWUDV VRFLHGDGHV LQGtJHQDV

Questão 20

4XHP FRQVWUXLX D 7HEDV GH VHWH SHUWDV"
1RV OLYURV HVWmR QRPHV GH UHLV
$UUDVWDUDP HOHV RV EORFRV GH SHGUD"
(D %DELO{QLD YiULDV YH]HV GHVWUXLDU &DUWDJR"
WDQWDV YH]HV"
(P TXH FDVDV GD /LPD GRXUDGD PRUDYDP RV FRQVWUXWRUHV
3DUD RQGH IRUDP RV SHGUHLURV QD QRLWH HP TXH D 0XUDOKD
GD &KLQD ¿FRX SURQWD"
$ JUDQGH 5RPD HVWi FKHLD GH DUFRV GR WULXQIR
4XHP RV HUJXHX" 6REUH TXHP WULXQID DRUPH &RQVWDQWLQR"

% 5 (& + 7 Perguntas de um trabalhador que lê. 'LVSRQtYHO HP KWWS UHFDQWRGRHVWXGDQWH ED
$FHVVR HP DEU

3DUWLQGR GDV UHÀH[}HV GH XP WUDEDOKDGRU TXH Or XP OLYUR
GH +LVWyULD R DXWRU FHQVXUD D PHPyULD PRQVWUXtGD VREUH
GHWHUPLQDGRV PRQXPHQWRV H DFRQWHFLPHQWRV KLVWyULFRV
$ FUtWLFD UHIHUH VH DR IDWR GH TXH

Ⓐ RV DJHQWHV KLVWyULFRV GH XPDGHWHUPLQDGD SRVLÇÃR GH
GHYHULDP VHU DTXHOHV TXH UHDOLPDUDP
RX JUDQGLRVRV H SRU LVVR ¿FDUDP QD PHPyULD
Ⓑ D +LVWyULD GHYHULD VH SUHRFXSDU HP PHPRULDU RV
QRPHV GH UHLV RX GRV JRYHUQDQWHV GH
TXH VH GHVHQYROYHUDP DR ORQJR DRV &RQVWDQWLQR &XUDQWH &DUWDJR &RQVWDQWLQR &DUWDJR &RQVWDQWLQR &DUWDJR &RQVWDQWLQR

Questão 24

(X R 3UtQFLSH 5HJHQWH IDoR VDEHUDRV TXH R SUHYHQWH $OYDUi YLUHP TXH GHVHMDQGR SURPRYHU DQGDQWH ULTXH]D QDFLRQDO H VHQGR XP GRVEDDQHLURV PDQXIDWXUDV H D LQG~VWULD VRX VHU¿YLGR DERQHUH HVVHV UDYRV QR WRGD H TXDOTXHU SURLELomR TXH KDMDDWHVWH HHVSHWRQ HP (VWDGR GR %UDVLO GH HVFUDYRV HP VHXV GRPtQLRV

$OYDUi GH OLEHUGDGH SDUD DV LQG~VWULDV ž GH $EUL O GH &RORQ%RO DYGHV &$PDUD 5mR GR ULR GD Textos políticos da História do Brasil 9RO %UDVtOLD 6HQDGR)HGHUDO DGDSWDGR

2 SURMHWR LQGXVWULDOL]DQWH GH QR DOYDUi QmR VH FRQFUHWL]RX 4XH R SHUtRGR H[SOLFDP HVVH IDWR"

A $ RFXSDomR GH 3RUWXJDO SHODV WURSDV IUDQFHVDV IHFKDPHQWR GDV PDQXIDWXUDV

B $ GHSHQGrQFLD SRUWXJXHVD GD SUHGRPtQLR LQGXVWULDO LQJOrV VREUH VXDV UHGHV GH FRPpUFLR

C $ GHVFRQ¿DQoD GD EXUJXHVLD LQGXVWULDO FRORQLDO GLDQWH GD FKHJDGD GD IDPtOLD UHDO

D 2 FRQIURQWR HQWUH D)UDQoD H D &RORQLD SRUWXJXHVD &RPR &DSLWDO &RORQLDO &RPpUFLR &RORQLDO &RPpUFLR &RORQLDO &RPpUFLR

Questão 27

2 DUWLJR GR &yGLJR SHQDO %UDVLOHLUR GH)D]HU QDV UXDV H SUDoDV S~EOLFDV H[HUFtFLRV GH DJRODGH H GHVWUH]D FRUSRUDO FRQKHFLGRV SHOD FRPSDQKHLUDV GH FDSRHLUDJHP DQGDU HP FRUUHUHDV FRP DUPDV RX LQVWUXPHQWRV FDSD]HV GH SURGX]LU XPD QHVVD SURYRFDQGR WXPXOWR RX GHVRUGHQV 3HQD 3ULVmR GH GRLV D VHLV PHVHV

62$5(6 &(A Negregada instituição: os capoeiras no Rio de Janeiro: 1850-1890.
5LR GH -DQHLUR 6HFUHWDULD 0XQLFLSDO GH &XOWXUD DE 3WDGR

2 DUWLJR GR SULPHLUR &yGLJR 3HQDO &RQVLGHUD &ULPH &RQWUD &DXVDU &RQWUD SRtWLFD PHGLGDV VRFLDOPHQWH H[FOXGHQWHV 1HVVH FRQWH[WR WDO UHJXODPHQWR H[SUHVVDYD

A) D PDQXWHQomR GH SDUWH GD OHJLVODomR GR SDtV SRU XPD YLVWDV DR FRQWUROH GD FULPLQDOLGDGH
B) D GHIHVD GR UHWRUQR GR FDWLYHLUR &RQVWLWXLomR &RQVW SULPHLURV JRYHUQRV GR SHUtRGR UHSXEOLFDQR
C) R FDUiWHU GLVFLSOLQDGRU GH XPD LQGXVWULDOL]DGD GHVHMRVD SURJUHVVR H FLYLOL]DomR
D) D FULPLQDOL]DomR GH SUiWLFDV FXOWXUDLV D SHUVHJXLomR GH YDORUHV TXH YLQFXODYDP FHUWDV SUiWLFDV GH HVFUDYLGmR
E) R SRGHU GR UHJLPH HVFUDYLVWD QHJURV FRPR FDWHJRULD VRFLDO LQIHULRU segregada.

Questão 28

(P QRVVR SDtV TXHUHPRV VXEVWLWXLU XPD PRUDO D KRQUD SHOD SURELGDGH RV XVRV SHORV SULQFtSLRV DV FRQYHQLrQFLDV SHORV GHYHUHV LPSpULR GD UD]mR R GHVSUH]R j GHVJUDoD &RQWUD &RQWUD &RQWU

Questão 32

'H PDUoR GH D IHYHUHLUR GH
GHFUHWDGDV PDLV GH OHLV QRYDV
H GH UHJXODPHQWDomR GR WUDEDOKR
VHWRUHV 7RGDV HODV WrP VLGR VL
GR JRYHUQR 'HVGH Dt R WUDEDOKD
QRV TXDGURV JHUDLV GR UHJLPH R VHX

'$17$6 0 $ IRUoD QDFLRQDOL]DGRUD GR (VWDGR 1RYRS.5LR GH -DQHLUR ',3 $SXG %(5&,72
R. 1RV WHPSRV GH *HW~OLR GD UHYROXomR GH 3DXORP SWXDO WDGR 1RYR

$ DGRomR GH QRYDV SROtWLFDV S~EOLFDV H DV XGDQoDV
MXUtGLFR LQVWLWXFLRQDLV RFRUULGDV QR %UDVLO ERP D DVFHQVmR
GH *HW~OLR 9DUJDV DR SRGHU HYLGHQFLDP R SDSHO KLVWyULFR
GH FHUWDV OLGHUDQoDV H D LPSRUW
FRQTXLVWD GD FLGDGDQLD 'HVVH SU

Questão 33

1mR p GLItFLO HQWHQGHU R TXH RFRUUHX QR %UDVLO QRV DQRV
LPHGLDWDPHQWH DQWHULRUHV DR JROSH PLOLWDU GH $
GLPLQXLomR GD RIHUWD GH HPSUHJRV H D GHVYDORUL]DomR GRV
VDOiULRV SURYRFDGDV SHOD LQÀDomR QD VRSD
PRELOL]DomR SROtWLFD SRSXODU
RQGDV JUHYLVWDV GH YiULDV FDWHJRULDV SUR¿VVLRQDLV R TXH
DSURIXQGRX DV WHQV}HV VRFLDLV
WUDEDOKDGRUDV VH UHFXVDUDP D S
GR PRGHOR HFRQ{PLFR MXVFHOLQLVWD

MENDONÇA, S. R. A Industrialização Brasileira 6mR 3DXOR 0RGHUQD

6HJXQGR R WH[WR RV FRQÀLWRV VRFLDLV RFRUULGRV QR LQtFLR
GRV DQRV GHFRUUHUDP SULQFLSDOPHQWH

Questão 34

$ OHL QmR DDYFH GD QDWXUH]D MXQW
SHORV SUiPHLURV SDVWRUHV D OHL QD
YDWyULDV GRV PDVVDEUHV GDV FRQTX
VHXV KHUyLV GH KRUURU D OHL QDVFH
GDV WHUUDV GHYDVWDGDV HOD QDVFH
DXR DEUDVDPHUR HOEFRQWUD
QRV TXDGURV JHUDLV GR UHJLPH R VHX

)2&$&$0/ 0 $XOD GH GH M DEqmiesRdasSociedade. ,Q
6mR 3DXOR 0DUWLQV)RQWH

2 ¿OyVRIR 0LFKHO)RXFDXOW VpF ;;
D SRtWLFD H D QHL HP UHODomR DR
VRFLDO &RP EDVH QD UHÀH[mR GH)R
GDV OHLV QD RUJDQL]DomR GDV VRFLH
DV SRSXODQ HVWDV DSDUHFHUDP D
FRQTXLVWD GD FLGDGDQLD 'HVVH SU

Questão 35

Opinião

os Estados

Questão 36

(X IXUR XP SRR
6H QmR WHP FDUQH
PDUFDGD SRU VXFHVVLYDV
E deixa andar, deixa andar...

=p .HWWL Opinião SRtYHO HP KWWS ZZZ PSEQ
$FHVVR HP DEU

Questão 36

A chegada da televisão

$ FDL[D GH SDQGRUD WHFQROyJLFD SHQHWUD QRV QDUUDUHV HOHWUD
VXDV FDEHoDV IDODQWHV DVWURV SURYHQLHQWHV GH RXWURV SDLVHV
IDEXORVDV LUUHVLVWtYHLV JDURWDV SURSDJDQGD YHUGHV
PRGHUQL]DGDV GR WUDGLFLRQDO KRPHP VDOGXtFKH

6(9&(1.2 1 2 História da Vida Privada no Brasil 3. República: da Belle Époque à Era do Rádio 6mR 3DXOR &LD GDV /HWUDV

$ 79 D SDUWLU GD GpFDGD GH
EUDVLOHLURV SURYRFDQGR PXGDQ©DV
KiELWRV GD SRSXODomR &HUWRV
EUDVLOHLUD UHYHODUDP TXH D 79
HVSDoR GH DomR GD LPSUHQVD WRUQRX-VH WDPEpP YHtFXOR
GH XWLOLGDGH S~EOLFD D IDYRU GD GHPRFUDFLD QD PHGLGD
HP TXH

Ⓐ DPSOL¿FRX RV GLVFXUVRV QDFLRQDOVWDV H DXWRULWiULRV GXUDQWH R JRYHUQR 9DUJDV
Ⓑ UHYHORX SDUD R SDtV FDVRV GH FRUUXSomR QD HVIERA SROtWLFD GH YiULRV JRYHUQRV
Ⓒ PDTXLRX LQGLFDGRUHV VRFLDLV QHJDWLYRV GXUDQWH DV GpFDGDV GH H
Ⓓ DSRLRX QR JRYHUQR &DVWHOR %UDQFR DV LQLFLDWLYDV GH IHFKDPHQWR GR SDUODPHQWR
Ⓔ FRUURERURX D FRQVWUXomR GH RETUDV PUD{QLEDV GXUDQWH RV JRYHUQRV PLOLWDUHV

Questão 37

2V PHLRV GH FRPXQLFDomR IXQFLRQDP RRPR XP]HOR HQWUH
RV GLIHUHQWHV VHJPHQWRV GH XPD VRFLHGDGH 1DV ~OWLPDV
GpFDGDV DFRPSDQKDPRV D LQVHUomR GH XP QRYR PHLR GH
FRPXQLFDomR TXH VXSHUD HP PXLWR RRXWURV ; MWHLYWGHWHS
YLVWR TXH SRGH FRQWULEXLU SDUD RRXWURV SURSRVWDV GH GLIH
VRFLDO H SROtWLFD GD VRFLHGDGH 1 EHOGHTXR SRVWDELOLWDU GR W
D LQVWLWXLomR GH PHFDQLVPRV HOHWU{QLFRV SDUD D HIHWLYD
SDUWLFLSDomR SROtWLFD H GLVVHPLQDomR GH YDORUHV
&RQVWLWXL R H[HPSOR PDLV H[SUHVVLYR GHVVH QRYR
FRQMXQWR GH UHGHV LQIRUPDFLRQDLV GD QDWXUH]D GR KRPHP VHU pWLF

Ⓐ Internet.
Ⓑ ¿EUD yWLFD
Ⓒ 79 GLJLWDO
Ⓓ WHOHIRQLD PyYHO
Ⓔ SRUWDELOLGDGH WHOHI{QLFD

Questão 38

$ SROXLomR H RXWUDV RIHQVDV DPELH
HVVH QRPH PDV Mi HUDP ODUJDPHQWH
QDV JUDQGHV FLGDGHV LQJOHVDV
SURYHQLHQWHV GH RXWURV SDLVHV HVWU
SURWHVWRV $ UHDomR DQWLPDTXL
SHORV GLYHUVRV OXGGLVPRV DQWHF
DPELHQWDOLVWDV (VVH HUD HQWmR
RV PLDVPDV XUEDQRV

SANTOS, M. A natureza do espaço: técnica e tempo, razão e emoção.

6mR 3DXOR ('863 DGDSWD

HQWURX QRV ODUHV
2 FUHVFHQWH GHVHQYROYLPHQWR Wp
PRGL¿FDo}HV QD SDLVDJHP H QRV
YLYHQFLDGRV SHODV VRFLHGDGHV 'H
SRUWHVWDV HQWUH WRQ PRYLPHQWR
VH H[SUHVVDUDP SRU PHLR
GH GHPRFUDFLD QD PHGLGD
Ⓐ GDV LGHRORJLDV FRQVHUYDFLRQLV
DGHSWRV QR PHLR XUEDQR
Ⓑ GDV SROtWLFDV JRYHUQDPHQWDLV
REMHWRV QDWXUDLV H FXOWXUDLV
Ⓒ GDV WHRULDV VREUH D QHFHVVLGD
HQWUH WpFQLFD H QDWXUH]D
Ⓓ GRV ERLFRWHV DRV SURGXWRV
H[SORUDGRUDV H SROXHQWHV
Ⓔ GD FRQWHVWDomR j GHJUDGDomR
WUDQVJHVH GD QDWXUH]D

Questão 39

$ pWLFD SUHFLVD VHU FRPSUHHQ
HPSUHHQGLPHQWR FROHWLYR D VH
UHWRPDGR H UHGLVFXWLGR SRUTXH
LQWHUSHVVRDO H VRFLDO $ pWLFD VX
VRFLDO VH RUJDQL]H VHQWLQGR VH U
TXH FULH FRQGLo}HV SDUD R H[HUFtFL
DXW{QRPRV $ UHODomR HQWUH pWLFD
TXHVWmR GH HGXFDomR H OXWD SHOD
QHFHVViULD XPD pWLFD UHQRYDGD TX
GD QDWXUH]D QRV YDORUHV VRFLDLV
XPD QRYD SUiWLFD SROtWLFD

&25', HW DO 3DUD ¿ORVRIDU 6mR 3DXOR 6FLSL

2 FRQWUR ; MWHLYWGHWHS QHVDU D pW
QRYRV SUREOHPDV RULXQGRV GH GLIH
FRQ©LWRV LGHRORJLFRV H FRQWUD
6 EHOGHTXR SRVWDELOLWDU GR W
ERPSUHHQGLGD ERPR
Ⓐ QDWXUH]D H QWRUPD o}HV
GHOD RV FLGDGmRV SDVVDP D SHQV
FRP YDORUHV FRQHWLYRV
Ⓑ PHFDQLVPR GH FULDomR GH GLUHLW
j GD QDWXUH]D GR KRPHP VHU pWLF
Ⓒ PHLR SDUD UHVROYHU RV FRQÀLWRV
JOREDOL]DomR SRLV D SDUWLU GR
HIHWLYDPHQWH D pWLFD D SROtWLFD
Ⓓ SDUkPHWUR SDUD DVVHJXUDU R H[HU
SHORV LQWHUHVVHV H DomR SULYDGD
Ⓔ DFHLWDomR GH YDORUHV XQLYHUV
VRFLHGDGH TXH EXVFD GLPHQVLRQD
RXWUDV VRFLHGDGHV

Questão 40

+RPHQV GD ,QJODWHUUD SRU TXH DDUDU SDUD RV VHQKRUHV
TXH YRV PDQWrP QD PLVpULD"
3RU TXH WHFHU FRP HVIRUoRV H FXLGDGR DV ULFDVLUXSDV
TXH YRVVRV WLUDQRV YHVWHP"
3RU TXH DOLPHQWDU YHVWLU H SRXSDU GREHUR DWR W~XXOR
HVVHV SDUDVLWDV LQJUDWRV TXH HISORUDP YRVVR VXRU DK
TXH EHEHP YRVVR VDQJXH"

6+(//(< 2V KRPHQV GD ,QJODWHUUD
$SXG +8%(50$1 / História da Riqueza do Homem 5 R GH -DQHLUR =DKDU

$ DQiOLVH GR WUHFKR SHUPLWH LGHQWL¿FDU TXH R SRHWD
URPkQWLFR 6KHOOH\ UHJLVWURX XPD FRQWUDGLomR
QDV FRQGLo}HV VRFLRHFRQ{PLFDV GD QDVFHQWH FODVVH
WUDEDOKDGRUD LQJOHVD GXUDQWH D 5HYROXomR ,QGXVWULDO &DS
FRQWUDGLomR HVWi LGHQWL¿FDGD

A QD SREUH]D GRV HPSUHJDGRV TXH HVWDYD GLVVRFLDGD
GD ULTXH]D GRV SDWU}HV
B QR VDOiULR GRV RSHUiULRV TXH HUD SURSRUFLRQDO DRV
VHXV HVIRUoRV QDV LQG~VWULDV SRGHUHV
C QD EXUJXHVLD TXH WLQKD VHXV LQWHUHVVHV DEDODGRV QR
SHOR SUROHWDULDGR
D QR WUDEDOKR TXH HUD FRQVLGHUDGR XPD JDUDQWLD
GH OLEHUGDGH
E QD ULTXH]D TXH QmR HUD XVXIUXWXiULD DQTXHOHV
TXH D SURGX]LDP

Questão 41

³3HFDGR QHIDQGR´ HUD H[SUHVVmR FRUUHQWHPHQWH XWLOL]DGD
SHORV LQTXLVLGRUHV SDUD D VRGRPLD 1HIDQGXV R TXH
QmR SRGH VHU GLWR $ $VVHPEOHLD GH EOpULJRV UHXQLGD HP
6DOYDGRU HP FRQVLGHUDX D VRGRPLD ³WmR SpVVLPR H
KRUUHQGR FULPH´ WmR FRQWUiULR8jPOEDLGR QDWXUH]D DH FLGH XHUDEUDU GH
LQGLJQR GH VHU QRPHDGR´ H SRU LVVR PH VWRGDYHH TXH UHFRUUHVVHP D
129$,6) 0(//2 (62 História da Vida Privada no Brasil 9
6mR 3DXOR &RPSDQKLD GDV /HWUDV DGDSWDGR

2 Q~PHUR GH KRPRVVH[XDLV DVVDVVLQDGRV QR %UDVLO
EDWHX R UHFRUGH KLVWyULFR HP ¿QDLV GR VpFXOR &RPR HVVH
5HODWyULR $QXDO GH $VVDVVLQDWR &RPH[XDLV HP %U
± /pVELFDV *D\V %LVVH[XDLV H 7UDYHVWLV QHVVH DQR
IRUDP UHJLVWUDGRV PRWRV SRU PRWLYDomR KRPRIyEOLFD
QR 3DtV

'LVSRQtYHO HP ZZ DOHPGDQRWLFDLDKSRF EU &RPH[XDLV &DVDVVLQDWR &DSDSWDGR &DSDSWDGR &DSDSWDG

Questão 44

Rascunho

1D pWLFD FRQWHPSRUkQHD R VXMHLWR QmR p PDLV XP VXMHLWR VXEVWDQFLDO VREHUDQR H DEVROXWDPHQWH OLYUH QHP XP VXMHLWR HPStULFR SXUDPHQWH QDWXUDO (OH p VLPXOWDQHDPHQWH RV GRLV QD PHGLGD HP TXH p XP sujeito histórico-social $VVLP D pWLFD DGTXLUH XP GLPHQVLRQDPHQWR SROtWLFR XPD YH] TXH D DomR GR VXMHLWR QmR SRGH PDLV VHU YLVWD H DYDOLDGD IRUD GD UHODomR VRFLDO FROHWLYD 'HVVH PRGR D pWLFD VH HQWUHODoD QHFHVVDULDPHQWH FRP D SROtWLFD HQWHQGLGD HVWD FRPR D iUHD GH DYDOLDomR GRV YDORUHV TXH DWUDYHVVDP DV UHODo}HV VRFLDLV H TXH LQWHUOLJD RV LQGLYtGXRV HQWUH VL

6(9(5,12 $)RRVRQ&RR 3DXOR &RUWH] DGDSWDGR

2 WH[WR DR HYRFDU D GLPHQVmR KLVWyULFD GR SURFHVVR GH IRUPDomR GD pWLFD QD VRFLHGDGH FRQWHPSRUkQHD UHVVDOWD

A) RV FRQWH~GRV pWLFRV GHFRUUHQWHV GDV LGHRORJLDV SROtWLFR SDUWLGiULDV
B) R YDORU GD DomR KXPDQD GHULYDGD GH SUHFHLWRV PHWDItVLFRV
C) D VLVWHPDWL]DomR GH YDORUHV GHVDVVRFLDGRV GD FXOWXUD
D) R VHQWLGR FROHWLYR H SROtWLFR GDV Do}HV KXPDQDV LQGLYLGXDLV
E) R MXOJDPHQWR GD DomR pWLFD SHORV SROtWLFRV HOHLWRV GHPRFUDWLFDPHQWH

Questão 45

48,12Toda Mafalda 6mR 3DXOR 0DUWLQV)RQWHV

'HPRFUDFLD ³UHJLPH SROtWLFR QR TXDO D VREHUDQLD p H[HUFLGD SHOR SRYR SHUWHQFH DR FRQMXQWR GRV FLGDGmRV´

-$3,$66Ò + 0$5&21DGH QiULR %iVLFR GH5LRGH-DQHLUR =DKDU

8PD VXSRVWD ³YDFLQD´ FRQWUD R GHVSRWLVPR HP XP FRQWH[WR GHPRFUiWLFR WHP SRU REMHWLYR

A) LPSHGLU D FRQWUDWDomR GH IDPLOLDUHV SDUD R VHUYLoR S~EOLFR
B) UHGX]LU D DomR GDV LQVWLWXLo}HV FRQVWLWXFLRQDLV
C) FRPEDWHU D GLVWULEXLomR HTXLOLEUDGD GH SRGHU
D) HYLWDU D HVFROKD GH JRYHUQDQWHV DXWRULWiULRV
E) UHVWULQJLU D DWXDomR GR 3DUODPHQWR

CIÊNCIAS DA NATUREZA E SUAS TECNOLOGIAS

Questões de 46 a 90

Questão 46

$ YDFLQD R VRUR H RV DQWLELyWLFRV VXEPHWH RV RU XW QL]DGRV SDUD SURWHomR GRV F RUJDQLVPRV D SURFHVVRV ELROyJLFRV GLIHUHQWHV 3HVVRDV TXH YLDMDP SDUD UHJL}HV HP TXH R FRUUHP DOWDV LQFLGrQFLDV GH IXVmR FRPR R HVWDORR SRU H[H GH IHEUH DPDUHOD GH SLFDGDV GH FRFUDV SHeRQKHQWDV H GH OHSWRVSLURVH H TXHUHP HYLWDU RX WUDWDU SURFHODPDV GH VD~GH UHODFLRQDGRV D HVVDV RFRUUrQFLDV GHWHUPLQDGDV RULHQWDo}HV

$R SURFXUDU XP SRVWR GH VD~GH XP YLDMDQWH RULHQWDGR SRU XP PpGLFR D WRPDU SUHYHQWLYDPHQWH RX FRPR PHGLGD GH WUDWDPHQWR

Ⓐ DQWLELyWLFR FRQWUD R YtUXV GD IHEUH DPDUHOD VRUR DQWLRItGLFR FDVR VHMD SLFDGR SRU XPD FRFUDVH FRQWUD D OHSWRVSLURVH

Ⓑ YDFLQD FRQWUD R YtUXV GD IHEUH DPDUHOD VRUR DQWLRItGLFR FDVR VHMD SLFDGR SRU XPD FREUD H DQWLELyWLFR FDVR HQWUH HP FRQWDWR FRP D

Ⓒ VRUR FRQWUD R YtUXV GD IHEUH DPDUHOD DQWLELyWLFR FDVR VHMD SLFDGR SRU XPD FREUD H VRUR FRQWUD WR[LQDV EDFWHULDQDV

Ⓓ DQWLELyWLFR RX VRUR WDQWR FRQWUD R YtUXV GD IHEUH DPDUHOD FRPR SDUD YHQHQR GH FREUDV H YDFLQD FRQWUD D OHSWRVSLURVH

Ⓔ VRUR DQWLRItGLFR H DQWLELyWLFR FRQWUD D YDFLQD FRQWUD D IHEUH DPDUHOD FDVR HQWUH HP FRQWDWR FRP R YtUXV FDXVDGRU GD GRHQoD

Questão 47

$V RQGDV HOHWURPDJQpWLFDV FRPR D OX] YLVtYHO H DV RQGDV GH UiGLR YLDMDP HP OLQKD UHWD HP XP PHLR KRPRJrQHR (QWmR DV RQGDV GH UiGLR HPLWLGDV QD UHJLmR OLWRUkQHD GR %UDVLO QmR DOFDQoDULDP D UHJLmR DPD]{QLFD GR %UDVLO SRU FDXVD GD FXUYDWXUD GD 7HUUD (QWUHWDQWR VDEHPRV TXH p SRVVtYHO WUDQVPLWLU RQGDV GH UiGLR HQWUH HVVDV OXFDOLGDGHV GHYLGR j LRQRVIHUD

&RP D DMXGD GD LRQRVIHUD D WUDQVPLVVmR GH RQGDV SODQDV HQWUH R OLWRUDO GR %UDVLO H D UHJLmR DPD]{QLFD p SRVVtYHO SRU PHLR GD

Ⓐ UHÀH[mR
Ⓑ UHIUDomR
Ⓒ GLIUDomR
Ⓓ SRODUL]DomR
Ⓔ LQWHUIHUrQFLD

Questão 48

7RGR FDUUR SRSXODU XPD FDL[D GH XW QL]DGRV SDUD SURWHomR GRV F LXVtYHLV VmR FRQVWLWXtGRV GH XP P GH IXVmR FRPR R HVWDORR SRU H[H TXDQGR SHUFRUULGRV SRU XPD FRUU PDLRU WUDWDU SURHODPDV GH VD~GH TXH DTXHOD TXH VmR FDSD RXDQGR D IXVLPPWXUD XPD VpULH GH FRUUHQWH SRU HOHV VXSRUWDGRV

Fusível	Corrente Elétrica (A)
$1XO	
$PDUHOR	
/DUDQMD	
3UHWR	
9HUPHOKR	

Ⓐ D]XO
Ⓑ SUHWR
Ⓒ ODUDQMD
Ⓓ DPDUHOR
Ⓔ YHUPHOKR

Rascunho

Questão 49

$ FiULH GHQWDO UHVXOWD GD DWLYLGDGH GH ED FWpULDV TXH
GHJUDGDP RV Do~FDUHV H RV WUDQVIRUPDP HP iFLGRV
TXH FRUURHP D SRUomR PLQHUDOL]DGD GRV GHQWHV 2 ¬ RU
MXQWDPHQWH FRP R FiOFLR H XP Do~FDU HRDPDGR [LOLWRO
DJHP LQLELQGR HVVH SURFHVVR 4XDQGR QmR VH HVFRYDP
RV GHQWHV FRUUHWDPHQWH H QHQHV DEXPXODP VH UHVWRV
GH DOLPHQWRV DV EDFWpULDV TXH YLYHP QD ERFD DGHUHP
DRV GHQWHV IRUPDQGR D SODFD &RP R WHPSR QWR RX ELR¿OPH
1D SODFD HODV WUDQVIRUPDP R Do~FDU GRV UHVWRV GH
DOLPHQWRV HP iFLGRV TXH FRUURHP R HVPDQWH GR GHQWH
IRUPDQGR XPD FDYLGDGH TXH p D (TXDQGR FDHP QR FKmR
TXH D SODFD EDFWHULDQD VH IRUPD HPEDUDU
LQJHVWmR GH FDUERLGUDWRV IHUPHQWiYHLV SBLV DV EDFWpULDV
SRVVXHP SROLVVDFDUtGHRV LQWUDFHOXODUHV GH UHVHUYD

'LVSRQtYHO HP KWWS ZZZ GLDULRGDVDXGH FRP EU $FHVVR HP DJR DGDSWDGR

cárie 1 GHVWUXLomR GH XP RVVR SRU FRUURVmR SURJUHVVLYD
FiULH GHQWiULD HIHLWR GD GHVWUXLomR GD HVWUXWXUD GHQWiULD
SRU EDFWpULDV

+28$,66 $QW{QLR Dicionário eletrônico 9ºHUL]mR (GLWRUD 2EMHWLYD DGDSWDGR

$ SDUWLU GD OHLWXUD GR WH[WR TXH GLVFXWH DV EDXVDV
GR DSDUHFLPHQWR GH FiULHV H GD VXD UHODomR FRP DV
LQIRUPDo}HV GR GLFLRQiULR FRQFOXL VH TXH D FiULH GHQWDO
UHVXOWD SULQFLSDOPHQWH GH

Ⓐ IDOWD GH À~RU H GH FiOFLR QD SDUHGH GRV GHQWHV
SRSXODomR EUDVLOHLUD
Ⓑ FRQVXPR H[DJHUDGR GR [LOLWRO XP Do~FDU QD GLHWD
DOLPHQWDU GLiULD GR LQGLYtGXR
Ⓒ UHGXomR QD SUROLIHUDomR EDFWHULDQD EDFWpULDV
GHVEDODQFHDGD SHOD Pi DOLPHQWDomR
Ⓓ XVR H[DJHUDGR GR À~RU XP DJHQWH TXH HP DOWD
TXDQWLGDGH WRUQD VH Wy[LFR j IRUPDomR GRV GHQWHV
Ⓔ FRQVXPR H[FHVVLYR GH Do~FDU RV GHQWHV FDUDEROR
H Pi KLJLHQL]DomR EXFDO TXH FRQWULEXHP SDUD D
SUROLIHUDomR GH EDFWpULDV

Questão 50

(P QRVVR FRWLGLDQR XWLOL]DPRV DV SDODYUDV ³FDORU´ H
³WHPSHUDWXUD´ GH IRUPD GLIHUHQWH &RP R REMHWLYR GH VH WHVWDU D H
XVDGDV QR PHLR FLHQWt¿FR 1D OLQJXDJHP FRUULTXHLUD R DTXHF
p LGHQWL¿FDGR FRPR ³DOJR TXHQWH´ H WDPEpP &DORU H WHPSHUDWXUD VXEVWkQ
³TXDQWLGDGH GH FDORU GH XP FRUSR´ (VVHV VLJQL¿FDGRV
QR HQWDQWR QmR FRQVHJXHP H[SOLFDU GLYHUVDV VLWXDo}HV
TXH SRGHP VHU YHUL¿FDGDV QD SUiWLFD 1HVVH WHVWH FDGD IRUQR RSHURX j

'R SRQWR GH YLVWD FLHQWt¿FR 2 IRUQR PDLV H¿FLHQWH IRL DTXHOH T
PRVWUD D OLPLWDomR GRV FRQFHLWRV FRUULTXHLURV GH FDORU H
WHPSHUDWXUD"

Ⓐ $ WHPSHUDWXUD GD iJXD SRGH ¿FDU FRQVWDQWH GXUDQWH
R WHPSR HP TXH HVWLYHU IHUYHQGR
Ⓑ 8PD PmH FRORFD D PmR QD iJXD GD EDQKHLUD GR
EHEr SDUD YHUL¿FDU D WHPSHUDWXUD DR QHFHX D PDLRU TXDQWLGDGH GH
Ⓒ $ FKDPD GH XP IRJmR SRGH VHU XVDGD SDUD DXPHQWDU
D WHPSHUDWXUD GD iJXD HP XPD SDQHOD
Ⓓ $ iJXD TXHQWH TXH HVWi HP XPD SDQHOD pQHUJLD
SDUD RXWUD FDQHFD D ¿P GH GLPLQXLU VXD WHPSHUDWXUD
Ⓔ 8P IRUQR SRGH IRUQHFHU FDORU SDUD XPD YDVLOKD GH
iJXD TXH HVWi HP VHX LQWHULRU FRP PHQRU WHPSHUDWXUD
GR TXH D GHOH

Questão 51

2 WHIWR 3 2 YER GDV IROKDV WUD] XP
7¬FXQDV SDUD XP HQ{PHQR XVXDOPH
QDWXUHED
Do~FDU HRDPDGR [LOLWRO
RV HVFRYDP
O vôo das Folhas
&RP R YHQWR
Do~FDU GRV UHVWRV GH
DV IROKDV VH PRYLPHQWDP
(TXDQGR FDHP QR FKmR
9DGH OHPEUDU
RX HPEDUDU QR FHFLR
$V IROKDV YHOKDV DXWXPQDLV DV EDFWpULDV
Rigatura O Rigatura FREUH R FKmR
ARUHVWD HQULTXHFH D WHUUD H
$V IROKDV YHOKDV PRUUHP SDUD DMXG
IROKDV QRYDV
Dentro do rigatura YLYHP DUDQKDV IRUPLJDV
FHQWRSHLDV PLQKRFDV FRJXPHORV
RXWURV VHUHV PXLWR
$V IROKDV WDPEpP FDHP QRV ODJRV QH
Natureza segundo os Tupinas/Livro das Árvores.
2UJDQL]DomR *HUDO GRV 3URIHVVRUHV %LOtG
1D YLVmR GRV tQGLRV 7LFXQDV D GHV
SHUDPHQWR GRV ¿LOKRV DR FRP XP SU
UHODFLRQDGR DR FLFOR
Ⓐ GD iJXD
Ⓑ do oxigênio.
Ⓒ GR JYVIRUR
Ⓓ RF DUEROR
Ⓔ do nitrogênio.

Questão 52

&RP R REMHWLYR GH VH WHVWDU D H
QWH GH FRPR HODV VmR
RUXDGDV QR FDORU H DTXHF
H WHPSHUDWXUD VXEVWkQ
GHWHUPLQDGD PDVVD HP FLQFR IRUQF
1HVVH WHVWH FDGD IRUQR RSHURX j
TXH VLWXDomR SUiWLFD
2 IRUQR PDLV H¿FLHQWH IRL DTXHOH T
FHQWRU DXPHQWDU
Ⓐ IRUQHFHX D PDLRU TXDQWLGDGH GH
Ⓑ EHGHX HQHUJLD j DPRVWUD GH PDL
WHPSR
Ⓒ IRUQHFHX D PDLRU TXDQWLGDGH GH
WHPSR
Ⓓ FHQHX pQHUJLD DR VDOGR DPRVWUD GH PHQ
PDLV OHQWDPHQWH
Ⓔ IRUQHFHX D PHQRU TXDQWLGDGH GH
HP PHQRV WHPSR

Questão 53

2 IvVIRUR JHUDOPHQWH UHSUHVHQW
PO_4^{-3} p XP LQJUHGLHQWH LQVXEVWL
p SDUWH FRQVWLWXLQWH GDV PHP
PROpFXODV GR '1$ H GR WULIRVIDWR
SULQFLSDO IRUPD GH DUPD]HQDPH
FpOXODV 2 IyVIRUR XWLOL]DGR Q
p H[WUDtGR GH PLQDV FXMDV UHV
PDLV HVFDVVDV &HUWDV SUiWLFD
HURVmR GR VROR SURYRFDQGR R W
VLVWHPDV DTXiWLFRV TXH ¿FD LP
$LQGD D FROKHLWD GDV ODYRXUDV
DOLPHQWDUHV SDUD RV OL[}HV GL
GRV tRQV QR VROR 7DLV IDWRU
VXVWHQWDELOLGDGH GHVVH tRQ

8PD PHGLGD TXH DPHQL]DULD HVVH

Ⓐ ,QFHQWLYDU D UHFLFODJHP GH XWLOL]DQGR GHMHWRV DQLPDLV H SURGXomR GH DGXER
Ⓑ 5HSRU R HVWRTXH UHWLUDGR GDV PDLV VLQWpWLFR GH IyVIRUR SDUD JDUDQWLU LQG~VWULD GH IHUWLOL]DQWHV
Ⓒ $XPHQWDU D LPSRUWDomR GH tRQV ULFRV SDUD VXSULU DV H[LJrQFLDV QDFLRQDLV GH IHUWLOL]DQWHV
Ⓓ 6XEVWLWXLU R IyVIRUR GRV IHUWLOL]DQWHV HOHPHQWR FRP D PHVPD IXQomR QHFHVVLGDGHV GR XVR GH VHXV tRQV
Ⓔ 3URLELU SRU PHLR GH OHL IHGHUDO FRP IyVIRUR SHORV DJULFXOWRUHV H[WUDomR GDV UHVHUYDV QDWXUDLV

Rascunho

Questão 54

W-SGH SUHOR QRKHLG RRFRDWR
GDV YHOD GD YLGD MiPXH
KHUDLVIUR VXO HVWUDQKD
HP TXH D IDIX VXPLX GHVWDFDGD SH

'LVSRQtYHO HP KWWS ZZZ LQRYDFDRWHFQRORJLFD FRP EU $F
UHVtGXRV ELRyJLFRV
$ DSDUrQFLD GH ~SLWHU p WLSLFDPH
IDIX[DV HVFXUDV HP VXD DWPRVIHUD ²
QRUWH H RXWUD QR KHPLVIpULR VX
PQWDQWH HPQWH HPQWR GDHQWR R
IDIX[D QR SODQHWD UHODFLRQD VH DR
FVPRGDWR GRV SDtVHV HP VXD DWPRVI
HÀHWLGD QHXVDV QXYHQV JHUD D L
SHORV WHOHVFySLRV QR HVSDoR RX Q
2 GHVDSDUHFLPHQWR GD IDIX[D VXO SRO
SRU XPD DOWHUDomR
Ⓐ QD WHPSHUDWXUD GD VXSHUfFLH G
Ⓑ QR IRUPDWR GD PDPDGDV DV RVD GR
Ⓒ QR SDUDSR GUDQLWD DLRQDO JHUDGR
Ⓓ QD FRPSRVLomR TXtPLFD GDV QXYHQ
Ⓔ QD GHQVLGDGH GDV QXYHQV TXH FR

Questão 55

(P YLVLWD D XPD XVLQD VXFURDOFRRO
S{GH REVHUYDU D VpULH GH SURFHVV
GD FDQD GH Do~FDU HQWUH RV TXDLV
$ FDQD FKHJD FRUWDGD GD ODY
GH FDPLQK}HV H p GHVSHMDGD
DOLPHQWDGRUDV TXH D FRQGX
PRHQGDV $QWHV GH VHU HVPDJDG
GR FDOGR DoXFDUDGR WRGD D F
SRU HVWHLUDV H SDVVDGD SRU X
UHWLUDGD GH PDWHULDLV PHWiO
$SyV VH HVPDJDU D FDQD R EDJD
DV FDOGHLUDV TXH JHUDP YDSR
WRGD D XVLQD
2 FDOGR SULPiULR UHVXOWDQWH
p SDVVDGR SRU ¿OWURV H VRIU
WUDQVIRUPDU VH HP Do~FDU UH¿

&RP EDVH QRV GHVWDTXHV GD REVHU
TXDLV RSHUDo}HV ItVLFDV GH VHSDU
IRUDP UHDOL]DGDV QDV HWDSDV GH EH
GH Do~FDU"

Ⓐ 6HSDUDomR PHFkQLFD H[WUDomR G
Ⓑ 6HSDUDomR PDJQpWLFD FRPEXVWmR
Ⓒ 6HSDUDomR PDJQpWLFD H[WUDomR
Ⓓ ,PDQWDomR FRPEXVWmR SHQHLUDo
Ⓔ ,PDQWDomR GHVWLODomR ¿OWUDor

Questão 56

=,(*/(5 0) (QHUJLD 6XVWHQWiYHO Revista IstoÉ

$ IRQWH GH HQHUJLD UHSUHVHQWDGD QD ¿JXUD FRQVLGHUDGD XPD GDV PDLV OLPSDV H VXVWHQWiYHLV GR PXQGR p H[WUDtGD GR FDORU JHUDGR

Ⓐ SHOD FLUFXODomR GR PDJPD QR VXEVROR
Ⓑ SHODV HUXSo}HV FRQVWDQWHV GRV YXOFnHV
Ⓒ SHOR VRO TXH DTXHFH DV iJXDV FRP UDGLDomR XOWUDYLROHWD
Ⓓ SHOD TXHLPD GR FDUYmR H FRPEXVWtYHLV IVVVHLV
Ⓔ SHORV GHWULWRV H FLQ]DV YXOFkQLFDV

Questão 57

2 GHVSHMR GH GHMHWRV GH HVJRWRV LQGXVWULDLV YHP FDXVDQGR VpULRV EUDVLOHLURV (VVHV SROXHQWHV VmR ULFRV HP VXEVWkQFLDV TXH FRQWULEXHP SDUD D HXWUR¿]DomR GH HFRVVLVWHPDV TXH p XP HQULTXHFLPHQWR GD iJXD SRU QXWULHQWHV SURYRFD XP JUDQGH FUHVFLPHQWRDE DFDVWHULDV QR HDVFRR SRGH SURPRYHU HVFDVVH] GH R[LJrQLR

8PD PDQHLUD GH HYLWDU D GLPLQXLomR GD FRQFHQWUDomR GH R[LJrQLR QR DPELHQWH p

Ⓐ $TXHFHU DV iJXDV GRV ULRV SHOD ¿WXDU DH QDW³ LDXV GH FDORU´ HVS YHORFLGDGH GH GHFRPSRVLomR GRV GHMHWRV
Ⓑ 5HWLUDU GR HVJRWR RV PDWHULDLV ULFRV HP QXWULHQWHV SDUD GLPLQXLU D VXD FRQFHQWUDomR QRV ULRV
Ⓒ $GLFLRQDU EDFWpULDV DQDHUyEL FDV QRV ULRV SDUD TXH HODV VREUHYLYDP PHVPR DQDHUyEL FDV
Ⓓ 6XEVWLWXLU SURGXWRV QmR ELRGHJUDGiYHLV SDUD TXH DV EDFWpULDV SRVVDP XWLOL]DU RV QXWULHQWHV
Ⓔ $XPHQWDU D VROXELOLGDGH GRV GHMHWRV QR HVJRWR SDUD TXH RV QXWULHQWHV ¿TXHP PDLV DFHVVtYHLV

Questão 58

6RE SUHVVmR QRUPDO DR QtYHO GR HP HEXOLomR j WHPSHUDWXUD GH &RORFRX XPD SH HVVD LQIRUPDomR XP JDURWR UHVLG OLWRUkQHD IH] D VHJXLQWH H[SHULrQ

‡ &RORFRX XPD FDQHFD PHWiOLFD F IRJDUHLUR GR IRJmR GH VXD FDVD
‡ 4XDQGR D iJXD FRPHoRX D IHUY FXLGDGRVDPHQWH D H[WUHPLGDGH XPD VHULQJD GH LQMHomR GHVS QD VXSHUItFLH GR OtTXLGR H HUJ VHULQJD DVSLURX FHUWD TXDQWLG LQWHULRU WDSDQGR D HP VHJXLGD
‡ 9HUL¿FDQGR DSyV DOJXQV LQVWDQ VHULQJD KDYLD SDUDGR GH IHUYHU GD VHULQJD FRQVWDWDQGR LQWUL D IHUYHU DSyV XP SHTXHQR GHVORF

&RQVLGHUDQGR R SURFHGLPHQWR DQ IHUYHU SRUTXH HVVH GHVORFDPHQWR

Ⓐ SHUPLWH D HQWUDGD GH FDORU GR o interior da seringa.
Ⓑ SURYRFD SRU DWULWR XP DTXHFLP na seringa.
Ⓒ SURGX] XP DXPHQWR GH YROXPH TXH GH HEXOLomR GD iJXD
Ⓓ SURSRUFLRQD XPD TXHGD GH SUHV VHULQJD TXH GLPLQXL R SRQWR GH
Ⓔ SRVVLELOLWD XPD GLPLQXLomR GD TXH DFLOLWD VXD HEXOLomR

Questão 59

$SDUWLU GH ¿QDOLGDGHV VHPHOKDQWHV DR SURSRU &RORFRX XPD FDXVDQGR XP JDVHV PRUL QR &2 FDXVDGRU GR HIHLWR HVWXID ,VVR GD TXDQWLGDGH GH FRPEXVWtYHLV SUHFLSDOPHQWH QR WUDQVSRUWH P LQGXVWULDLV $SS GLVR QHVVDV FDXVDUULDQ RU HDVFR ¿RRORV DVIDO SRU ¿QDOLGDGHV DQDORJDV DTXH DXPHQWD D UHWHQomR GH FDO FRQKHFH SRU ³LOKDV GH FDORU´ 7DO HVVHV PDWHULDLV DEVRUYHP R FDORU VRE D IRUPD GH UDGLDomR WpUPLFD

(P iUHDV XUEDQDV GHYLGR j DWXDom HDVWXDH QDW³ LDXV GH FDORU´ HVS GH HQHUJLD HOpWULFD

Ⓐ GLPLQXD GHYLGR j XWLL]DomR GH F PHWDO UJLFDV
Ⓑ DXPHQWD GHYLGR DR EORTXHLR GD DWPRVIHUD [LJrQLR
Ⓒ GHJUDGiYHLV SRU jQmR QHFHVVLGD jXD XWLOL]DGD HP LQG~VWULDV
Ⓓ DXPHQWH GHYLGR j QHFHVVLGDGH G GH LQG~VWULDV H UHVLGrQFLDV
Ⓔ GLPLQXD GHYLGR j QHFHVVLGDGH TXDQW HDVWXDH QDW³ LDXV GH FDORU´

Questão 60

$ ODYRXUD DUUR]HLUD QD SODQtFLH FRVWHUD GD DEUDQJrQFLD GH QXW
GR %UDVLO FRPXPHQWH VRIUH SHUGDV HOHYDGDV GH YLGRV
VDOLQL]DomR GD iJXD GH LUULJDomR TXH RFDVLRQD SUHMXLGRV
GLUHWRV FRPR D UHGXomR GH SURGXomR GD OODRXUD
6RORV FRP SURFHVVR GH VDOLQL]DomR DYDQoDGR QmR VmR
LQGLFDGRV SRU H[HPSOR SDUD R &RQWUROH GH DUUR] $V
SODQWDV UHWLUDP D iJXD GR VROR TXDQGR DV IRUoDV GH
HPEHELomR GRV WHFLGRV &RP GHVHQYROYLPHQWR SUHV
IRUoDV FRP TXH D iJXD p UHWLGD QR VROR

:,1.(/ + / 7 6&+,('(
'LVSRQtYHO HP KWWS DJURSDJH WULSRG FRP VDOLQL]D

Cultura do arroz: salinização de solos em cultivos de arroz

$ SUHVHQoD GH VDLV
VHMD GL¿FXOWDGD D DEVRUomR GH iJXD SHODV SODQWDV R
TXH SURYRFD R IHQ{PHQR FRQKHFL
FDUDFWHUL]DGR SHOR D

Ⓐ DXPHQWR GD VDOLQLGDGH HP TX
XPD FRQFHQWUDomR GH VDLV PD
GDV UDt]HV GDV SODQWDV LPSH
iJXD VHMD DEVRUYLGD
Ⓑ DXPHQWR GD VDOLQLGDGH HP T
QtYHO PXLWR EDL[R GH iJXD H DV SODQWDV QmR WrP IRUoD
GH VXFomR SDUD DEVRUYHU D iJXD
Ⓒ GLPLQXLomR GD VDOLQLGDGH TXH DWLQJH XP QtYHO HP
TXH DV SODQWDV QmR WrP IRUoD QmR WrP IRUoD
FRP TXH D iJXD QmR VHMD DEVRUYLGD
Ⓓ DXPHQWR GD VDOLQLGDGH TXH DWLQJH XP QtYHO HP TXH
DV SODQWDV WrP PXLWD VXGDomR QmR WHQGR IRUoD GH
VXFomR SDUD VXSHUi OD
Ⓔ GLPLQXLomR GD VDOLQLGDGH TXH DWLQJH XP QtYHO HP
TXH DV SODQWDV ¿FDP W~UJLGDV QmR WHQGR IRUoD GH DEVRUomR
VXGDomR SDUD VXSHUi OD

Questão 61

1R DQR GH XP YD]DPHQWR HP GXWRV GH yOHR QD EDtD
GH *XDQDEDUD 5- FDXVRX XP GRV PDLRUHV DFLGHQWHV
DPELHQWDLV GR %UDVLO $OpP GH DIHWDU D IDXQD H D ÀRUD R
DFLGHQWH DEDORX R HTXLOtEULR GD FDGHLD DOLPHQWDU GH WRGD
D EDtD 2 SHWUyOHR IRUPD XPD SHOtFXOD QD VXSHUItFLH GD
iJXD R TXH SUHMXGLFD DV WUURFDV JDVRVDV GD DWPRVIHUD FRP
D iJXD H GHVIDYRUHFH D UHDOL]DomR GH IRWRVVtQWHVH SHODV
DOJDV TXH HVWmR QD EDVH GD FDGHLD DOLPHQWDU KtGULFD
$OpP GLVVR R GHUUDPDPHQWR GH yOHR FRQWULEXLX SDUD R
HQYHQHQDPHQWR GDV iUYRUHV H FRQVHTXHQWHPHQWH SDUD D
LQWR[LFDomR GD IDXQD H ÀRUD DTXiWLFDV EHP FRPR FRQGX]LX
j PRUWH GLYHUVDV HVSpFLHV GH DQLPDLV HQWUH RXWUDV IRUPDV
GH YLGD DIHWDQGR WDPEpP D DWLYLGDGH SHVTXHLUD

/$8%,(5 / 'LYHUVLGDGH GH HVSpFLHV &DGHUQR &DPSR &RQJ &DPSR &RQJ &DPSR &RQJ

Questão 63

2 FUHVFLPHQWR GD SURGXomR GHF RQFHLWR GH RWWHRDLDRHYROXWLYD ORQJR GR WHPSR WHP LQÀXHQFLDGR GHFLVLYDPHQWH R HOH GLULD T SURJUHVVR GD KXPDQLGDGH PDV DWUDYpV GH XPD VpULH SUHFXSDomR R SUHMXt]R DR PHLR DPELHQWH 1RV SUy[LPRV DQRV XPD QRYD WHPSRORJLD GH JHUDomR GH HQHUJLD HOpWULFD GHYHUi JDQKDU HVSDoR DV FpOXODV D FRPEXVWtYHO KLGURJrQLR R[LJrQLR

9,//8//$6 + 0 7,&,$1(//, ($ *2 Química Nova na Escola. Nº PDLR

&RP EDVH QR WH[WR H QD ¿JXUD DR PHLR DPELHQWH SRU PHLR GD FpOXOD HOpWULFD SRU PHLR GD FpOXOD DR PHLR DPELHQWH R[LJrQLR GLIHUHQFLD VH GRV SURFHVVRV FRQVLGHUDGRV QR WH[WR

A) WUDQVIRUPD HQHUJLD TXtPLFD HP HQHUJLD HOpWULFD FDXVDU GDQRV DR PHLR DPELHQWH VXESURGXWR IRUPDGR p D iJXD
B) FRQYHUWH D HQHUJLD TXtPLFD FRQWLGD QRV SURGXWRV GRV FRPSRQHQWHV HP HQHUJLD HOpWULFD RFRUUD D SURGXomR GH JDVHV SRO XHQWHV QRFLYRV DR PHLR DPELHQWH
C) WUDQVIRUPD HQHUJLD TXtPLFD HP HQHUJLD HOpWULFD SRUpP HPLWH JDVHV SROXHQWHV GD PHVPD IRUPD TXH D SURGXomR GH HQHUJLD D SDUWLU GRV FRPEXVWtYHLV IyVVHLV
D) FRQYHUWH HQHUJLD HOpWULFD SURYHQLHQWH GRV FRPEXVWtYHLV IyVVHLV HP HQHUJLD TXtPLFD UHWHQGR PH JDVHV SROXHQWHV SURGX]LGRV QR SURFHVVR VHP DOWHUDU D TXDOLGDGH GR PHLR DPELHQWH
E) FRQYHUWH D HQHUJLD SRWHQFLDO DFXPXODGD QRV SURGXWRV HP HQHUJLD PROpFXODU GH iJXD FRQWLGDV QR VLVWHPD HP HQHUJLD TXtPLFD VHP TXH RFRUUD D SURGXomR GH JDVHV SROXHQWHV QRFLYRV DR PHLR DPELHQWH

Questão 64

$OJXQV DQItELRV H UpSWHjLV VLGRV VXEWHUUkQHD 1HVVD VLWXDomR FDUDFWHUtVWLFDV FRUSRUDLV FRPR GH SDWDV FRUSR DQHODGR TXH IDFLOWD R QR VXEVRORH HP DOJXQV PDW

6XSRQKD TXH XP QEWDOVR HRWHOFDU D GDV DGDSWDo}HV PHQFLRQDGDV QR WH[WR H QD ¿JXUD DR PHLR DPELHQWH SRQWR GH YLVWD DH HOH GLULD T HVVH SRQWR GH YLVWD HOH GLULD T SURJUHVVR GD KXPDQLGDGH PDV DWUDYpV GH XPD VpULH SUHFXSDomR QDW XUDO

A) D DXVrQFLD GH RQKRV WHULD VLGR XVR GRV RHVRRV VHJXQGR D OHL GH
B) R FRUSR DQHODGR p XPD FDUDFWH DGDSWDWLYD PDV VHULD WUDQV SULPHLUD JHUDomR GH GHVFHQGHQ
C) DV SDWDV WHULDP VLGR SHUGLGDV VHJXLGD HVVD FDUDFWHUtVWLFD I JHQpWLFR H HQWmR WUDQVPLWLGDV
D) DV FDUDFWHUtVWLFDV FLWDGDV QR SRU PHLR GH PXWDo}HV H GHSRLV IRUDP VHOHFLRQDGDV SRU VHUHP DPELHQWH HP TXH RRVVRHUQ DV
E) DV FDUDFWHUtVWLFDV FLWDGDV QR SRU PHLR GH PXWDo}HV H GHSRLV IRUDP VHOHFLRQDGDV SRU VHUHP DPELHQWH HP TXH RRVVRHUQ DV

Questão 65

$V PLVWXUDV HIHUYHVFHQWHV HP Sy VmR FRPXQV SDUD D DGPLQLVWUDomR GH DQWiFLGRV (VVD IRUPD HIHUYHVFHQWH SRU PHLR GH DGPLQLVWUDomR RX R iFLOLWDU HVVWDEHOHFLPHQWR GH XPD DOLPHQWDo}HV H DEVRUomR GR liUPDFR SHOR RUJDQLVPR $V PDWpULDV SULPDV TXH DWXDP QD H JHUDO R iFLGR WDUWiULFR RX R iFL VDO GH FDUiWHU EiVLFR FRPR R ELFDUE TXDQGR HP FRQWDWR FRP D iJXD $ S RQWH HV FRQWH FRP RX iJXD RFRUUH X WpULFDV VLHPWRXH OLEHUDomR OLEHUDomR GR iJXD FDUEQLFR ² JHUDQG

$V HTXDo}HV D VHJXLU UHSUHVHQWH UHDomR GD PLVWXUD HIHUYHVFHQWH GD PHVPD IRUPD TXH D RPLWLGRV RV HVWDGRV GH DJUHJDomR UHSUHVHQWD R IFLGR FtWULFR

I- NaHCO : 1D + HCO$_3^-$
II- HCO UH O + CO
III- HCO$_3^-$ + H$^+$ UH CO
,9 +A U + + A$^-$

$ LRQL]DomR D GLVVRFLDomR L{QLFD H D OLEHUDomR GR JiV RFRUUHP UH VHJXLQWHV HWDSDV

A) 9 HGDSWDGRV
B) DSUHVHQWDP DOJXPDV
C) SRU HHPSOR DXVrQFLD
D) R GHVORFDPHQWR
E) DXVrQFLD GH RO

Questão 66

8P DPELHQWH FDSD] GH DV¿[LDU 2WDEDV WRF DHQWDLG QRVVDV QHFHV
FRQKHFLGRV GR SODQHWD IRL FRQ XOW]DGR SHORV SHORUP HQRV
WUrV HVSpFLHV GLIHUHQWHV GH LQ HW WHFQRORJLDV SDUD DV SURYHLWDU
'HVFREHUWRV D PDLV GH P GH SURXHQ&LQ&LDQ $ HQHUJLD VRODU
0HGLWHUUkQHR HOHV VmR RV SULPHLURV PHPEURV GR UHLQR
DQLPDO D SURVSHUDU PHVPR GLDQWH GD DXVrQFLD WRWDO
GH R[LJrQLR $Wp DJRUD DFKDYD VH TXH Vy EDFWpULDV
SXGHVVHP WHU HVVH HVWLOR GH YLGD ¹mR DGPLUD TXH RV
ELFKRV SHUWHQoDP D XP JUXSR SRXFR FRQKHFLGR
GRV ORULFtIHURV TXH PDO FKHJDP D $SHVDU GR
WDPDQKR SRVVXHP FDEHoD ERFD VLVWHPD GLJHVWLYR
H XPD FDUDSDoD $ DGDSWDomR GRV ELFKRV YLGD QR
VXIRFR p WmR SURIXQGD TXH VXDV FpOXODV GLVSHQVDUDP DV
FKDPDGDV PLWRF{QGULDV

/23(6 5 Italianos descobrem animal que vive em água sem oxigênio 'LVSRQtYHO HP KWWS ZZZ IROKD XRO FRP EU $FHVVR HP DEU DE DE &DUD &DUD &DUD

Questão 68

$ HQHUJLD HOpWULFD FRQVXPLGD QD UHVLGrQFLD YWpP PRQLWRUDGD GH FRPE
HP TXLORZDWW KRUD SRU PHLR GH XP PRQLWRU GH HQHUJLD HOpWULFD HP LPSRUWk
GH FRQVXPR 1HVVH UHOyJLR GD GLVWULEXLGRUD SURGX FHUVXFHUUGHP LPSRUWk
WHP VH R SRQWHLUR GD XQLGDGH SURGX[LGR HQ FRPSDUDGR FRP R
H GR PLOKDU 6H XP SRQWHLUR HVWHQYHRQ WUDQ GRUJXQ ~PHUFKV SDUD
FRQVLGHUD VH R ~OWLPR Q~PHUR XOWUDSDVVDGR SHORX SRQWHLUR
6XSRQKD TXH DV PHGLGDV LQGLFDGDV QRV PRQLWRUHV DEDLXWDomR FDGD YH] P
VHJXLQWHV WHQKDP VLGR IHLWDV HP XPD FLGDGH HP TXHR
SUHoR GR TXLORZDWW KRUD IRVVH GH 5

leitura atual

leitura do mês passado

) , / + 2 $ * % $ 5 2 Instalação Elétrica. 6 m R 3 D X O R 6 F L S L R Q H

2 YDORU D VHU SDJR SHOR FRQVXPR GH HQHUJLD HOpWULFD
registrado seria de

Ⓐ 5
Ⓑ 5
Ⓒ 5
Ⓓ 5
Ⓔ 5

Rascunho

Questão 69

&RQVLGHUH TXH HP SHTXHQRV YROXPH
GH DPERVRV RV DOFRyLV VHMD R PHVPR '
GH YLVWD HFRQ{PLFR p PDLV YDQWDMR

Ⓐ PHWDQRO SRLV VXD FRPEXVWmR
DSUR[LPDGDPHQWH HQHUJLD SRU
FRPEXVWtYHO TXHLPDGR
Ⓑ HWDQRO SRLV VXD FRPEXVWmR
DSUR[LPDGDPHQWH HQHUJLD SRU
FRPEXVWtYHO TXHLPDGR
Ⓒ PHWDQRO SRLV VXD FRPEXVWmR
DSUR[LPDGDPHQWH HQHUJLD SRU
FRPEXVWtYHO TXHLPDGR
Ⓓ HWDQRO SRLV VXD FRPEXVWmR
DSUR[LPDGDPHQWH HQHUJLD SRU
FRPEXVWtYHO TXHLPDGR
Ⓔ HWDQRO SRLV VXD FRPEXVWmR
DSUR[LPDGDPHQWH HQHUJLD SRU
FRPEXVWtYHO TXHLPDGR

Rascunho

Álcool	Densidade a 25 ºC (g/mL)	Calor de Combustão (kJ/mol)
0 H W D Q R O & +2 +		
(W D Q R O & +CH 2 +		

% $, 5 ' & Química Ambiental 6 m R 3 D X O R $ U W P H G D G

'DGRV 0DVVDV PRDUHV HP J PRO +

Questão 70

2EVHUYH D WDEHOD VHJXLQWH (O XWR $UHVSHQJ¿FR GH WpFQLFDV FRQVWDQWHV QR PDQXDO GH XVR H QW~HV OHQWHV GH SHOR IDEULFDQWH GH XPD WRUQHLUD H SUHVWDP IDWRUHV GH ULVFR S GH XPD LQIHFomR GHQRPLQDGD FHU TXH FDXVD XOFHUDomR LQÀDPDWyUL LQWHUURPSHU R SURFHVVR GD GRH WUDWDPHQWR DQWLELyWLFR 'H PRGR ULVFR SURYRFDP D GLPLQXLomR GD R H GHWHUPLQDP PXGDQoDV QR VHX PH HVWDGR DHUyELFR SDUD DQDHUyELFR REVHUYD VH D GLPLQXLomR QR Q~PHU PLWRVHV GR HSLWpOLR R TXH SUHGLV GHIHLWRV HSLWHOLDLV H j LQYDVmR E

&5(67$) /HQWH GH FRQWDWR H LQIHFomR RFXODU &RPH Revista Sinopse 3DXOR 0RUHLUD -U Y Q D

'LVSRQtYHO HP KWWS ZZZ FDUGDO FRP EU PDQXDOSURG 0DQXDLV 7RUQHLUD 6XSUHPD 0DQXDOB7RUQHLUDB6XSUHPDBURR SGI

&RQVLGHUDQGR TXH R PRGHOR GH PDIR SRWQFLDGD YHUVmR 9 GD WRUQHLUD VXSUHPD IRL WDGXWLGD PHQWH FRQHFWDGD D XPD UHGH FRP WHQVmR QRPLQDO GH 9 H TXH R DSDUHOKR HVWi FRQ¿JXUDGR SDUD WUDEDOKDU HP VXD Pi[LPD SRWrQFLD 4XDO R YDORU DSURLPDGR GD SRWrQFLD DR OLJDU D WRUQHLUD"

Ⓐ :

Ⓑ :

Ⓒ :

Ⓓ :

Ⓔ :

Rascunho

Questão 71

2D XWR $UHVSHQJ¿FR GH WpFQLFDV OHQWHV GH G XH QW~HV OHQWHV QR SDQXDO GH XVR H QW~HV OHQWHV GH SHOR IDEULFDQWH GH XPD FRQGLo UH SUHVWDP IDWRUHV GH ULVFR S GH XPD LQIHFomR GHQRPLQDGD FHU TXH FDXVD XOFHUDomR LQÀDPDWyUL LQWHUURPSHU R SURFHVVR GD GRH WUDWDPHQWR DQWLELyWLFR 'H PRGR ULVFR SURYRFDP D GLPLQXLomR GD R H GHWHUPLQDP PXGDQoDV QR VHX PH HVWDGR DHUyELFR SDUD DQDHUyELFR REVHUYD VH D GLPLQXLomR QR Q~PHU PLWRVHV GR HSLWpOLR R TXH SUHGLV GHIHLWRV HSLWHOLDLV H j LQYDVmR E

Ⓐ $ LQVWDODomR GDV EDFWpULDV H R LQIHFLRVR QR FyUQHD HVWmR UHOD FDUDFWHUVWLFDV JHUDLV GHVVHV PL

Ⓑ $ JUDQGH FDSDFLGDGH GH DGDSWD DH FRQVWDQWHV PXGDQoDV QR DPE UHSURGX]HP H R SURFHVVR DHUyEL RSomR GHVVHV PLFURUJDQLVPRV SD energia.

Ⓒ $ GLYHUVLGDGH PRUIROyJLFD HQ DXPHQWDQGR D YDULHGDGH GH W LQIHFFLRVRV H D QXWULomR KHWH GH HVVHV PLFURUJDQLVPRV REWHU energia.

Ⓓ 2 DOWR SRGHU GH UHSURGXomR DXP JHQpWLFD GRV PLOKDUHV GH LQGL KHWHURWUy¿FD FRPR ~QLFD IRUPD G SULPD H HQHUJLD GHVVHV PLFURUJDQ

Ⓔ 2 DOWR SRGHU GH UHSURGXomR RU GHVFHQGHQWHV JHQHWLFDPHQWH L GLYHUVLGDGH PHWDEyOLFD FRQVL DHUyELFRV H DQDHUyELFRV SDUD D

Rascunho

Questão 72

7RGRV RV RUJDQLVPRV QHFHVVLWDP GH XPD IRQWH GH HQHUJLD SDUD UHDOL]DU VXDV IXQo}HV YLWDLV &RP EDVH QHVVH SULQFtSLR RV RUJDQLVPRV DXWRWUyIR

Questão 75

'RLV SHVTXLVDGRUHV SHUFRUUHUDP RV WHUPRV PDUFDGRV
QR PDSD $ WDUHID GHOHV IRL DQDOLVDGR QXPD YH
HQFRQWUDQGR SUREOHPDV UHODWDGRV DR PRQLWRUDPH
UHFXSHUDomR $ VHJXLU VmR UHSURGX]LGRV WUHFKRV DOHDWyULRV
H[WUDtGRV GRV UHODWyULRV GHVVHV GRLV SHVTXLVDGRUHV

7UHFKRV DOHDWyULRV H[WUDtGRV GR UHODWyULR GR SHVTXLVDGRU 3

, ³3RU FDXVD GD GLPLQXLomR GUVWLFD GDV HVSpFLHV
YHJHWDLV GHVWH HFRVVLVWHPD
JUDOKD D]XO WDPEpP HVWi HP SURFHVVR GH HWLQomR
,, ³$V iUYRUHV GH WURQFRV WRUWXRVRV H EDVFDV
JURVVDV TXH SUHGRPLQDP QHVVH HFRVVLVWHPD
HVWmR VHQGR XWLOL]DGDV HP FDU RDGD´

7UHFKRV DOHDWyULRV H[WUDtGRV GR UHODWyULR GR SHVTXLVDGRU 3

,,, ³'DV SDOPHLUDV TXH SUHGRPLQDP QHVVH
SRGHP VHU H[WUDtGDV VXEVWkQFLDV L
SDUD D HFRQRPLD UHJLRQDO´
,9 ³$SHVDU GD DULGH] GHVWD UHJLmR
HQFRQWUDPRV PXLWDV SODQWDV HVSLQKRVDV
SRGH GHVSH]DU D VXD ELRGLYHUVLGDGH´

Questão 76

,QYHVWLJDGRUHV GDV 8QLYHUVLGDG &DOLIyUQLD GHVHQYROYHUDP XP Aedes aegypti JHQHWLFDPHQWH PRGL¿FDGD TX SDUD XVR QD EXVFD GH UHGXomR QD GD GHQJXH 1HVVD QRYD YDULHGDGH IrPHDV QmR FRQVHJXHP YRDU GHYLGR GHVHQYROYLPHQWR GR P~VFXOR GDV JHQpWLFD LQWURGX]LGD p XP JHQH G LVVR p R JHQH WHP H[SUHVVmR GRPL XPD FySLD GR DOHOR H HVWH Vy DWX

)8 * HWHPDOH VSHFL¿F ÀLJKWOHVV SKHQRW\SH IRU P 31$6

3UHYr VH SRUpP TXH D XWLOL]DomR de Aedes aegypti GHPRUH DLQGD DQRV S LPSOHPHQWDGD SRLV Ki GHPDQGD GH UHODomR DR LPSDFWR DPELHQWDO $ de Aedes aegypti GHVVD YDULHGDGH JHQH PRGL¿FDGD UHGX]LULD R Q~PHUR GH XPD GHWHUPLQDGD UHJLmR SRUTXH

Ⓐ GLPLQXLULD R VXFHVVR UHSURGXW transgênicos.
Ⓑ UHVWULQJLULD D iUHD JHRJUi¿FD G GH PRVTXLWR
Ⓒ DXPHQWDULD R VXFHVVR UHSURGX QDWXUDO GRV PRVTXLWRV
Ⓓ WRUQDULD R PRVTXLWR PHQRV UH HWLQQyJLFR GD GRHQoD
Ⓔ GL¿FXOWDULD D REWHQomR GH DOL JHQHWLFDPHQWH PRGL¿FDGRV

Questão 77

1RFDQR RVHSLQKHLUR DV PRUWHV QHVVH QDQRVVDWHOLWH QR ´]RROyJLFR GH HYLGHQFLDGDV CVWXGRV WpFQLFRV LQWRUFLFDomR SRU PRQRÀXRUDFHWDW H LOHJDOPHQWH F FDU RDGD´ PRQRÀXRUDFHWDWR GH GR iFLGR PRQRÀXRUDFpWLFR H DJH PDPtIHURV EORTXHDQGR R ELFQR GH . SDUDGD GD UHVSLUDomR FHOXDU R[DP QHVVH QD FLUXODomR

LVSRQtYHO HP KWWS ZZZ IROKD XRO FRP EU $FHVVR H

2 PRQRÀXRUDFHWDWR GH VyGLR SRGH

Ⓐ GHVLGUDWDomR GR iFLGR PRQRÀ OLEHUDomR GH iJXD
Ⓑ KLGUyOLVH GR iFLGR PRQRÀXRUDFp GH iJXD
Ⓒ SHUGD GH tRQV KLGUR[LOD GR iFLG FRP OLEHUDomR GH kLGUy[LGR GH V
Ⓓ QHXWUDOLVDomR &DW RQ DR iFLGR PRQRÀX KLGUy[LGR GH VyGLR FRP OLEHUDo
Ⓔ VXEVWLWXLomR GRV tRQV KLGURJ HVWUXWXUD GR iFLGR PRQRÀXRUDF RV RXD LV H 3DQWDQDO

Ecossistemas brasileiros: mapa da distribuição dos ecossistemas

'LVSRQtYHO HP KWWS HGXFDFDR XRO FRP EU FLHQFLDV XOW X MKWP$FHVVR HP DEU DGDSWDGR

2V WUHFKRV , ,, ,,, H ,9 UHIHUHP VH SHOD RUGHP DRV VHJXLQWHV HFRVVLVWHPDV

Ⓐ &DDWLQJD &HUUDGR =RQD GRV FRFDLV H)ORUHVWD $PD]{QLFD
Ⓑ 0DWD GH $UDXFiULDV &HUUDGR =RQD GRV FRFDLV &DDWLQJD
Ⓒ 0DQJXH]DLV =RQD GRV FRFDLV &HUUDGR H 0DWD $WOkQWLFD
Ⓓ)ORUHVWD $PD]{QLFD &HUUDGR 0DWD $WOkQWLFD H 3DPSDV
Ⓔ 0DWD $WOkQWLFD &HUUDGR =RQD GRV FRFDLV H 3DQWDQDO

Questão 78

'XDV LUPmV TXH GLYLGHP R PHVPR2 VXSHUWRL FLHGDHVWXGRVQRV VmR GLYLG
FRPELQDUDP GH FRPSUDU GXDV FDLH[DW UFRPDWDPXDVVSDUHD GHVWDFDP RV
JXDUGDUHP VHXV SHUWHQFHV GHQWURGHDLXTXH FDLH[DVHQWDP HIHLWR
HYLWDQGR DVVLP D EDJXQoD VREUHUHVPHKXPDCQHRMVVWXCHRV SHVWLFLGDV
8PD GHODV FRPSURX XPD PHWiOLFDFHQWUDOH [yPDRFUDL[DR TXDO HVWmR
GH PDGHLUD GH iUHH HVSHVVXUDRXDWUHUDO GHLHiWRPRVFRSRUB[LJrQLR
IDFLOLWDU D LGHQWL¿FDomR 8P GLDHWRPLHQXHWRLFUDX HXPXDGLF DO RUJ
SDUD D SURYD GH)tVLFD H DR VH DFRRRGDQHRPQDRPHVGR GHVmR GLYLGLGR
HVWXGRV JXDUGDUDP VHXV FHOXODUHVHQQRUHHQWRHVmRV LQFR
FDL[DV $R ORQJR GHVVH GLD XPD GHODV QUHHHX GLJrQLR TXH ID] GX
WHOHI{QLFDV HQTXDQWR RV DPLJRVyGRRXWUDWWQWXDRCOQRDTXHQ{RGH
H UHFHELDP D PHQVDJHP GH TXH R RHOXQDRVmRVXEWXUDtGRV SRU HQ
iUHH GH FREHUWXUD RX GHVOLJDGR
3DUD H[SOLFDU HVVD VLWXDomR XP ItVLFR GHYHULD D¿UPDU TXH
R PDWHULDO GD FDL[D FXMR WHOHIRQH
OLJDo}HV p GH

% $, 5 ' Química Ambiental. % R R N P D P

8PQ H[HPSORGHQmRWHOHIRQH
DSUHVHQWD JUXSR HWR[L HP VXD lyU
UHSUHVHQWDGR HP

Ⓐ PDGHLUD H R WHOHIRQH QmR IXQFLRQDYD SRUTXH D
PDGHLUD QmR p XP ERP FRQGXWRU GH
Ⓑ PHWDO H R WHOHIRQH QmR IXQFL
EOLQGDJHP HOHWURVWiWLFD TXH R P
Ⓒ PHWDO H R WHOHIRQH QmR IXQFLRQ
UHÀHWLD WRGR WLSR GH UDGLDomR T
Ⓓ PHWDO H R WHOHIRQH QmR IXQFLRC
ODWHUDO GD FDL[D GH PHWDO HUD PD
Ⓔ PDGHLUD H R WHOHIRQH QmR IXQF
HVSHVVXUD GHVWD FDL[D HUD PDLRU
FDL[D GH PHWDO

Questão 79

$V PRELOL]Do}HV SDUD SURPRYHU XP SC
DV IXWXUDV JHUDo}HV VmR FDGD YH] PDL
SDUWH GRV PHLRV GH WUDQVSRUWH GH
PRYLGD SHOD TXHLPD GH XP FRPEXVWtY
H[HPSOL¿FDomR GR {QXV FDXVDGR SRU
VDEHU TXH XP FDUUR SURGX] HP PpGLD
GLy[LGR GH FDUERQR SRU NP SHUFRUUL

Revista Aquecimento Global. $QR Qž 3XEOLFDomR GR ,QVWLWXWR %UDVLL

8P GRV SULQFLSDLV FRQVWLWXLQWHV G
&H 3RU PHLR GD FRPEXVWmR GR RFW
8 18
OLEHUDomR GH HQHUJLD SHUPLWLQGR
PRYLPHQWR $ HTXDomR TXH UHSUHVHQV
GHVVH SURFHVVR GHPRQVWUD TXH

Ⓐ QR SURFHVVR Ki OLEHUDomR GH R[LJ
de O .
Ⓑ R FRH¿FLHQWH HVWHTXLRPpWULFR S
SDUD GR RFWDQR
Ⓒ QR SURFHVVR Ki FRQVXPR GH iJXD S
OLEHUDomR GH HQHUJLD
Ⓓ R FRH¿FLHQWH HVWHTXLRPpWULFR SD
SDUD GR RFWDQR
Ⓔ R FRH¿FLHQWH HVWHTXLRPpWULFR SDUD R JiV FDUE{QLFR p
GH SDUD GR RFWDQR

Questão 80

Ⓐ

Ⓑ

Ⓒ

Ⓓ

Ⓔ